Attachment F

Revision to Connecticut's
State Implementation Plan

8-Hour Ozone Attainment Demonstration
Technical Support Document

Appendices

Connecticut Department of Environmental Protection
February 1, 2008

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Appendix 2A

The Nature of the Ozone Air Quality Problem in the Ozone Transport Region: A Conceptual Description

NESCAUM, October 2006

The Nature of the Ozone Air Quality Problem in the Ozone Transport Region: A Conceptual Description

Prepared for the Ozone Transport Commission

Prepared by NESCAUM
Boston, MA

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October 2006

Contributing Authors

Tom Downs, Maine Department of Environmental Protection
Richard Fields, Massachusetts Department of Environmental Protection
Prof. Robert Hudson, University of Maryland
Iyad Kheirbek, NESCAUM
Gary Kleiman, NESCAUM
Paul Miller, NESCAUM
Leah Weiss, NESCAUM

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Mohammed A. Majeed, Delaware Department of Natural Resources and Environmental Conservation
Charles Pietarinen, New Jersey Department of Environmental Protection
Jeff Underhill, New Hampshire Department of Environmental Services
David Wackter, Connecticut Department of Environmental Protection
Martha Webster, Maine Department of Environmental Protection
Danny Wong, New Jersey Department of Environmental Protection
Jung-Hun Woo, NESCAUM
Michael Woodman, Maryland Department of the Environment

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Executive Summary

The Ozone Transport Region (OTR) of the eastern United States covers a large area that is home to over 62 million people living in Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and northern Virginia. Each summer, the people who live within the OTR are subject to episodes of poor air quality resulting from ground-level ozone pollution that affects much of the region. During severe ozone events, the scale of the problem can extend beyond the OTR's borders and include over 200,000 square miles across the eastern United States. Contributing to the problem are local sources of air pollution as well as air pollution transported hundreds of miles from distant sources outside the OTR.

To address the ozone problem, the Clean Air Act Amendments require states to develop State Implementation Plans (SIPs) detailing their approaches for reducing ozone pollution. As part of this process, states are urged by the U.S. Environmental Protection Agency (USEPA) to include in their SIPs a conceptual description of the pollution problem in their nonattainment areas. This document provides the conceptual description of the ozone problem in the OTR states, consistent with the USEPA's guidance.

Since the late 1970s, a wealth of information has been collected concerning the regional nature of the OTR's ground-level ozone air quality problem. Scientific studies have uncovered a rich complexity in the interaction of meteorology and topography with ozone formation and transport. The evolution of severe ozone episodes in the eastern U.S. often begins with the passage of a large high pressure area from the Midwest to the middle or southern Atlantic states, where it assimilates into and becomes an extension of the Atlantic (Bermuda) high pressure system. During its passage east, the air mass accumulates air pollutants emitted by large coal-fired power plants and other sources located outside the OTR. Later, sources within the OTR make their own contributions to the air pollution burden. These expansive weather systems favor the formation of ozone by creating a vast area of clear skies and high temperatures. These two prerequisites for abundant ozone formation are further compounded by a circulation pattern favorable for pollution transport over large distances. In the worst cases, the high pressure systems stall over the eastern United States for days, creating ozone episodes of strong intensity and long duration.

One transport mechanism that has fairly recently come to light and can play a key role in moving pollution long distances is the nocturnal low level jet. The jet is a regional scale phenomenon of higher wind speeds that often forms during ozone events a few hundred meters above the ground just above the stable nocturnal boundary layer. It can convey air pollution several hundreds of miles overnight from the southwest to the northeast, directly in line with the major population centers of the Northeast Corridor stretching from Washington, DC to Boston, Massachusetts. The nocturnal low level jet can extend the entire length of the corridor from Virginia to Maine, and has been observed as far south as Georgia. It can thus be a transport mechanism for bringing ozone and other air pollutants into the OTR from outside the region, as well as move locally formed air pollution from one part of the OTR to another.

Other transport mechanisms occur over smaller scales. These include land, sea, mountain, and valley breezes that can selectively affect relatively local areas. They play a vital role in drawing ozone-laden air into some areas, such as coastal Maine, that are far removed from major source regions.

With the knowledge of the different transport scales into and within the OTR, a conceptual picture of bad ozone days emerges. After sunset, the ground cools faster than the air above it, creating a nocturnal temperature inversion. This stable boundary layer extends from the ground to only a few hundred meters in altitude. Above this layer, a nocturnal low level jet can form with higher velocity winds relative to the surrounding air. It forms from the fairly abrupt removal of frictional forces induced by the ground that would otherwise slow the wind. Absent this friction, winds at this height are free to accelerate, forming the nocturnal low level jet. Ozone above the stable nocturnal inversion layer is likewise cut off from the ground, and thus it is not subject to removal on surfaces or chemical destruction from low level emissions. Ozone in high concentrations can be entrained in the nocturnal low level jet and transported several hundred kilometers downwind overnight. The next morning as the sun heats the Earth's surface, the nocturnal boundary layer begins to break up, and the ozone transported overnight mixes down to the surface where concentrations rise rapidly, partly from mixing and partly from ozone generated locally. By the afternoon, abundant sunshine combined with warm temperatures promotes additional photochemical production of ozone from local emissions. As a result, ozone concentrations reach their maximum levels through the combined effects of local and transported pollution.

Ozone moving over water is, like ozone aloft, isolated from destructive forces. When ozone gets transported into coastal regions by bay, lake, and sea breezes arising from afternoon temperature contrasts between the land and water, it can arrive highly concentrated.

During severe ozone episodes associated with high pressure systems, these multiple transport features are embedded within a large ozone reservoir arriving from source regions to the south and west of the OTR. Thus a severe ozone episode can contain elements of long range air pollution transport from outside the OTR, regional scale transport within the OTR from channeled flows in nocturnal low level jets, and local transport along coastal shores due to bay, lake, and sea breezes.

From this conceptual description of ozone formation and transport into and within the OTR, air quality planners need to develop an understanding of what it will take to clean the air in the OTR. Weather is always changing, so every ozone episode is unique in its specific details. The relative influences of the transport pathways and local emissions vary by hour and day during the course of an ozone episode and between episodes. The smaller scale weather patterns that affect pollution accumulation and its transport underscore the importance of local (in-state) controls for emissions of nitrogen oxides (NO_X) and volatile organic compounds (VOCs), the main precursors of ozone formation in the atmosphere. Larger synoptic scale weather patterns, and pollution patterns associated with them, support the need for NO_X controls across the broader eastern United States. Studies and characterizations of nocturnal low level jets also support the need for local and regional controls on NO_X and VOC sources as locally generated and transported pollution can both be entrained in nocturnal low level jets formed during nighttime hours. The presence of land, sea, mountain, and valley breezes indicate that there are unique aspects of pollution accumulation and transport that are area-specific and will warrant policy responses at the local and regional levels beyond a one-size-fits-all approach.

The mix of emission controls is also important. Regional ozone formation is primarily due to NO_X, but VOCs are also important because they influence how efficiently ozone is produced by NO_X, particularly within urban centers. While reductions in anthropogenic VOCs will typically have less of an impact on the long-range transport of ozone, they can be effective in reducing ozone in urban areas where ozone production may be limited by the availability of VOCs. Therefore, a combination of localized VOC reductions in urban centers with additional NO_X reductions across a larger region will help to reduce ozone and precursors in nonattainment areas as well as downwind transport across the entire region.

The recognition that ground-level ozone in the eastern United States is a regional problem requiring a regional solution marks one of the greatest advances in air quality management in the United States. During the 1990s, air quality planners began developing and implementing coordinated regional and local control strategies for NO_X and VOC emissions that went beyond the previous emphasis on urban-only measures. These measures have resulted in significant improvements in air quality across the OTR. Measured NO_X emissions and ambient concentrations have dropped between 1997 and 2005, and the frequency and magnitude of ozone exceedances have declined within the OTR. To maintain the current momentum for improving air quality so that the OTR states can meet their attainment deadlines, there continues to be a need for more regional NO_X reductions coupled with appropriate local NO_X and VOC controls.

1. INTRODUCTION

1.1. Background

Ground-level ozone is a persistent public health problem in the Ozone Transport Region (OTR), a large geographical area that is home to over 62 million people living in Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, and northern Virginia. Breathing ozone in the air harms lung tissue, and creates the risk of permanently damaging the lungs. It reduces lung function, making breathing more difficult and causing shortness of breath. It aggravates existing asthmatic conditions, thus potentially triggering asthma attacks that send children and others suffering from the disease to hospital emergency rooms. Ozone places at particular risk those with preexisting respiratory illnesses, such as emphysema and bronchitis, and it may reduce the body's ability to fight off bacterial infections in the respiratory system. Ground-level ozone also affects otherwise healthy children and adults who are very active, either at work or at play, during times of high ozone levels (USEPA, 1999). In addition, recent evidence suggests that short-term ozone exposure has potential cardiovascular effects that may increase the risk of heart attack, stroke, or even death (USEPA, 2006).

The Clean Air Act requires states that have areas designated "nonattainment" of the ozone National Ambient Air Quality Standard (NAAQS) to submit State Implementation Plans (SIPs) demonstrating how they plan to attain the ozone NAAQS. The SIPs must also include regulations that will yield the necessary emission reductions to attain the national ozone health standard. As part of the SIP process, the U.S. Environmental Protection Agency (USEPA) urges states to include a conceptual description of the pollution problem in their nonattainment areas. The USEPA has provided guidance on developing a conceptual description, which is contained in Chapter 8 of the document "Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS" (EPA-454/R-05-002, October 2005) (Appendix A of this report reproduces Chapter 8 of the USEPA guidance document).[a] This document provides the conceptual description of the ozone problem in the OTR states, consistent with the USEPA's guidance. In the guidance, the USEPA recommends addressing three questions to help define the ozone problem in a nonattainment area: (1) Is regional transport an important factor? (2) What types of meteorological episodes lead to high ozone? (3) Is ozone limited by availability of volatile organic compounds, nitrogen oxides, or combinations of the two, and therefore which source categories may be most important to control? This report addresses these

[a] At the time of this writing, the USEPA was incorporating Section 8 of the 8-hour ozone guidance into a new USEPA guidance document covering ozone, $PM_{2.5}$, and regional haze. The new guidance is in Section 11 of Draft 3.2 "Guidance on the Use of Models and other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze," U.S. EPA, (Draft 3.2 – September 2006), available at http://www.epa.gov/ttn/scram/guidance_sip.htm#pm2.5 (accessed Oct. 5, 2006). The newer guidance, when finalized, may differ in some respects from the text given in Section 8 of the earlier ozone guidance.

questions, as well as provides some in-depth data and analyses that can assist states in developing conceptual descriptions tailored to their specific areas, where appropriate.

1.2. Ozone formation

Ground-level ozone is formed in the atmosphere through a series of complex chemical reactions involving sunlight, warm temperatures, nitrogen oxides (NO_X) and volatile organic compounds (VOCs). Figure 1-1 is a conceptual picture of the emission sources and conditions contributing to ozone formation in the atmosphere. There are natural (biogenic) sources of NO_X, such as formation by soil microbes, lightening, and forest fires, but the dominant NO_X sources in the eastern United States arise from human activities, particularly the burning of fossil fuels in cars, trucks, power plants, and other combustion sources (MARAMA, 2005).

In contrast to NO_X sources, there are significant biogenic sources of VOCs in the eastern United States that can play an important contributing role in ozone formation. Isoprene, a highly reactive natural VOC emitted typically by deciduous trees such as oak, is an important ozone precursor across large parts of the East. Isoprene emissions typically increase with temperature up to a point before high temperatures tend to shut off emissions as leaf stomata (pores) close to reduce water loss. The tendency for increasing isoprene emissions with increasing temperatures (up to a point) coincides with the temperature and sunlight conditions favorable for increased ozone production (MARAMA, 2005).

Human-caused (anthropogenic) VOC emissions are important and may dominate the VOC emissions by mass (weight) in an urban area, even though natural sources dominate in the overall region. Some anthropogenic VOCs, such as benzene, are toxic, and may increase risks of cancer or lead to other adverse health effects in addition to helping form ozone (MARAMA, 2005).

Figure 1-1. Conceptual picture of ozone formation in the atmosphere

Picture provided by the Maryland Department of the Environment.

The relationship between the relative importance of NO_X and VOC emissions in producing ozone is complex. The relative ratio of NO_X and VOC levels in the local atmosphere can affect the efficiency of local urban ozone production, and this can vary by time (hour or day) at the same urban location, as well as across locations within the same urban area. High NO_X concentrations relative to VOC levels may hinder ozone production through the destruction of ozone by NO_X (sometimes called "NO_X scavenging"). The same NO_X, however, when diluted relative to VOCs through the downwind transport and dispersal of a pollution plume, will promote ozone formation elsewhere.

1.3. Spatial pattern of ozone episodes in the OTR

The day-to-day pattern of ground-level ozone varies according to meteorological variables that include, but are not limited to, sunlight, air temperature, wind speed, and wind direction. Generally within the OTR, one would expect elevated ozone to occur more frequently in southernmost areas, where solar elevation angles are greater and cold frontal passages are fewer. A glance at monthly composite maps (for example, July-August 2002) at the USEPA AIRNOW website seems to confirm this (http://www.epa.gov/airnow/nemapselect.html). On some days, however, one notes that the highest ozone levels shift northward to mainly affect the northern part of the OTR. Other shifts are apparent between coastal and interior areas.

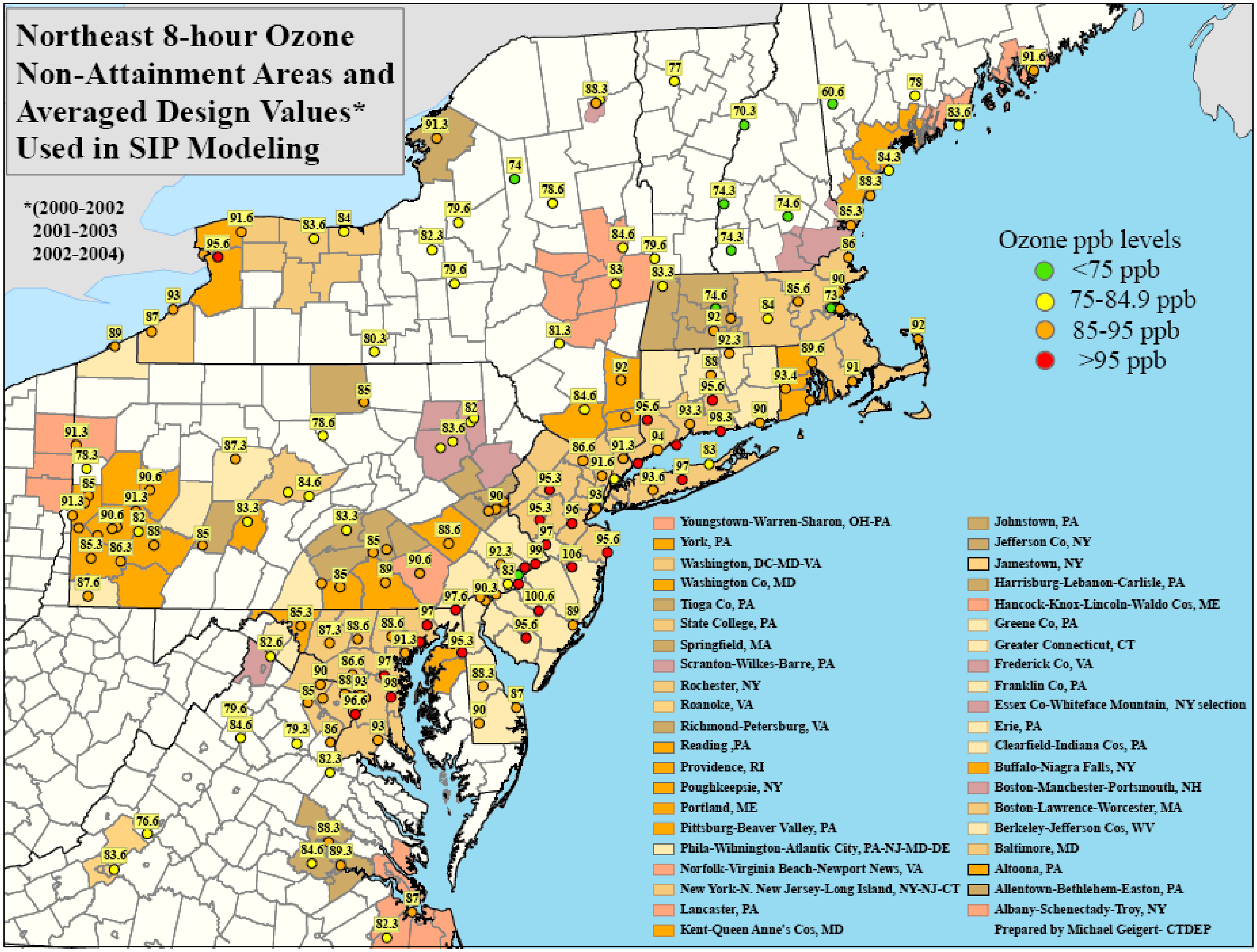
This variability of the daily ozone pattern is tied to variations in the atmosphere's circulations over a range of scales, and how geographic features influence these circulations. These features can include boundaries between land and sea, and the influence of the Appalachian Mountains on winds to their east over the Atlantic Coastal Plain.

For the OTR, Stoeckenius and Kemball-Cook (2005) have identified five general ozone patterns: (1) high ozone throughout the OTR; (2) high ozone confined to the extreme southeastern OTR; (3) high ozone along the I-95 corridor and northern New England; (4) high ozone in the western OTR; and (5) generally low ozone throughout the OTR. However, not all ozone episodes necessarily neatly fit into one of the five general patterns as daily conditions will vary and a given ozone episode may have characteristics that fall across several class types. These five general patterns, however, are a useful classification scheme for characterizing how representative an historical ozone episode is for possible use in air quality planning efforts. Appendix B presents the descriptions of the five general ozone patterns and their meteorological attributes as developed by Stoeckenius and Kemball-Cook (2005).

1.4. The regional extent of the ozone problem in the OTR

Air monitoring demonstrates that areas with ozone problems in the OTR do not exist in isolation. The map of Figure 1-2 shows an extensive pattern of closely adjacent ozone nonattainment in areas throughout the OTR. The 8-hour ozone baseline design values (defined in the figure caption) at the monitoring sites shown in the figure indicate extensive areas throughout the OTR with many monitors having values above the 8-hour ozone NAAQS of 0.08 ppm. In practice, this corresponds to levels equal to or greater than 0.085 ppm (equivalent to 85 ppb). The map also shows that many monitors outside the designated nonattainment areas of the OTR also record elevated ozone concentrations approaching the 8-hour ozone NAAQS (i.e., 75-84.9 ppb), even if not violating it. The many monitoring locations across that OTR measuring elevated ozone levels that approach or exceed the 8-hour ozone NAAQS give a strong indication of the regional nature of the OTR's ozone problem.

Figure 1-2. Map of 8-hour ozone baseline design values in the OTR

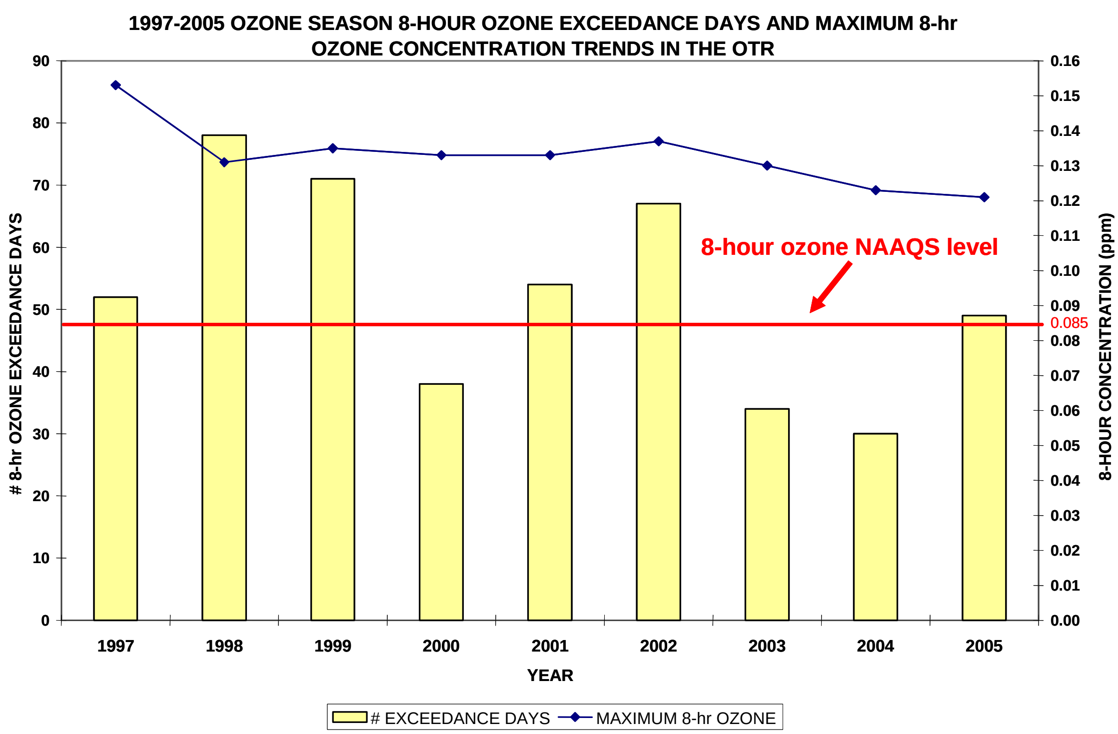


Note: A monitor's baseline design value is the average of the three design values (3-year averages of the 4th maximum 8-hour ozone level) for the set of years 2000-2002, 2001-2003, and 2002-2004. The figure shows the regional nature of ozone levels in the OTR, with a number of closely adjacent nonattainment areas (baseline design values ≥ 85 ppb) along with a broader region of elevated regional ozone (e.g., baseline design values ≥ 75 ppb) (figure by Michael Geigert, Connecticut Department of Environmental Protection).

1.5. Ozone trends in the OTR

The number of 8-hour ozone exceedance days vary year-to-year in the OTR, which is largely driven by variations in meteorology. During warmer summers conducive for ozone formation, the number of exceedance days at individual monitors in nonattainment areas of the OTR has been frequent, typically with 10 or more days above the 8-hour ozone NAAQS during the course of the summer. Figure 1-3 displays the variation in exceedance days when collectively considering all monitoring sites across the OTR since 1997. The figure also includes a line indicating the trend in the maximum 8-hour ozone concentrations observed in the OTR each year. The variation in exceedance days from year-to-year makes it difficult to discern a clear trend, although there is some hint that the number of exceedance days may be declining in recent years. There appears to be a stronger indication of a declining maximum 8-hour ozone concentration in the OTR since 1997, although the maximum concentration remains well above the 8-hour ozone NAAQS. This reflects the impact of numerous control strategies implemented locally, regionally, and nationally to reduce emissions of the precursor pollutants that contribute to ozone formation in the atmosphere.

Figure 1-3. Trends in 8-hour ozone in the OTR 1997-2005



Note: The bars correspond to the number of 8-hour ozone exceedance days per year. The upper blue line indicates the trend in maximum 8-hour ozone concentrations in the OTR during 1997-2005. The lower red horizontal line indicates the level of the 8-hour ozone NAAQS (functionally 0.085 ppm). (Figure created by Tom Downs, Maine Dept. of Environmental Protection.)

The tables in Appendix C contain the frequency of ozone exceedance days for individual monitors in the OTR states from 1997 to 2005. Appendix D contains tables for the 8-hour ozone design values recorded at ozone monitors in the OTR during 1997-2005. These tables give an indication of the number of monitors in the OTR since 1997 that have exceeded the 8-hour NAAQS of 85 ppb (equal to 0.085 ppm in the tables of Appendix D) at some point in time.

1.6. History of ozone transport science

1.6.1. From the 1970s to the National Research Council report, 1991

Research studies conducted in the 1970s gave some of the earliest indications that pollution transport plays an important role in contributing to air pollution problems in the OTR. An aircraft study in the summer of 1979 tracked a mass of ozone-laden air and its precursors leaving central Ohio, crossing the length of Pennsylvania, and entering the Northeast Corridor where it contributed upwards of 90 ppb to early morning ozone concentrations in the OTR prior to local ozone formation from local emissions (Clarke & Ching, 1983). Wolff and Lioy (1980) described a "river of ozone" extending from the Gulf Coast through the Midwest and into New England. A number of early studies also documented the role of large coal-fired power plants in forming significant amounts of ozone pollution that traveled far downwind from the power plant source and contributed to a large elevated background of regional ozone (Davis *et al.*, 1974; Miller *et al.*, 1978; Gillani & Wilson, 1980; Gillani *et al.*, 1981; White *et al.*, 1983). Section 2 below describes in more depth the observed meteorological processes identified as the ozone transport mechanisms important for the OTR.

On a regional scale, NO_X emissions within areas of high VOC emissions, such as forested regions rich in isoprene, will produce elevated levels of ozone. A number of studies have now established that regional ozone formation over the eastern United States is limited primarily by the supply of anthropogenic NO_X, with anthropogenic VOCs having less regional influence compared to their potential urban influence. This is due to the presence of significant amounts of natural VOCs across broad areas of the eastern United States (Trainer *et al.*, 1987; Chameides *et al.*, 1988; Sillman *et al.*, 1990; McKeen *et al.*, 1991; Chameides *et al.*, 1992; Trainer *et al.*, 1993; Jacob *et al.*, 1993).

The presence of dispersed NO_X emissions sources, such as coal-fired power plants, in rural regions rich in isoprene and other natural VOC emissions from trees and other vegetation often leads to elevated regional ozone during the summer months. This ozone can then be transported into urban areas where it contributes to high background concentrations during the early morning hours before local production of ozone occurs from local precursor emissions (both NO_X and VOCs).

In 1991, a National Research Council (NRC) committee, synthesizing the best available information at the time on ozone formation and transport in the eastern United States, reported (NRC, 1991):

> High ozone episodes last from 3-4 days on average, occur as many as 7-10 times a year, and are of large spatial scale: >600,000 km^2. Maximum values of non-urban ozone commonly exceed 90 ppb during these episodes, compared with average daily maximum values of 60 ppb in summer. An urban area need contribute an increment of only 30 ppb over the regional background during a high ozone episode to cause a violation of the National Ambient Air Quality Standard (NAAQS) in a downwind area. … Given the regional nature of the ozone problem in the eastern United States, a regional model is needed to develop control strategies for individual urban areas.
>
> [Note: The NRC discussion was in the context of the ozone NAAQS at the time of the NRC report, which was 0.12 ppm (120 ppb) averaged over one hour.]

The observed ozone spatial scale of >600,000 km^2 (>200,000 square miles) is comparable to the combined size of Kentucky, Ohio, West Virginia, Pennsylvania, Maryland, New York, and New Jersey. Additional field studies and modeling efforts since the NRC report (described below) have reinforced its basic findings and provide a consistent and coherent body of evidence for transport throughout the eastern United States.

1.6.2. Ozone Transport Assessment Group (OTAG) 1995-1997

The increasing regulatory focus on broader regional approaches to ozone control beyond the OTR began with the Ozone Transport Assessment Group (OTAG) in 1995. OTAG was a partnership between the USEPA, the Environmental Council of the States (ECOS), state and federal government officials, industry organizations, and environmental groups. OTAG's goal was "to develop an assessment of and consensus agreement for strategies to reduce ground-level ozone and its precursors in the eastern United States" (OTAG, 1997a). The effort assessed transport of ground-level ozone across state boundaries in the 37-state OTAG region and developed a set of recommendations to the USEPA. OTAG completed its work in 1997.

OTAG supported a significant modeling effort of four regional ozone episodes across the eastern United States. OTAG's Regional and Urban Scale Modeling Workgroup found that on a regional scale, modeled NO_X reductions produced widespread ozone decreases across the eastern United States with limited ozone increases generally confined to some urban areas. Also on a regional scale, VOC reductions resulted in limited ozone decreases generally confined to urban areas (OTAG, 1997b).

The OTAG Air Quality Analysis Workgroup provided additional observational and other analytical results to inform model interpretation and the development of OTAG recommendations. Among its many finding, this Workgroup observed:

> Low wind speeds (< 3 m/sec) enable the accumulation of ozone near local source areas. High winds (> 6 m/sec) reduce the concentrations but contribute to the long-range transport of ozone. The average range of ozone transport implied from an array of diverse methods is between 150 miles and 500 miles. However, the perceived range depends on whether one considers the average concentrations (300–500 miles) or peak concentrations (tens of miles at 120 ppb). The relative importance of ozone transport for the attainment of the new 80 ppb 8-hour standard is likely to be higher due to the closer proximity of nonattainment areas. (OTAG, 1997c)

Based on the variety of technical work performed by multiple stakeholders during the process, OTAG reached a number of major conclusions (OTAG, 1997d), including:

- Regional NO_X reductions are effective in producing ozone benefits; the more NO_X reduced, the greater the benefit.
- Ozone benefits are greatest in the subregions where emissions reductions are made; the benefits decrease with distance.
- Both elevated (from tall stacks) and low-level NO_X reductions are effective.
- VOC controls are effective in reducing ozone locally and are most advantageous to urban nonattainment areas.
- Air quality data indicate that ozone is pervasive, that ozone is transported, and that ozone aloft is carried over and transported from one day to the next.

The technical findings of OTAG workgroups were consistent with the modeling and observational studies of regional ozone in the eastern United States already appearing in the scientific literature at that time.

Through its work, OTAG engaged a broad group outside of the scientific community in the discussion of ozone transport. This brought a greater understanding of the role of ozone transport across the eastern United States that was then translated into air quality policy with the creation of a regional ozone control strategy focusing on the reduction of NO_X emissions from power plants.

1.6.3. Northeast Oxidant and Particle Study (NE-OPS) 1998-2002

The Northeast Oxidant and Particle Study (NE-OPS) began in 1998 as a USEPA sponsored project to study air quality issues in the Northeast. The study undertook four major field programs at a field site in northeastern Philadelphia during the summers of 1998, 1999, 2001, and 2002. It involved a collaborative effort among research groups from a number of universities, government laboratories, and representatives of the electric power industry in an investigation of the interplay between the meteorological and chemical processes that lead to air pollution events in the Northeast. A suite of measurement techniques at and above the earth's surface gave a three-dimensional regional scale picture of the atmosphere. The studies found that horizontal transport aloft and vertical mixing to the surface are key factors in controlling the evolution and severity of air pollution episodes in the Northeast (Philbrick *et al.*, 2003a).

At the conclusion of the 2002 summer field study, the NE-OPS researchers were able to draw several conclusions about air pollution episodes in Philadelphia and draw inferences from this to the conditions in the broader region. These include (Philbrick *et al.*, 2003b):

- Transported air pollution from distant sources was a major contributor to all of the major summer air pollution episodes observed in the Philadelphia area.
- Regional scale meteorology is the major factor controlling the magnitude and timing of air pollution episodes.

- Knowledge of how the planetary boundary layer evolves over the course of a day is a critical input for modeling air pollutant concentrations because it establishes the mixing volume.
- Remote sensing and vertical profiling techniques are critical for understanding the processes governing air pollution episodes.
- Ground-based sensors do not detect high levels of ozone that are frequently trapped and transported in layers above the surface.
- Horizontal and vertical nighttime transport processes, such as the nocturnal low level jets and "dynamical bursting"[b] events, are frequent contributors of pollutants during the major episodes.
- Specific meteorological conditions are important in catalyzing the region for development of major air pollution episodes.
- Tethered balloon and lidar measurements suggest a very rapid down mixing of species from the residual boundary layer during the early morning hours that is too large to be accounted for on the basis of NO_X reactions alone.
- Summer organic aerosols in Philadelphia consist of a relatively constant level of primary organic particulate matter, punctuated by extreme episodes with high levels of secondary organic aerosol during ozone events. Primary organic particulate matter is both biogenic and anthropogenic in nature, with the relative importance fluctuating from day to day, and possibly associated more strongly with northwest winds. Secondary aerosol formation events may be responsible for dramatic increases in particulate organic carbon, while the relatively constant contribution of primary sources could make a greater contribution to annual average particulate levels. More research is needed to sort out the relative contributions of anthropogenic and biogenic sources.

The findings on nocturnal low level jets occurring in concert with ozone pollution episodes are particularly salient for air quality planning for the OTR. In 19 of 21 cases where researchers observed nocturnal low level jets during the NE-OPS 2002 summer campaign in the Philadelphia area, they also saw peak 1-hour ozone levels exceeding 100 ppbv. The nocturnal low level jets were capable of transporting pollutants in air parcels over distances of 200 to 400 km. The field measurements indicating that these jets often occur during periods of large scale stagnation in the region demonstrate the important role nocturnal low level jets can play in effectively transporting air pollutants during air pollution episodes (Philbrick *et al.*, 2003b).

The upper air observations using tethered balloons and lidar indicated the presence of high pollutant concentrations trapped in a residual layer above the surface, thus preserving the pollutants from destruction closer to the surface. Ozone, for example, when trapped in an upper layer during nighttime hours is not subject to destruction by NO_X scavenging from low-level emission sources (i.e., cars and trucks) or deposition to surfaces like vegetation, hence it is available for horizontal transport by nocturnal low level jets. The following day, it can vertically transport back down to the surface through "bursting events" and daytime convection. When involving an upper layer of ozone-laden air horizontally transported overnight by a nocturnal low level jet, downward mixing can increase surface ozone concentrations in the morning that is not the result of local ozone production (Philbrick *et al.*, 2003b).

1.6.4. NARSTO 2000

NARSTO (formerly known as the North American Research Strategy for Tropospheric Ozone) produced "An Assessment of Tropospheric Ozone Pollution – A

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[b] "Dynamical bursting" events occur in the early morning hours due to instabilities in the lower atmosphere caused by differences in wind speeds at different altitudes below the layer of maximum winds. Bursting events can vertically mix air downwards to the surface (see Philbrick *et al.,* 2003b at p. 36).

North American Perspective" in 2000 to provide a policy-relevant research assessment of ozone issues in North America (NARSTO, 2000). While the NARSTO Assessment is continental in scope, it encompasses issues relevant to the OTR, including results from a NARSTO-Northeast (NARSTO-NE) field campaign.

Several policy-relevant findings from the NARSTO Assessment are of relevance to the OTR (NARSTO, 2000):

- Available information indicates that ozone accumulation is strongly influenced by extended periods of limited mixing, recirculation of polluted air between the ground and aloft, and the long-range transport of ozone and its precursors. As a result, air quality management strategies require accounting for emissions from distant as well as local sources.
- Local VOC emission reductions may be effective in reducing ozone in urban centers, while NO_X emission reductions become more effective at distances removed from urban centers and other major precursor emissions.
- The presence of biogenic emissions complicates the management of controllable precursor emissions and influences the relative importance of VOC and NO_X controls.
- The effectiveness of VOC and NO_X control strategies is not uniquely defined by the location or nature of emissions. It is now recognized that the relative effectiveness of VOC and NO_X controls may change from one location to another and even from episode to episode at the same location.

The NARSTO Assessment identified the stagnation of synoptic scale (>1000 km^2) high pressure systems as a commonly occurring weather event leading to ozone pollution episodes. These systems are warm air masses associated with weak winds, subsiding air from above, and strong inversions capping the planetary boundary level in the central region of the high. The warm air mass can settle into place for days to more than a week, and in the eastern U.S. tend to slowly track from west to east during the summer. These conditions result in the build up of pollution from local sources with reduced dispersion out of the region. In terms of air quality, the overall appearance of such systems is the presence of numerous local or urban-scale ozone pollution episodes embedded within a broader regional background of elevated ozone concentrations (NARSTO, 2000 at p. 3-34).

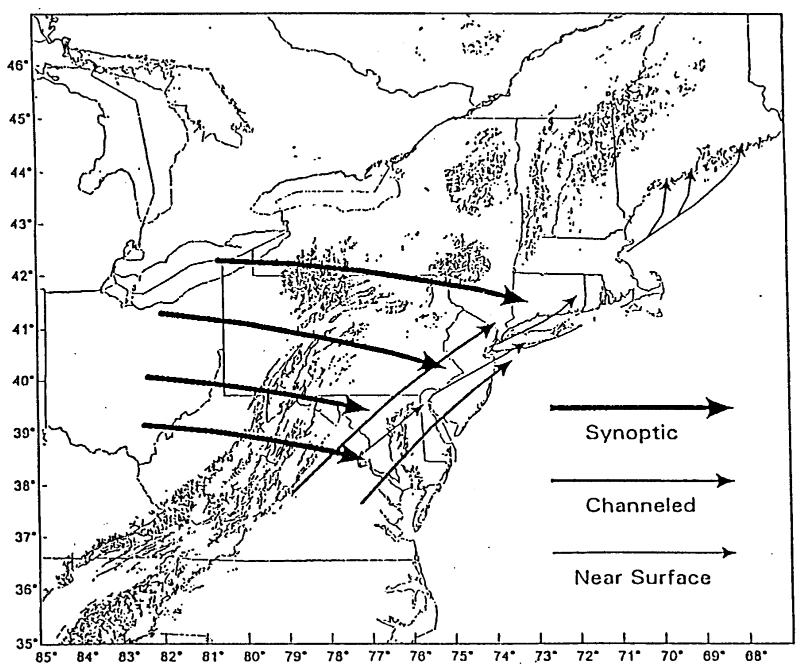
While stagnation implies little movement, the NARSTO Assessment found that a variety of processes can lead to long-range transport of air pollutants that initially accumulated in these large-scale stagnation events. Over time, pollution plumes meander, merge, and circulate within the high pressure system. Because of the difference in pressures, pollutant plumes that eventually migrate to the edges of a high pressure system get caught in increasing winds at the edge regions, creating more homogeneous regional pollution patterns. Stronger winds aloft capture the regional pollutant load, and can transport it for hundreds of kilometers downwind of the stagnated air mass's center (NARSTO, 2000 at p. 3-34). For example, air flow from west to east over the Appalachian Mountains can move air pollution originating within the Ohio River Valley into the OTR.

Studies undertaken by the NARSTO-NE field program also observed several regional scale meteorological features arising from geographical features in the eastern U.S. that affect pollutant transport. One important feature is the channeled flow of a nocturnal low level jet moving air pollution from the southwest to the northeast along the Northeast Corridor during overnight hours. The NARSTO-NE field program observed nocturnal low level jets on most nights preceding regional ozone episodes in the OTR, consistent with the observations of the NE-OPS campaign.

Another important smaller scale transport mechanism is the coastal sea breeze that can sweep ashore pollutants originally transported over the ocean parallel to the coastline. An example of this is the high ozone levels seen at times along coastal Maine that move in from the Gulf of Maine after having been transported in pollution plumes from Boston, New York City, and other Northeast Corridor locations (NARSTO, 2000 at pp. 3-34 through 3-37).

As a result of the NARSTO-NE field program, a conceptual picture of pollution transport into and within the OTR is possible. It consists of a combination of large-scale synoptic flow from the Midwest interacting with various regional and smaller-scale transport and meteorological features within the OTR, as illustrated in Figure 1-4. Synoptic-scale transport from west to east across the Appalachian Mountains occurs with the slow-moving stagnant high pressure systems that foster large regional ozone episodes across eastern U.S. Regional-scale channeled flows, specifically nocturnal low level jets from the southwest to the northeast along the Atlantic Coastal Plain, can occur within the synoptic system. In addition, daytime sea breezes can significantly affect bay and coast line air pollution levels within the OTR (NARSTO, 2000 at 3-36 and 3-37, citing Blumenthal *et al.*, 1997).

Figure 1-4. Conceptual picture of different transport regimes contributing to ozone episodes in the OTR



Transport Regimes Observed During NARSTO-Northeast

Long-range (synoptic scale) transport occurs from west to east across the Appalachian Mountains. Regional scale transport in channeled flows also occurs from west to east through gaps in the Appalachian Mountains and in nocturnal low level jets from southwest to northeast over the Northeast

Corridor. Daytime sea breezes can affect local coastal areas by bringing in air pollution originally transported near the surface across water parallel to the coast (e.g., along the Maine coastline). Figure from NARSTO, 2000, citing Blumenthal *et al.*, 1997.

1.6.5. New England Air Quality Study (NEAQS) 2002-2004

The New England Air Quality Study (NEAQS) has to date conducted field campaigns during the summers of 2002 and 2004 to investigate air quality on the Eastern Seaboard and transport of North American emissions into the North Atlantic (NEAQS, 2002). Transport of air pollution into the Gulf of Maine and subsequently into coastal areas of northern New England received extensive attention.

High ozone levels in northern New England occur with light to moderate winds from source regions in the Northeast urban corridor, rather than under locally stagnant conditions. The most important transport pathways leading to high ozone in coastal New Hampshire and Maine are over water rather than over land. Transport over water is particularly important in this northern region of the OTR for several reasons. First, there is a persistent pool of cooler water in the northern and eastern Gulf of Maine and Bay of Fundy. This creates a smoother transport surface for air pollutants relative to land transport, with a decrease in convective (vertical) mixing. Second, deposition of pollutants to the water surface is very small compared to the more rapid deposition occurring on land. Third, the lack of convective mixing allows pollution to be transported in different directions in layers at different heights in the atmosphere (Angevine *et al.*, 2004).

During the summer of 2002, researchers observed two transport events into coastal northern New England. The first occurring on July 22 through July 23 involved large-scale synoptic transport in a 400-600 m layer over the Gulf of Maine that was in contact with the water's surface. The southwesterly flow brought ozone pollution up from the New York City, Boston and other northeastern urban locations into coastal northern New England. Ozone monitors on Maine's coast extending from the New Hampshire border to Acadia National Park recorded elevated 1-hour average ozone levels between 88 and 120 ppb during this period. In a later episode during August 11-14, ozone and wind observations indicated the role of local-scale transport via a sea breeze (southeasterly flow) bringing higher ozone levels into coastal New Hampshire from a polluted layer originally transported off shore in the Gulf of Maine in a southwesterly flow arising out of the Northeast urban corridor. Transport in an elevated layer also occurred with higher ozone recorded at a monitor on Cadillac Mountain in Acadia National Park relative to two monitors located at lower elevations in the park (Angevine *et al.*, 2004).

The results of NEAQS indicate the important conditions contributing to ozone transport along the northern New England coast. The cool waters of the Gulf of Maine allow for transport of air pollutants over distances of 20-200 km in stable layers at the water's surface with little pollutant deposition or dilution. Sea breezes can modify large-scale synoptic transport over the ocean and bring high ozone levels into particular sites located on the coast. Transport within higher layers above the Gulf of Maine can carry pollutants over much greater distances, 200-2000 km (Angevine *et al.*, 2004).

1.6.6. Regional Atmospheric Measurement, Modeling, and Prediction Program (RAMMPP) 2003

The Regional Atmospheric Measurement, Modeling, and Prediction Program (RAMMPP) is a program led by researchers at the University of Maryland. Its focus is developing a state-of-the-art scientific research tool to improve understanding of air quality in the mid-Atlantic region of the United States. It has a number of facets, including ozone and $PM_{2.5}$ pollutant level forecasting, aircraft, and surface measurements, real-time weather forecasting, and chemical transport modeling.

During the August 2003 electrical blackout in the eastern United States, one of the largest in North American history, scientists with RAMMPP were able to obtain airborne measurements that directly recorded changes in air pollution due to the virtual shutdown of numerous coal-fired power plants across a large part of this region (Marufu *et al.*, 2004). Initially, aircraft measurements were collected early in the day on August 15, 2003 above western Maryland, which was outside the blackout region. These measurements were compared with aircraft measurements taken later that day over central Pennsylvania, about 24 hours into the blackout. The comparison indicated a decrease in ozone concentrations of ~50 percent within the blackout region (as well as >90 percent decrease in SO_2 and ~70 percent reduction in light scattered by particles). These reductions were also consistent with comparisons to measurements obtained over central Pennsylvania the previous year during a period of similar synoptic patterns as occurred during the blackout. Forward trajectories indicated that the decrease in air pollution during the blackout benefited much of the eastern United States. The decrease in ozone was greater than expected based on estimates of the relative contribution of power plant NO_X emissions to ozone formation in the region. The researchers suggested that this could be due to underestimation of power plant emissions, poor representation of power plant plumes in emission models, or an incomplete set of atmospheric chemical reactions in photochemical models. This accidental "real world" experiment indicates that ozone formation across a large part of the eastern United States is sensitive to power plant NO_X emissions, and may be even more sensitive to NO_X reductions from these sources than currently predicted by air quality modeling.

1.7. Summary

The chemistry of ozone formation in the atmosphere involves reactions of NO_X and VOC emissions from numerous sources during periods of warm temperatures and abundant sunshine. The day-to-day pattern of ground-level ozone in the OTR varies according to a number of meteorological variables, such as sunlight, temperature, wind speed, and wind direction. High levels of ozone within the OTR do not occur in isolation, indicating a broad regional air quality problem. Trends in 8-hour ozone levels since 1997 indicate improvement in air quality, a reflection of numerous control strategies implemented locally, regionally, and nationally to reduce emissions of the pollutants that contribute to ozone formation.

The scientific literature prior to 1985 contains a number of peer reviewed papers describing observed episodes of ozone and precursor pollutant transport. In 1991, a National Research Council report summarized the state-of-the-science, which further highlighted the broad regional nature of the ozone problem in the eastern U.S. Since then, multiple collaborative efforts and field campaigns have further investigated specific aspects of the regional ozone problem affecting the OTR, and these provide a significant foundational basis for informed policy decisions to improve air quality.

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2. METEOROLOGY AND EVOLUTION OF OZONE EPISODES IN THE OZONE TRANSPORT REGION

The following sections describe current knowledge of the factors contributing to ozone episodes in the OTR. The general description of weather patterns comes mainly from the work of Ryan and Dickerson (2000) done for the Maryland Department of the Environment. Further information is drawn from work by Hudson (2005) done for the Ozone Transport Commission and from a mid-Atlantic regional air quality guide by MARAMA (2005). The regional nature of the observed ozone episodes in the OTR is reinforced in modeling studies by the USEPA for the Clean Air Interstate Rule.

2.1. Large-scale weather patterns

Ryan and Dickerson (2000) have described the general meteorological features conducive to ozone formation and transport that are pertinent to the OTR. On the local scale, meteorological factors on which ozone concentrations depend are the amount of available sunlight (ultraviolet range), temperature, and the amount of space (volume) in which precursor emissions mix. Sunlight drives the key photochemical reactions for ozone and its key precursors and the emissions rates of many precursors (isoprene for example) are temperature dependent. Emissions confined within a smaller volume result in higher concentrations of ozone. Winds in the lowest 2 km of the atmosphere cause horizontal mixing while vertical temperature and moisture profiles drive vertical mixing. High ozone is typically associated with weather conditions of few clouds, strong temperature inversions, and light winds.

The large-scale weather pattern that combines meteorological factors conducive to high ozone is the presence of a region of upper air high pressure (an upper air ridge) with its central axis located west of the OTR. The OTR east of the axis of the high-pressure ridge is characterized by subsiding (downward moving) air. This reduces upward motion necessary for cloud formation, increases temperature, and supports a stronger lower level inversion. While the upper air ridge is located west of the OTR, surface high pressure is typically quite diffuse across the region. This pattern occurs throughout the year but is most common and longer lived in the summer months (Ryan and Dickerson, 2000).

The large, or synoptic, scale, weather pattern sketched above has important implications for transport into and within the OTR. First, the persistence of an upper air ridge west of the OTR drives generally west to northwest winds that can carry ozone generated outside the OTR into the OTR. A key point from this wind-driven transport mode is that stagnant air is not always a factor for high ozone episodes in the OTR. Second, the region in the vicinity of the ridge axis, being generally cloud free, will experience significant radiational cooling after sunset and therefore a strong nocturnal inversion will form. This inversion, typically only a few hundred meters deep, prevents ozone and its precursors from mixing downward overnight. Above the inversion layer, there is no opportunity for destruction of the pollutants by surface deposition, thus increasing the pollutants' lifetimes aloft and consequently their transport distances. Third, with diffuse surface high pressure, smaller scale effects can become dominant in the lowest layers of the atmosphere. These include bay and land breezes, the Appalachian lee side trough, and the development of the nocturnal low level jet. Nocturnal low-level jets are commonly observed during high ozone events in the OTR (Ryan and Dickerson, 2000).

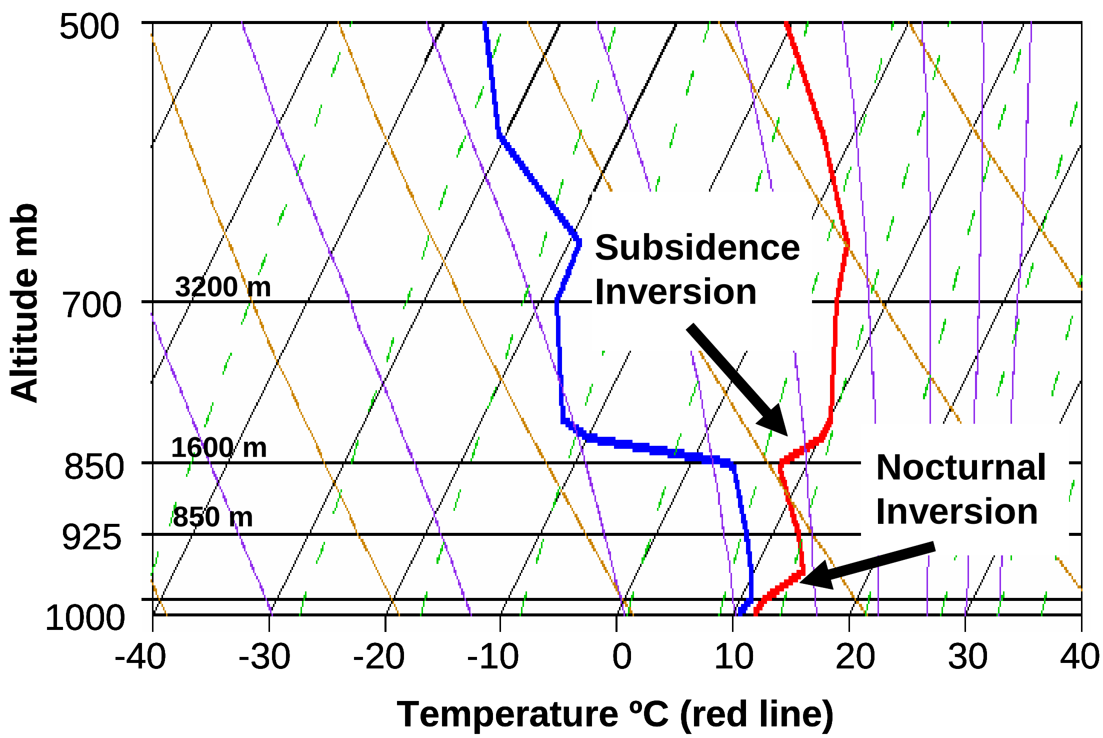
As previously mentioned in Section 1, Stoeckenius and Kemball-Cook (2005) have identified five ozone patterns in the OTR as a guide to an historical ozone episode's representativeness for air quality planning purposes. They also described the meteorological conditions that are generally associated with each of these patterns. Appendix B presents the five types with the additional meteorological detail.

2.2. Meteorological mixing processes

An important element in the production of severe ozone events is the ability of the atmosphere through temperature inversions to inhibit the mixing processes that under normal conditions would lead to dilution of the emitted pollutants. For the purposes of this discussion, we focus on two major classes of temperature inversions, (1) nocturnal (radiative) and (2) subsidence.

Figure 2-1 shows an example of nocturnal and subsidence inversions in a temperature profile taken over Albany, NY, on September 1, 2006 at 7 a.m. eastern standard time. The figure shows two distinct temperature inversions – the ground-based nocturnal inversion and an inversion at about 1600 meters caused by the sinking motion (subsidence) of the atmosphere in a high pressure system.

Figure 2-1. Temperature profile taken over Albany, NY, on September 1, 2006 at 7 a.m. eastern standard time



2.2.1. Nocturnal inversions

Land surfaces are far more efficient at radiating heat than the atmosphere above, hence at night, the Earth's surface cools more rapidly than the air. That temperature drop is then conveyed to the lowest hundred meters of the atmosphere. The air above this layer cools more slowly, and a temperature inversion forms. The inversion divides the atmosphere into two layers that do not mix. Below the nocturnal surface inversion, the surface winds are weak and any pollutants emitted overnight accumulate. Above the inversion, winds continue through the night and can even become stronger as the inversion isolates the winds from the friction of the rough surface.

In the morning, the sun warms the Earth's surface, and conduction and convection transfer heat upward to warm the air near the surface. By about 10:00 – 11:00 a.m., the temperature of the surface has risen sufficiently to remove the inversion. Air from above and below the inversion can then mix freely. Depending on whether the air above the inversion is cleaner or more polluted than the air at the surface, this mixing can either lower or increase air pollution levels.

2.2.2. Subsidence inversions

Severe ozone events are usually associated with high pressure systems. In the upper atmosphere, the winds around a high pressure system move in a clockwise direction. At the ground, friction between the ground and the winds turns the winds away from the center of the system and "divergence" occurs, meaning that air at the surface moves away from the center. With the movement of air horizontally away from the center of the high at the surface, air aloft moves vertically downward (or "subsides") to replace the air that left. Thus, the divergence away from the high pressure system gives rise to subsidence of the atmosphere above the high. The subsiding motion causes the air to warm as it moves downward and is compressed. As the warmer air meets the colder air below, it forms an inversion. A subsidence inversion is particularly strong because it is associated with this large scale downward motion of the atmosphere. The subsidence inversion caps pollution at a higher altitude in the atmosphere (typically from 1200 to 2000 meters), and it is far more difficult to break down than the nocturnal inversion. Hence the subsidence inversion limits vertical mixing in the middle of the day during an air pollution episode, keeping pollutants trapped closer to the ground.

2.3. Meteorological transport processes

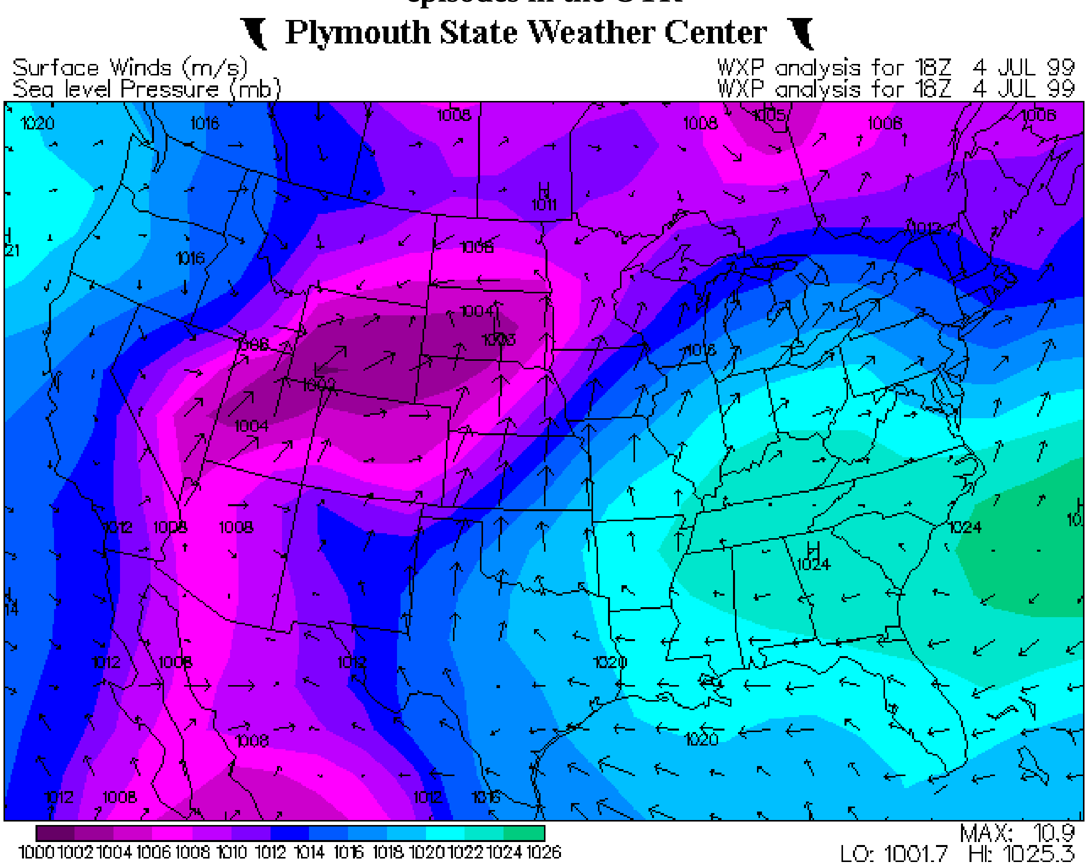
2.3.1. Introduction

Figure 2-2 shows the classic synoptic weather pattern at the Earth's surface associated with severe ozone episodes within the OTR. A quasi-stationary high pressure system (the Bermuda high) extends from the Atlantic Ocean westward into interior southeastern U.S., where a second weaker high is located. Surface winds, circulating clockwise around the high, are especially light in the vicinity of the secondary high. Farther north, a southwesterly flow strengthens toward New York and southern New England. This situation illustrates two circulation regimes often existing in OTR ozone episodes: more stagnant conditions in southern areas and a moderate transport flow in the OTR from southwest to northeast. In addition, as discussed previously, high pressure systems exhibit subsidence, which results in temperature inversions aloft, and cloud free skies.

Closer to the surface, the Appalachian Mountains induce changes in the wind field that also play important roles in the formation and transport of ozone in the OTR. The mountains act as a physical barrier confining, to some degree, pollution to the coastal plain. They also induce local effects such as mountain and valley breezes, which, in the case of down-slope winds, can raise surface temperatures thereby increasing chemical reactivity. In addition, mountains create a lee side trough, which helps to channel a more concentrated ozone plume, and contribute to the formation of nocturnal low level jets, the engine of rapid nighttime transport.

The Atlantic Ocean also plays a strong role during ozone episodes where sea breezes can draw either heavily ozone-laden or clean marine air into coastal areas.

Figure 2-2. Schematic of a typical weather pattern associated with severe ozone episodes in the OTR



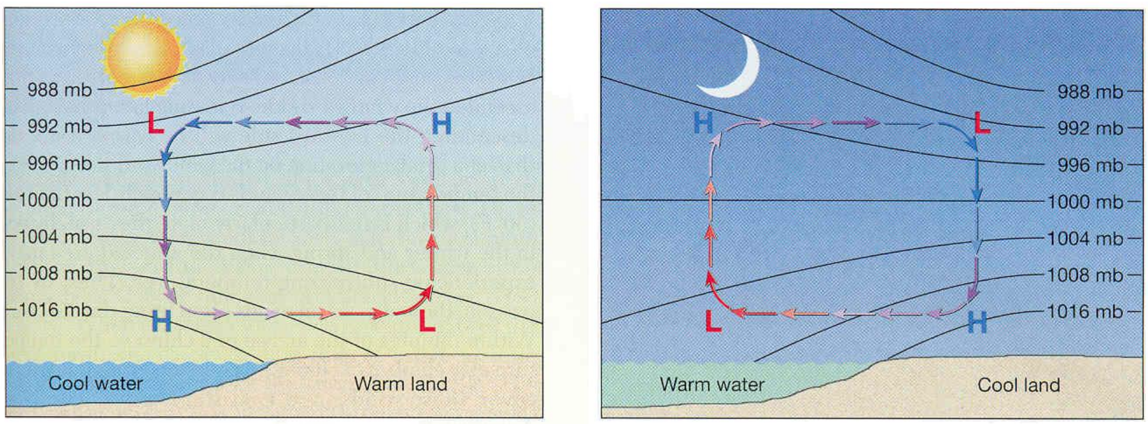
Meteorological processes that transport ozone and its precursors into and within the OTR can roughly be broken down into three levels: ground, mid and upper. The following sections discuss the three wind levels associated with meteorological transport processes in more detail.

2.3.2. Ground level winds

Land, sea, mountain, and valley breezes

In the OTR, land and sea breezes, and mountain and valley breezes can have an important influence on local air quality. These local winds are driven by a difference in temperature that produces a difference in pressure. Figure 2-3 shows a schematic of the formation of a sea breeze. The sea breeze forms in the afternoon when the land is considerably hotter than the ocean or bay. Air then flows from the high pressure over the ocean toward the low pressure over land. At night, the opposite may happen as the land cools to below the ocean's temperature, and a land breeze blows out to sea. Because the nighttime land and water temperature differences are usually much smaller than in the day, the land breeze is weaker than the sea breeze. Sea breezes typically only penetrate a few kilometers inland because they are driven by temperature contrasts that disappear inland.

Figure 2-3. Illustration of a sea breeze and a land breeze



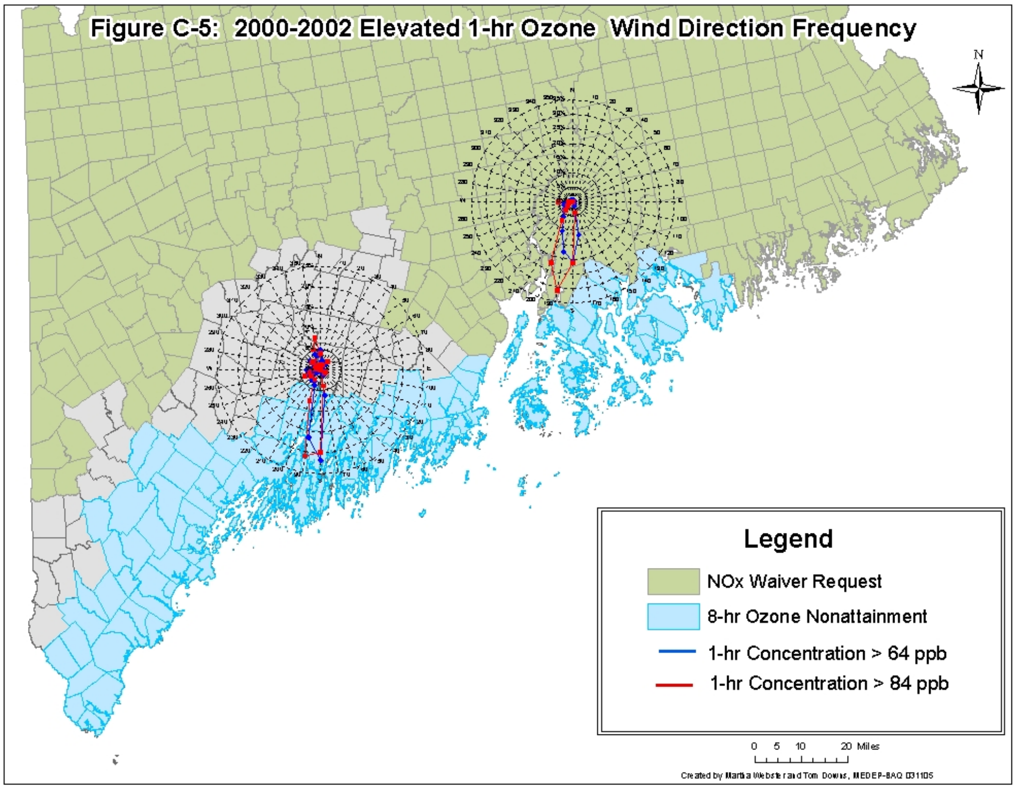
a) Sea Breeze **b) Land Breeze**

Figure from *Lutgens & Tarbuck*, 2001.

Along coastlines, such as coastal New England, sea breezes bring in air pollution transported near the surface over water from urban locations located to the southwest. Figure 2-4 shows the average 2000-2002 wind direction frequency for elevated 1-hour ozone in the vicinity of the Kennebec and Penobscot Rivers in Maine. There is a clear maximum of pollution in the direction of the sea breeze. These sites are located many miles upriver from the coast, and receive ozone transported over water from the sea up through the coastal bays and rivers.

In other cases, sea breezes can affect air quality in coastal cities because, under stagnant synoptic-scale winds, a city's emissions may be recirculated or pushed back over land after having drifted out over the sea earlier. Before sea breeze circulation begins, air pollution from a coastal city can move out over the water. In the absence of a shift in winds due to a sea breeze, the city's air pollution will be blown away. When a sea breeze circulation sets up, however, the polluted air is pushed back toward the city. The sea breeze only pushes a few miles inland, which is where the barrier to mixing lies. Later in the day, the air may be quite clean on the ocean side of the city, but the air is usually quite dirty on the inland side. The city suffers from its own recirculated pollution, and also from the sea breeze that does not allow pollution from the city to flow away from it. Appendix E presents more detailed information on sea breezes and flow over the ocean that contribute to ozone transport in parts of the OTR.

Figure 2-4. Average 2000 – 2002 wind direction frequency associated with elevated one-hour ozone levels in coastal Maine



The bay breeze is a shallow circulation over large inland bays, and may only extend a couple hundred meters above the surface. For example, bay breezes from the Chesapeake Bay often make Baltimore's summertime air quality particularly poor. Air from the city cannot escape directly across the Bay. On the other hand, a few miles closer to the Bay, conditions are often considerably cleaner, since no fresh emissions have gotten into the air there since earlier that morning. Polluted air from the west side of the Bay can still mix upward, where it meets the stronger winds aloft, pass over the Bay breeze circulation and come back down on the east side of the Bay.

Mountain and valley breezes are also driven by a temperature contrast. In the daytime, the side of the mountain will heat up more quickly than the valley, and hence a flow from the valley to the mountain results. At night this flow is reversed as the mountain side cools more quickly than the valley. As a result of these differences in cooling and heating, during the day, warm winds blow up toward the peaks from the valley below, while at night, cool air sinks and flows down the valley, settling in the lowest points. Local topography is very important in generating this phenomenon, making the breeze unique to a particular area.

Mountains and valleys also serve to isolate air in the valleys, while air at the mountaintops may be coming from very far away. Mountain winds, inversions, and mixing are quite complex. On a quiet night, the mountaintop may be in the free troposphere, open to long-range transport, while the valley below is usually capped by a nocturnal inversion, isolating pollution in the valley. Air quality measurements taken during plane flights in the Shenandoah River Valley have shown that the air pollutants in the valley may be rather different from the air at the nearby peaks. Cities on the western side of the mountains will find that the Appalachians are capable of damming pollution up against them (MARAMA, 2005 at pp. 42-43).

Appalachian lee side trough

The Appalachian lee side trough forms on the leeward (downwind) side of the Appalachian Mountains. In a sense, it is the daytime companion to the nocturnal low level jet, discussed below, because it forms under similar stagnant conditions; however, the mechanism for its formation is different. In the OTR, a lee side trough forms when winds blow over the Appalachian Mountains and down the lee side of the mountain range to the coastal plain. As the column descends down the lee side, it stretches vertically and spins faster, pulling up air and creating low pressure, thus rotating the winds to the southwest. Because the air is typically rather dry, and the trough itself is rather weak, it does not usually lead to showers and thunderstorms the way a trough associated with other weather systems would. It does cause winds to shift their direction, so a wind that comes over the mountains from the west will turn and blow from the southwest along the coastal plain. Therefore, when surface winds on the coastal plain are from the southwest, if the Appalachian lee side trough is in place, it may be that the air actually came from the west, descended, and turned. The implication for air quality policy is straightforward. Pollution making its way over the mountains from the west will turn once it reaches the coastal plain and come from the southwest. Because surface winds are then from the southwest, when the Appalachian lee side trough is in place, the limits of a nonattainment area's airshed will be expanded farther south and west than they might otherwise be (MARAMA, 2005 at pp. 41-42). Studies have observed high ozone levels in the OTR associated with a lee side trough east of the Appalachian Mountains and aligned with the Northeast Corridor (Gaza, 1998; Kleinman *et al.*, 2004).

2.3.3. Mid-level winds: Nocturnal low level jets

The nocturnal low level[c] jet is a localized region of rapid winds in the lower atmosphere (typically 500-1500 m above the ground level) that form at night under the same calm conditions often present in a pollution episode. Forming just above the nighttime temperature inversion mentioned previously, the nocturnal low level jet depends on the isolation from the surface provided by the inversion. It is primarily a nocturnal phenomenon that occurs more frequently during the spring and summer seasons.

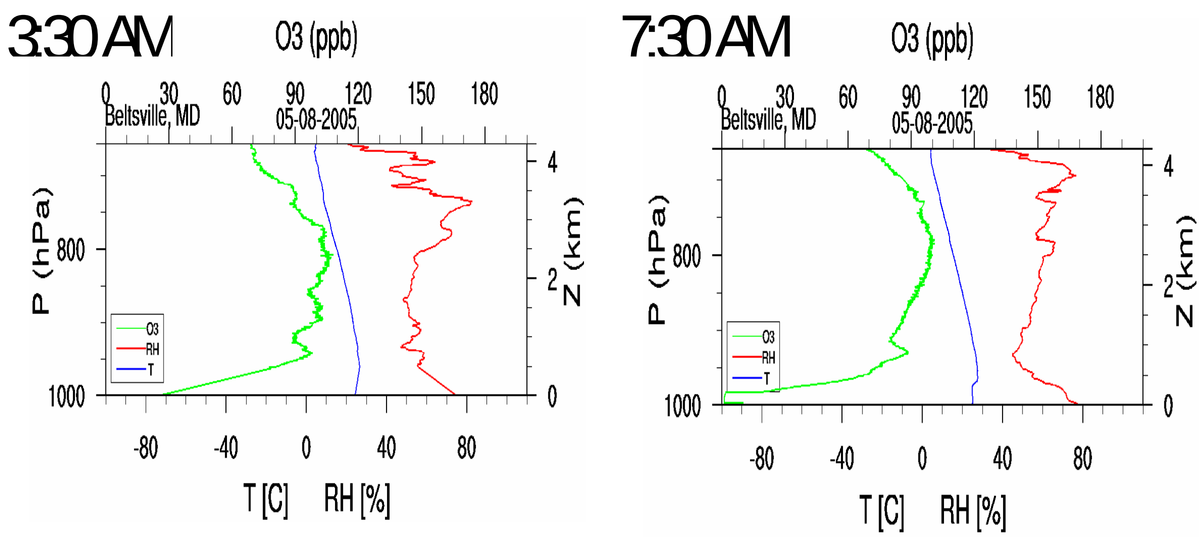
[c] "Low level" in this instance is relative to upper level jets occurring in the upper troposphere to lower stratosphere at heights of 10-15 km above the ground level. It is not a "ground level" phenomenon of the types described in the previous section.

A nocturnal low level jet is generally found where a range of mountains meets a flat plain. There is a particularly strong nocturnal low level jet in the Great Plains of the central United States on the eastern side of the Rocky Mountains. On the Eastern Seaboard, nocturnal low level jets develop along the Atlantic Coastal Plain located to the east of the Appalachian Mountains and to the west of the Atlantic Ocean. While the typical wind speed minimum of a nocturnal low level jet is often defined as more than 12 meters per second (m s^{-1}), Ryan (2004) has proposed a weaker minimum speed criterion of 8 m s^{-1} in the East because of the expected weaker terrain-induced forcing in this region. The mid-Atlantic nocturnal low level jet has a width of 300-400 km (to its half peak value) and a length scale of more than 1500 km, following closely the orientation of the Appalachian Mountains.

The nocturnal low level jet forms when fronts and storm systems are far away. Surface winds are parallel to the terrain, which in the case of the OTR is southwest running over the Atlantic Coastal Plain in front of the Appalachian Mountains. The nocturnal low level jet forms because land cools quicker than the air above it at night. The quickly cooling land results in the air closest to the surface cooling quicker than the air higher above. This creates a temperature inversion that separates the atmosphere into layers. The warmer air above the inversion layer (~200-800 m above ground) loses the frictional effect of the surface and increases in speed. In the eastern United States, the nocturnal low level jet has been observed in Georgia, the Carolinas and Virginia (Weisman, 1990; Sjostedt *et al.*, 1990) in addition to the OTR (NARSTO, 2000). Appendix F describes a specific example of an observed nocturnal low level jet occurring over the length of the OTR during a period of high ozone in July 2002.

Upper air studies have observed ozone being transported overnight in nocturnal low level jets in the OTR (Woodman *et al.*, 2006). The Maryland Department of the Environment (MDE) operates an upper air profiler at the Howard University (HU) site located in Beltsville, Maryland. On August 5, 2005, two helium-filled balloons carrying ozone sensors (called "ozonesondes") were launched at the HU – Beltsville site in the early morning hours. Using the upper air profiler, a nocturnal low level jet of 15 m s^{-1} was observed between approximately midnight and 7:30 a.m. One ozonesonde was launched at 3:30 a.m. and measured an ozone concentration of approximately 95 ppb at about 600 meters, which is within the nocturnal low level jet. Another ozonesonde was launched at 7:30 a.m. and measured an ozone concentration of approximately 90 ppb at about 1,000 meters (Figure 2-5). Each of the ozone concentrations was observed at approximately the same height as the nocturnal temperature inversion as indicated by the kink in the temperature profile. The observations indicated that elevated ozone concentrations are within the nocturnal low level jet.

Figure 2-5. Ozonesonde measurements on August 5, 2005 of elevated ozone concentrations in a nocturnal low level jet above Beltsville, MD



2.3.4. Upper level winds: Ozone and precursors aloft

Theoretical and numerical model simulations have suggested for some time that there is a strong regional component to urban air quality in the northeastern United States (Liu *et al*., 1987; Sillman *et al*., 1990; McKeen *et al*., 1990). Since 1992, over 300 aircraft flights have been made to measure vertical profiles of ozone, the nitrogen oxides, carbon dioxide, sulfur dioxide, and more recently aerosol particles during high ozone episodes.[d] Figure 2-6 shows the results of profiles taken over central Virginia on July 15, 1995, at about 9:00 am on the last day of a four day severe ozone episode. During this episode, winds measured at Sterling, Virginia (IAD) in the 500-3000 m layer, where ozone was at a maximum, were consistently from the west to the north. This was particularly true on July 15. There were no periods of stagnation or reversal of wind direction during this period. Figure 2-6 shows that the ozone mixing ratio above the boundary layer is much larger than that at the ground, peaking at about 1200 meters.

An examination of the various pollutant data in Figure 2-6 helps to identify possible sources of the elevated ozone. It should be noted that while both automobiles and power plants emit NO_X, automobiles emit carbon monoxide (CO) but not sulfur dioxide (SO_2), while power plants emit SO_2 but not CO. The CO profile is not correlated well with the ozone data, indicating that the source of the ozone is not from local sources, i.e., automobiles. The peak in the NO_Y[e] profile at around 800 meters is an indication of "aged air" (hence transport) as a number of studies have found a strong relationship between increasing ozone and NO_Y in photochemically aged air masses (Trainer *et al*.,

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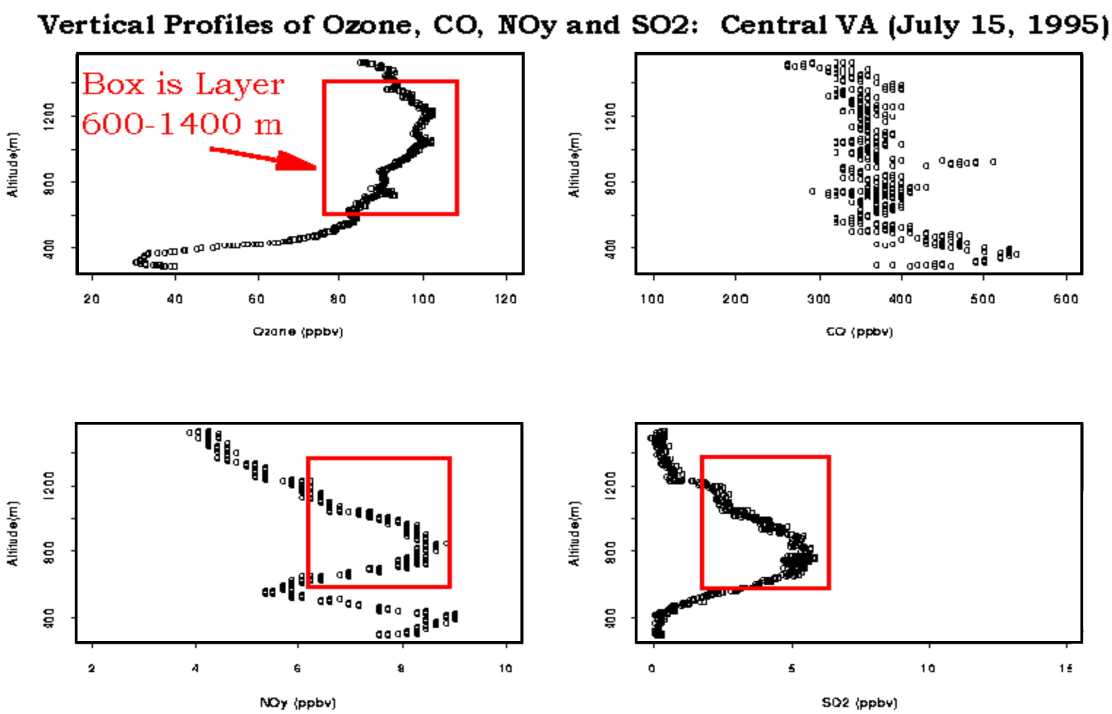
[d] These measurements were made as part of the University of Maryland's RAMMPP (Regional Atmospheric Measurement, Modeling, and Prediction Program) under the sponsorship of ARMA, MARAMA (Mid-Atlantic Regional Air Management Association), VADEQ (Virginia Department of Environmental Quality), and NCDEQ (North Carolina Department of Environmental Quality).

[e] $NO_Y = NO + NO_2$ + all other oxidized nitrogen products of NO_X, excluding N_2O.

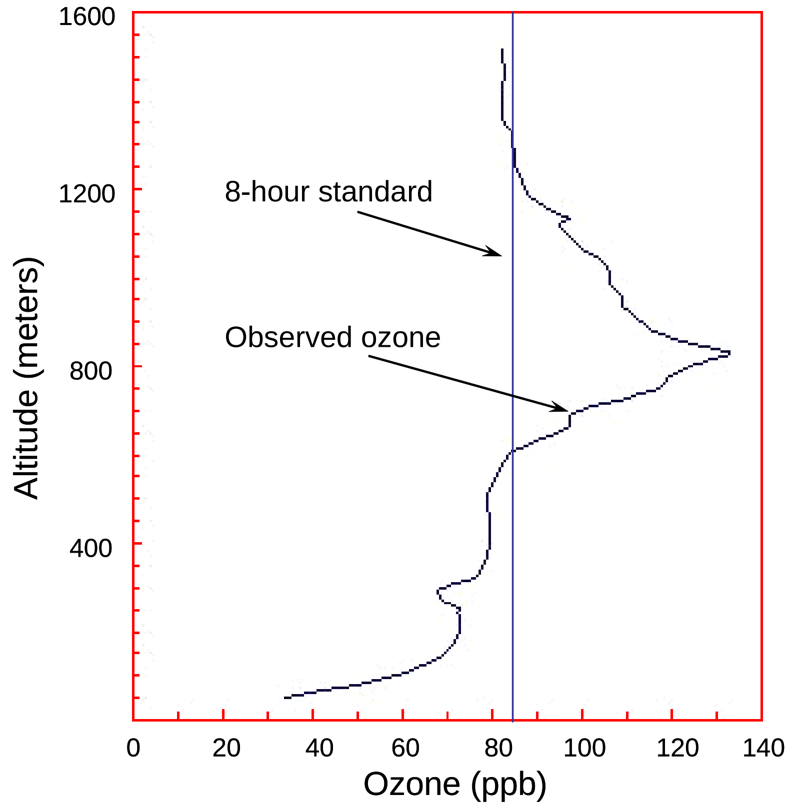
1993; Kleinman *et al.*, 1994; Olszyna *et al.*, 1994). Finally, the peak in the SO_2 profile, which occurs above the nocturnal inversion, is unlikely to come from local sources. Indeed the presence of the SO_2 leads to the conclusion that the air is coming from power plants west of the Appalachian Mountains.

Figure 2-6. Altitude profiles for ozone, carbon monoxide, NO_Y, and SO_2 taken on July 15, 1995



During the same July 1995 period, measurements aloft in other parts of the OTR also recorded high ozone overnight in layers 500 m or higher above the surface. Ozone aloft concentrations above Poughkeepsie, NY and New Haven, CT approached levels of 120 ppb or greater on the night of July 14 (Zhang & Rao, 1999). Figure 2-7 displays the aircraft measurements above Poughkeepsie, NY around 4 a.m. EST.

Figure 2-7. Observed vertical ozone profile measured above Poughkeepsie, NY at about 4 a.m. EST on July 14, 1995



Note: The figure includes a vertical line at 85 ppb for comparing aloft measurements with the 8-hour ozone NAAQS (observed ozone data from Zhang & Rao, 1999).

The aircraft measurements since 1992 reinforce the previously mentioned observations by Clarke and Ching (1983) during the summer of 1979, in which aircraft measurements recorded aloft ozone concentrations of about 90 ppb transported overnight from eastern Ohio and entering into the Northeast Corridor over a region stretching from the lower Hudson River Valley north of New York City down across eastern Pennsylvania and into Maryland just west of Baltimore. The measurements also observed NO_X aloft during the overnight hours that could contribute to additional ozone formation in the OTR as it mixed down to the surface in the morning.

The presence of high levels of ozone and precursors aloft across a large spatial region gives rise to the concept of an "ozone reservoir" existing at night just above the nocturnal inversion boundary. The pollutants in this reservoir are not subject to destruction at the surface, and can be transported long distances in the wind flows created by the synoptic scale weather patterns conducive to ozone formation and transport.

2.4. Atmospheric modeling of regional ozone transport

Modeling results by the USEPA for the Clean Air Interstate Rule (CAIR) further underscore the regional nature of ozone transport into and within the OTR through the various pathways described in the above sections. Based on ozone air quality modeling results, the USEPA tabulated the percent contribution to 8-hour ozone nonattainment in a number of OTR counties. The USEPA modeled the contributions for the base year 2010, which included implementation of the NO_X SIP Call and other existing and promulgated control programs. Table 2-1 shows the CAIR results for the OTR counties (USEPA, 2005, from Table VI-2).

Table 2-1. USEPA CAIR modeling results of percent contribution to 8-hour ozone nonattainment in OTR counties in 2010 due to transport from upwind states

2010 Base Nonattainment Counties	2010 Base 8-Hour Ozone (ppb)	Percent of 8-Hour Ozone due to Transport
Fairfield CT	92	80 %
Middlesex CT	90	93 %
New Haven CT	91	95 %
Washington DC	85	38 %
Newcastle DE	85	37 %
Anne Arundel MD	88	45 %
Cecil MD	89	35 %
Harford MD	93	31 %
Kent MD	86	47 %
Bergen NJ	86	38 %
Camden NJ	91	57 %
Gloucester NJ	91	62 %
Hunterdon NJ	89	26 %
Mercer NJ	95	36 %
Middlesex NJ	92	62 %
Monmouth NJ	86	65 %
Morris NJ	86	63 %
Ocean NJ	100	82 %
Erie NY	87	37 %
Richmond NY	87	55 %
Suffolk NY	91	52 %
Westchester NY	85	56 %
Bucks PA	94	35 %
Chester PA	85	39 %
Montgomery PA	88	47 %
Philadelphia PA	90	55 %
Kent RI	86	88 %
Arlington VA	86	39 %
Fairfax VA	85	33 %

From USEPA, 2005 (Table VI-2)

The CAIR modeling by the USEPA also provides information on the upwind areas (by state) contributing to downwind nonattainment in the OTR counties. Table 2-2 presents the upwind states significantly contributing to 8-hour ozone nonattainment in counties within the OTR, according to significance criteria used by the USEPA (USEPA, 2005, from Table VI-5). The states listed in the table as significantly contributing to downwind ozone nonattainment in the OTR counties include states outside of the OTR, indicating the broad regional scale of the ozone transport problem.

Table 2-2. USEPA CAIR modeling results of upwind states that make a significant contribution to 8-hour ozone in downwind OTR nonattainment counties

Downwind State/County		**Upwind States**									
CT	Middlesex	MA	NJ	NY	OH	PA	VA				
CT	New Haven	MD/DC	NJ	NY	OH	PA	VA	WV			
CT	Fairfield	MD/DC	NJ	NY	OH	PA	VA	WV			
District of Columbia		MD/DC	OH	PA	VA						
DE	New Castle	MD/DC	MI	NC	OH	PA	VA	WV			
MD	Harford	NC	OH	PA	VA	WV					
MD	Kent	MI	NC	OH	PA	VA	WV				
MD	Cecil	MI	OH	PA	VA	WV					
MD	Anne Arundel	MI	NC	OH	PA	VA	WV				
NJ	Ocean	DE	MD/DC	MI	NY	OH	PA	VA	WV		
NJ	Bergen	MD/DC	MI	OH	PA	VA	WV				
NJ	Gloucester	DE	MD/DC	MI	OH	PA	VA	WV			
NJ	Morris	DE	MD/DC	MI	NY	OH	PA	VA	WV		
NJ	Middlesex	DE	MD/DC	MI	NY	OH	PA	VA	WV		
NJ	Hunterdon	DE	MD/DC	OH	PA	VA	WV				
NJ	Camden	DE	MD/DC	MI	OH	PA	VA	WV			
NJ	Mercer	DE	MD/DC	MI	NY	OH	PA	VA	WV		
NJ	Monmouth	DE	MD/DC	MI	NY	OH	PA	VA	WV		
NY	Erie	MD/DC	MI	NJ	PA	VA	WI				
NY	Westchester	MD/DC	NJ	OH	PA	VA	WV				
NY	Richmond	MD/DC	MI	NJ	PA	VA	WV				
NY	Suffolk	CT	DE	MD/DC	MI	NC	NJ	OH	PA	VA	WV
PA	Montgomery	DE	MD/DC	NJ	OH	WV					
PA	Philadelphia	DE	MD/DC	MI	NJ	OH	VA	WV			
PA	Chester	DE	MD/DC	MI	NJ	OH	VA	WV			
PA	Bucks	DE	MD/DC	MI	NJ	OH	VA	WV			
RI	Kent	CT	MA	NJ	NY	OH	PA	VA			
VA	Arlington	MD/DC	OH	PA							
VA	Fairfax	MD/DC	OH	PA	WV						

From USEPA, 2005 (Table VI-5). States are listed alphabetically and not according to order of influence.

While the USEPA modeled 40 eastern U.S. counties as in nonattainment of the 8-hour ozone NAAQS in the 2010 base year (including counties not in the OTR), it projected that only three of those 40 counties would come into attainment by 2010 with the additional NO_X reductions of CAIR (USEPA, 2005, p. 58). The USEPA modeling does predict that ozone will be lower in the remaining nonattainment counties by 2010 due to CAIR, with additional counties coming into attainment by 2015. The CAIR reductions, therefore, will bring the OTR nonattainment counties closer to attainment by 2010, but will not result in attainment for a large majority of OTR counties predicted to be in nonattainment in 2010 prior to implementation of CAIR.

2.5. Summary

This section has summarized current knowledge of the meteorological processes that affect local ozone levels within the OTR. A conceptual description of transport within the OTR can be divided into three principle components: ground level transport at the surface, transport by the nocturnal low level jet, and transport aloft. All three modes of transport depend on the location of the high pressure system. Ground level transport is the result of interaction between the synoptic flow and local effects, such as the sea breeze and the Appalachian lee side trough. Transport within the OTR can occur by the nocturnal low level jet that forms late at night or in the very early morning hours. This phenomenon is a result of the differential heating of the air between the Appalachian Mountains and the Atlantic Ocean. It has been observed throughout the Eastern Seaboard from Georgia to Maine. The nocturnal low level jet can transport ozone that formed within the OTR or was transported into the OTR from outside the region. Transport aloft is dominated by the anti-cyclonic flow around a high pressure system, which can lead to transport of an ozone reservoir into the OTR created by emissions in areas that lie outside the OTR. Local emissions within the OTR add to the polluted air mixing down from above that arrived from more distant locations.

Atmospheric modeling by the USEPA underscores the observations that the OTR's ozone problem has contributions from outside and upwind of the region. Pollution sources in the Ohio River Valley and the Southeast significantly contribute to ozone nonattainment problems in various portions of the OTR.

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3. OZONE-FORMING POLLUTANT EMISSIONS

The pollutants that affect ozone formation are volatile organic compounds (VOCs) and nitrogen oxides (NO_X). The emissions dataset presented for the OTR in the first section below is from the 2002 MANE-VU (Mid-Atlantic/Northeast Visibility Union) Version 2 regional haze emissions inventory. MANE-VU is the regional planning organization (RPO) for the mid-Atlantic and Northeast states coordinating regional haze planning activities for the region. While the context of the MANE-VU inventory is regional haze, it includes inventories of NO_X and VOCs that also inform air quality planners on sources important to ozone formation.[f] To provide a fuller context of precursor emissions contributing to regional ozone affecting the OTR, the section following the MANE-VU information presents NO_X and VOC emissions information from the 2002 National Emissions Inventory (NEI) for states in adjacent RPOs.

3.1. Emissions inventory characteristics in the OTR

3.1.1. Volatile organic compounds (VOCs)

Existing emission inventories generally refer to VOCs as hydrocarbons whose volatility in the atmosphere makes them particularly important in enhancing ozone formation in the presence of NO_X.

As shown in Figure 3-1, the VOC inventory for the OTR is dominated by mobile and area sources. Most VOC emissions in the OTR, however, come from natural sources, which are not shown in the figure. Among the human-caused VOC emissions, on-road mobile sources of VOCs include exhaust emissions from gasoline passenger vehicles and diesel-powered heavy-duty vehicles as well as evaporative emissions from transportation fuels. VOC emissions may also originate from a variety of area sources (including solvents, architectural coatings, and dry cleaners) as well as from some point sources (e.g., industrial facilities and petroleum refineries).

Naturally occurring (biogenic) VOC emissions are caused by the release of natural organic compounds from plants in warm weather. Many natural VOCs that contribute to ozone formation are highly reactive. Isoprene, for example, is a highly reactive five-carbon natural VOC emitted from mostly deciduous trees (e.g., oaks) that plays an important role in enhancing regional ozone formation across the eastern U.S. (Trainer *et al.*, 1987; Chameides *et al.*, 1988). Because biogenic VOC emissions are large and reactive, they are the most important part of the VOC inventory for understanding and predicting ozone formation. Biogenic VOCs are not included in Figure 3-1, but nationally, they represent roughly two-thirds of all annual VOC emissions (USEPA, 2006a). Modeling biogenic emissions can be difficult as it requires simulating biological responses to a range of environmental conditions, such as leaf temperature and the amount of sunlight reaching a leaf surface.

[f] The description of OTR state inventories discussed in the first section does not include the portion of Virginia in the Washington, DC metropolitan area. Information for Virginia is in the following section and comes from the 2002 National Emissions Inventory.

Figure 3-1. 2002 MANE-VU state VOC inventories in the OTR

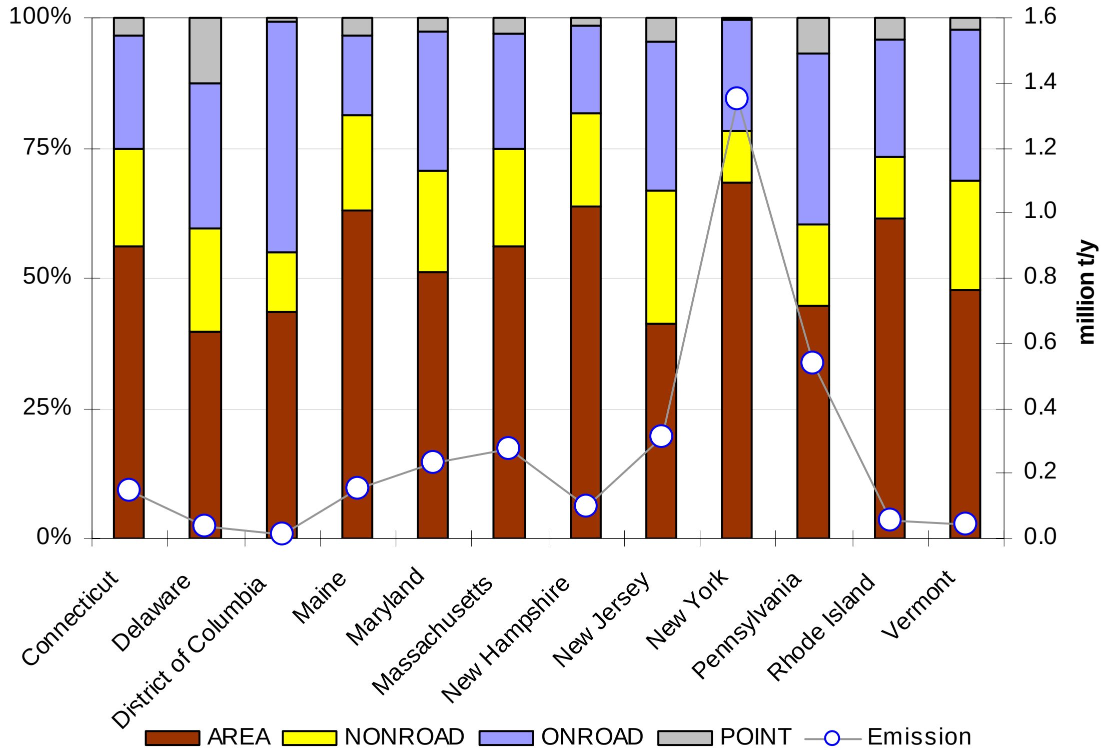


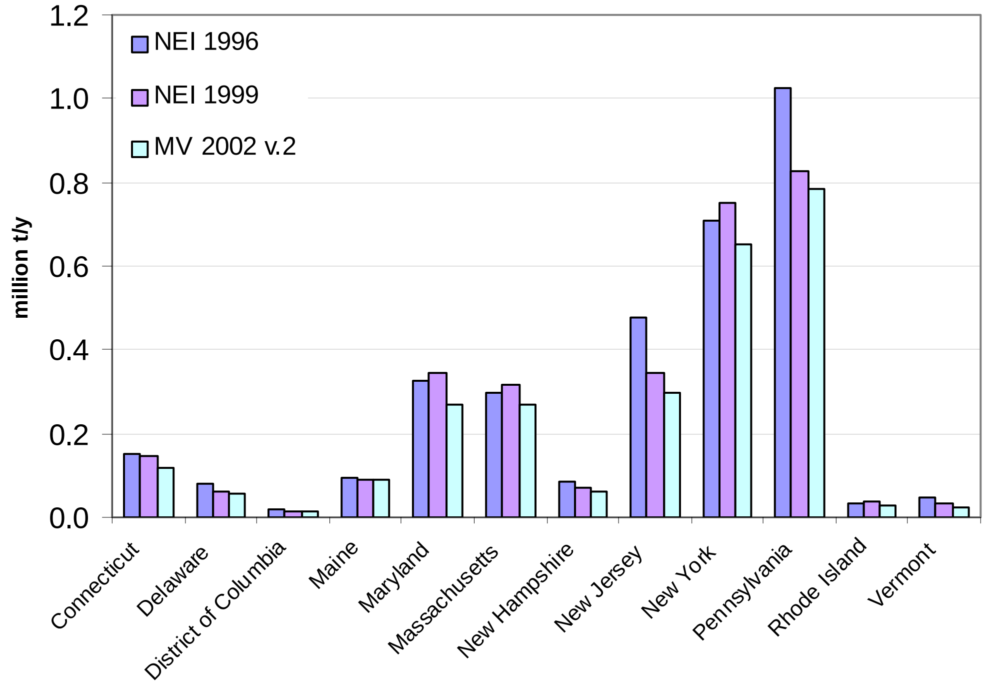
Figure key: Bars = Percentage fractions of four source categories; Circles = Annual emissions amount in 10^6 tons per year. The Virginia portion of the Washington, DC metropolitan area is not shown in the figure.

3.1.2. Oxides of nitrogen (NO_X)

NO_X emissions are a fundamental necessity for the atmospheric formation of ozone. Without NO_X, ozone formation during warm summer days would virtually cease, regardless of the amount of reactive VOCs present. By contrast, without VOCs, NO_X would still produce ozone in the presence of sunlight, albeit at a much diminished efficiency.

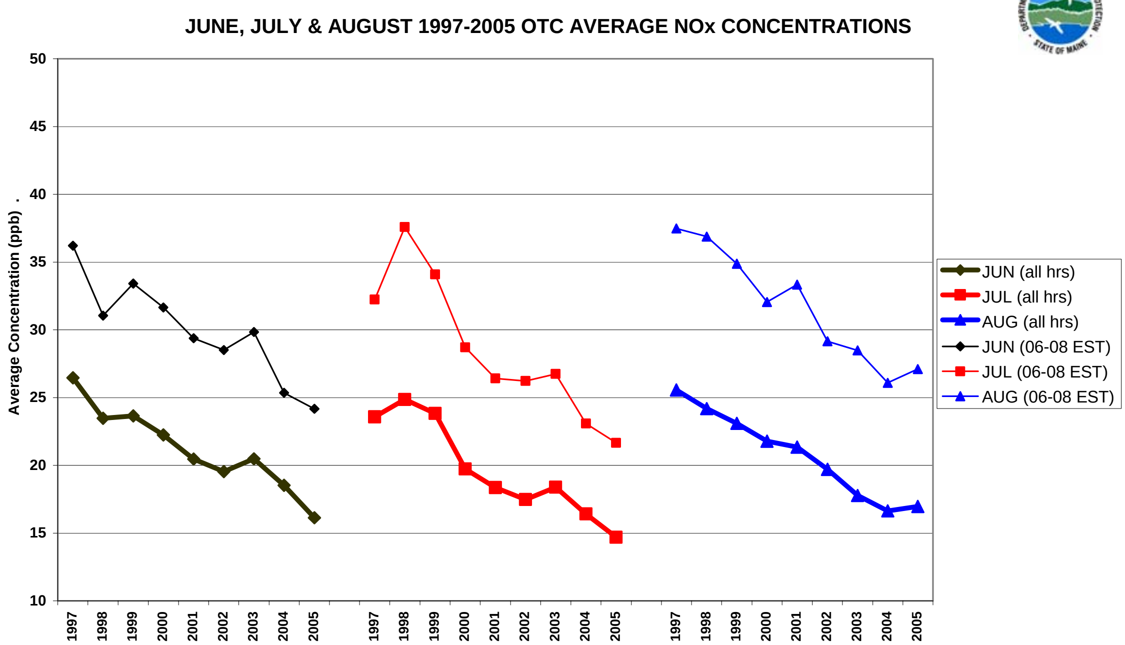
Figure 3-2 shows NO_X emissions in the OTR at the state level. Since 1980, nationwide emissions of NO_X from all sources have shown little change. In fact, emissions increased by 2 percent between 1989 and 1998 (USEPA, 2000). This increase is most likely due to industrial sources and the transportation sector, as power plant combustion sources have implemented modest emissions reductions during the same time period. Most states in the OTR experienced declining NO_X emissions from 1996 through 2002, except Massachusetts, Maryland, New York, and Rhode Island, which show an increase in NO_X emissions in 1999 before declining to levels below 1996 emissions in 2002.

Figure 3-2. State level nitrogen oxides emissions



Monitored ambient NO_X trends during the summer from 1997 to 2005 corroborate the downward trend in NO_X emissions seen in the emissions inventories for the OTR. As seen in Figure 3-3, the 24-hour (lower trend lines) and 6 a.m.-8 a.m. (upper trend lines) NO_X concentrations indicate decreases in NO_X over this time period in the OTR. The NO_X reductions likely come from decreasing vehicle NO_X emissions due to more stringent motor vehicle standards as well as NO_X reductions from the OTR NO_X Budget Program and the NO_X SIP Call (mainly power plants).

Figure 3-3. Plot of monitored NO_X trends in OTR during 1997-2005



Note: Upper trend lines correspond to ambient NO_X measured from 0600-0800 EST in the morning. Lower trend lines correspond to NO_X measured over entire day (created by Tom Downs, Maine Department of Environmental Protection).

Power plants and mobile sources generally dominate state and national NO_X emissions inventories. Nationally, power plants account for more than one-quarter of all NO_X emissions, amounting to over six million tons. The electric sector plays an even larger role, however, in parts of the industrial Midwest where high NO_X emissions have a particularly significant power plant contribution. By contrast, mobile sources dominate the NO_X inventories for more urbanized mid-Atlantic and New England states to a far greater extent, as shown in Figure 3-4. In these states, on-road mobile sources — a category that mainly includes highway vehicles — represent the most significant NO_X source category. Emissions from non-road (i.e., off-highway) mobile sources, primarily diesel-fired engines, also represent a substantial fraction of the inventory.

Figure 3-4. 2002 MANE-VU state NO_X inventories in the OTR

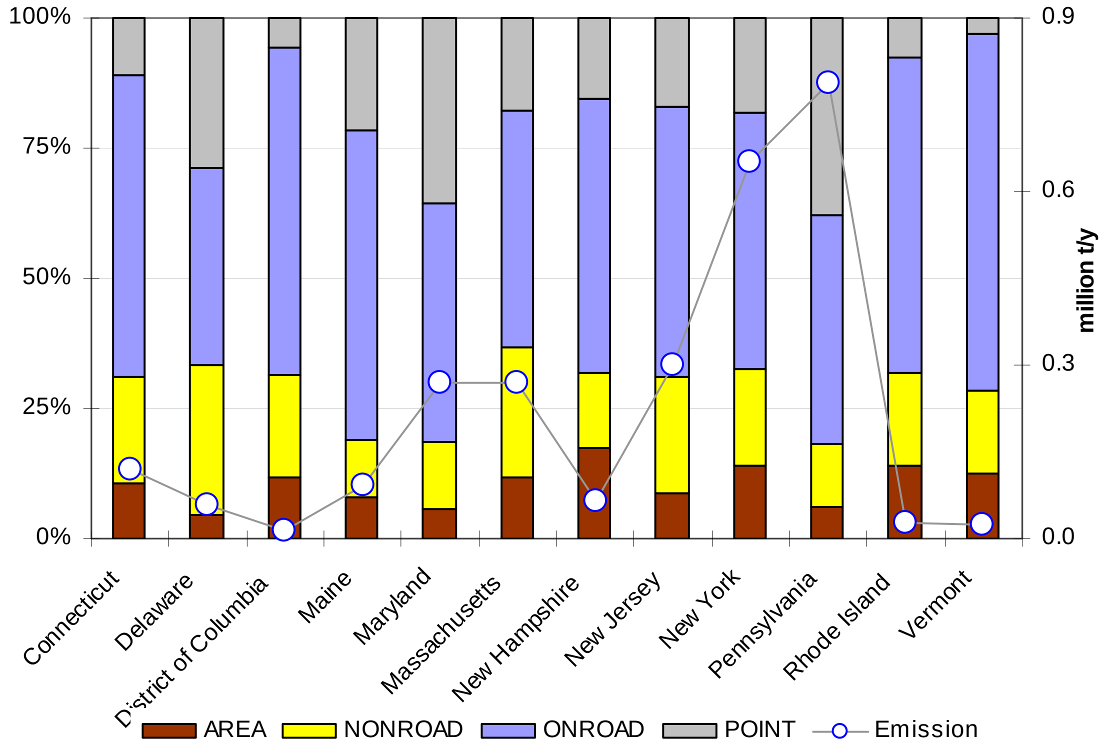


Figure key: Bars = Percentage fractions of four source categories; Circles = Annual emissions amount in 10^6 tons per year. The Virginia portion of the Washington, DC metropolitan area is not shown in the figure.

3.2. Emissions inventory characteristics outside the OTR

NO_X and VOC emissions in the OTR are only one component of the emissions contributing to ozone affecting the OTR. As regional modeling for the NO_X SIP Call and CAIR have shown, emission sources, primarily of NO_X, located outside the OTR can significantly contribute to ozone transported into the OTR. Here we present regional emissions information grouped by the three eastern RPOs – MANE-VU, VISTAS (Visibility Improvement State and Tribal Association of the Southeast), and the MWRPO (Midwest RPO). Table 3-1 lists the states in each RPO.

The inventory information is extracted from the USEPA final 2002 National Emissions Inventory (NEI). For consistency, the MANE-VU information here also comes from the 2002 NEI rather than from the MANE-VU Version 2 regional haze emissions inventory described above. The differences between the inventories are not great, as the NEI and the MANE-VU Version 2 inventory are both based on the same inventory information provided by the states.

Table 3-1. Eastern U.S. RPOs and their state members

RPO	State
MWRPO	Illinois
MWRPO	Indiana
MWRPO	Michigan
MWRPO	Ohio
MWRPO	Wisconsin
MANE-VU	Connecticut
MANE-VU	Delaware
MANE-VU	District of Columbia
MANE-VU	Maine
MANE-VU	Maryland
MANE-VU	Massachusetts
MANE-VU	New Hampshire
MANE-VU	New Jersey
MANE-VU	New York
MANE-VU	Pennsylvania
MANE-VU	Rhode Island
MANE-VU	Vermont
VISTAS	Alabama
VISTAS	Florida
VISTAS	Georgia
VISTAS	Kentucky
VISTAS	Mississippi
VISTAS	North Carolina
VISTAS	South Carolina
VISTAS	Tennessee
VISTAS	Virginia
VISTAS	West Virginia

Table 3-2 presents VOC emissions by source sector and RPO for the eastern United States. The NO_X emissions by source sector and RPO are presented in Table 3-3. Regionally, NO_X emissions are more important with respect to regional ozone formation and transport. NO_X emissions in combination with abundant naturally occurring VOC emissions from oaks and other vegetation have been shown to be important sources of regional ozone in the eastern U.S. (Trainer et al. 1987; Chameides et al. 1988).

Table 3-2. VOC emissions in eastern RPOs

RPO	Point	Area	On-road	Non-road	Total
MWRPO	234,938	1,182,186	660,010	492,027	2,569,160
MANE-VU	93,691	1,798,158	793,541	494,115	3,179,504
VISTAS	458,740	2,047,359	1,314,979	609,539	4,430,617

Table 3-3. NO_X emissions in eastern RPOs

RPO	Point	Area	On-road	Non-road	Total
MWRPO	1,437,284	184,790	1,290,178	723,844	3,636,096
MANE-VU	680,975	268,997	1,297,357	534,454	2,781,783
VISTAS	2,094,228	266,848	2,160,601	812,615	5,334,293

3.3. Are NO_X or VOC control strategies most effective at reducing ozone?

The effectiveness of a NO_X-focused or VOC-focused control strategy to reduce ozone is not constant by location or emissions; rather it is a changing chemical characteristic of an air parcel affecting a particular location. As a result, the effectiveness of a NO_X or VOC-focused control strategy can vary within an air parcel as it dynamically evolves over time with transport, dispersion, and photochemical aging (NARSTO, 2000).

On a regional basis, OTAG, CAIR and other modeling studies have consistently shown that NO_X reductions have the greatest impact on regional ozone concentrations, while VOC reductions have more local impacts. This is largely a result of significant naturally occurring VOC emissions (especially isoprene) in large forested regions of the eastern U.S. Real-world results from regional NO_X reductions at power plants (i.e., the NO_X SIP Call) are now indicating that significant ozone reductions are occurring on a regional basis as a result of regional NO_X strategies. A recent USEPA report finds a strong association between areas with the greatest NO_X emission reductions due to the NO_X SIP Call and downwind sites exhibiting the greatest improvement in ozone in 2005 (USEPA, 2006b).

As a general rule, VOC reductions may be effective at reducing urban-scale ozone pollution in lieu of or in combination with local NO_X reductions, while regional NO_X controls are most effective at reducing regional ozone. While a general rule can be outlined in evaluating the potential effectiveness of NO_X and VOC-focused control strategies, the optimal strategy for a specific location will depend on the particular circumstances of that location. Exceptions to a VOC-only strategy for an urban area can occur when the urban area has large natural VOC emissions, ozone is transported from upwind, or there is recirculation of aged local pollution (e.g., sea breeze effect). Furthermore, because the conditions causing individual ozone episodes can vary, a given urban area may change in sensitivity between a NO_X and VOC-focused strategy depending on a particular episode’s conditions (NARSTO, 2000). Therefore, the appropriate combination of VOC and NO_X controls at the local level depends on local circumstances with the realization that a single approach focusing on NO_X or VOC-only controls is not necessarily effective for all episode types. It is clear, however, that regional NO_X reductions provide regional ozone reductions, and this will influence ozone levels being transported into local urban areas.

3.4. Summary

There are large emissions of VOCs and NO_X within and outside the OTR that contribute to local and regional ozone problems. Naturally occurring VOC emissions play an important role in combination with human-caused NO_X emissions in forming regional ozone across large sections of the eastern U.S. Regional NO_X control strategies are demonstrating success in reducing regional ozone. On a more local scale, some combination of VOC and NO_X controls may be needed, with the specific combination dependent upon local circumstances.

References

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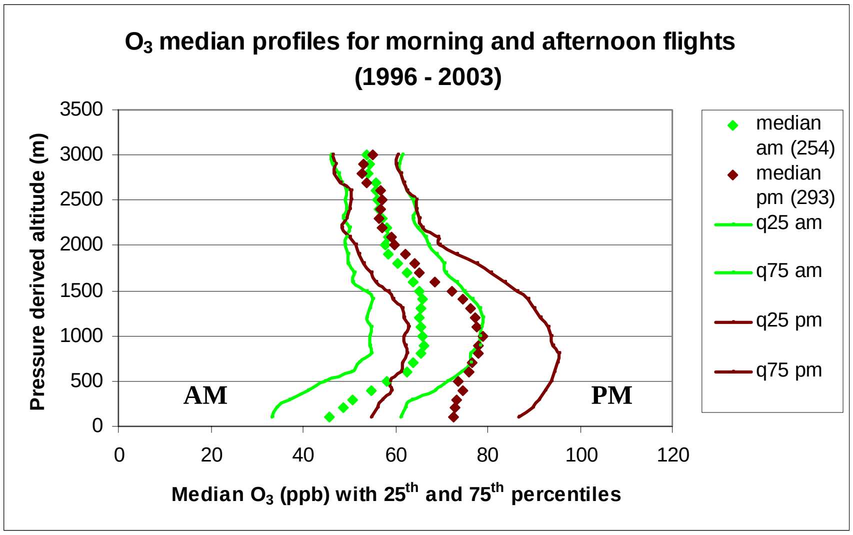
4. WHAT WILL IT TAKE TO CLEAN THE AIR? – LINKING THE SCIENCE TO POLICY

4.1. The three phases of a bad ozone day and the ozone reservoir

With the atmospheric chemistry, meteorology, and air emission inventory elements presented in the previous sections, a conceptual description emerges of ozone problem in the OTR. Consider a typical "day," defined as starting at sunset, for a severe ozone event associated with a high pressure system. Conceptually, a bad ozone day can be considered as occurring in three phases. During phase one, a nocturnal inversion forms as the temperature of the earth drops following sunset, isolating the surface from stronger winds only a few hundred feet overhead. Ozone near the surface cannot mix with ozone above and is destroyed as it reacts with the Earth's surface. In a city, fresh NO_X emissions react with ozone, further reducing its concentration, so that by morning, very little ozone is left below the nocturnal inversion. At this time, the nocturnal inversion is at its strongest, and winds at the surface are typically calm.

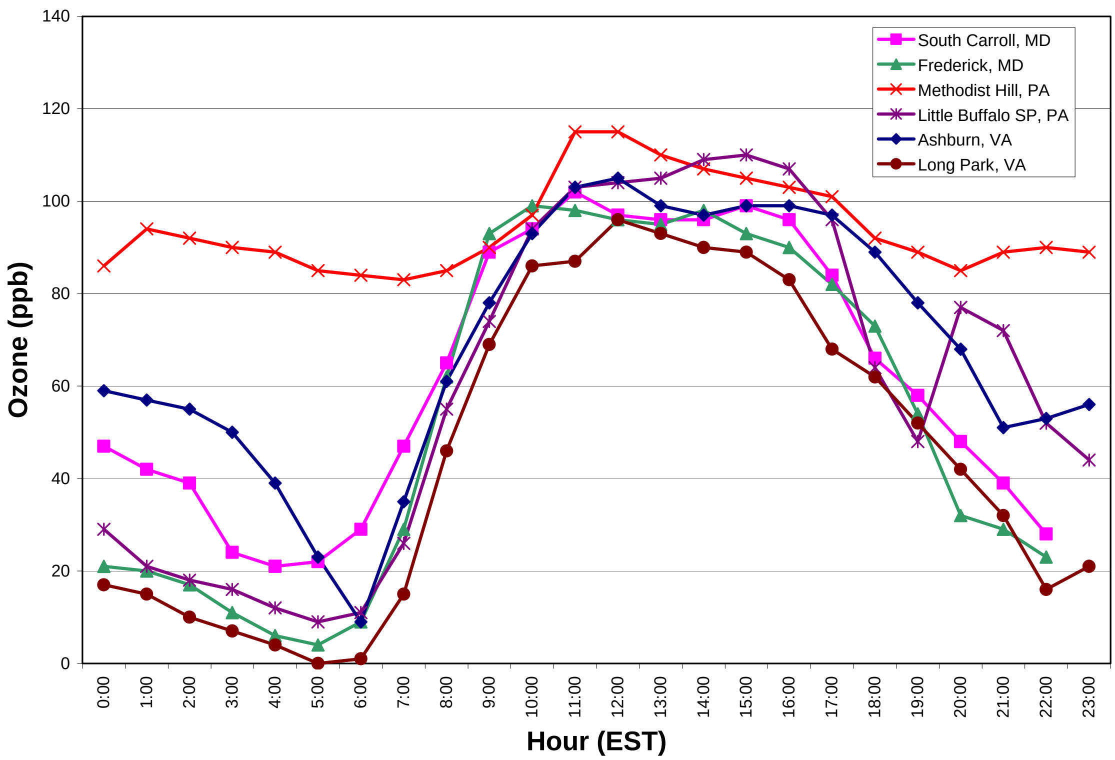
Above the nocturnal inversion, the situation is quite different. Ozone and its precursors, both from the previous day's local emissions and from transport, remain largely intact. There are no surfaces to react with the ozone and a large reservoir of ozone remains above the inversion. During phase two of a bad ozone day, the nocturnal inversion breaks down at mid-morning, with the result that the ozone and precursors above the inversion can now mix with the air near the surface. The result of this mixing is a sudden change in ozone. Figure 4-1 shows median ozone profiles for morning and afternoon aircraft flights from 1996 – 2003. One can clearly see the breakdown of the nocturnal inversion throughout the day (Hudson, 2005).

Figure 4-1. Median ozone profiles for morning and afternoon flights from 1996 – 2003



In phase three of a bad ozone day, ozone concentrations reach their highest levels in the afternoon through the combined accumulation of local pollution produced that day mixed with the transported regional pollution load brought in overnight from the ozone reservoir. Figure 4-2 shows this graphically for the southern OTR. The ozone monitor at Methodist Hill, PA is a high elevation site located at 1900 ft in altitude in south central Pennsylvania, and is above the nocturnal inversion. In the early morning hours of August 12, 2002 (e.g., 5 a.m.), it recorded ozone concentrations above 80 ppb, which was much higher than what other lower elevation monitors in the region were recording (e.g., Little Buffalo State Park, PA, South Carroll County, MD, Frederick, MD, Ashburn, VA, Long Park, VA). Due to the lack of sunlight necessary to produce ozone photochemically during nighttime hours, the high ozone levels seen at Methodist Hill, PA indicate the presence of a significant ozone reservoir above the nocturnal inversion layer produced during daylight hours at some earlier point in time and transported into the region. With the break up of the nocturnal inversion after sunrise (e.g., starting about 7 a.m.), ozone concentrations at the lower elevation monitors show a rapid increase. This reflects the mixing down of the ozone reservoir from higher altitude to the surface in combination with local ozone production near the surface now that the sun has begun inducing its photochemical production.

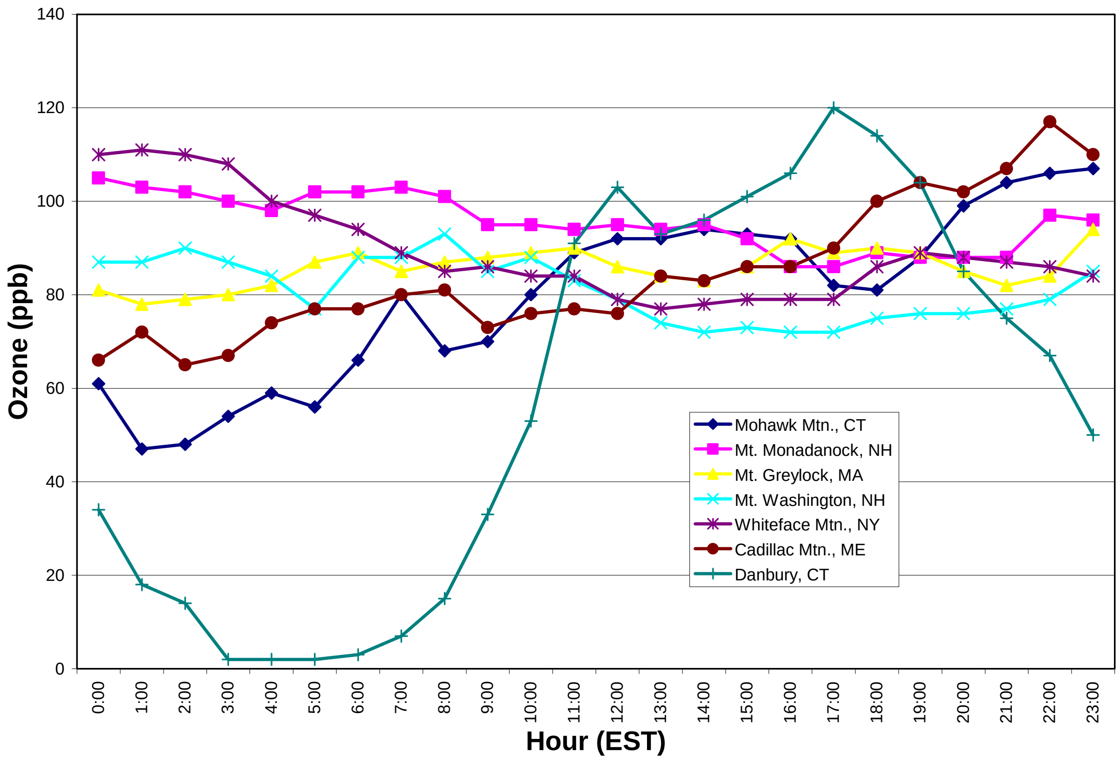
Figure 4-2. Hourly ozone profiles in the southern OTR, August 12, 2002



The ozone reservoir extends across the OTR, as seen on the same night in high elevation ozone monitoring sites in the northern OTR. Figure 4-3 shows the hourly ozone concentrations measured on August 12, 2002 at Mohawk Mountain, CT, Cadillac Mountain, ME, Mt. Greylock, MA, Mt. Monadanock, NH, Mt. Washington, NH, and

Whiteface Mountain, NY. As with Methodist Hill, PA on this day, these sites show elevated ozone concentrations during nighttime hours, as compared to lower elevation sites below the nocturnal inversion (e.g., Danbury, CT). By mid-day, however, the nocturnal boundary layer has broken down, mixing the transported ozone from the reservoir above into the locally produced ozone below. Appendix G provides more detail on contributions to the ozone reservoir within and outside the OTR.

Figure 4-3. Hourly ozone profiles in the northern OTR, August 12, 2002



Data provided by Tom Downs, Maine Department of Environmental Protection.

4.2. Chronology of an ozone episode – August 2002

The chronology of an historical ozone episode occurring in the OTR from August 8 to August 16, 2002 provides a real-world example that pieces together the elements of the ozone conceptual description given in this document. Surface maps from the period provide a synoptic overview of major weather systems that were influencing air quality across the OTR during that time. Meteorological insights combined with ozone concentration information provide a picture of the evolving ozone episode on a day-by-day basis. Figure 4-4, Figure 4-5, and Figure 4-6, respectively, show eight-panel displays of surface weather maps, back trajectories, and 8-hour maximum ozone concentrations from each day. The daily progression shows the formation of high ozone that shifts from west to east, and ultimately northward, during successive days of the episode according to local ozone formation and transport shaped by wind patterns within and outside of the OTR.

The August 2002 episode began with a slow-moving high pressure system centered over the Great Lakes initiating a northerly flow over the OTR on August 8. Over the next several days, the high drifted southeastward and became extended across a large part of the eastern U.S., bringing high temperatures to the region. Calm conditions west of the OTR on August 10 were pivotal for the formation of ozone, which first began building in the Ohio River Valley. Over the next four days, 8-hour ozone concentrations climbed well above the 85 ppb (0.08 ppm) NAAQS over a wide area of the OTR. Large parts of the heavily populated Northeast Corridor experienced 8-hour ozone levels above 100 ppb during the height of the episode, which far exceeded the 85 ppb NAAQS.

The following chronology provides a day-by-day evolution of the August 2002 ozone episode. Parts of this description are taken from Ryan (2003).

August 8: A high pressure system over the Great Lakes produces NW-N prevailing surface winds (~4-8 mph) throughout the region. Maximum daily temperatures approach or exceed 80º F.

August 9: Wind speeds fall off but the direction remains NW-N as the high moves into the Pennsylvania-New York region. Temperatures rise as cloud cover declines. Background ozone levels begin to build in the Ohio River Valley with 8-hour maximum concentrations reaching the 60-80 ppb range.

August 10: High pressure is directly over the mid-Atlantic. With dew points still in the mid-50º's F, the skies are extraordinarily clear throughout the day. Temperatures (except in northern-most areas) approach 90º F while surface-level winds turn to more southerly directions. With high pressure overhead, the back trajectories suggest very light winds and recirculation. Calm conditions through the morning hours in the lower Ohio River Valley promote increasingly higher levels of ozone noted in surface observations – now reaching above the 85 ppb 8-hour ozone NAAQS over much of Indiana, Ohio, and other states along the Ohio River, as well as states around Lake Michigan and large portions of the southeastern U.S. Ozone levels above the 8-hour NAAQS now begin appearing for the first time in the western and southern parts of the OTR.

August 11: Surface high pressure drops slowly southeastward across the mid-Atlantic with the center in western North Carolina drifting to coastal South Carolina during the day. The upper level ridge has also moved east and is located over the mid-Atlantic. Circulation around the high becomes well established. A surface-level trough descends from north of the Great Lakes during the day, passes eastward through the Ohio River Valley and stalls over the Allegheny Mountains and southward. Peak temperatures are in the low to mid-90º's F. Morning winds are low-to-calm in the area east of the Mississippi – the area of ozone now reaches from eastern Wisconsin to Tennessee and eastward to Georgia up through the Carolinas into the OTR, covering most of Pennsylvania, New York, New Jersey, Connecticut, Rhode Island and Massachusetts. Winds are generally south to southwest as is reflected in the boundary layer back trajectories. The key factor driving local ozone production appears to be a very stable boundary layer. The 8 a.m. sounding at the Washington-Dulles airport shows a very strong low-level inversion from 950-900 mb with a deep residual layer beneath a continuing strong subsidence inversion – now based at 760 mb.

August 12: The upper level ridge remains quasi-stationary with its axis over the mid-Atlantic. The center of high pressure at 850 mb is over North Carolina and Georgia. At the surface, the characteristic Appalachian lee side trough forms. Temperatures exceed

90º F throughout the OTR except in coastal Maine. Winds are fairly strong from the northwest. This is reflected in the back trajectories that show a shift to westerly transport. Elevated upwind ozone concentrations at 11 a.m. on August 11 occur in the vicinity of the origin of the back trajectories, on the order of 78-86 ppb. Ozone concentrations fall this day west of the Appalachians but increase markedly across the mid-Atlantic. The area of highest ozone has pushed eastward and now extends from southern Maine across central Pennsylvania down through Maryland into the Carolinas, Georgia, and eastern Tennessee. Ozone builds throughout the day as circulation forces it to channel northeast between the stalled trough and a cold front approaching from the Midwest. Some of the highest 8-hour concentrations occur through the central to southern OTR on this day.

August 13: Calm conditions prevail as the trough reaches coastal New Jersey by 8 a.m. Generally clear skies allow temperatures to reach the mid-90º's F everywhere except in coastal Maine. Dew points, which had been rising since August 8, reach the upper 60º's F. A morning sounding at the Washington-Dulles airport showed a continuing strong low level inversion with a residual mixed layer to 850 mb ending just beneath a weak secondary inversion. The cap aloft has lifted to ~ 630 mb and the sounding is more unstable compared to previous day's between the two inversion layers. The Appalachian lee side trough continues in place from late on August 12. As is typically the case, the highest ozone concentrations are found in proximity to this boundary. The highest 8-hour ozone concentrations are along the eastern portions of the OTR from northeastern Virginia through New Jersey, Long Island, Connecticut, and into eastern Massachusetts. By 8 p.m., showers associated with the approaching cold front have reached into Ohio.

August 14: By 8 a.m., the trough has dissipated and the high is moving offshore, resulting in an increasing southerly wind component, which pushes maritime air northward. Dew points remain in the upper 60º's F and peak temperatures reach into the 90º's F everywhere and top 100º F in several locations. Ozone concentrations build again, with the highest levels concentrated in the central OTR from eastern Pennsylvania across to Massachusetts. A "hotspot" of ozone appears in upstate New York at the eastern end of Lake Ontario, and may be the result of transport from the west across the lake. Ozone concentrations decrease south and west of Baltimore and along coastal New Jersey as cleaner maritime air pushes in from the south.

August 15: This episode ends in a very different manner than the standard high ozone episode. Instead of the passage of a sharp cold front, this episode ends gradually as cleaner air sweeps north, winds increase, and the atmosphere steadily destabilizes. Ozone concentrations fall across the middle and lower OTR as low level flow becomes more southeast and the Bermuda high fills in westward. The highest levels, still exceeding the 8-hour ozone NAAQS, now occur in the northern reaches of the OTR in upstate New York, Vermont, New Hampshire, and Maine.

August 16: Cloud cover spreads over the region with ozone falling further. The new high building into the upper Midwest pushes the remains of the showers out of the Northeast. A spot of high ozone persists in central New Jersey. This is the last exceedance day in a string of seven exceedance days within the OTR during this extended episode.

Figure 4-4. Surface weather maps for August 9-16, 2002

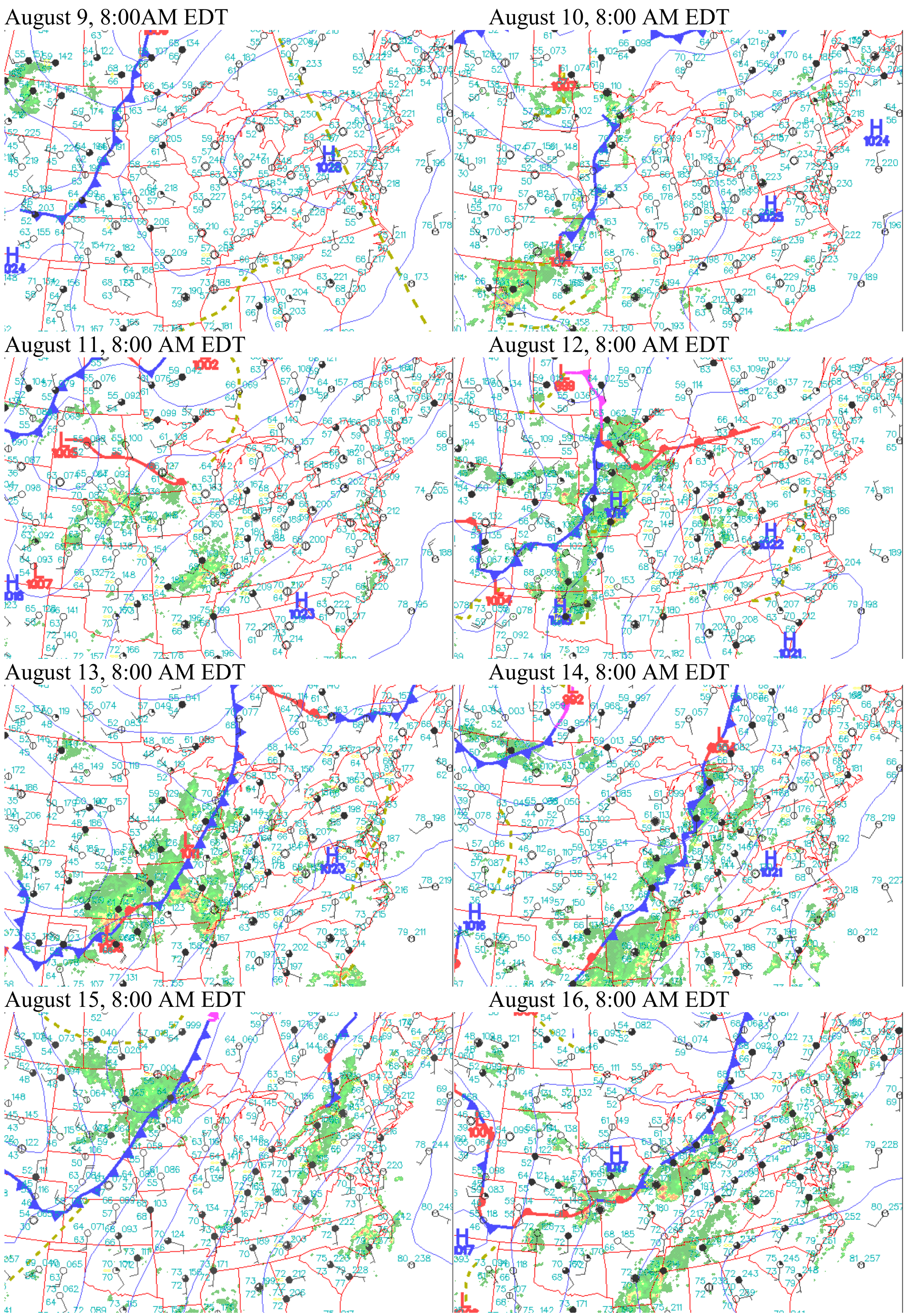


Figure 4-5. HYSPLIT 72-hour back trajectories for August 9-16, 2002

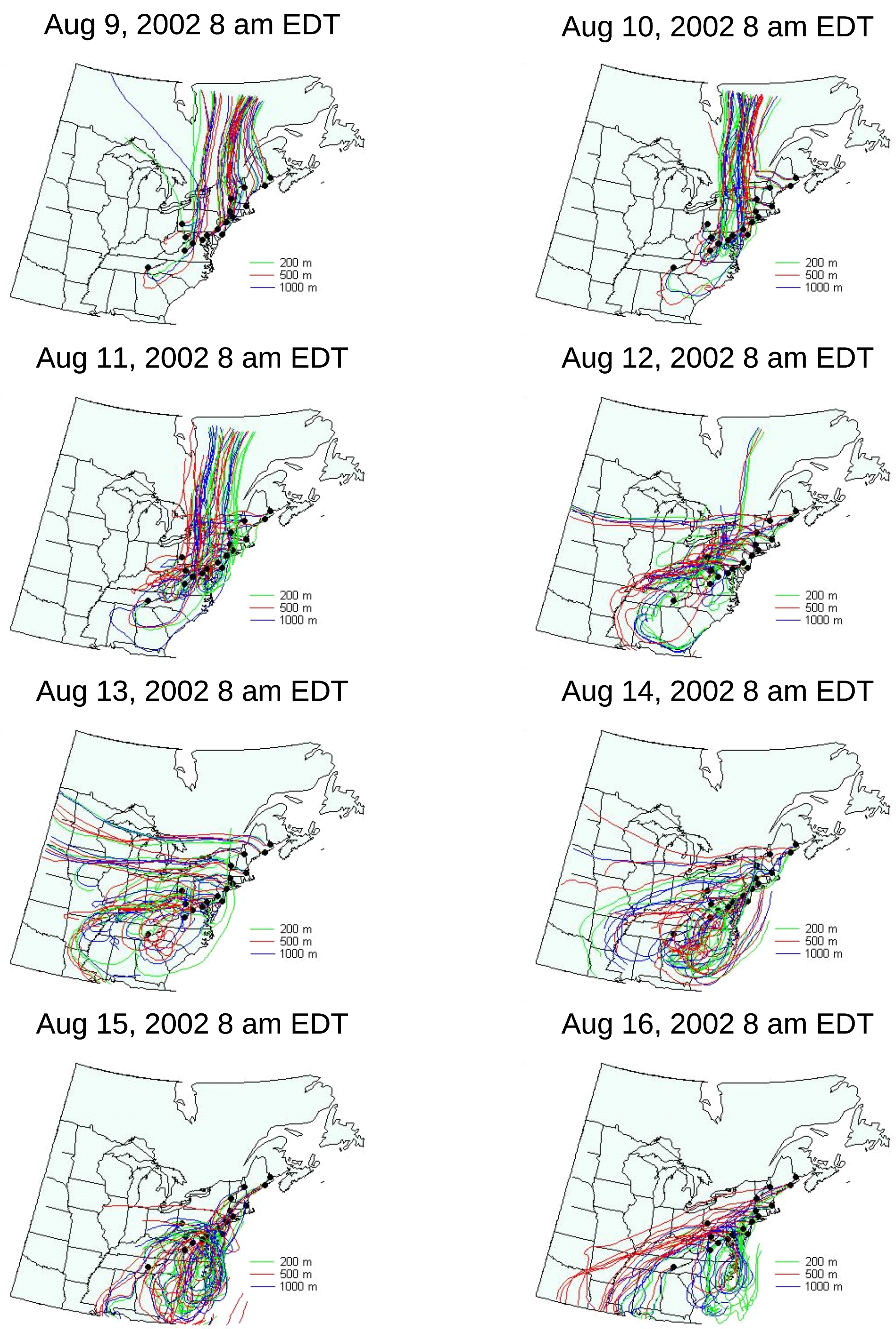
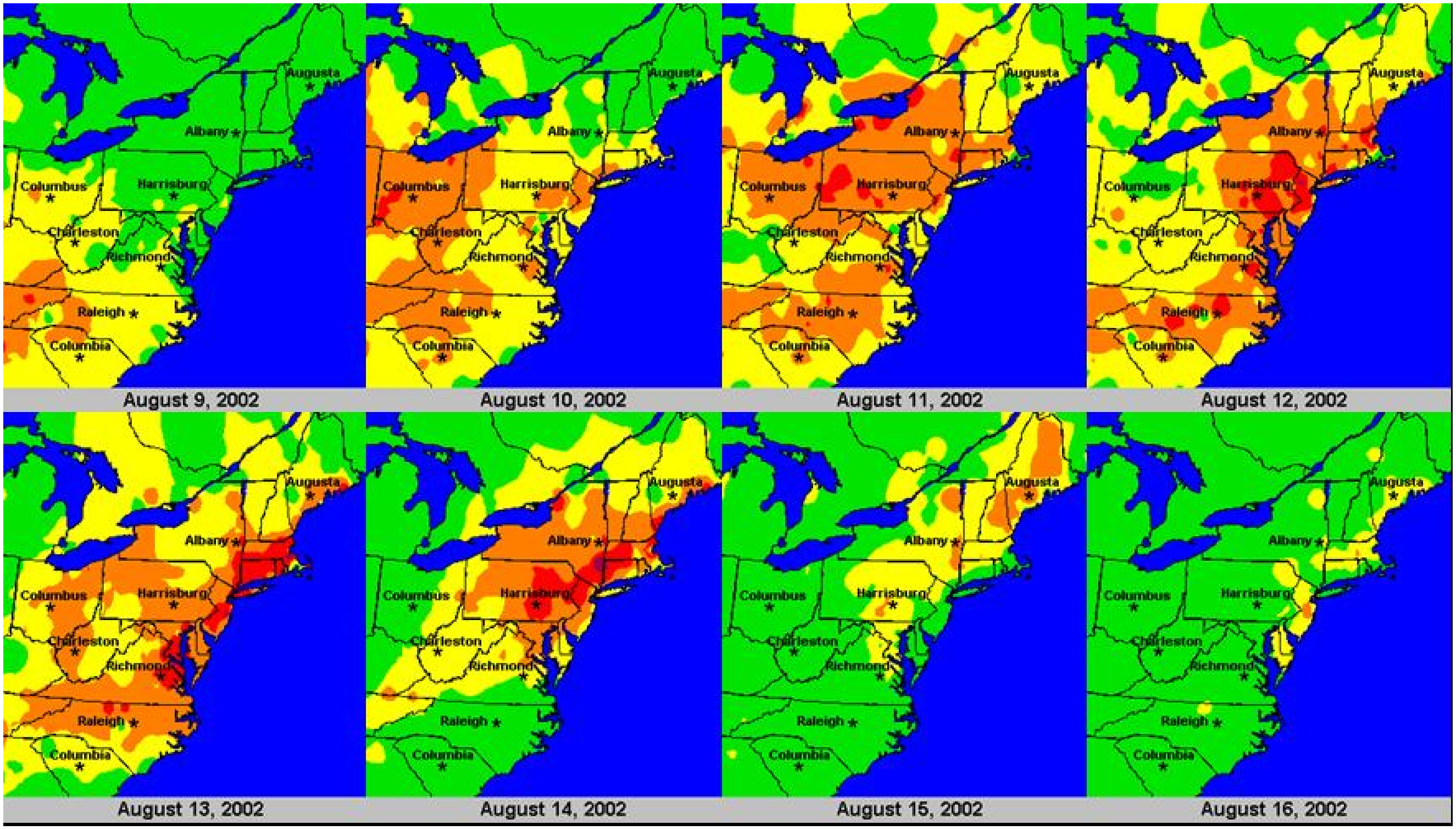


Figure 4-6. Spatially interpolated maps of maximum 8-hour surface ozone concentrations August 9 – 16, 2002



4.3. Clean Air Act provisions

As is evident from the myriad source regions and transport pathways affecting the OTR, the regional ozone nonattainment problem presents a significant challenge to air quality planners. To improve air quality, emission reductions of the appropriate pollutants must occur at the appropriate levels (i.e., stringency of controls) and over the appropriate geographic extent. States have primary responsibility for achieving the goals of the Clean Air Act, as they are responsible for developing State Implementation Plans and implementing and enforcing emission reduction programs to meet the health-protective National Ambient Air Quality Standards (NAAQS).

When Congress passed the Clean Air Act Amendments of 1990, it recognized that air pollution transcends political boundaries and that tools for addressing transport must be made available to state and federal governments. Accordingly, several Clean Air Act provisions deal with transported pollution, including: (1) prohibiting the USEPA from approving State Implementation Plans that interfere with another state's ability to attain or maintain a NAAQS; (2) requiring the USEPA to work with states to prevent emissions that contribute to air pollution in a foreign country; (3) allowing states to form ozone transport regions; (4) requiring states in ozone transport regions to adopt a prescribed set of controls in order to achieve a minimum level of regional emission reductions; and (5) allowing states to petition the USEPA for timely relief from stationary source emissions that interfere with attainment or maintenance of a NAAQS, and requiring the USEPA to act on such petitions within a very short, prescribed timeframe. Taken together, these provisions provide a framework for air quality planning. Its inherent principles are:

- Timely action is critical in order to protect public health;
- States must act locally to address air pollution;
- While acting locally, states must also consider their impacts downwind in addition to in-state impacts when developing state implementation plans (SIPs), and ameliorate such impacts through SIPs;
- Regional actions have been and can continue to be effective;
- To be effective on a regional level, states working together must work off of a level playing field.

What the science tells us of the nature of the ozone problem in the OTR supports this framework. The smaller scale weather patterns that affect pollution accumulation and transport underscore the importance of local (in-state) controls for NO_X and VOC emissions. Larger synoptic scale weather patterns, and pollution patterns associated with them, support the need for NO_X controls across the eastern United States. Studies and characterizations of nocturnal low level jets (i.e., channeled transport) also support the need for local and regional controls on NO_X and VOC sources as local and transported pollution from outside the OTR can be entrained in nocturnal low level jets formed during nighttime hours within the OTR. Land, sea, mountain, and valley breezes indicate that there are unique aspects of pollution accumulation and transport that are area-specific and will warrant policy responses at the local and regional levels beyond a one-size-fits-all approach.

The mix of emission controls is also important for states to consider. While long-range transport of ozone is primarily due to NO_X, VOCs are important because they contribute to ozone formation by influencing how efficiently ozone is produced by NO_X, particularly within urban centers. While reductions in anthropogenic VOCs will typically have less of an impact on the long-range transport of ozone, they can be effective in reducing ozone in those urban areas where ozone production may be limited by the availability of VOCs. Therefore, a combination of localized VOC reductions in urban centers with additional NO_X reductions (from both mobile and point sources) across a larger region will help to reduce ozone and precursors in nonattainment areas as well as their downwind transport across the entire region (NESCAUM, 1997).

4.4. Past regional efforts

While states are somewhat limited in their ability to directly affect emissions reductions beyond their own geo-political boundaries, over the past 15-20 years, the Northeast states have acted regionally with tremendous success. Such efforts have included:

- In 1989, regional low volatility gasoline (i.e., Reid Vapor Pressure pf 9.0 psi) was introduced into the NESCAUM region, resulting in significant VOC reductions;
- In 1994, the California Low Emission Vehicle (LEV) program commenced in the Northeast Corridor as regulations were adopted by Maine, Massachusetts, New York, and Vermont. To date, four additional states have joined the program, which continues to yield reductions in NO_X, VOC, CO, and air toxics.
- In 1994, the states of the Ozone Transport Commission agreed to promulgate regional NO_X RACT controls and a NO_X cap-and-trade program. The adopted regional RACT deadline was 1995. By 1999, the NO_X Budget Program was implemented over the 12-state region from Maine to Washington, DC. In 2002, the USEPA reported that the NO_X Budget sources "emitted at a level approximately 12 percent below 2001 allocations" (USEPA, 2002). Progress continues with a more stringent cap taking effect in 2003.
- In 1997, eight OTR states petitioned the USEPA under section 126 of the Clean Air Act, requesting NO_X emissions reductions on certain stationary sources in the Eastern U.S. In 1999, four more OTR members filed section 126 petitions. The USEPA granted four of the initial eight state petitions in 2000.[g]
- In 2001, the states of the Ozone Transport Commission agreed to support a suite of model rules for inclusion in SIPs as appropriate to address 1-hour ozone problems. The model rules included controls for: (1) architectural and industrial maintenance coatings; (2) portable fuel containers; (3) consumer products; (4) solvent cleaning; (5) mobile equipment repair and refinishing; and (5) additional

[g] The initial eight section 126 OTR states were Connecticut, Maine, Massachusetts, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont. The additional four OTR members filing section 126 petitions were Delaware, the District of Columbia, Maryland, and New Jersey. The four granted petitions were from Connecticut, Massachusetts, New York, and Pennsylvania.

NO_X controls for industrial boilers, cement kilns, stationary reciprocating engines, and stationary combustion engines.

These regional efforts have led the way for similar broader regional and national programs. For mobile sources, the USEPA promulgated its federal Reformulated Gasoline Program in 1995 and the National LEV program in 1998. For stationary sources, the USEPA announced in 1997 that it would expand the OTR NO_X Budget Program through the NO_X SIP Call, which included 22 states and NO_X caps in place by 2003. The NO_X SIP Call also served as a response to the states' Section 126 petitions under the Clean Air Act.

In 2005, the USEPA took a further step to address the regional ozone problem by issuing the Clean Air Interstate Rule (CAIR), which requires additional NO_X reductions in 25 eastern states and the District of Columbia. The USEPA projects that CAIR will achieve NO_X reductions of 2 million tons in 2015, a 61% decrease from 2003 levels. This will be a significant step forward in improving air quality, but the time allowed to achieve these reductions is later than the deadline many eastern states are facing to meet the current 8-hour ozone NAAQS. This, therefore, only partially provides the OTR with a regional measure that helps achieve the Clean Air Act's goal of attaining the ozone air quality health standard within the Act's mandatory deadlines.

4.5. Summary: Building upon success

A conceptual understanding of ozone as a regional problem in the OTR and throughout the eastern U.S. is now well established. With this evolution in understanding, regional approaches to the ozone problem are now underway, starting with the 1990 Clean Air Act Amendments that created the Ozone Transport Region. This initial regional approach, however, did not include large source regions outside of the OTR containing many large coal-fired power plants and other pollution sources contributing to the long-range transport of ozone into the OTR.

In 1998, the USEPA took another step in addressing the regional problem by finalizing the NO_X SIP Call, which covered emissions of NO_X, the main precursor of regional ozone, in additional parts of the East. Even with these reductions, air quality modeling has projected continuing significant contributions from upwind sources in out-of-state regions. As a result, the USEPA promulgated a further round of regional NO_X reductions in the East with the adoption of CAIR in 2005. With the modeling foundation for CAIR, the USEPA has presented a compelling technical case on the need for additional regional NO_X reductions in the eastern U.S. to reduce ozone levels and protect public health. While states in the Northeast disagree with the extent of NO_X reductions and the timeline for those reductions to occur, the program is an excellent next step toward reducing ozone in the OTR.

There is a tendency to characterize the nonattainment problems persisting after implementation of the USEPA's Clean Air Interstate Rule and other federal programs as "residual," but care must be taken in assessing these continuing nonattainment problems. A "residual" ozone problem is better characterized as a persistent nonattainment problem that still requires broad regional responses coupled with local controls. As this conceptual description points out, one of the great lessons and successes seen in the history of air quality policy was the shift from urban-only air pollution control strategies to broader regional approaches in the East at the end of the 1990s (e.g., NO_X SIP Call). The danger exists, however, that the perception of a "residual" ozone problem as being only a local issue will ignore the lessons learned from effective regional approaches.

The current suite of local and regional controls have a proven track record of success, and have helped to significantly lower NO_X, VOC, and ozone levels across the eastern U.S. As described earlier in this report, monitored NO_X emissions and ambient concentrations have dropped between 1997 and 2005, and the frequency and magnitude of ozone exceedances have declined within the OTR. To maintain the current momentum for improving air quality so that the OTR states can meet their attainment deadlines, there continues to be a need for more regional NO_X reductions coupled with appropriate local NO_X controls and regional and local VOC controls.

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Appendix A: USEPA Guidance on Ozone Conceptual Description

From "Guidance on the Use of Models and Other Analyses in Attainment Demonstrations for the 8-hour Ozone NAAQS," U.S. Environmental Protection Agency, EPA-454/R-05-002, Section 8, October 2005.

Note: At the time of this writing, the USEPA was incorporating Section 8 of the 8-hour ozone guidance into a new USEPA guidance document covering ozone, $PM_{2.5}$, and regional haze. The new draft guidance is in Section 11 of Draft 3.2 "Guidance on the Use of Models and other Analyses for Demonstrating Attainment of Air Quality Goals for Ozone, $PM_{2.5}$, and Regional Haze," U.S. EPA, (Draft 3.2 – September 2006), available at http://www.epa.gov/ttn/scram/guidance_sip.htm#pm2.5 (accessed Oct. 5, 2006). The newer guidance, when finalized, may differ in some respects from the text given in Section 8 of the earlier ozone guidance.

Excerpt of Section 8 from EPA 8-hour ozone NAAQS guidance document:

Appendix A: USEPA Guidance on Ozone Conceptual Description

8.0 How Do I Get Started? - A "Conceptual Description"

A State/Tribe should start developing information to support a modeled attainment demonstration by assembling and reviewing available air quality, emissions and meteorological data. Baseline design values should be calculated at each ozone monitoring site, as described in Section 3. If past modeling has been performed, the emission scenarios examined and air quality predictions may also be useful. Readily available information should be used by a State/Tribe to develop an initial conceptual description of the nonattainment problem in the area which is the focus of a modeled attainment demonstration. A conceptual description is instrumental for identifying potential stakeholders and for developing a modeling/analysis protocol. It may also influence a State's choice of air quality model, modeling domain, grid cell size, priorities for quality assuring and refining emissions estimates, and the choice of initial diagnostic tests to identify potentially effective control strategies. In general, a conceptual description is useful for helping a State/Tribe identify priorities and allocate resources in performing a modeled attainment demonstration.

In this Section, we identify key parts of a conceptual description. We then present examples of analyses which could be used to describe each of these parts. We note that initial analyses may be complemented later by additional efforts performed by those implementing the protocol.

8.1 What Is A "Conceptual Description"?

A "conceptual description" is a qualitative way of characterizing the nature of an area's nonattainment problem. It is best described by identifying key components of a description. Examples are listed below. The examples are not necessarily comprehensive. There could be other features of an area's problem which are important in particular cases. For purposes of illustration later in the discussion, we have answered each of the questions posed below. Our responses appear in parentheses.

1. Is the nonattainment problem primarily a local one, or are regional factors important?

(Surface measurements suggest transport of ozone close to 84 ppb is likely. There are some other nonattainment areas not too far distant.)

2. Are ozone and/or precursor concentrations aloft also high?

(There are no such measurements.)

3. Do violations of the NAAQS occur at several monitoring sites throughout the nonattainment area, or are they confined to one or a small number of sites in proximity to one another?

(Violations occur at a limited number of sites, located throughout the area.)

4. Do observed 8-hour daily maximum ozone concentrations exceed 84 ppb frequently or just on a few occasions?

(This varies among the monitors from 4 times up to 12 times per year.)

5. When 8-hour daily maxima in excess of 84 ppb occur, is there an accompanying characteristic spatial pattern, or is there a variety of spatial patterns?

(A variety of patterns is seen.)

6. Do monitored violations occur at locations subject to mesoscale wind patterns (e.g., at a coastline) which may differ from the general wind flow?

(No.)

7. Have there been any recent major changes in emissions of VOC or NO_X in or near the nonattainment area? If so, what changes have occurred?

(Yes, several local measures [include a list] believed to result in major reductions in VOC [quantify in tons per summer day] have been implemented in the last five years. Additionally, the area is expected to benefit from the regional NO_X reductions from the NO_X SIP call.)

8. Are there discernible trends in design values or other air quality indicators which have accompanied a change in emissions?

(Yes, design values have decreased by about 10% at four sites over the past [x] years. Smaller or no reductions are seen at three other sites.)

9. Is there any apparent spatial pattern to the trends in design values?

(No.)

10. Have ambient precursor concentrations or measured VOC species profiles changed?

(There are no measurements.)

11. What past modeling has been performed and what do the results suggest?

(A regional modeling analysis has been performed. Two emission scenarios were modeled: current emissions and a substantial reduction in NO_X emissions throughout the regional domain. Reduced NO_X emissions led to substantial predicted reductions in 8-hour daily maximum ozone in most locations, but changes near the most populated area in the nonattainment area in question were small or nonexistent.)

12. Are there any distinctive meteorological measurements at the surface or aloft which appear to coincide with occasions with 8-hour daily maxima greater than 84 ppb?

(Other than routine soundings taken twice per day, there are no measurements aloft. There is no obvious correspondence with meteorological measurements other than daily maximum temperatures are always > 85 F on these days.)

Using responses to the preceding questions in this example, it is possible to construct an initial conceptual description of the nonattainment area's ozone problem. First, responses to questions 1 and 11 suggest there is a significant regional component to the area's nonattainment problem. Second, responses to questions 3, 4, 7, 8, and 11 indicate there is an important local component to the area's nonattainment problem. The responses to questions 4, 5 and 12 indicate that high ozone concentrations may be observed under several sets of meteorological conditions. The responses to questions 7, 8, and 11 suggest that ozone in and near the nonattainment area may be responsive to both VOC and NO_X controls and that the extent of this response may vary spatially. The response to question 6 suggests that it may be appropriate to develop a strategy using a model with 12 km grid cells.

The preceding conceptual description implies that the State/Tribe containing the nonattainment area in this example will need to involve stakeholders from other, nearby States/Tribes to develop and implement a modeling/analysis protocol. It also suggests that a nested regional modeling analysis will be needed to address the problem. Further, it may be necessary to model at least several distinctive types of episodes and additional analyses will be needed to select episodes. Finally, sensitivity (i.e., diagnostic) tests, or other modeling probing tools, will be needed to assess the effects of reducing VOC and NO_X emissions separately and at the same time.

It should be clear from the preceding example that the initial conceptual description of an area's nonattainment problem may draw on readily available information and need not be detailed. It is intended to help launch development and implementation of a modeling/analysis protocol in a productive direction. It will likely be supplemented by subsequent, more extensive modeling and ambient analyses performed by or for those implementing the modeling/analysis protocol discussed in Section 9.

8.2 What Types Of Analyses Might Be Useful For Developing And Refining A Conceptual Description?

Questions like those posed in Section 8.1 can be addressed using a variety of analyses ranging in complexity from an inspection of air quality data to sophisticated mathematical analyses. We anticipate the simpler analyses will often be used to develop the initial conceptual description. These will be followed by more complex approaches or by approaches requiring more extensive data bases as the need later becomes apparent. In the following paragraphs, we revisit key parts of the conceptual description identified in Section 8.1. We note analyses which may help to develop a description of each part. The list serves as an illustration. It is not necessarily exhaustive.

8.2.1. Is regional transport an important factor affecting the nonattainment area?

- Are there other nonattainment areas within a day's transport of the nonattainment area?

- Do "upwind" 8-hour daily maximum ozone concentrations approach or exceed 84 ppb on some or all of the days with observed 8-hour daily maxima > 84 ppb in the nonattainment area?
- Are there major sources of emissions upwind?
- What is the size of the downwind/upwind gradient in 8-hour daily maximum ozone concentrations compared to the upwind values?
- Do ozone concentrations aloft but within the planetary boundary layer approach or exceed 84 ppb at night or in the morning hours prior to breakup of the nocturnal surface inversion?
- Is there a significant positive correlation between observed 8-hour daily maximum ozone concentrations at most monitoring sites within or near the nonattainment area?
- Is the timing of high observed ozone consistent with impacts estimated from upwind areas using trajectory models?
- Do available regional modeling simulations suggest that 8-hour daily maximum ozone concentrations within the nonattainment area respond to regional control measures?
- Does source apportionment modeling indicate significant contributions to local ozone from upwind emissions?

8.2.2. What types of meteorological episodes lead to high ozone?

- Examine the spatial patterns of 8-hour daily maxima occurring on days where the ozone is > 84 ppb and try to identify a limited number of distinctive patterns.
- Review synoptic weather charts for days having observed concentrations > 84 ppb to identify classes of synoptic scale features corresponding to high observed ozone.
- Perform statistical analyses between 8-hour daily maximum ozone and meteorological measurements at the surface and aloft to identify distinctive classes of days corresponding with observed daily maxima > 84 ppb.

8.2.3. Is ozone limited by availability of VOC, NO_X or combinations of the two? Which source categories may be most important?

- What are the major source categories of VOC and NO_X and what is their relative importance in the most recent inventory?
- Review results from past modeling analyses to assess the likelihood that ozone in the nonattainment area will be more responsive to VOC or NO_X controls. Do conclusions vary for different locations?
- Apply modeling probing tools (e.g., source apportionment modeling) to determine which source sectors appear to contribute most to local ozone formation.
- Apply indicator species methods such as those described by Sillman (1998, 2002) and Blanchard (1999, 2000, 2001) at sites with appropriate measurements on days with 8-hour daily maximum ozone exceedances. Identify classes of days where further ozone formation appears limited by available NO_X versus classes of days where further ozone formation appears limited by available VOC. Do the conclusions differ for different days? Do the results differ on weekdays versus weekends?
- Apply receptor modeling approaches such as those described by Watson (1997, 2001), Henry (1994) and Henry (1997a, 1997b, 1997c) to identify source categories contributing to ambient VOC on days with high observed ozone. Do the conclusions differ on days when measured ozone is not high?

Additional analyses may be identified as issues arise in implementing a modeling/analysis protocol. These analyses are intended to channel resources available to support modeled attainment demonstrations onto the most productive paths possible. They will also provide other pieces of information which can be used to reinforce conclusions reached with an air quality model, or cause a reassessment of assumptions made previously in applying the model. As noted in Section 4, corroboratory analyses should be used to help assess whether a simulated control strategy is sufficient to meet the NAAQS.

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Appendix B: Ozone pattern classifications in the OTR

Appendix B: Ozone pattern classifications in the OTR

The following five types of ozone patterns in the OTR are taken from: Stoeckenius, T. and Kemball-Cook, S. "Determination of representativeness of 2002 ozone season for ozone transport region SIP modeling." Final Report prepared for the Ozone Transport Commission, 2005. Figure B-1 shows the 850 mb height and wind fields and Figure B-2 shows the surface temperatures and 10 meter wind fields for the five patterns (reproduced from Figures 3-2 and 3-5 of Stoeckenius & Kemball-Cook, 2005).

"Type A" – High ozone throughout the OTR. This pattern is characterized by strong high pressure over the southeastern states extending from the surface to 500 mb with high temperatures extending into New England and southwest surface winds throughout the OTR. The 850 mb temperatures and heights, and surface temperatures are above average at all locations except Washington DC; winds are southwest to west throughout the OTR except more variable at LaGuardia and magnitudes of resultant wind vectors are higher than average (indicative of a fairly steady, well defined flow regime), east-west surface pressure gradients are near neutral but southwest-northeast gradients along the I-95 corridor and in the west (Pittsburgh to Buffalo) are positive, which is consistent with the southwest flow. The stable air mass and high temperatures promote ozone formation throughout the OTR under these conditions.

"Type B" – High ozone confined to the extreme southeastern OTR. This pattern is characterized by an upper-level trough offshore of the OTR and a surface high centered over Kentucky. This results in cooler air advection over nearly all of the OTR with northwest flow aloft and a more westerly flow at the surface. The 850 mb heights are lower than average (especially in New England) and surface winds are more frequently from the northwest along the I-95 corridor than under Type A. Temperatures at 850 mb along the I-95 corridor are only slightly cooler than under Type A but inland temperatures, especially in the north, are much cooler (e.g., at Buffalo); similarly, surface temperatures along the I-95 corridor are about the same as under Type A but temperatures are cooler in Buffalo and Albany. Type B events have the strongest positive west-east surface pressure gradients of any category, consistent with the northwest winds but gradients from Washington to New York and Boston are positive. The cooler air over the western OTR and westerly to northwesterly flow result in the higher ozone levels being confined to just the extreme southern portion of the OTR under this pattern.

"Type C" – High ozone along the I-95 corridor and northern New England. This pattern is characterized by an extension of the semi-permanent Bermuda high into the southeastern U.S. and an area of high surface and 850 mb temperatures extending from Maryland to Maine; the 500 mb pattern is nearly zonal (east-west flow) while flow at the surface is generally from the southwest. The 850 mb heights are intermediate between Type A and Type B but 850 mb temperatures are very high along the I-95 corridor and slightly cooler further inland. Winds are more consistently south - southwest at all sites than under other episode types and almost no northwest-north-northeast winds are seen at LaGuardia in contrast to other types. Resultant wind vector magnitudes are much higher

than average, consistent with the steady southwest flow. Southwest – northeast pressure gradients along the I-95 corridor and from Pittsburgh to Buffalo are positive, consistent with the southwest flow. Average east-west pressure gradients are near zero. These conditions result in above average ozone levels all along the I-95 corridor with advection north into coastal and interior New England. Ozone levels are slightly below average in the extreme southeastern and western OTR.

"Type D" – High ozone in the western OTR. This pattern is characterized by an area of mean upper level divergence with associated cut-off low at 850 mb off the Outer Banks of North Carolina. A relatively vigorous mean low pressure center can be seen at the surface. An east-west temperature gradient across the OTR is evident at 850 mb. Surface temperatures along the I-95 corridor and in Albany are below average but surface temperature is above average at Buffalo. The 850 mb heights are the highest of any episode type due to a strong ridge over New England. Surface winds are mostly east-northeast along the I-95 corridor from DC to New York but more variable further north. In contrast to episode types A, B, or C, the southwest-northeast pressure gradients along the I-95 corridor are negative, consistent with the northeast surface winds. West-east pressure gradients are flat. These conditions result in below average ozone in the eastern OTR due to the on-shore flow in the north and cyclonic conditions in the south but above average ozone levels in the western OTR due to stable, warm conditions with light winds.

"Type E" – Generally low ozone throughout the OTR. This category includes days with moderately low to lowest average ozone readings of all OTR exceedance days used in the characterization scheme. The Bermuda high is shifted east relative to the other types and flow over the southeastern U.S. is only weakly anti-cyclonic with a nearly zonal flow pattern at the 850 and 500 mb levels over the OTR. Temperatures at the surface and aloft are the coolest of any episode type. While winds aloft are nearly westerly, surface winds are generally south-southeast over most of the OTR. The southwest-northeast pressure gradients are negative along the I-95 corridor and east-west gradients are positive, consistent with the southeast flow. These conditions result in below average ozone throughout the OTR due to the relatively low temperatures and southeasterly onshore flow at coastal locations.

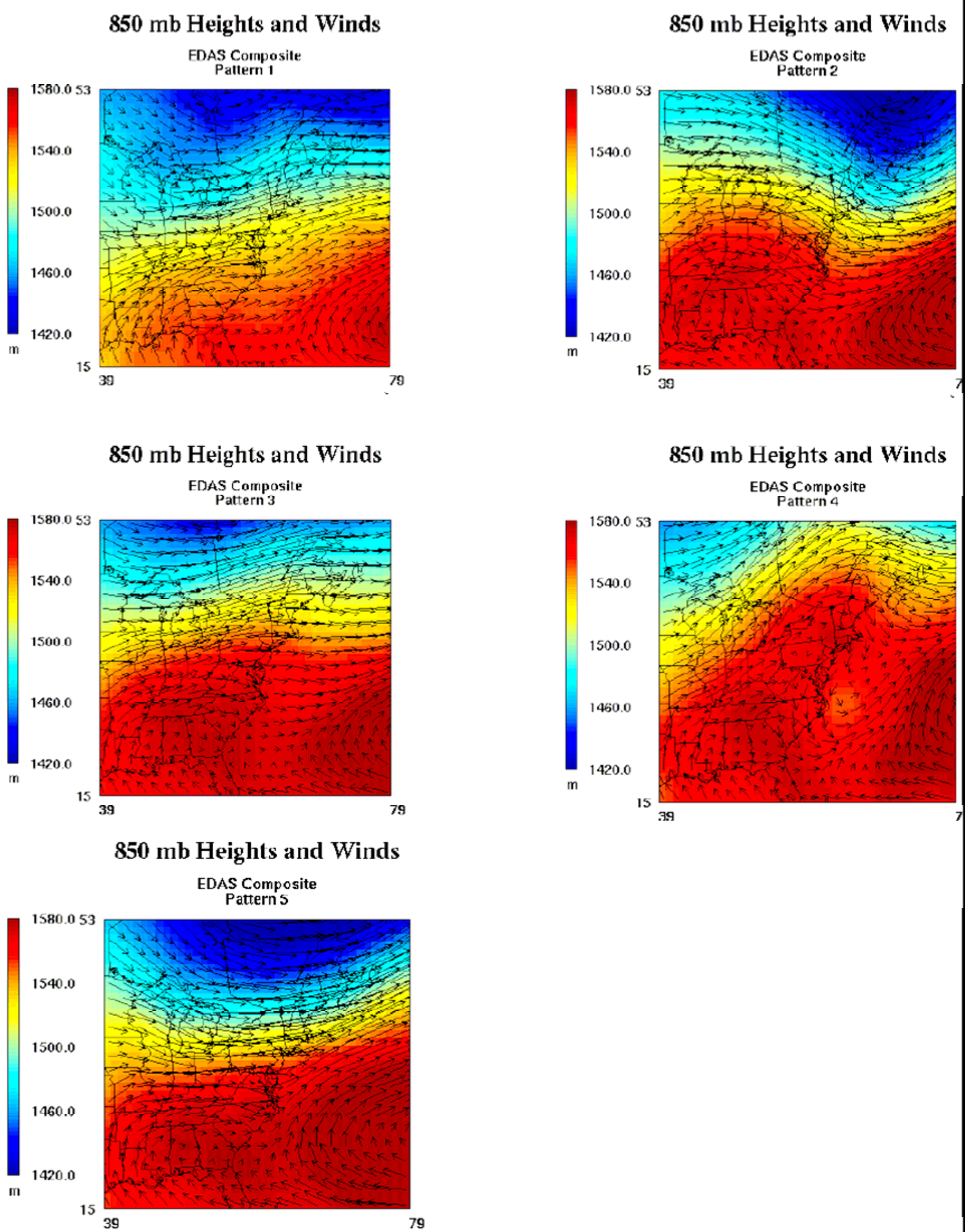


Figure B-1. Average 850 mb height and wind fields for each episode (pattern) type identified by Stoeckenius and Kemball-Cook (pattern numbers refer to the episode types listed in text): Pattern 1 = Episode Type E, 2 = B, 3 = A, 4 = D, 5 = C) (Figure 3-2 of Stoeckenius & Kemball-Cook (2005)).

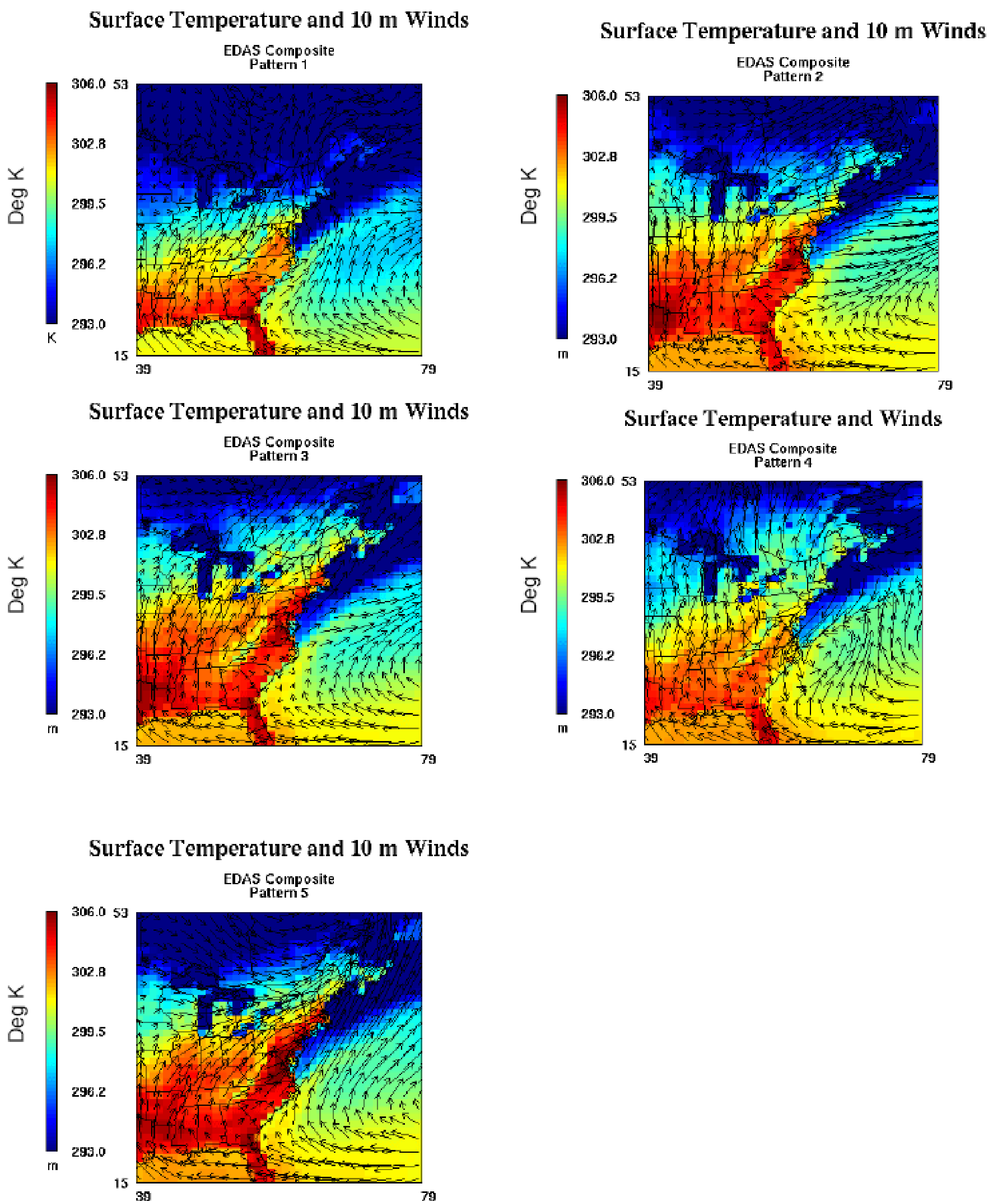


Figure B-2. Average surface temperature and 10 m wind fields for each episode (pattern) type identified by Stoeckenius and Kemball-Cook (pattern numbers refer to the episode types listed in text): Pattern 1 = Episode Type E, 2 = B, 3 = A, 4 = D, 5 = C) (Figure 3-5 of Stoeckenius & Kemball-Cook (2005)).

Appendix C: Exceedance days by monitor in the OTR

Appendix C: Exceedance days by monitor in the OTR

Tables of the number of 8-hour ozone NAAQS exceedance days recorded at individual monitors in the OTR nonattainment/attainment areas for the 1997-2005 ozone seasons. Hourly data were downloaded in January 2006 from the USEPA Air Quality System (AQS) database. The number of 8-hour ozone exceedance days were calculated using procedures specified in USEPA's "Guideline on Data Handling Conventions for the 8-hour Ozone NAAQS" (OAQPS, EPA-454/R-98-017, Dec. 1998) with flagged data (due to a regional forest fire smoke event) eliminated from the analysis. While these tables are derived from the publicly available data in the USEPA AQS database, states may have monitoring data that differ from these. For example, the tables contain state-specific data provided by the Maryland Department of the Environment and the New Jersey Department of Environmental Protection that differ from the USEPA AQS database at the time the data were downloaded in January 2006. "***" indicates years during which a monitor was not in operation or had less than 75 percent data collection during the ozone season.

Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
100010002	Kent	Killens Pond	DE	14	17	13	5	8	10	3	0	2
100031003	New Castle	Bellefonte	DE	6	8	10	5	5	11	***	***	***
100031007	New Castle	Lums Pond	DE	15	12	12	5	9	9	4	0	6
100031010	New Castle	Brandywine Creek	DE	17	17	16	7	15	18	3	3	3
100031013	New Castle	Wilmington (Bellefonte2)	DE	***	***	***	***	***	8	3	1	4
100051002	Sussex	Seaford	DE	14	16	17	5	4	10	4	0	3
100051003	Sussex	Lewes	DE	***	17	17	6	10	14	4	2	7
240150003	Cecil	Fairhill	MD	19	20	20	18	16	17	6	3	9
340010005	Atlantic	Nacote Creek	NJ	18	24	14	4	9	11	4	0	3
340070003	Camden	Camden Lab	NJ	12	15	16	6	19	19	4	3	5
340071001	Camden	Ancora	NJ	23	29	25	10	17	27	9	6	12
340110007	Cumberland	Millville	NJ	14	17	17	6	14	20	6	2	4
340150002	Gloucester	Clarksboro	NJ	19	22	21	8	17	24	6	4	6
340210005	Mercer	Rider Univ.	NJ	16	17	24	11	15	26	7	1	7
340290006	Ocean	Colliers Mills	NJ	21	28	23	11	21	30	9	8	14
420170012	Bucks	Bristol	PA	14	17	24	14	16	17	9	2	7

Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420290050	Chester	West Chester	PA	***	***	***	***	20	19	4	***	***
420290100	Chester	New Garden	PA	***	***	***	***	17	23	4	5	8
420450002	Delaware	Chester	PA	19	17	19	7	12	16	3	2	4
420910013	Montgomery	Norristown	PA	19	17	20	11	18	12	4	1	8
421010004	Philadelphia	Philadelphia - Downtown	PA	0	1	2	1	0	0	2	0	0
421010014	Philadelphia	Philadelphia - Roxborough	PA	10	7	***	4	10	13	2	0	3
421010024	Philadelphia	Philadelphia - NE Airport	PA	17	15	***	5	13	22	4	6	8
421010136	Philadelphia	Philadelphia - Elmwood	PA	0	4	12	3	5	13	2	0	***

Baltimore, MD (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
240030014	Anne Arundel	Davidsonville	MD	20	42	31	7	14	25	5	4	9
240030019	Anne Arundel	Fort Meade	MD	24	25	27	10	19	20	3	5	***
240051007	Baltimore	Padonia	MD	10	7	14	3	9	19	2	1	2
240053001	Baltimore	Essex	MD	10	11	11	3	10	14	3	2	6
240130001	Carroll	South Carroll	MD	9	18	16	5	10	10	2	1	5
240251001	Harford	Edgewood	MD	18	17	17	11	20	25	7	6	11
240259001	Harford	Aldino	MD	20	12	17	8	18	22	4	3	10
245100053	Baltimore (City)	Baltimore-Ponca St	MD	***	***	***	***	***	8	***	***	***
245100050	Baltimore (City)	Baltimore-0050	MD	16	***	***	***	***	***	***	***	***
245100051	Baltimore (City)	Baltimore-0051	MD	9	5	7	***	***	***	***	***	***

New York-N. New Jersey-Long Island, NY-NJ-CT (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
90010017	Fairfield	Greenwich	CT	13	8	14	3	13	18	7	1	8
90011123	Fairfield	Danbury	CT	14	9	17	7	9	17	4	4	11

New York-N. New Jersey-Long Island, NY-NJ-CT (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
90013007	Fairfield	Stratford	CT	17	11	9	4	10	20	8	2	8
90019003	Fairfield	Westport	CT	15	13	13	3	15	19	6	2	10
90010113	Fairfield	Bridgeport	CT	6	***	***	***	***	***	***	***	***
90070007	Middlesex	Middletown	CT	12	5	15	6	11	16	7	1	7
90091123 & 90090027	New Haven	New Haven	CT	7	3	5	***	***	***	***	1	2
90093002	New Haven	Madison	CT	19	9	16	6	11	19	9	2	8
90099005	New Haven	Hamden	CT	***	***	11	2	9	14	7	***	***
340030005	Bergen	Teaneck	NJ	***	***	***	2	10	18	4	2	8
340030001	Bergen	Cliffside Park	NJ	5	***	***	***	***	***	***	***	***
340130011 & 340130016	Essex	Newark Lab	NJ	6	5	6	***	***	6	***	***	***
340170006	Hudson	Bayonne	NJ	9	7	17	3	6	6	2	1	6
340190001	Hunterdon	Flemington	NJ	18	21	23	9	12	19	7	6	13
340230011	Middlesex	Rutgers Univ.	NJ	16	15	23	10	17	26	5	2	10
340250005	Monmouth	Monmouth Univ.	NJ	12	20	12	5	8	17	10	2	8
340273001	Morris	Chester	NJ	13	22	21	6	15	27	5	0	3
340315001	Passaic	Ramapo	NJ	***	8	16	1	9	13	2	2	8
340390008	Union	Plainfield	NJ	5	***	***	***	***	***	***	***	***
360050080	Bronx	NYC-Morrisania Center	NY	5	1	5	***	***	***	***	***	***
360050083	Bronx	NYC-200th St & Southern Blvd	NY	5	0	8	1	1	6	2	1	0
360050110	Bronx	NYC-IS52	NY	***	***	***	1	***	6	2	0	1
360610010	New York	NYC-Mabel Dean HS	NY	***	2	3	0	***	***	***	***	***
360610063	New York	NYC-Roof WTC	NY	16	22	18	5	12	***	***	***	***
360810004	Queens	NYC-Queens College	NY	10	***	***	***	***	***	***	***	***
360810097	Queens	NYC-QBORO	NY	***	***	10	3	3	***	***	***	***
360810098	Queens	NYC-College Pt	NY	***	***	***	1	1	1	1	0	0
360810124	Queens	NYC-Queens	NY	***	***	***	***	***	7	4	0	4
360850067	Richmond	NYC-Susan Wagner HS	NY	21	12	17	11	10	19	5	2	8

New York-N. New Jersey-Long Island, NY-NJ-CT (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
361030002	Suffolk	Babylon	NY	8	10	11	4	2	9	6	2	6
361030004	Suffolk	Riverhead	NY	11	9	16	4	3	6	3	***	6
361030009	Suffolk	Holtsville	NY	***	***	***	4	8	18	6	2	***
361192004	Westchester	White Plains	NY	11	6	12	2	8	15	4	0	9

Washington, DC-MD-VA (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
110010025	District of Columbia (all)	Takoma	DC	11	18	15	5	7	13	3	2	1
110010041	District of Columbia (all)	River Terrace	DC	12	11	16	2	7	12	2	0	1
110010043	District of Columbia (all)	McMillian Reservoir	DC	18	20	22	2	12	21	3	3	5
240090010 & 240090011	Calvert	Calvert	MD	4	10	10	5	5	***	***	***	2
240170010	Charles	S. Maryland	MD	17	30	31	5	9	15	6	1	6
240210037	Frederick	Frederick Municipal Airport	MD	***	***	19	4	14	13	3	1	1
240313001	Montgomery	Rockville	MD	13	22	16	2	11	11	3	2	3
240330002	Prince George's	Greenbelt	MD	24	24	23	7	19	15	3	***	***
240338001	Prince George's	Suitland	MD	14	25	18	3	14	***	***	***	***
240338003	Prince George's	Equestrian Center	MD	***	***	***	***	***	15	4	5	5
510130020	Arlington Co	Aurora Hills	VA	17	10	21	3	12	18	4	4	5
510590005	Fairfax	Chantilly (Cub Run)	VA	2	16	6	2	9	12	2	3	0
510590018	Fairfax	Mount Vernon	VA	***	17	16	4	10	16	5	6	8
510590030	Fairfax	Franconia	VA	***	***	19	0	14	18	5	5	6
510591004 & 510591005	Fairfax	Seven Corners & Annandale	VA	10	17	9	2	***	20	3	4	4
510595001	Fairfax	McLean – Lewinsville	VA	3	7	6	2	8	7	3	3	2
511071005	Loudoun	Ashburn	VA	***	17	7	1	9	23	3	2	***
511530009	Prince William	James S. Long Park	VA	4	13	9	2	6	7	4	1	0
515100009	Alexandria (City)	Alexandria	VA	5	10	10	2	6	10	3	3	2

Jefferson Co., NY (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
360450002	Jefferson	Perch River	NY	8	4	6	1	17	13	9	2	3

Greater Connecticut, CT (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
90031003	Hartford	East Hartford	CT	7	2	11	2	8	10	0	1	5
90050005	Litchfield	Cornwall (Mohawk Mt)	CT	***	***	***	***	***	13	4	2	8
90050006	Litchfield	Torrington	CT	9	10	12	4	***	***	***	***	***
90110008	New London	Groton	CT	17	3	11	3	7	7	5	1	4
90131001	Tolland	Stafford	CT	10	8	12	1	10	13	1	2	8

Boston-Lawrence-Worcester (E. MA), MA (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
250010002	Barnstable	Truro	MA	17	2	12	3	13	9	8	3	7
250051002	Bristol	Fairhaven	MA	12	2	8	3	8	5	8	1	1
250051005	Bristol	Easton	MA	7	7	3	0	14	***	***	***	***
250070001	Dukes	Wampanoag Laboratory – Martha's Vineyard	MA	***	***	***	***	***	***	***	0	4
250095005	Essex	Lawrence-Haverhill	MA	2	1	1	0	0	6	***	***	0
250092006	Essex	Lynn	MA	6	7	6	1	11	13	3	2	6
250094004	Essex	Newbury	MA	6	6	6	0	8	9	2	1	0
250170009	Middlesex	USEPA Region 1 Lab – Chelmsford	MA	***	***	***	***	***	***	***	***	2
250171102	Middlesex	Stow	MA	***	5	8	1	12	8	0	1	2
250171801	Middlesex	Sudbury	MA	6	4	***	***	***	***	***	***	***
250174003	Middlesex	Waltham	MA	6	7	5	***	***	***	***	***	***
250213003	Norfolk	E Milton (Blue Hill)	MA	***	***	***	***	***	17	5	2	4

Boston-Lawrence-Worcester (E. MA), MA (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
250250041	Suffolk	Boston-Long Island	MA	***	***	4	0	9	10	1	1	5
250250042	Suffolk	Boston-Roxbury	MA	***	***	0	0	2	2	1	1	1
250251003	Suffolk	Chelsea	MA	2	4	3	***	***	***	***	***	***
250270015	Worcester	Worcester	MA	5	6	8	1	6	***	1	0	5

Providence (All RI), RI (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
440030002	Kent	W Greenwich	RI	10	4	7	5	13	12	1	2	5
440071010	Providence	E Providence	RI	3	2	2	2	10	9	4	2	4
440090007	Washington	Narragansett	RI	***	1	11	4	11	8	8	4	5

Springfield (Western MA), MA (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
250034002	Berkshire	Adams	MA	***	***	1	***	16	4	2	1	6
230130003	Hampden	Agawam	MA	9	1	1	1	2	6	***	***	***
250130008	Hampden	Chicopee	MA	7	5	7	1	9	10	3	1	8
250150103	Hampshire	South Hadley (Amherst)	MA	2	2	3	1	3	4	0	1	1
250154002	Hampshire	Ware	MA	9	6	9	2	12	10	0	3	8

Poughkeepsie, NY (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
360270007	Dutchess	Millbrook	NY	7	8	8	2	8	8	0	1	3
360715001	Orange	Valley Central	NY	6	6	8	1	12	4	4	2	7
360790005	Putnam	Mt Ninham	NY	7	8	15	1	10	19	2	1	7

Boston-Manchester-Portsmouth (SE), NH (Classification: MODERATE)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
330110016 & 330110019 & 330110020	Hillsborough	Manchester	NH	3	0	***	0	***	4	0	1	0
330111010 & 330111011	Hillsborough	Nashua	NH	4	3	8	1	7	5	1	2	1
330150009 & 330150015 & 330150014	Rockingham	Portsmouth	NH	5	3	5	0	***	8	0	1	0
330150013	Rockingham	Brentwood	NH	***	0	1	0	4	10	***	***	***
330150012 & 330150016	Rockingham	Rye	NH	9	4	3	0	7	7	0	1	0
330173002	Strafford	Rochester	NH	1	0	2	0	1	6	0	***	***

Kent and Queen Anne's Cos., MD (Classification: MARGINAL)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
240290002	Kent	Millington	MD	19	16	22	6	13	17	4	1	3

Lancaster, PA (Classification: MARGINAL)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420710007	Lancaster	Lancaster	PA	21	27	18	5	15	18	3	1	6

Portland, ME (Classification: MARGINAL)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
230050027	Cumberland	Portland	ME	***	***	***	***	***	***	***	0	0
230052003	Cumberland	Cape Elizabeth	ME	6	5	2	0	8	5	0	0	0
230230003 & 230230004	Sagadahoc	Phippsburg/Georgetown (Reid State Park)	ME	7	4	4	1	***	5	1	0	0
230313002	York	Kittery	ME	7	4	4	0	4	12	2	1	0
230312002	York	Kennebunkport	ME	5	5	5	1	8	10	2	1	0
230310037 & 230310038	York	Hollis	ME	2	0	1	0	***	3	0	0	0

Buffalo-Niagara Falls, NY (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
360290002	Erie	Amherst	NY	0	13	6	4	10	21	7	0	5
360631006	Niagara	Middleport	NY	1	6	7	3	10	16	6	0	4

Youngstown-Warren-Sharon, OH-PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
390990009 & 390990013	Mahoning	Youngstown - Oakhill	OH	3	15	7	1	5	14	4	1	2
391550008 & 391550011	Trumbull	Warren-Trumbull County	OH	8	19	10	2	12	24	5	2	5
391550009	Trumbull	Kinsman	OH	7	15	10	2	5	16	4	0	2
420850100	Mercer	Farrell	PA	9	24	8	2	15	20	6	1	4

Pittsburgh-Beaver Valley, PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420030008	Allegheny	Lawrenceville	PA	7	14	10	3	4	16	5	0	1
420030010	Allegheny	Pittsburg	PA	***	6	16	4	9	25	5	0	4
420030067	Allegheny	South Fayette	PA	8	24	15	4	7	17	4	1	4
420030088	Allegheny	Penn Hills	PA	5	16	11	4	***	***	***	***	***
420031005	Allegheny	Harrison Township	PA	12	18	14	4	8	14	2	0	6
420050001	Armstrong	Kittanning	PA	***	21	18	2	16	15	5	1	4
420070002	Beaver	Hookstown	PA	4	11	9	1	9	19	6	0	5
420070005	Beaver	Brighton Township	PA	3	15	11	1	8	23	3	0	4
420070014	Beaver	Beaver Falls	PA	5	10	6	3	4	9	3	0	2
421250005	Washington	Charleroi	PA	14	34	11	3	7	14	4	0	2
421250200	Washington	Washington	PA	6	15	11	3	6	9	5	0	4
421255001	Washington	Florence	PA	4	11	9	2	7	17	3	0	4
421290006	Westmoreland	Murrysville	PA	4	3	5	2	1	9	2	0	4
421290008	Westmoreland	Greensburg	PA	***	***	16	3	3	10	4	0	2

Jamestown, NY (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
360130006	Chautauqua	Dunkirk	NY	***	***	12	5	11	23	7	4	6
360130011	Chautauqua	Westfield	NY	4	11	8	3	4	18	4	0	2

Hancock, Knox, Lincoln & Waldo Cos., ME (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
230130004	Knox	Port Clyde	ME	6	3	2	0	6	5	3	0	1
230090401	Hancock	Schoodic Point	ME	***	***	***	***	***	***	1	0	***
230090001	Hancock	Seawall	ME	***	***	***	0	4	***	***	***	***
230090101 & 230090103	Hancock	Acadia National Park – McFarland Hill	ME	1	4	5	0	9	6	2	0	0
230090102	Hancock	Acadia National Park – Cadillac Mtn.	ME	5	8	4	3	9	8	3	0	3

Franklin Co., PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420550001	Franklin	Methodist Hill	PA	7	22	20	4	15	27	3	0	0

Erie, PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420490003	Erie	Erie	PA	6	12	13	2	4	17	4	0	4

Essex Co. (Whiteface Mtn.), NY (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
360310002	Essex (Whiteface Mountain above 1,900 foot elevation)	Whiteface Mountain Summit	NY	2	1	3	2	5	12	7	0	***
360310003		Whiteface Mtn. Base	NY	1	2	3	0	3	11	5	0	1

Allentown-Bethlehem-Easton, PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420770004	Lehigh	Allentown	PA	12	18	19	5	9	16	4	3	6
420950025	Northampton	Freemansburg	PA	0	5	22	6	14	12	4	6	5
420950100 & 420958000	Northampton	Easton	PA	11	8	12	2	11	13	3	1	1

Reading, PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420110001	Berks	Kutztown	PA	6	14	12	2	7	11	1	***	***
420110009 & 420110010	Berks	Reading	PA	10	16	14	3	8	13	3	1	4

Clearfield and Indiana Cos., PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420630004	Indiana	Strongstown	PA	***	***	***	***	***	***	***	***	5
420334000	Clearfield	Moshannon	PA	12	16	1	2	8	13	4	0	4

Greene Co., PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420590002	Greene	Holbrook	PA	***	***	21	6	12	9	3	0	5

York, PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420010002	Adams	Biglerville	PA	***	***	***	***	***	7	2	0	1
421330008	York	York	PA	13	18	10	6	8	12	3	1	6

Rochester, NY (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
360551004 & 360551007	Monroe	Rochester	NY	4	1	***	1	3	12	3	0	0
361173001	Wayne	Williamson	NY	4	4	7	1	5	10	2	0	0

Albany-Schenectady-Troy, NY (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
360010012	Albany	Albany – Loudonville	NY	2	1	3	1	6	6	2	2	3
360830004	Rensselaer	Grafton State Park	NY	***	***	***	***	***	16	2	2	2
360910004	Saratoga	Stillwater	NY	3	2	6	1	7	6	5	2	3
360930003 & 360930093	Schenectady	Schenectady	NY	1	0	2	1	1	3	2	0	0

Harrisburg-Lebanon-Carlisle, PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	8-hr Ozone exceedance days								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420430401	Dauphin	Harrisburg	PA	3	22	15	3	7	11	2	1	3
420431100	Dauphin	Hershey	PA	9	9	15	5	12	13	2	0	4
420990301	Perry	Little Buffalo State Park	PA	7	8	13	2	10	7	3	0	1

Johnstown, PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420210011	Cambria	Johnstown	PA	7	13	11	5	5	6	2	0	1

Scranton-Wilkes-Barre, PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420690101	Lackawanna	Peckville	PA	6	5	11	1	5	14	2	0	2
420692006	Lackawanna	Scranton	PA	4	5	11	1	5	8	2	0	1
420791100	Luzerne	Nanticoke	PA	0	2	4	1	5	6	3	0	0
420791101	Luzerne	Wilkes-Barre	PA	8	7	9	1	7	7	2	0	1

State College, PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420270100	Centre	State College	PA	***	***	***	2	5	8	3	0	1
420274000	Centre	Penn Nursery	PA	7	8	4	2	1	12	4	0	***

Tioga Co., PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
421174000	Tioga	Tioga	PA	***	***	***	2	3	8	3	0	0

Altoona, PA (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420130801	Blair	Altoona	PA	7	17	6	2	3	9	3	0	1

Washington Co. (Hagerstown), MD (Classification: SUBPART 1 EARLY ACTION COMPACT)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
240430009	Washington	Hagerstown	MD	***	***	11	2	5	17	3	1	2

New York (Classification: ATTAINMENT)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
360150003	Gloucester	Elmira	NY	0	2	2	1	2	4	1	0	0
360410005	Hamilton	Piseco Lake	NY	1	1	1	1	2	4	2	0	1
360430005	Herkimer	Nicks Lake	NY	0	0	0	1	0	1	2	0	0
360530006	Madison	Camp Georgetown	NY	0	2	1	1	2	5	2	0	0
360650004	Oneida	Camden	NY	0	1	1	1	3	5	2	0	0
360671015	Onondaga	East Syracuse	NY	2	3	4	1	4	9	2	0	2
360750003	Oswego	Fulton	NY	***	***	***	***	***	***	5	0	2
361111005	Ulster	Belleayre Mountain	NY	4	1	3	1	3	1	3	0	0

Maine (Classification: ATTAINMENT)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
230112005	Kennebec	Gardiner	ME	2	3	1	0	3	4	1	0	0
230090301	Hancock	Castine	ME	***	***	***	***	***	3	1	0	0
230210003	Piscataquis	Dover-Foxcroft	ME	***	0	1	0	0	***	***	***	***
230194008	Penobscot	Holden	ME	0	2	0	***	6	4	1	0	0
230173001	Oxford	North Lovell	ME	0	0	0	0	0	1	0	0	0
CC0040002	NB CAN	Roosevelt-Campobello IP	NB	0	1	0	0	0	0	0	0	0
230194007	Penobscot	Howland	ME	0	0	1	0	0	1	0	0	0
230038001	Aroostook	Ashland	ME	0	0	0	0	0	1	0	0	0

Pennsylvania (Classification: ATTAINMENT)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
420730015	Lawrence	New Castle	PA	4	2	5	0	1	6	2	0	1
420810100	Lycoming	Montoursville	PA	***	***	***	***	***	7	3	0	3
420810403	Lycoming	Williamsport	PA	0	1	0	1	1	***	***	***	***
420814000	Lycoming	Tiadaghton	PA	0	3	0	1	1	3	2	0	***

Vermont (Classification: ATTAINMENT)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
500030004	Bennington	Bennington	VT	2	0	3	1	2	4	0	2	0
500070007	Chittenden	Underhill	VT	0	0	1	0	0	3	0	0	0

New Hampshire (Classification: ATTAINMENT)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	**8-hr Ozone exceedance days**								
				1997	1998	1999	2000	2001	2002	2003	2004	2005
330012003 & 330012004	Belknap	Laconia	NH	1	0	0	***	2	3	0	0	0
330031002	Carroll	Conway	NH	0	0	0	0	0	1	***	***	***
330050007	Cheshire	Keene	NH	1	1	1	1	1	1	0	0	0
330074002	Coos	Mt Washington Base	NH	***	***	***	***	***	0	0	1	0
330074003	Coos	Pittsburg	NH	***	***	***	***	***	***	0	0	0
330090008 & 330092005	Grafton	Haverhill-Lebanon	NH	0	0	0	0	0	1	0	0	0
330115001	Hillsborough	Peterborough (Miller State Park)	NH	***	***	***	***	***	***	0	1	3
330170007 & 330171007	Strafford	Concord	NH	1	0	0	0	1	4	0	1	0
330190003	Sullivan	Claremont	NH	1	0	0	1	0	3	0	1	0

Appendix D: 8-hour ozone design values in the OTR, 1997-2005

Appendix D: 8-hour ozone design values in the OTR, 1997-2005

Tables of the valid 8-hour ozone design values (3-year averages of the ozone season 4th maximum 8-hour ozone concentrations) recorded at individual monitors in OTR nonattainment/attainment areas for the 1997-2005 ozone seasons. Hourly data were downloaded from the USEPA Air Quality System (AQS) database in January 2006. The 8-hour averages and design values were calculated using procedures specified in EPA's "Guideline on Data Handling Conventions for the 8-hour Ozone NAAQS" (OAQPS, EPA-454/R-98-017, Dec. 1998) with flagged data (due to a regional forest fire smoke event) eliminated from the analysis. "***" indicates years during which a monitor was not in operation or had less than 90 percent data collection (with a design value less than 85 ppb) for the respective 3-year period. Red shading indicates averages ≥ 85 ppb (violating the 8-hr ozone NAAQS), orange shading indicates averages between 80 and 84 ppb, yellow shading indicates average between 75 and 79 ppb and green shading indicates averages < 75 ppb. While these tables are derived from the publicly available data downloaded in January 2006 from the USEPA AQS database, states may have monitoring data that differ from these. For example, design values for New Jersey were provided by the New Jersey Department of Environmental Protection and differ in some instances from the derived values based on the USEPA AQS database.

Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
100010002	Kent	Killens Pond	DE	99	97	93	92	89	84	80
100031003	New Castle	Bellefonte	DE	90	91	91	92	***	***	***
100031007	New Castle	Lums Pond	DE	100	97	97	96	93	84	80
100031010	New Castle	Brandywine Creek	DE	99	96	95	96	93	89	82
100031013	New Castle	Wilmington (Bellefonte2)	DE	***	***	***	***	90	85	82
100051002	Sussex	Seaford	DE	99	98	95	94	91	85	82
100051003	Sussex	Lewes	DE	***	95	90	87	88	85	84
240150003	Cecil	Fairhill	MD	110	106	106	104	98	91	89
340010005	Atlantic	Nacote Creek	NJ	101	94	95	91	91	85	82
340070003	Camden	Camden Lab	NJ	104	101	104	101	102	93	85
340071001	Camden	Ancora	NJ	111	106	108	104	102	96	92
340110007	Cumberland	Millville	NJ	104	101	102	98	98	91	86
340150002	Gloucester	Clarksboro	NJ	106	105	105	104	100	94	88
340210005	Mercer	Rider Univ.	NJ	112	109	112	102	99	91	85

Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
340290006	Ocean	Colliers Mills	NJ	113	114	115	113	109	99	94
420170012	Bucks	Bristol	PA	103	102	105	104	100	93	86
420290050	Chester	West Chester	PA	***	***	***	***	95	***	***
420290100	Chester	New Garden	PA	***	***	***	95	98	91	87
420450002	Delaware	Chester	PA	100	96	94	95	92	88	82
420910013	Montgomery	Norristown	PA	104	102	100	97	92	88	86
421010004	Philadelphia	Philadelphia – Downtown	PA	72	72	71	74	75	68	63
421010014	Philadelphia	Philadelphia – Roxborough	PA	90	87	88	93	93	86	81
421010024	Philadelphia	Philadelphia – NE Airport	PA	***	***	***	98	97	95	90
421010136	Philadelphia	Philadelphia – Elmwood	PA	86	89	88	87	84	80	***

Baltimore, MD (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
240030014	Anne Arundel	Davidsonville	MD	109	107	103	102	98	94	89
240030019	Anne Arundel	Fort Meade	MD	107	100	100	101	97	93	***
240051007	Baltimore	Padonia	MD	95	92	93	92	89	85	77
240053001	Baltimore	Essex	MD	99	93	93	93	93	88	83
240130001	Carroll	South Carroll	MD	95	94	93	92	89	85	82
240251001	Harford	Edgewood	MD	105	100	104	104	103	94	91
240259001	Harford	Aldino	MD	106	97	98	100	98	93	86
245100053	Baltimore (City)	Baltimore-Ponca St	MD	***	***	***	***	***	***	***
245100050	Baltimore (City)	Baltimore-0050	MD	***	***	***	***	***	***	***
245100051	Baltimore (City)	Baltimore-0051	MD	90	***	***	***	***	***	***

New York-N. New Jersey-Long Island, NY-NJ-CT (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
90010017	Fairfield	Greenwich	CT	99	93	96	95	100	92	87
90011123	Fairfield	Danbury	CT	101	96	97	98	96	93	91

New York-N. New Jersey-Long Island, NY-NJ-CT (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
90013007	Fairfield	Stratford	CT	98	94	96	98	102	95	90
90019003	Fairfield	Westport	CT	103	94	97	93	97	92	89
90010113	Fairfield	Bridgeport	CT	***	***	***	***	***	***	***
90070007	Middlesex	Middletown	CT	99	95	99	97	98	92	90
90091123 & 90090027	New Haven	New Haven	CT	86	***	***	***	***	***	***
90093002	New Haven	Madison	CT	103	96	97	98	102	95	90
90099005	New Haven	Hamden	CT	***	***	95	94	98	***	***
340030005	Bergen	Teaneck	NJ	***	***	***	92	95	89	86
340030001	Bergen	Cliffside Park	NJ	***	***	***	***	***	***	***
340130011 & 340130016	Essex	Newark Lab	NJ	93	***	***	***	***	***	***
340170006	Hudson	Bayonne	NJ	107	99	100	86	87	82	84
340190001	Hunterdon	Flemington	NJ	106	103	104	97	97	92	90
340230011	Middlesex	Rutgers Univ.	NJ	113	109	111	101	98	89	86
340250005	Monmouth	Monmouth Univ.	NJ	100	102	101	97	97	93	89
340273001	Morris	Chester	NJ	102	100	101	98	98	90	82
340315001	Passaic	Ramapo	NJ	***	89	94	88	88	84	81
340390008	Union	Plainfield	NJ	***	***	***	***	***	***	***
360050080	Bronx	NYC-Morrisania Center	NY	84	***	***	***	***	***	***
360050083	Bronx	NYC-200th St & Southern Blvd	NY	88	80	83	81	84	83	75
360050110	Bronx	NYC-IS52	NY	***	***	***	***	***	80	76
360610010	New York	NYC-Mabel Dean HS	NY	***	69	***	***	***	***	***
360610063	New York	NYC-Roof WTC	NY	106	98	98	***	***	***	***
360810004	Queens	NYC-Queens College	NY	***	***	***	***	***	***	***
360810097	Queens	NYC-QBORO	NY	***	88	86	***	***	***	***
360810098	Queens	NYC-College Pt	NY	***	***	68	74	75	72	69
360810124	Queens	NYC-Queens	NY	***	***	***	***	***	***	***
360850067	Richmond	NYC-Susan Wagner HS	NY	105	96	98	96	94	89	87
361030002	Suffolk	Babylon	NY	97	91	87	92	95	94	91

New York-N. New Jersey-Long Island, NY-NJ-CT (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
361030004	Suffolk	Riverhead	NY	98	94	91	85	***	***	***
361030009	Suffolk	Holtsville	NY	***	***	***	97	100	94	***
361192004	Westchester	White Plains	NY	98	92	92	90	94	90	88

Washington, DC-MD-VA (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
110010025	District of Columbia (all)	Takoma	DC	95	96	93	93	88	85	78
110010041	District of Columbia (all)	River Terrace	DC	91	88	88	91	92	84	77
110010043	District of Columbia (all)	McMillian Reservoir	DC	100	96	94	95	94	89	82
240090010 & 240090011	Calvert	Calvert	MD	90	91	89	***	***	***	***
240170010	Charles	S. Maryland	MD	104	101	96	94	94	91	88
240210037	Frederick	Frederick Municipal Airport	MD	***	92	91	91	88	83	78
240313001	Montgomery	Rockville	MD	95	90	89	89	88	83	80
240330002	Prince George's	Greenbelt	MD	106	99	97	95	93	***	***
240338001	Prince George's	Suitland	MD	99	94	93	***	***	***	***
240338003	Prince George's	Equestrian Center	MD	***	***	***	***	***	94	91
510130020	Arlington Co	Aurora Hills	VA	97	92	92	96	99	95	87
510590005	Fairfax	Chantilly (Cub Run)	VA	91	91	88	88	89	84	79
510590018	Fairfax	Mount Vernon	VA	96	97	95	97	97	96	91
510590030	Fairfax	Franconia	VA	***	90	89	92	97	96	89
510591004 & 510591005	Fairfax	Seven Corners & Annandale	VA	95	90	***	***	***	94	86
510595001	Fairfax	McLean – Lewinsville	VA	86	86	86	90	88	86	79
511071005	Loudoun	Ashburn	VA	***	89	86	90	92	88	***
511530009	Prince William	James S. Long PARK	VA	91	88	85	85	87	83	79
515100009	Alexandria (City)	Alexandria	VA	91	89	88	90	92	88	81

Jefferson Co., NY (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
360450002	Jefferson	Perch River	NY	90	82	87	91	97	86	81

Greater Connecticut, CT (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
90031003	Hartford	East Hartford	CT	91	84	88	90	90	84	80
90050005	Litchfield	Cornwall (Mohawk Mt)	CT	***	***	***	***	***	89	87
90050006	Litchfield	Torrington	CT	97	93	***	***	***	***	***
90110008	New London	Groton	CT	94	87	90	89	93	88	85
90131001	Tolland	Stafford	CT	95	89	90	94	95	88	86

Boston-Lawrence-Worcester (E. MA), MA (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
250010002	Barnstable	Truro	MA	95	89	96	93	95	88	86
250051002	Bristol	Fairhaven	MA	91	87	93	90	95	88	86
250051005	Bristol	Easton	MA	88	81	84	***	***	***	***
250070001	Dukes	Wampanoag Laboratory – Martha's Vineyard	MA	***	***	***	***	***	***	***
250095005	Essex	Lawrence-Haverhill	MA	74	68	63	70	***	***	***
250092006	Essex	Lynn	MA	93	86	86	90	93	87	83
250094004	Essex	Newbury	MA	87	82	83	86	89	83	78
250170009	Middlesex	USEPA Region 1 Lab – Chelmsford	MA	***	***	***	***	***	***	***
250171102	Middlesex	Stow	MA	***	86	88	89	89	79	75
250171801	Middlesex	Sudbury	MA	***	***	***	***	***	***	***
250174003	Middlesex	Waltham	MA	93	***	***	***	***	***	***
250213003	Norfolk	E Milton (Blue Hill)	MA	***	***	***	***	***	91	85
250250041	Suffolk	Boston-Long Island	MA	***	***	84	89	91	86	81
250250042	Suffolk	Boston-Roxbury	MA	***	***	66	72	76	71	68
250251003	Suffolk	Chelsea	MA	82	***	***	***	***	***	***
250270015	Worcester	Worcester	MA	94	88	85	85	86	***	79

Providence (All RI), RI (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
440030002	Kent	W Greenwich	RI	92	88	94	97	95	87	84
440071010	Providence	E Providence	RI	***	***	87	91	93	***	82
440090007	Washington	Narragansett	RI	***	85	92	93	95	90	89

Springfield (Western MA), MA (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
250034002	Berkshire	Adams	MA	***	***	***	***	87	***	***
230130003	Hampden	Agawam	MA	84	77	77	83	***	***	***
250130008	Hampden	Chicopee	MA	91	86	85	92	94	90	84
250150103	Hampshire	South Hadley (Amherst)	MA	82	76	77	78	77	69	67
250154002	Hampshire	Ware	MA	99	89	89	89	87	84	82

Poughkeepsie, NY (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
360270007	Dutchess	Millbrook	NY	90	87	87	93	94	89	79
360715001	Orange	Valley Central	NY	90	86	87	84	87	83	84
360790005	Putnam	Mt Ninham	NY	94	89	89	92	93	89	86

Boston-Manchester-Portsmouth (SE), NH (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
330110016 & 330110019 & 330110020	Hillsborough	Manchester	NH	***	***	***	***	***	75	70
330111010 & 330111011	Hillsborough	Nashua	NH	89	81	83	85	87	84	80

Boston-Manchester-Portsmouth (SE), NH (Classification: MODERATE) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
330150009 & 330150015 & 330150014	Rockingham	Portsmouth	NH	87	80	***	***	***	80	75
330150013	Rockingham	Brentwood	NH	***	69	76	80	***	***	***
330150012 & 330150016	Rockingham	Rye	NH	90	79	81	83	84	78	73
330173002	Strafford	Rochester	NH	81	76	75	77	80	***	***

Kent and Queen Anne's Cos., MD (Classification: MARGINAL) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
240290002	Kent	Millington	MD	100	101	100	102	95	89	82

Lancaster, PA (Classification: MARGINAL) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420710007	Lancaster	Lancaster	PA	101	97	96	94	92	86	83

Portland, ME (Classification: MARGINAL) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
230050027	Cumberland	Portland	ME	***	***	***	***	***	***	***
230052003	Cumberland	Cape Elizabeth	ME	89	77	80	86	88	79	71
230230003 & 230230004	Sagadahoc	Phippsburg/Georgetown (Reid State Park)	ME	92	84	***	***	***	79	70
230313002	York	Kittery	ME	88	81	81	84	88	84	77
230312002	York	Kennebunkport	ME	92	82	86	90	91	84	74
230310037 & 230310038	York	Hollis	ME	76	72	***	***	***	75	73

Buffalo-Niagara Falls, NY (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
360290002	Erie	Amherst	NY	85	89	92	97	99	91	86
360631006	Niagara	Middleport	NY	86	85	87	91	95	89	86

Youngstown-Warren-Sharon, OH-PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
390990009 & 390990013	Mahoning	Youngstown - Oakhill	OH	91	89	86	87	89	85	80
391550008 & 391550011	Trumbull	Warren-Trumbull County	OH	95	91	88	90	95	91	86
391550009	Trumbull	Kinsman	OH	95	91	87	87	90	87	83
420850100	Mercer	Farrell	PA	96	92	88	92	94	88	83

Pittsburgh-Beaver Valley, PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420030008	Allegheny	Lawrenceville	PA	91	88	85	89	92	87	81
420030010	Allegheny	Pittsburg	PA	***	91	92	93	93	86	84
420030067	Allegheny	South Fayette	PA	99	96	90	90	91	87	82
420030088	Allegheny	Penn Hills	PA	92	91	88	***	***	***	***
420031005	Allegheny	Harrison Township	PA	101	94	92	95	92	87	81
420050001	Armstrong	Kittanning	PA	86	93	92	91	93	88	84
420070002	Beaver	Hookstown	PA	92	89	88	90	94	90	84
420070005	Beaver	Brighton Township	PA	91	90	89	90	92	87	81
420070014	Beaver	Beaver Falls	PA	90	89	85	88	86	81	75
421250005	Washington	Charleroi	PA	101	94	87	86	89	84	80
421250200	Washington	Washington	PA	91	88	86	86	88	82	81
421255001	Washington	Florence	PA	91	90	88	88	87	82	78
421290006	Westmoreland	Murrysville	PA	85	81	80	81	84	81	80
421290008	Westmoreland	Greensburg	PA	***	***	86	86	91	87	82

Jamestown, NY (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
360130006	Chautauqua	Dunkirk	NY	***	***	89	92	94	93	89
360130011	Chautauqua	Westfield	NY	89	88	85	87	89	85	79

Hancock, Knox, Lincoln & Waldo Cos., ME (Classification: SUBPART 1)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
230130004	Knox	Port Clyde	ME	82	76	80	83	87	81	77
230090401	Hancock	Schoodic Point	ME	***	***	***	***	***	***	***
230090001	Hancock	Seawall	ME	***	***	***	***	***	***	***
230090101 & 230090103	Hancock	Acadia National Park - McFarland Hill	ME	85	83	85	84	87	80	75
230090102	Hancock	Acadia National Park - Cadillac Mtn.	ME	89	87	89	93	94	88	82

Franklin Co., PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420550001	Franklin	Methodist Hill	PA	97	95	92	94	93	85	75

Erie, PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420490003	Erie	Erie	PA	93	90	87	88	92	87	83

Essex Co. (Whiteface Mtn.), NY (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
360310002	Essex (Whiteface Mountain above 1,900 foot elevation)	Whiteface Mountain Summit	NY	80	***	***	87	91	89	***
360310003		Whiteface Mtn. Base	NY	79	76	78	82	88	83	77

Allentown-Bethlehem-Easton, PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420770004	Lehigh	Allentown	PA	100	97	96	93	91	88	85
420950025	Northampton	Freemansburg	PA	87	95	97	92	90	88	87
420950100 & 420958000	Northampton	Easton	PA	93	90	91	89	89	86	82

Reading, PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420110001	Berks	Kutztown	PA	92	89	90	87	84	***	***
420110009 & 420110010	Berks	Reading	PA	96	92	95	92	91	83	80

Clearfield and Indiana Cos., PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420630004	Indiana	Strongstown	PA	***	***	***	***	***	***	***
420334000	Clearfield	Moshannon	PA	93	87	83	87	90	85	82

Greene Co., PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420590002	Greene	Holbrook	PA	97	96	92	90	89	84	81

York, PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420010002	Adams	Biglerville	PA	***	***	***	***	***	80	76
421330008	York	York	PA	94	93	90	92	89	86	82

Rochester, NY (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
360551004 & 360551007	Monroe	Rochester	NY	***	***	***	85	88	79	73
361173001	Wayne	Williamson	NY	86	81	81	83	88	81	71

Albany-Schenectady-Troy, NY (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
360010012	Albany	Albany - Loudonville	NY	80	77	80	83	86	80	76
360830004	Rensselaer	Grafton State Park	NY	***	***	***	***	***	86	80
360910004	Saratoga	Stillwater	NY	84	80	84	***	87	84	82
360930003 & 360930093	Schenectady	Schenectady	NY	75	71	75	76	81	76	74

Harrisburg-Lebanon-Carlisle, PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420430401	Dauphin	Harrisburg	PA	92	90	86	87	86	82	78
420431100	Dauphin	Hershey	PA	94	93	94	91	88	81	78
420990301	Perry	Little Buffalo State Park	PA	90	85	84	83	87	80	78

Johnstown, PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420210011	Cambria	Johnstown	PA	93	91	88	88	87	80	77

Scranton-Wilkes-Barre, PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420690101	Lackawanna	Peckville	PA	90	87	86	85	85	80	75
420692006	Lackawanna	Scranton	PA	88	84	84	83	84	79	76
420791100	Luzerne	Nanticoke	PA	82	81	82	83	84	78	73
420791101	Luzerne	Wilkes-Barre	PA	92	84	84	84	86	81	77

State College, PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420270100	Centre	State College	PA	***	***	***	85	86	82	79
420274000	Centre	Penn Nursery	PA	90	84	80	82	88	84	***

Tioga Co., PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
421174000	Tioga	Tioga	PA	***	***	***	84	86	85	81

Altoona, PA (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420130801	Blair	Altoona	PA	95	89	84	84	85	81	77

Washington Co. (Hagerstown), MD (Classification: SUBPART 1) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
240430009	Washington	Hagerstown	MD	***	***	85	87	86	83	78

New York (Classification: ATTAINMENT) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
360150003	Gloucester	Elmira	NY	79	79	79	81	83	77	70
360410005	Hamilton	Piseco Lake	NY	79	77	77	79	81	76	73
360430005	Herkimer	Nicks Lake	NY	72	70	72	74	76	72	69
360530006	Madison	Camp Georgetown	NY	79	78	78	80	82	77	73
360650004	Oneida	Camden	NY	76	73	76	78	83	78	72
360671015	Onondaga	East Syracuse	NY	82	80	81	83	85	***	74
360750003	Oswego	Fulton	NY	***	***	***	***	***	***	82
361111005	Ulster	Belleayre Mountain	NY	83	80	81	81	83	80	79

Maine (Classification: ATTAINMENT) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
230112005	Kennebec	Gardiner	ME	77	73	75	78	80	76	70
230090301	Hancock	Castine	ME	***	***	***	***	***	75	70
230210003	Piscataquis	Dover-Foxcroft	ME	***	62	65	***	***	***	***
230194008	Penobscot	Holden	ME	75	***	76	***	83	75	68
230173001	Oxford	North Lovell	ME	59	58	61	60	62	60	61
CC0040002	NB CAN	Roosevelt-Campobello IP	NB	62	60	61	60	61	54	54
230194007	Penobscot	Howland	ME	71	68	69	68	68	64	61
230038001	Aroostook	Ashland	ME	65	62	64	65	64	63	60

Pennsylvania (Classification: ATTAINMENT) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
420730015	Lawrence	New Castle	PA	83	78	78	78	80	77	73
420810100	Lycoming	Montoursville	PA	***	***	***	***	***	82	79
420810403	Lycoming	Williamsport	PA	74	71	71	***	***	***	***
420814000	Lycoming	Tiadaghton	PA	***	77	76	79	80	77	***

Vermont (Classification: ATTAINMENT) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
500030004	Bennington	Bennington	VT	80	76	79	80	80	78	73
500070007	Chittenden	Underhill	VT	74	74	75	77	78	76	71

New Hampshire (Classification: ATTAINMENT) 8-hr Ozone DESIGN VALUE (ppb)

AQS MONITOR ID	COUNTY	MONITOR NAME	ST	1997-1999	1998-2000	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
330012003 & 330012004	Belknap	Laconia	NH	68	***	***	***	78	75	73
330031002	Carroll	Conway	NH	67	64	66	67	***	***	***
330050007	Cheshire	Keene	NH	75	71	72	73	76	74	71
330074002	Coos	Mt Washington Base	NH	***	***	***	***	***	***	67
330074003	Coos	Pittsburg	NH	***	***	***	***	***	***	60
330090008 & 330092005	Grafton	Haverhill-Lebanon	NH	70	70	69	68	72	72	71
330115001	Hillsborough	Peterborough (Miller State Park)	NH	***	***	***	***	***	***	77
330170007 & 330171007	Strafford	Concord	NH	74	71	70	74	75	75	71
330190003	Sullivan	Claremont	NH	73	70	72	73	75	77	72

Appendix E: The sea breeze and flow over the ocean in-depth

Appendix E: The sea breeze and flow over the ocean in-depth

Figure E-1 displays a general description of ozone transport in coastal New England. This figure shows 90th percentile ozone concentration wind direction plots at four sites along the coast. For the first site, Lynn, MA, high ozone days are affected mainly by winds from the southwest bringing ozone up the coast to the site. At the second site, Newbury, MA, winds arrive to the site from two directions, up the coast, in a similar pattern seen at Lynn, but also from the ocean. The high ozone days therefore can result from ozone and its precursors coming from inland or from the ocean in the sea breeze. At the two northern sites in Maine, Cape Elizabeth and Acadia National Park, winds on high ozone days come mostly off the ocean. This is mainly due to the orientation of the Maine coastline, as summertime winds generally come from the southwest, therefore traveling over the ocean before arriving to these sites.

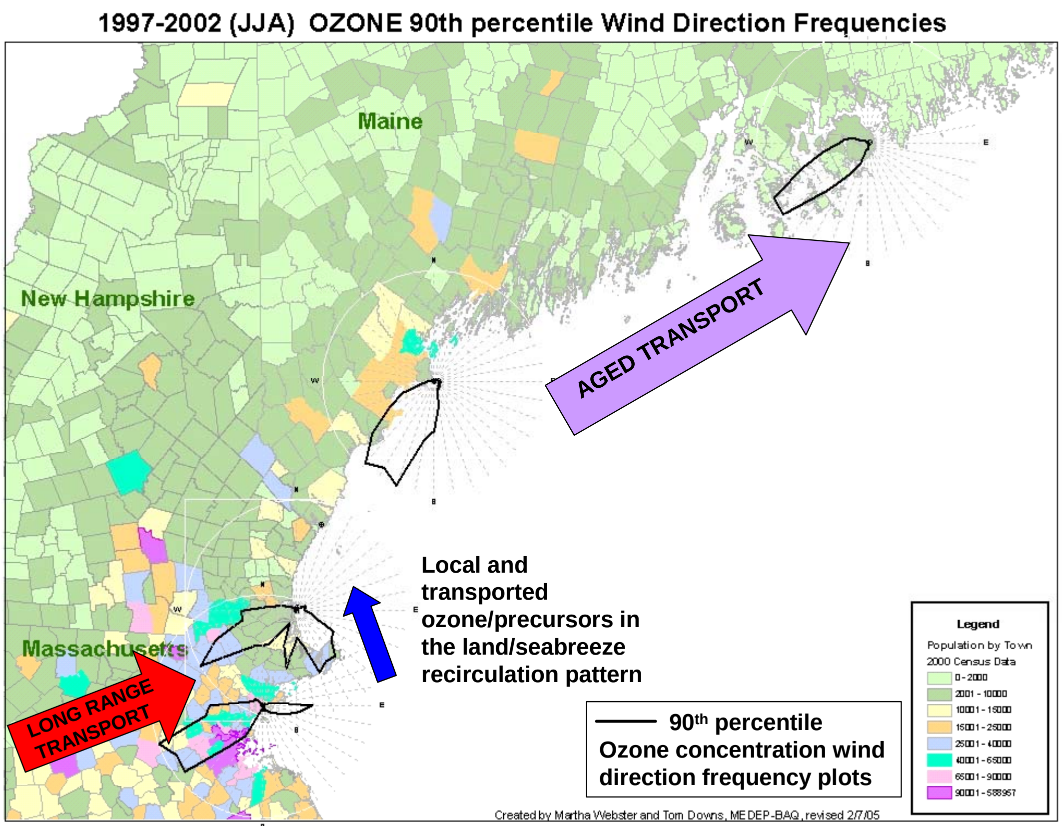


Figure E-1. 90th percentile ozone concentration wind direction frequency plots at four coastal sites in northern New England (figure provided by Tom Downs, Maine Department of Environmental Protection).

Figure E-2 displays wind directions at Newbury, MA on June 29, 1997 where hourly ozone concentrations ranged from 88 ppb to 107 ppb during the afternoon hours and a sea breeze can be identified. The forward trajectory starting in Boston at 6 a.m. shows winds pushing air from the Boston metro area out into the harbor throughout the day. The hourly ozone wind rose at Newbury, MA shows the afternoon wind shift that occurred on this day where vector direction indicates wind direction and magnitude indicates ozone concentrations. Morning winds came from a west/northwesterly direction when hourly ozone concentrations at the site ranged from 47 to 68 ppb. At 1 p.m., the wind shifted direction, now coming off the ocean from the southeast, accompanied by a 20 ppb increase in hourly ozone. Hourly ozone levels then continued to increase in the early afternoon, peaking at 107 ppb at 3 p.m. This increase in ozone levels accompanying a shift in winds pushing air masses from the ocean to a coastal site illustrates how the sea breeze can contribute to poor air quality along the coast. The poor air quality could be a result of polluted air from Boston being pushed back to the site in the sea breeze. Sea breezes, however, are not always associated with worsening air quality as the afternoon sea breeze doesn't always bring in polluted air.

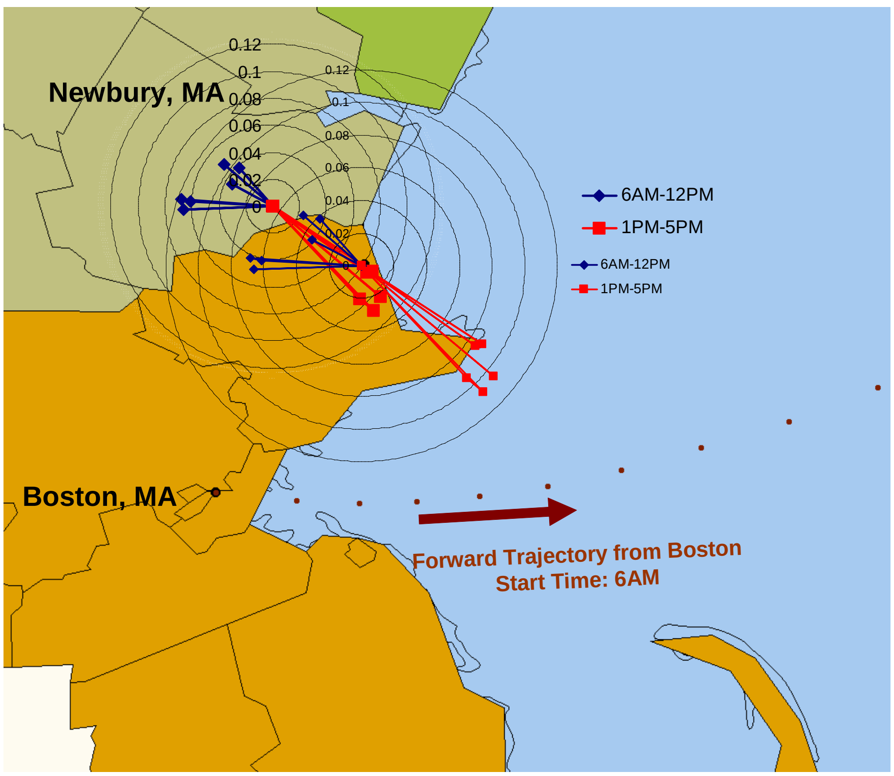


Figure E-2. Example of a sea breeze effect occurring in Newbury, MA on June 29, 1997 (figure data provided by Tom Downs, Maine Department of Environmental Protection).

At sites further north in Maine, the sea breeze effect is less dramatic due to the orientation of the Maine coastline. Figure E-3 shows a similar ozone wind rose plot for Cape Elizabeth, ME on the same day illustrated in Figure E-2. With the exception of the winds at 6 a.m. that came from the northwest, the winds arrived to the site from the southwest direction. There are some slight shifts in wind direction, particularly a shift after 5 p.m. that began to bring winds from the inland side of the coast, but it is difficult to determine whether these shifts are due to a sea breeze effect or if the evening shift is due to the weakened sea breeze. Winds are generally moving up the coast, over water, and winds in the same direction of the sea breeze can bring poor air quality. On this day, ozone concentrations ranged between 89 and 102 ppb between 3 p.m. and 7 p.m.

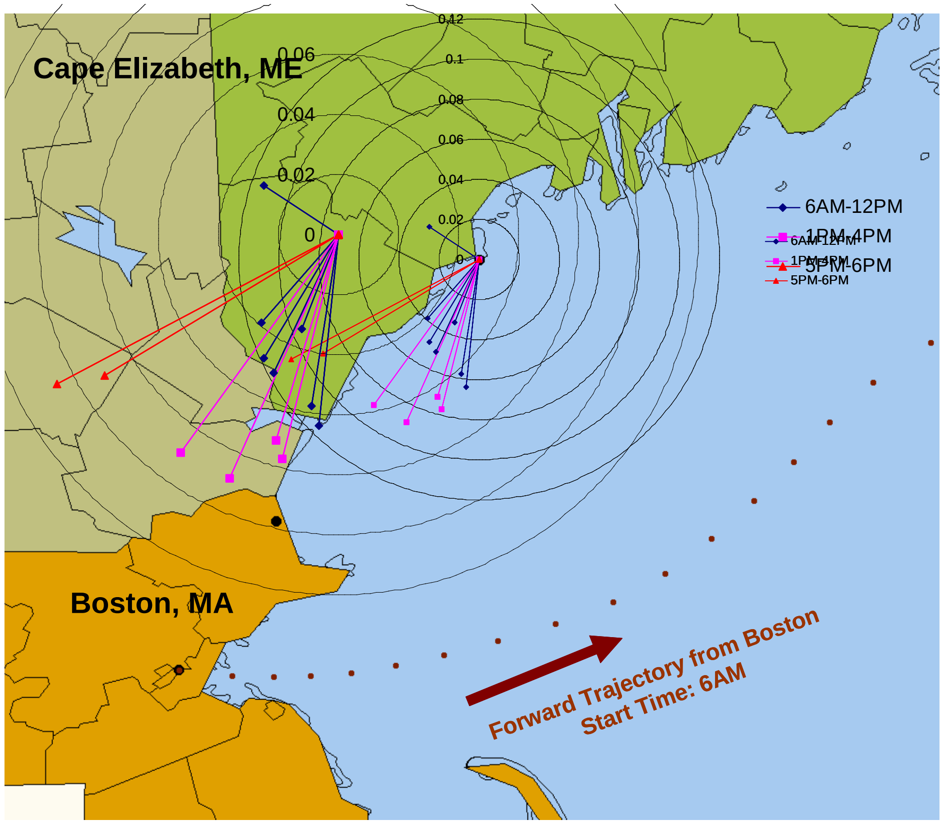


Figure E-3. Wind directions and ozone concentrations at Cape Elizabeth, ME on June 29, 1997 (figure data provided by Tom Downs, Maine Department of Environmental Protection).

Transport over the ocean is commonly observed downwind of the New York City metropolitan area during the summer months due its proximity to the Atlantic Ocean and the Long Island Sound. The four pollution rose plots presented in Figure E-4 represent the frequency of wind direction on the highest 10 percentile ozone concentration days from April 1 to October 31 during the years 1997 to 2005. The winds on the highest ozone days point at the New York City metropolitan area at all locations along the Connecticut shoreline. Going along the Connecticut shoreline to the east (towards Groton), the predominant wind frequency direction shifts increasingly to the west, tracking the upwind location of the New York City metropolitan area.

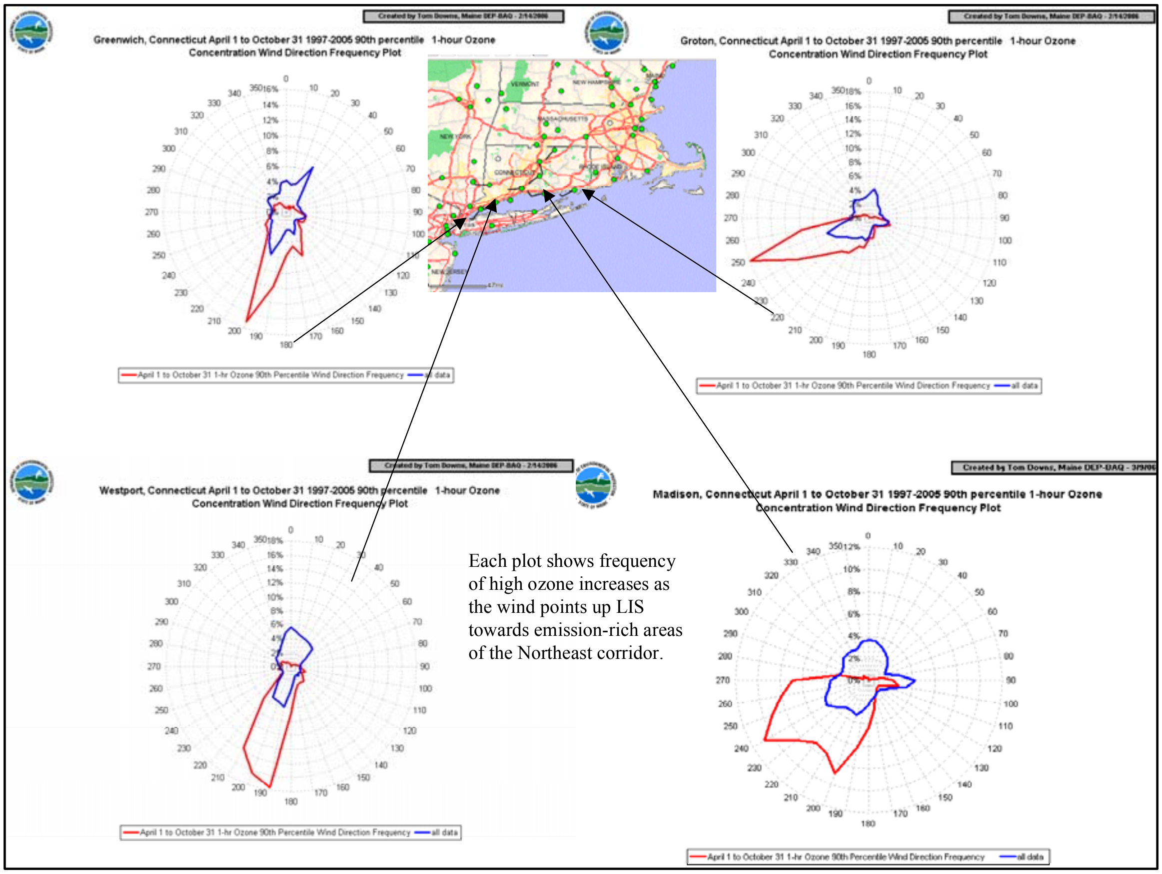


Figure E-4. Wind rose plots along Connecticut shoreline for the time period April 1 to October 31 during the years 1997 through 2005. The elongated red outlines pointing to the southwest to west are wind directions on the highest 10 percentile ozone concentration days at four Connecticut coastal locations. For comparison, the blue outlines are the wind rose plots for all days over the same period. The high ozone day wind rose plots indicate pollution flow over Long Island Sound that tracks the upwind location of the New York City metropolitan area (figure from Tom Downs, Maine Department of the Environment).

Appendix F: Observed nocturnal low level jet across the OTR, July 2002

Appendix F: Observed nocturnal low level jet across the OTR, July 2002

An example of the nocturnal low level jet across the OTR can be seen on the nights of July 22 through July 24, 2002, as night time winds at altitudes between 450 m and 1500 m were observed at several coastal sites. Figure F-1 shows wind profiler data on the night of July 22-July 23, 2002 for five sites along the east coast: Fort Meade, MD (FME), Orange, MA (ORE), Stow, MA (STW), Appledore Island, ME (ADI), and Pease Air Force Base, NH (PSE). These wind "barb" plots show wind direction (direction of arrow indicating where wind is coming from), wind speed (wind barb color), time of day (UTC time, x-axis), and altitude (meters, y-axis). The location of the nocturnal low level jet appears within the circle in each wind barb plot of Figure F-1. The figure shows a weak nocturnal low level jet at the southernmost site, Fort Meade, with wind speeds of 15 to 25 knots between 300 m and 500 m in the early part of the night. Further north, the nocturnal low level jet is more pronounced with wind speeds between 500 m and 1500 m above ground reaching 40 knots. Figure F-1 shows on this day the nocturnal low level jet extending from Maryland up through southern Maine. In addition, the wind barb plots show the northeasterly direction of the nocturnal low level jet. Above this jet, we see slower winds coming from the west to all the sites.

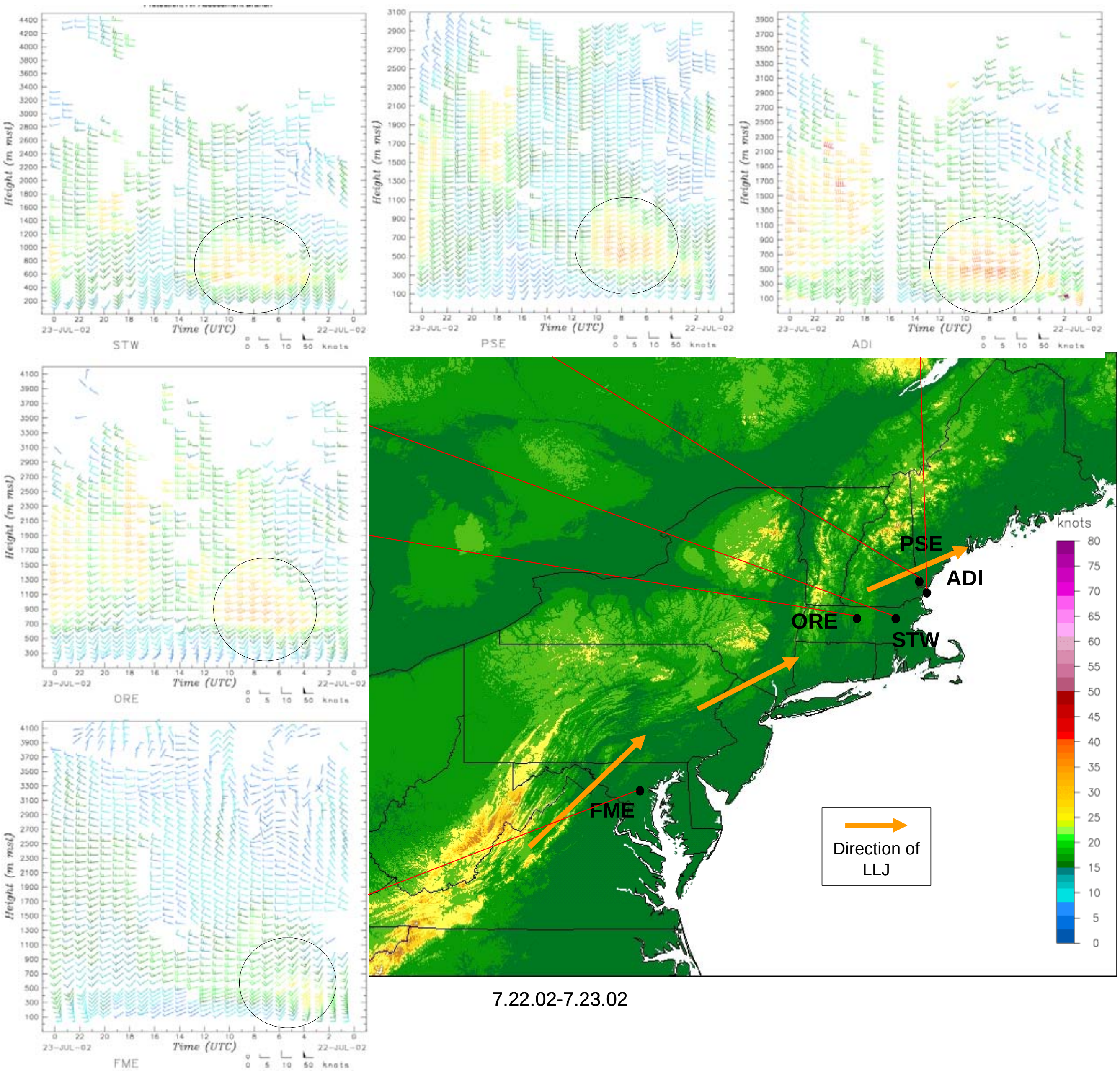


Figure F-1. Nocturnal low level jet on July 22 – 23, 2002. Note: Circles in the wind barb plots indicate the location of the nocturnal low level jet.

Figure F-1 shows that throughout the night, the nocturnal low level jet travels in a northeasterly direction along the east coast. The pollution implications of this nocturnal low level jet episode can be seen in Figure F-2. The Cadillac Mountain ozone monitor is located on the coast of Maine at an elevation of 466 m. At this elevated position, we can see how the nocturnal low level jet affects overnight and early morning ozone levels. Between midnight and 4 a.m. during the northeasterly nocturnal low level jet, hourly ozone concentrations at Cadillac Mountain are between 70 ppb and 80 ppb. Ozone levels had begun to increase early in the evening on July 22 and continued to increase throughout the night and peak at 3 a.m. This increasing nighttime ozone at an elevated position corresponds to the nocturnal low level jet channeling air up the coast during the night. Conversely, at Cape Elizabeth, a ground level site relatively close to Cadillac Mountain, night time ozone levels are much lower than on top of Cadillac Mountain. This difference in ozone at upper and lower levels shows how the nocturnal inversion can isolate air masses above and below the inversion.

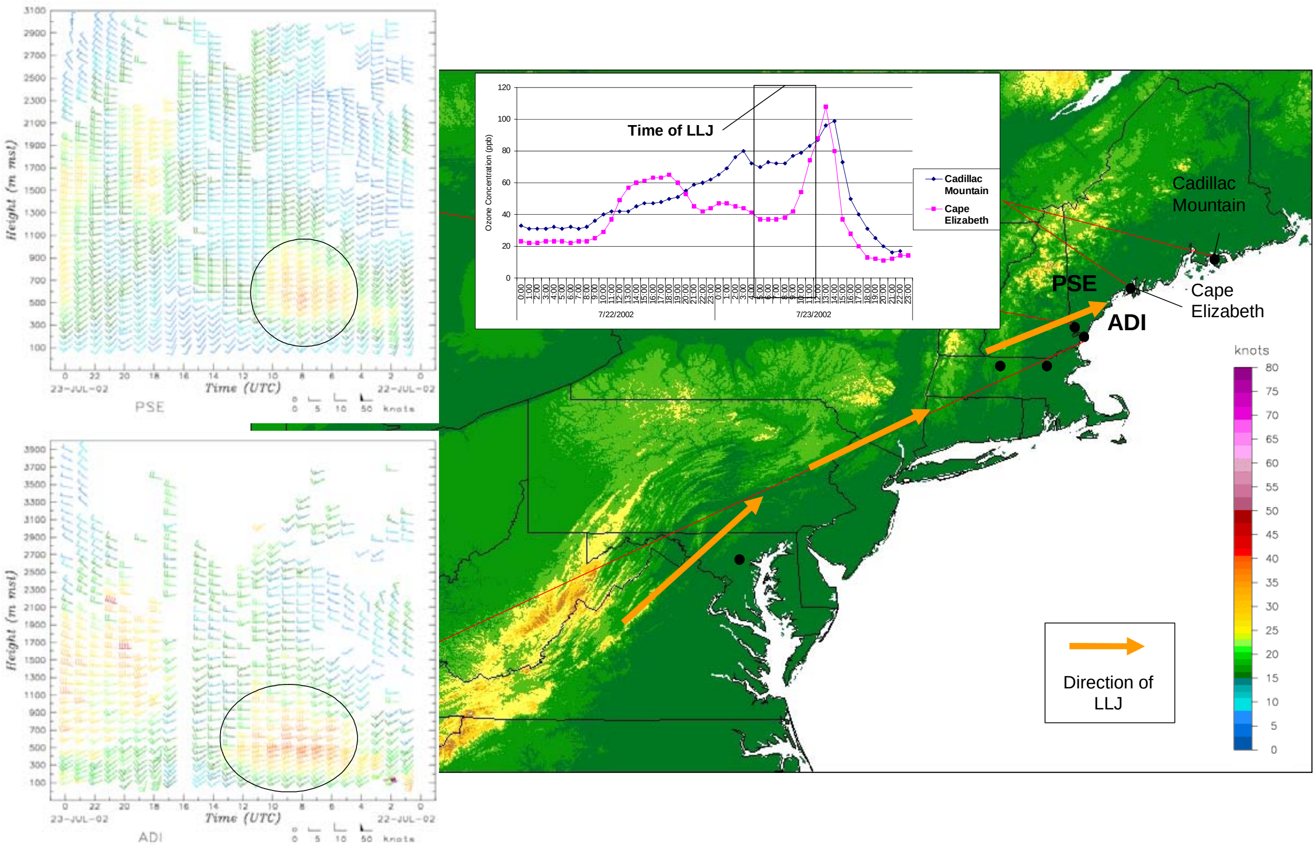


Figure F-2. Nocturnal low level jet with hourly ozone concentrations at Cadillac Mountain, ME and Cape Elizabeth, ME on July 22 – 23, 2002. Note: Circles in the wind barb plots indicate the location of the nocturnal low level jet.

The air mass affecting early morning ozone concentrations in Figure F-2 can be roughly tracked using wind speed and wind direction information from Cadillac Mountain, Pease, Appledore Island, and Orange. Assuming the nocturnal low level jet occurs for five hours that night (based on neighboring wind barb plots), the air mass arriving at Cadillac Mountain at 3 a.m. during peak ozone conditions was over central Massachusetts around 11 p.m. on July 22 when the nocturnal low level jet began to form. Tracking this farther back shows that the air mass affecting Cadillac Mountain was over western Connecticut around 6 p.m. on July 22. Looking at ozone levels in Cornwall, CT, we see that high ozone conditions existed in this region during the afternoon of July 22 with the average hourly ozone at 112 ppb between 4 p.m. and 7 p.m. Elevated ozone from this region first slowly traveled up the coast in the evening. When the nocturnal low level jet formed, it quickly pushed ozone up the coast affecting ozone levels at Cadillac Mountain, an elevated site in the jet, in the early morning hours (~3 a.m.).

Figure F-3 shows wind profiler information for the next day, July 24, 2002. In this case we see a stronger nocturnal low level jet between midnight and 8am that originates further to the south. The Fort Meade and Rutgers (RUT) sites show the nocturnal low level jet in the early part of the evening with flow in the northeasterly direction. At higher altitudes slower winds from the west pass over the nocturnal low level jet. Further north, a strong nocturnal low level jet can be seen at Stow, Appledore Island, and Pease. It is difficult to determine if a nocturnal low level jet exists at Orange as high winds continue at the upper altitudes and data are missing for the highest altitudes. Figure F-3 demonstrates an example of the nocturnal low level jet passing along the east coast as far south as Maryland and as far north as southern Maine.

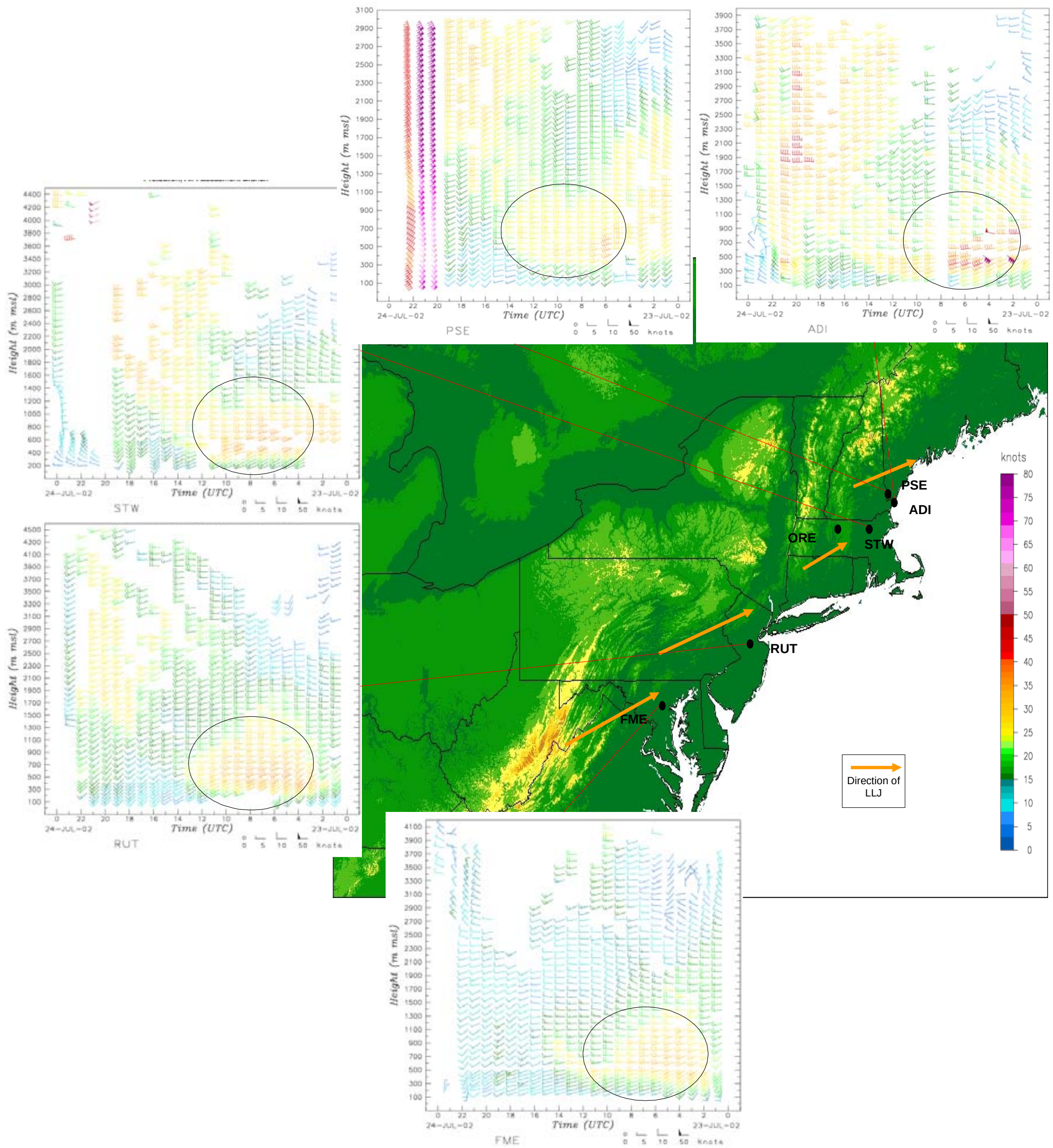


Figure F-3. Nocturnal low level jet on July 23 – 24, 2002. Note: Circles in the wind barb plots indicate the location of the nocturnal low level jet. Data are inconclusive for identifying a nocturnal low level jet at Orange, MA.

Figure F-3 shows that the nocturnal low level jet occurred on the night of July 23-24 as it did on the previous night. Figure F-4 shows ozone levels overnight on the July 23-24 at Cadillac Mountain and Cape Elizabeth. In this case, we see that low ozone is occurring at both sites during the early hours of July 24. Applying the same methods utilized earlier, wind speed and wind direction information from Cadillac Mountain indicate that the air arriving at Cadillac Mountain was also roughly over central Massachusetts at 10 p.m. on July 23 (same wind direction and wind speed as previous day). Wind profiler data show that winds moved this air mass from eastern New York and western Connecticut in the late afternoon. Average ozone levels between 4 p.m. and 7 p.m. were 53 ppb at Cornwall, CT. Therefore, much like on the previous day, air masses were tracked back to the western Connecticut area upwind. In this case, however, low levels of ozone existed in the air mass.

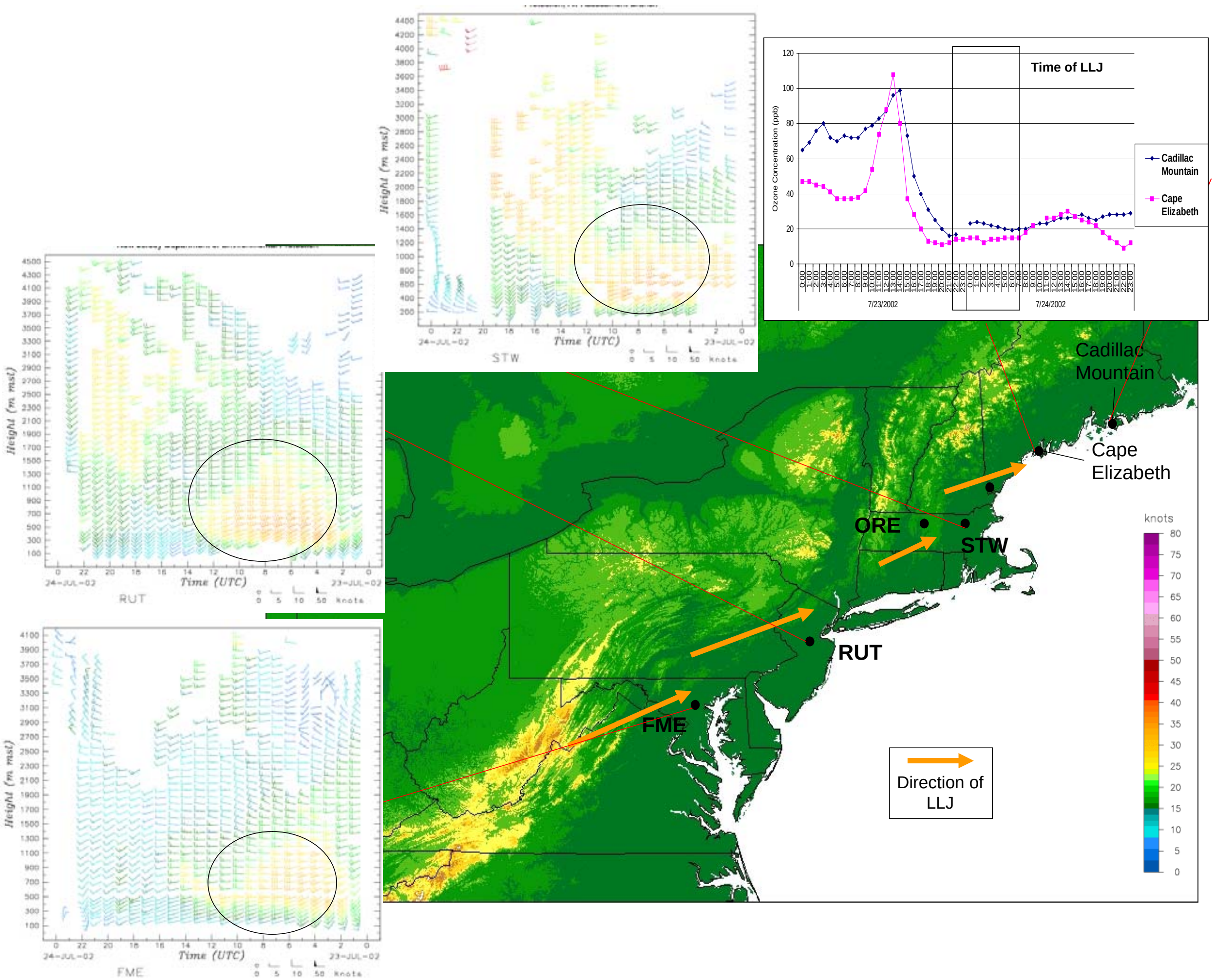


Figure F-4. Nocturnal low level jet with hourly ozone concentrations at Cadillac Mountain, ME and Cape Elizabeth, ME on July 23 – 24, 2002. Note: Circles in the wind barb plots indicate the location of the nocturnal low level jet. Data are inconclusive for identifying a nocturnal low level jet at Orange, MA.

Examining the wind profiler data from 4 p.m. to midnight on July 23 (Figure F-1 and Figure F-3), we see high winds at all altitudes developing throughout the region. Figure F-5 shows that these high winds are part of a weather front that passed through the region in the afternoon of July 23. This corresponds with the sharp drop in ozone levels at Cornwall, CT, Cadillac Mountain, ME, and Cape Elizabeth, ME (Figure F-6) as the front pushed ozone out of the region. This explains the low levels of ozone seen at Cadillac Mountain during the nocturnal low level jet in the early hours of July 24. This example demonstrates that not all nocturnal low level jets are associated with high ozone levels at elevated sites. A necessary condition for the transport of ozone in a nocturnal low level jet is the presence of upwind elevated ozone levels. The front that pushed through the region on the previous day resulted in "clean" air being transported in the nocturnal low level jet.

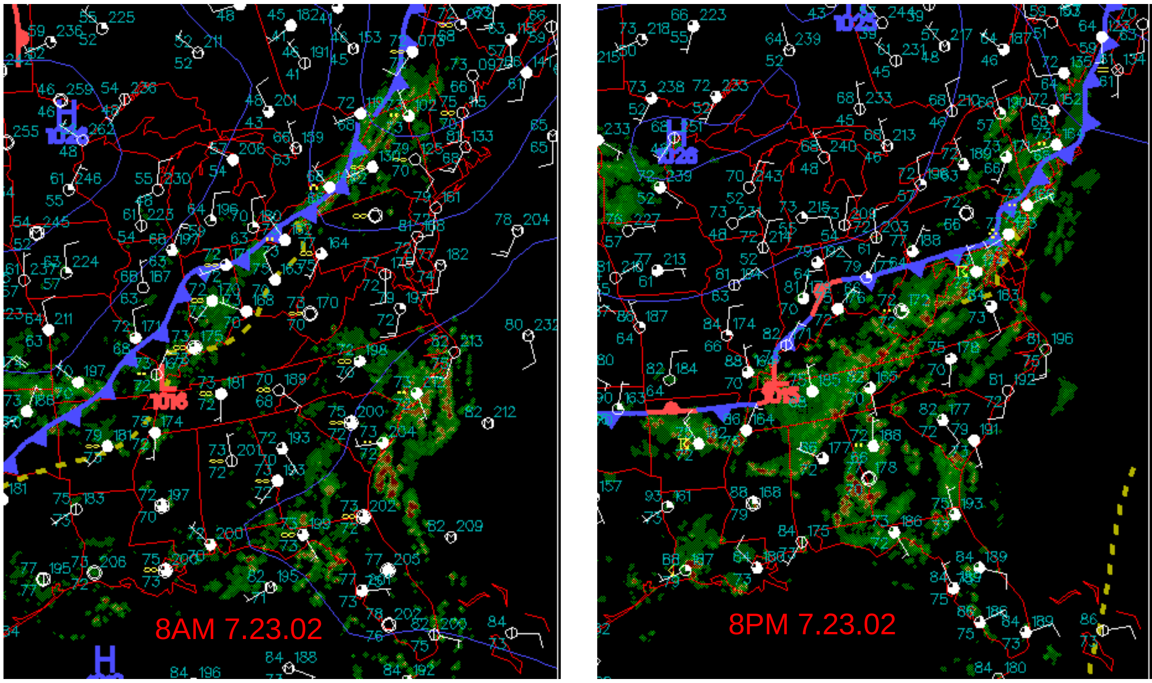


Figure F-5. Weather map displaying a front passing through the East on July 23, 2002.

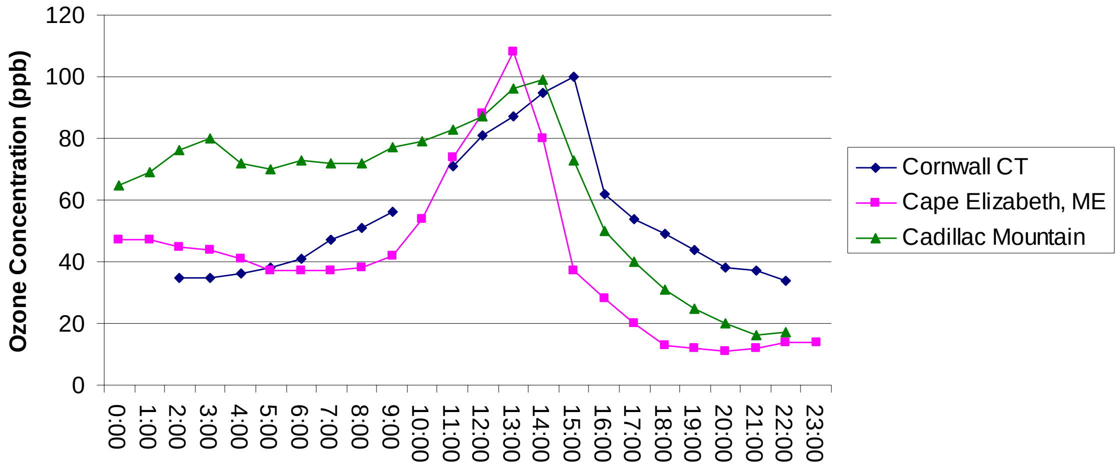


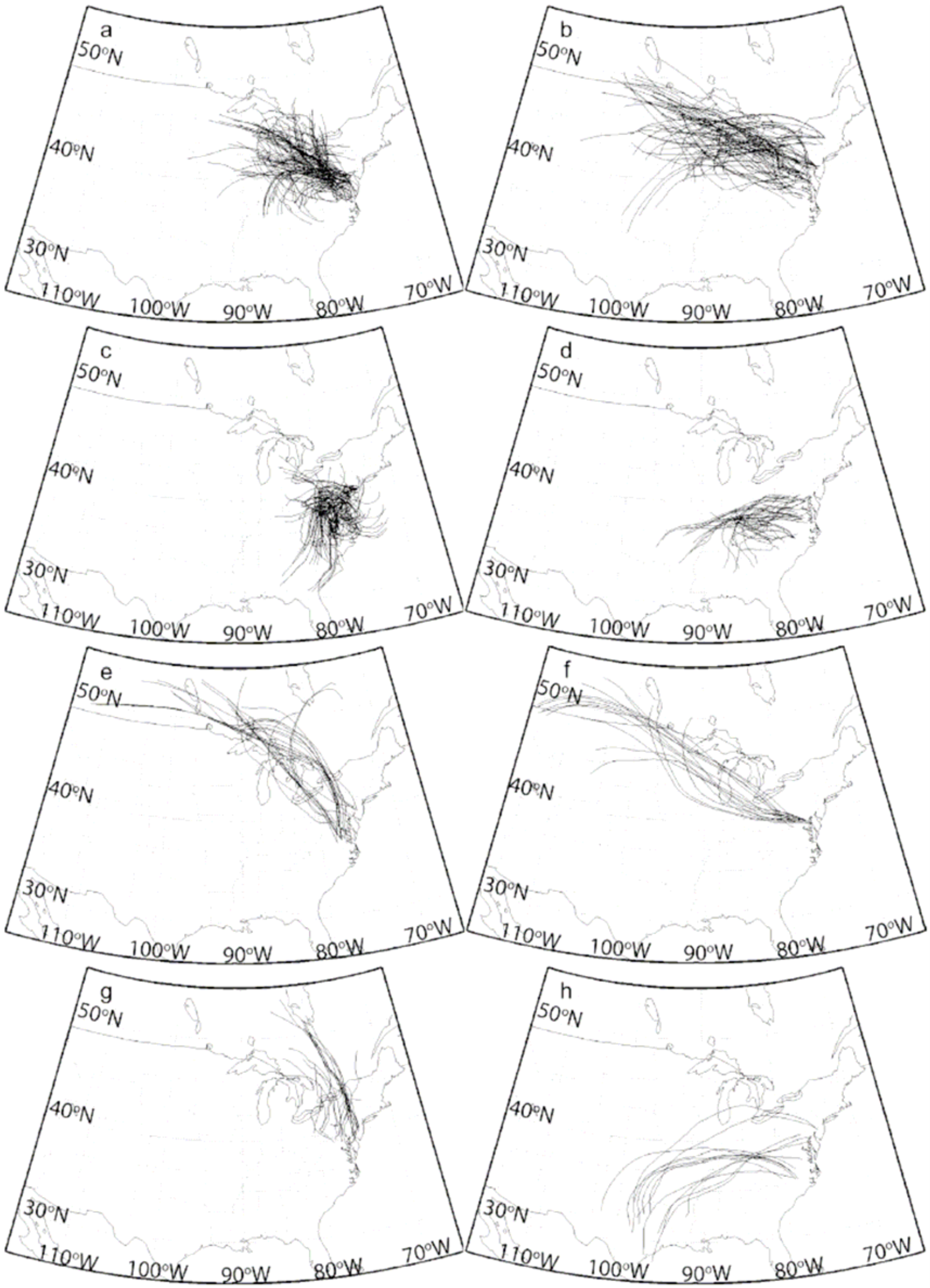
Figure F-6. Hourly ozone concentrations on July 23, 2002 at three sites.

Appendix G: Contributions to the ozone reservoir

Appendix G: Contributions to the ozone reservoir

Contributions to the ozone reservoir can come from two sources. The first is from the residual local ozone and precursors in the atmosphere at sunset. The second is from transport of ozone and precursors from outside of the local region. To identify these outside sources, Taubman *et al*. (2006) have made an analysis of the complete set of aircraft flights undertaken by RAMMPP between 1992 and 2003. Initially, the data were divided into morning and afternoon profiles to identify diurnal patterns. Little diurnal variation was observed in the carbon monoxide and sulfur dioxide profiles. The ozone values were greater in the afternoon than the morning, while ozone in the lower free troposphere (i.e., above the boundary level), where long range transport is possible, was consistently ~55 ppb. Transport patterns and source regions during summertime haze and ozone episodes were analyzed with a cluster analysis of back trajectory data. Eight clusters were identified, which were then divided into morning and afternoon profiles. Table G-1 lists the characteristics of each cluster, and Figure G-1 shows the back trajectories calculated for each profile divided by cluster at an altitude of 2000 meters. The median profile values were calculated and statistical differences were determined using a nonparametric procedure. When the greatest trajectory density lay over the northern Ohio River Valley, which has large NO_X and sulfur dioxide sources, the results were large ozone values, a large SO_2/CO ratio, large scattering particles, and high aerosol optical depth over the mid-Atlantic U.S. In contrast, relatively clean conditions over the mid-Atlantic occurred when the greatest trajectory density lay over the southern Ohio River Valley and nearly missed many large NO_X and SO_2 sources. The greatest afternoon ozone values occurred during periods of stagnation that were most conducive to photochemical production. The least pollution occurred when flow from the north-northwest was too fast for pollution to accumulate and when flow was from the north, where there are few urban or industrial sources.

Figure G-1: Maps of the 2 km, 48 hr HY-SPLIT back trajectory clusters for mid-Atlantic region



Note: Cluster groupings are a) cluster 1, b) cluster 2, c) cluster 3, d) cluster 4, e) cluster 5, f) cluster 6, g) cluster 7, and h) cluster 8. Figure from Taubman *et al.*, 2006.

Ozone transport over several hundred kilometers into the mid-Atlantic U.S. was estimated by calculating the ratio of the residual layer ozone between 500 m and 2 km in the upwind morning profiles to the downwind afternoon boundary layer values between 100 m and 2 km. The greatest level of transported ozone (69-82 percent) occurred when the maximum trajectory density lay over the southern and northern Ohio River Valley (clusters 1, 2, 4, and 6); ~59 percent of the total profiles). The least amount of transported ozone (55-58 percent) was associated with fast southwesterly flow (cluster 8; ~3 percent of the total profiles), fast north-northwesterly flow or clean northerly flow from regions with relatively few urban or industrial pollution sources (clusters 5 and 7; ~6 percent of the total profiles), and stagnant conditions within the mid-Atlantic conducive to greater local ozone production (cluster 3; ~27 percent of the total profiles). The average amount of ozone transported into the Baltimore-Washington urban corridor is 64 percent of the total observed ozone in the afternoon boundary layer. If the background ozone is removed, then this value is lowered to 55 percent.

When trajectory density plots were overlaid on maps with the largest annual NO_X and SO_2 emitters, specific source regions were identified. The results indicate that the areas of maximum trajectory density together with wind speed are effective predictors of regional pollution and loadings. Additionally, due to the Lagrangian nature of the dataset, the regionally transported contribution to the total afternoon boundary layer column ozone content in each cluster could be quantified.

Table G-1. Cluster groups for air mass trajectories into mid-Atlantic Region

Cluster	Description	Upwind Region
1	Large ozone values, large SO_2/CO ratio, large highly scattering particles. Moderate northwesterly flow – aged point source air.	Northern Ohio River Valley
2	Small ozone values, large SO_2/CO ratio. Northwesterly flow at higher wind speeds than Cluster 1 – aged point source air.	Northern Ohio River Valley, extending into the Great Lakes region
3	Large ozone values, small SO_2/CO ratio. Stagnant conditions with light southerly flow.	Central mid-Atlantic region
4	Small ozone values, small SO_2/CO ratio. Moderate southwesterly flow, small pollution loading – fewer point sources.	Southern Ohio River Valley
5	Fairly fast north-northwesterly flow. Flow too fast for pollution to accumulate from source region.	Northern Great Lakes
6	Moderately large ozone values, SO_2/CO ratio very large, smaller less scattering particles. Northwesterly flow, but faster wind speeds than Clusters 1 and 2. Crosses several large SO_2 and NO_X sources.	Northern Ohio River Valley
7	Least pollution of any of the clusters. Flow is out of the north. Relatively cool, dry continental air.	Eastern Ontario, western Quebec
8	Small ozone values, small SO_2/CO ratio. Fast southwest flow. Very few trajectories.	Vicinity of Texas

Reference

Taubman, B.F., J.C. Hains, A.M. Thompson, L.T. Marufu, B.G. Doddridge, J.W. Stehr, C.A. Peity, and R.R. Dickerson. "Aircraft vertical profiles of trace gas and aerosol pollution over the mid-Atlantic United States: Statistics and meteorological cluster analysis." *J. Geophys. Res.* **111**, D10S07, doi:10.1029/2005JD006196, 2006.

Appendix 2B

A Connecticut Perspective On the Regional Ozone Problem

1.0 Introduction

Ozone pollution along the east coast of the United States has proved to be a difficult challenge. The meteorology, topography, population density and spatial pattern of emissions all contribute to the problem. The weather patterns can concentrate and transport ozone over hundreds of miles. Thus, it is a truly regional problem in need of regional solutions. Emission reductions from electric generating units (EGUs), mobile sources and other source categories need to occur. On behalf of the Ozone Transport Commission, the Northeast States for Coordinated Air Use Management (NESCAUM) produced a conceptual description of how ozone is formed and transported regionally in the eastern US. See Section 2 of the main body of this technical support document (TSD) for a summary of NESCAUM's report and Appendix 2A for a complete copy of the report.

The discussion below provides a Connecticut perspective on the regional ozone problem. The types of meteorological events that produce high ozone in Connecticut are described, using the hot summer of 2002 as an example. In addition, evidence is provided demonstrating the important role that upwind transport areas play in contributing to Connecticut's high ozone events.

2.0 Meteorological Regimes Producing High Ozone Days in 2002

Four meteorological regimes corresponding to four spatial patterns of ozone exceedances are identified for Connecticut from 2002 data. The frequency of ozone exceedances was unusually high in 2002 (i.e., 34 days with at least one monitor exceeding the 8-hour standard) due to the extremely hot summer,[1] but the patterns seen were characteristic of other years. The patterns identified are:

1. Inland-only exceedances (6 days);
2. Coastal-only exceedances (11 days);
3. Western boundary-only exceedances (8 days); and
4. Statewide exceedances (9 days).

All patterns feature hot air masses with 850 millibar (mb) and temperatures exceeding 13C. These temperatures aloft can correspond to inland surface temperatures of at least 85°F, with coastal temperatures typically in the 70°F's and low 80°F's along Long Island Sound (LIS). Generally, the winds aloft at 850 mb during ozone events are from the west-southwest (WSW) to west-northwest (WNW) and fairly strong (indicating transport). Surface geostrophic wind patterns (i.e., winds not influenced by mesoscale effects such as the seabreeze or leeside trough) vary from the south for inland-only exceedances (Pattern 1), the west for coastal-only exceedances (Pattern 2), south-southwest for western boundary exceedances (Pattern 3), and southwest for statewide exceedances (Pattern 4).

[1] There were 35 days with high temperatures ≥ 90 °F in 2002, as measured at Bradley International Airport, compared to the 30-year average of 17 days. Only 1983, with 38 days ≥ 90 °F, was hotter over the 30 years.

2.1 Pattern 1: Inland-Only Exceedances

For Pattern 1, ozone is brought in aloft from the west and mixed down during the day. Strong southerly surface winds bring in clean maritime air from off the Atlantic Ocean, with the coastal surface monitors reflecting that phenomenon. Figure 2.1 represents an example of a time series of the winds and an ozone map for June 21, 2002. The maritime front does not make it very far inland, leaving inland monitors influenced by the dirty air mass. A low level jet often sets up aloft overnight, transporting polluted air from the southwest. The synoptic weather pattern consists of a large warm sector with strong southerly surface winds. See Figures 2.2 and 2.3 for the surface and upper air charts for June 21, 2002.

FIGURE 2.1 CT PATTERN 1
INLAND EXCEEDANCES, STRONG MARINE INFLUENCE ON JUNE 21, 2002

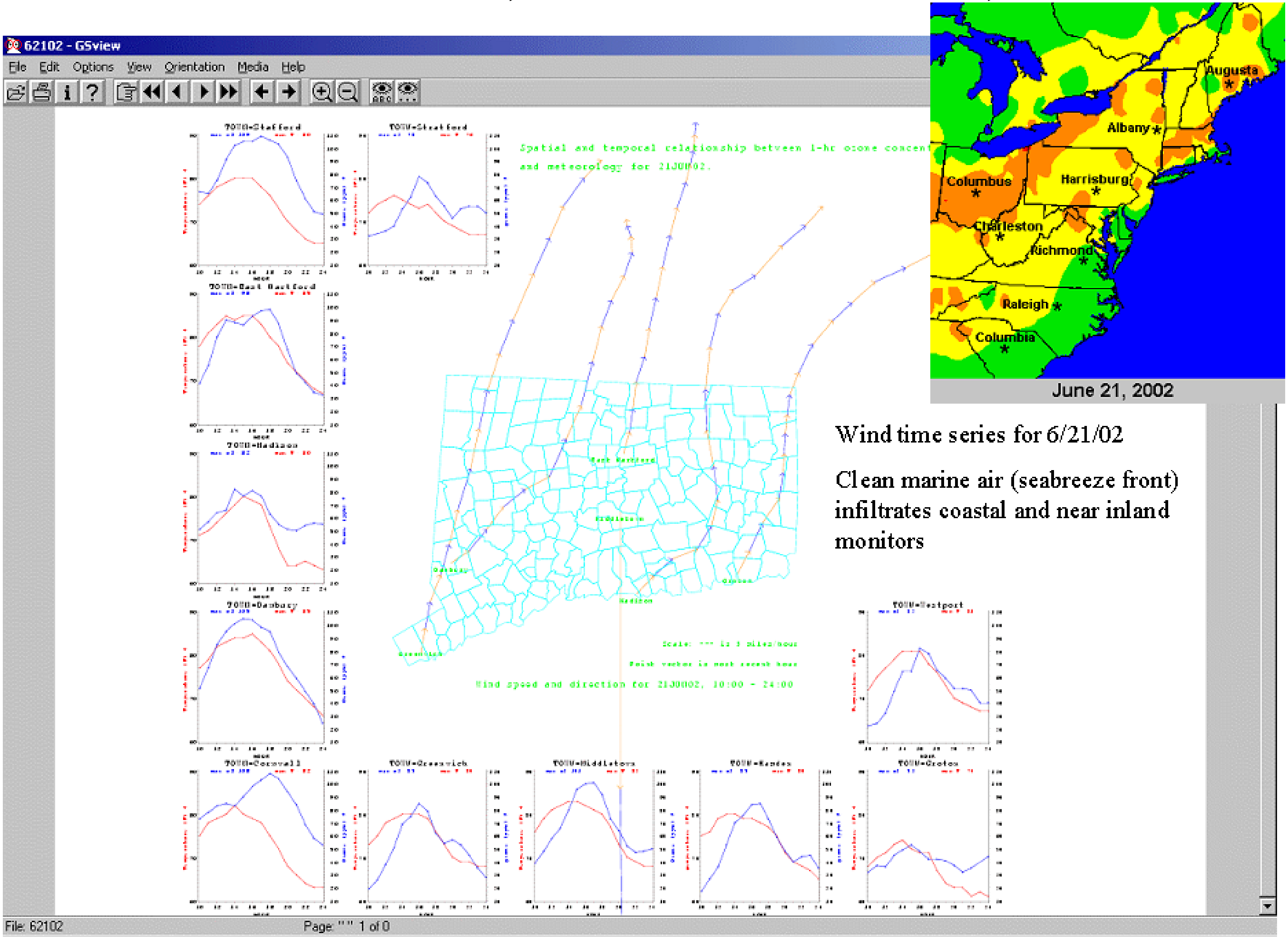
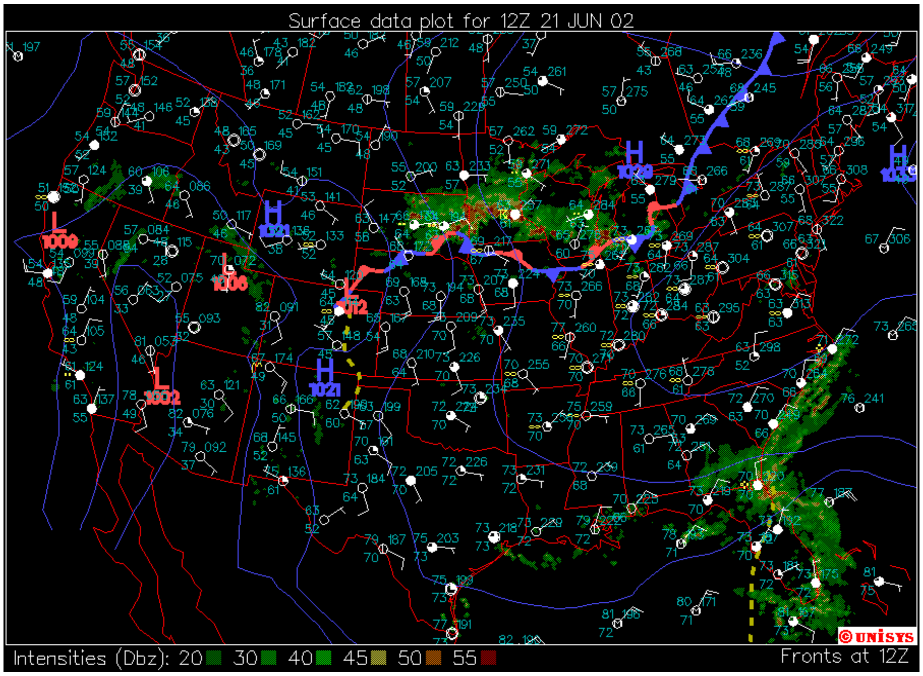
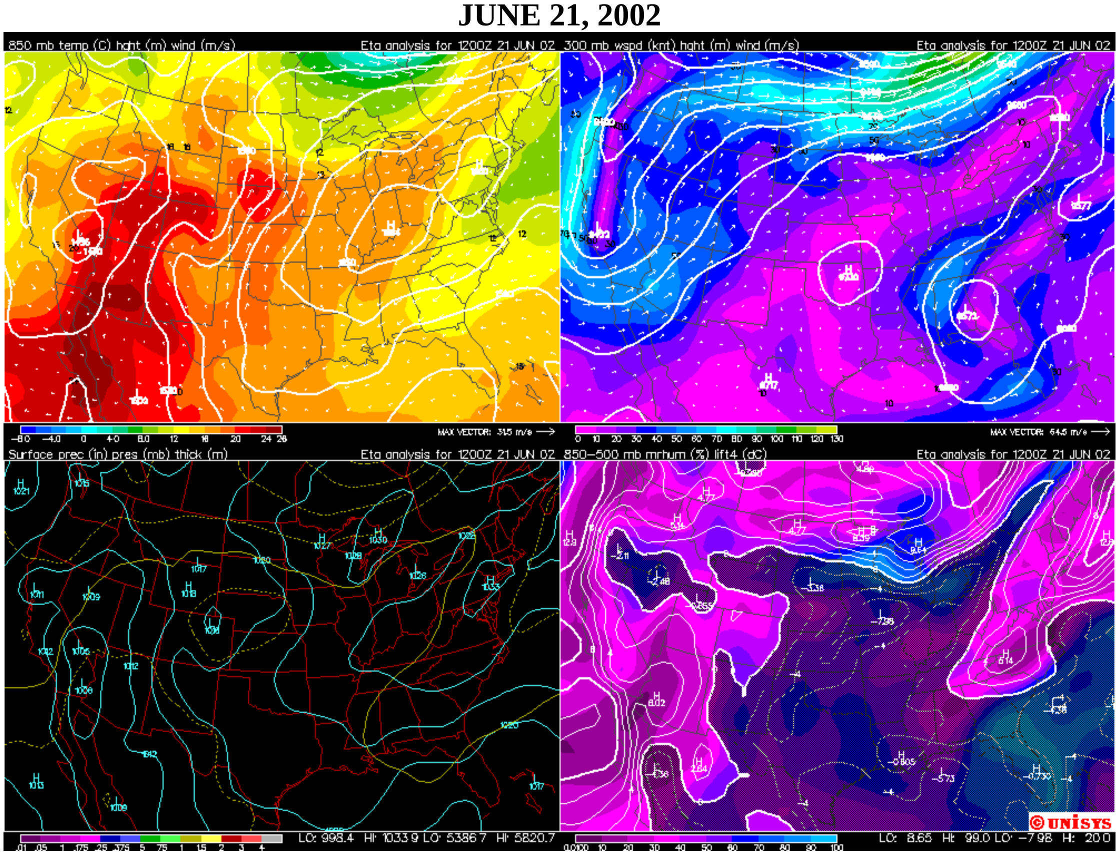


FIGURE 2.2 SURFACE METEOROLOGY ASSOCIATED WITH PATTERN 1
JUNE 21, 2002



Source: UNISYS, "UNISYS Weather Image and Map Archive" 2007. http://weather.unisys.com/archive/index.html

FIGURE 2.3 UPPER AIR METEOROLOGY ASSOCIATED WITH PATTERN 1
JUNE 21, 2002



Source: UNISYS, "UNISYS Weather Image and Map Archive" 2007. http://weather.unisys.com/archive/index.html

2.2 Pattern 2: Coastal-Only Exceedances

For Pattern 2, strong westerly surface winds transport pollutant laden air down LIS from west to east. (See Figure 2. upper left panel for forward trajectories for July 2, 2002). Ozone and its precursors are injected into the marine boundary layer (MBL) off the coast from New York and New Jersey. The MBL keeps the ozone highly concentrated by prohibiting vertical ventilation due to high stability. (See the lower left panel of Figure 2.4). The sea breeze has a southerly component to it, bringing the dirty air inland close to the shore. Inland, the wind is either west or WNW, prohibiting the maritime air from moving north and setting up a confluence/convergence zone further concentrating the ozone along the coast. The synoptic pattern is one of a cold front bearing down on the region from the west with strong west winds mixing down from aloft. (See Figure 2. for the surface chart, Figure 2.4, lower right panel for upper air chart). The exceedance pattern is a thin strip of concentrated ozone along the coast, as seen in Figure 2.4 (upper right panel).

2.3 Pattern 3: Western Boundary-Only Exceedances

For Pattern 3, the maritime surface air invades the eastern two-thirds of Connecticut and keeps monitors in that portion of the state clean. However, for those monitors downwind of New York City (Greenwich, Danbury, and perhaps Cornwall) high ozone is measured. (See Figure 2.6 for an air quality map and wind time series for August 2, 2002). The SSW urban winds out of New York City cause exceedances at the western monitors, and the south to SSE maritime winds keep the rest of the state clean. In the case of August 2, 2002, a frontal system divided the state causing the wind to blow from different directions in different parts of the state. (See the surface chart in Figure 2.7**.**) The upper air charts in Figure 2.8 indicate weak flow aloft and no strong dynamics for weather systems. The temperatures aloft (at 850 mb) were very warm, promoting the formation of ozone.

2.4 Pattern 4: Statewide Exceedances

For Pattern 4, the flow at all levels is favorable for high ozone formation in all of Connecticut (and much of the OTR as well). Many or all of the mechanisms discussed in patterns 1-3 may be operating. Pattern 4 is a "classical" ozone pattern drawing ozone from the I-95 urban corridor both at the surface and at mid levels via the low level jet, as well as from the Midwest at upper levels. This convergence can produce some of the highest measured ozone levels in Connecticut. Figure 2.9, for August 12 and 13, 2002, reveals the following:

- The ozone map shows high ozone levels enveloping much of the OTR;
- Lowest level winds are out of the SSW, picking up ozone and precursor emissions from both the I-95 corridor of urban areas and a pool of ozone off the Atlantic Coast (see Section 3.2.3 of the TSD and Figure 2.2.2.4 in Section 2.2 of the TSD);
- Midlevel winds are lee of the Appalachians and the vertical profile indicate the existence of a nocturnal jet transporting ozone northeastward**;**
- Upper level winds are blowing from the west and WSW, the source region that includes numerous large coal burning power plants in Pennsylvania and the Ohio Valley; and
- Ozone concentrations reached unhealthy and very unhealthy (up to 126 ppb 8-hour average) levels for much of the state.

FIGURE 2.4 CT PATTERN 2
COASTAL EXCEEDANCES, JULY 2, 2002
FORWARD TRAJECTORIES, AQ MAP, SURFACE WIND TIME SERIES AND 850 MB ANALYSIS

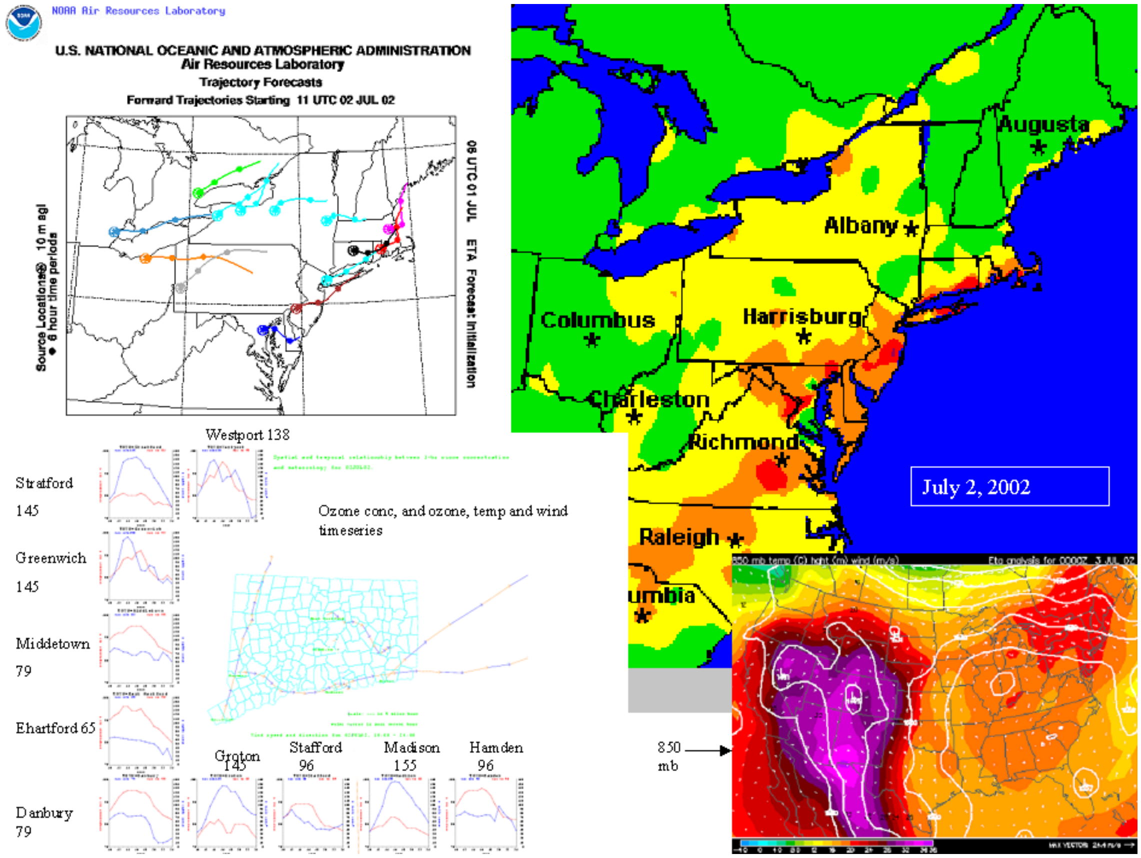
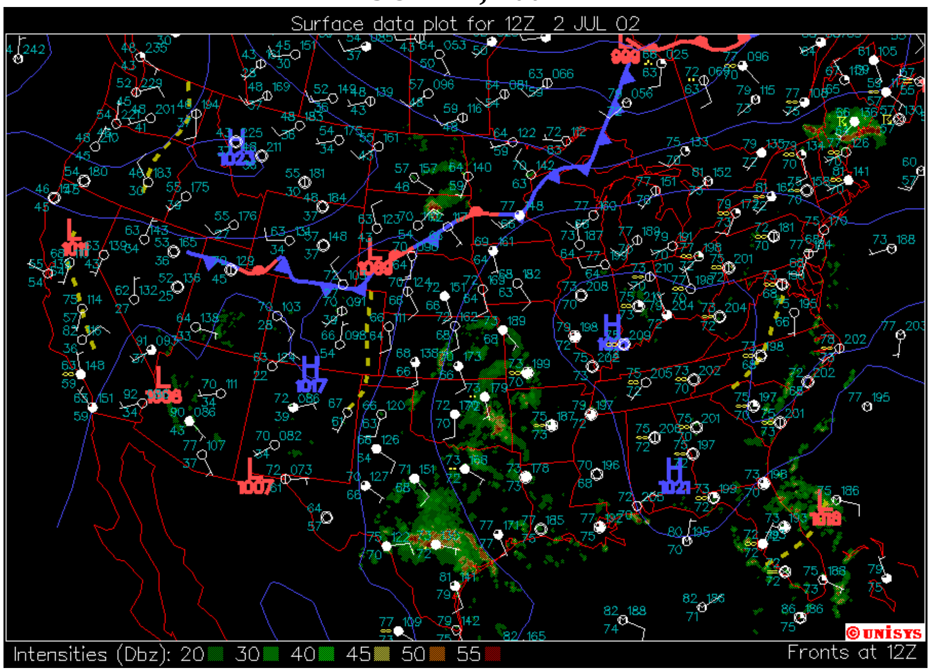


FIGURE 2.5. SURFACE METEOROLOGY ASSOCIATED WITH PATTERN 2 JULY 2, 2002



Source: UNISYS, "UNISYS Weather Image and Map Archive" 2007. http://weather.unisys.com/archive/index.html

FIGURE 2.6 CT PATTERN 3 AUGUST 2, 2002
EXCEEDANCES CONFINED TO THE SOUTHWEST CORNER OF THE STATE.
AIR QUALITY AND SURFACE TIME SERIES PLOTS

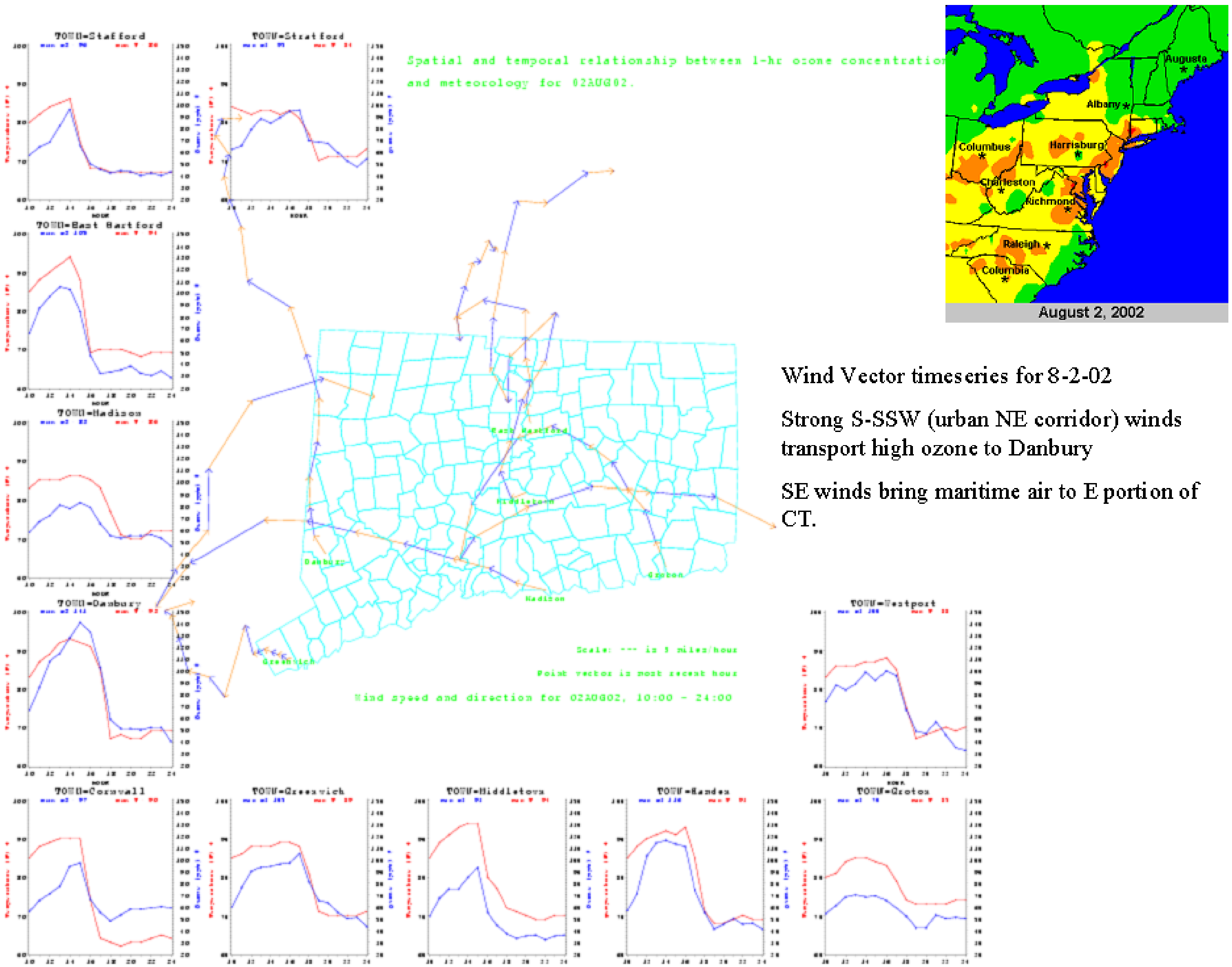


Figure 2.7 PATTERN 3
Surface Chart for August 2, 2002

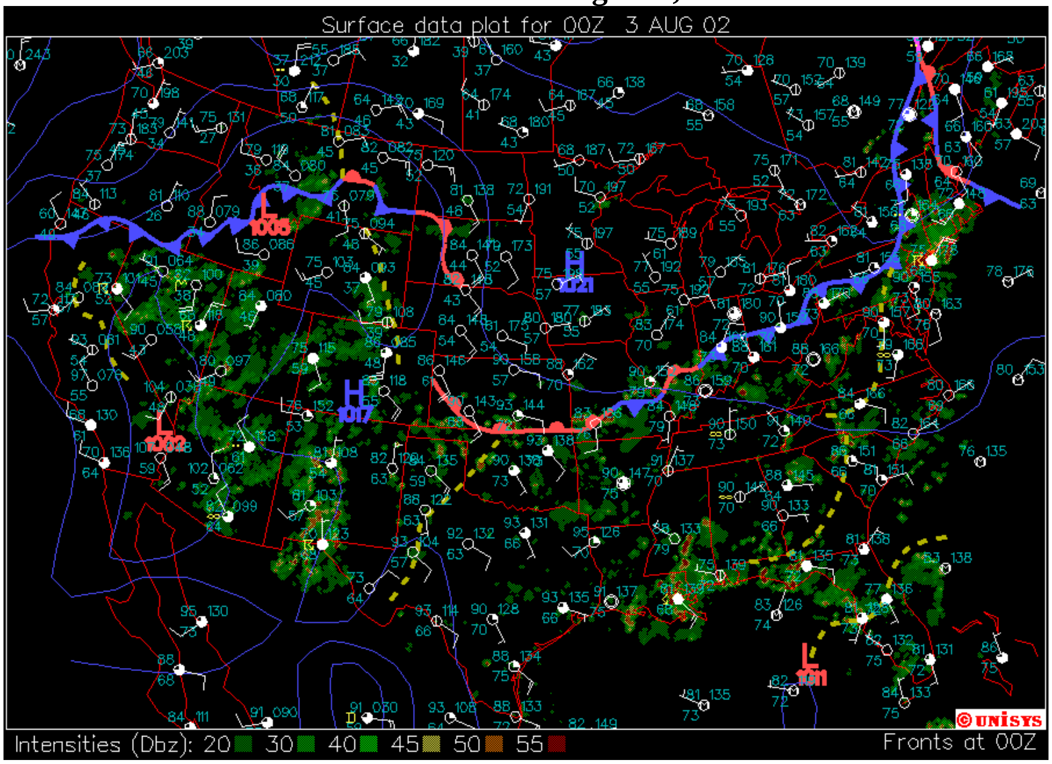
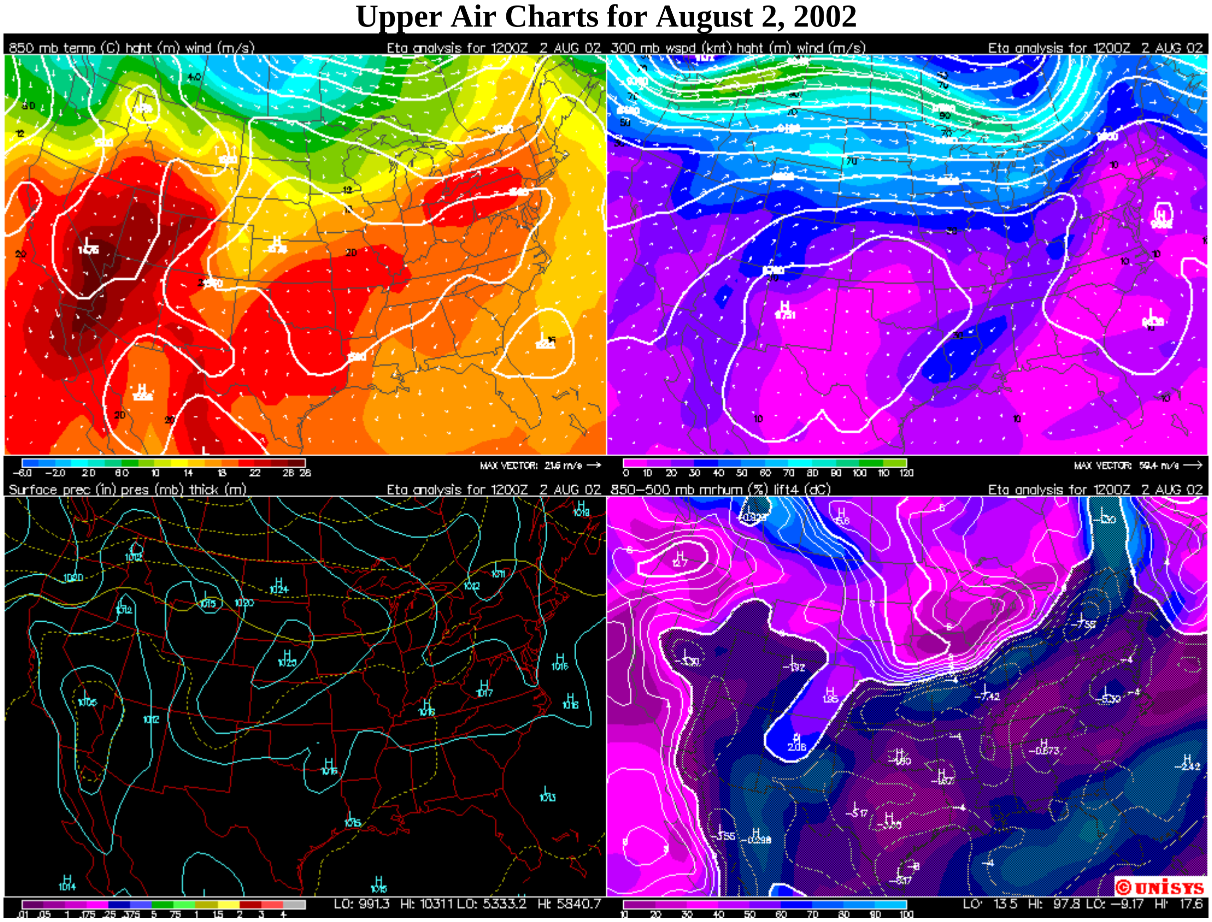


Figure 2.8 PATTERN 3
Upper Air Charts for August 2, 2002



Source: UNISYS, "UNISYS Weather Image and Map Archive" 2007. http://weather.unisys.com/archive/index.html

FIGURE 2.9 CT PATTERN 4
EXCEEDANCES IN ENTIRE STATE (AND THROUGHOUT OTR)
AIR QUALITY, VERTICAL PROFILE AND 3-D TRAJECTORY MAPS

A Worst Case Day in Connecticut

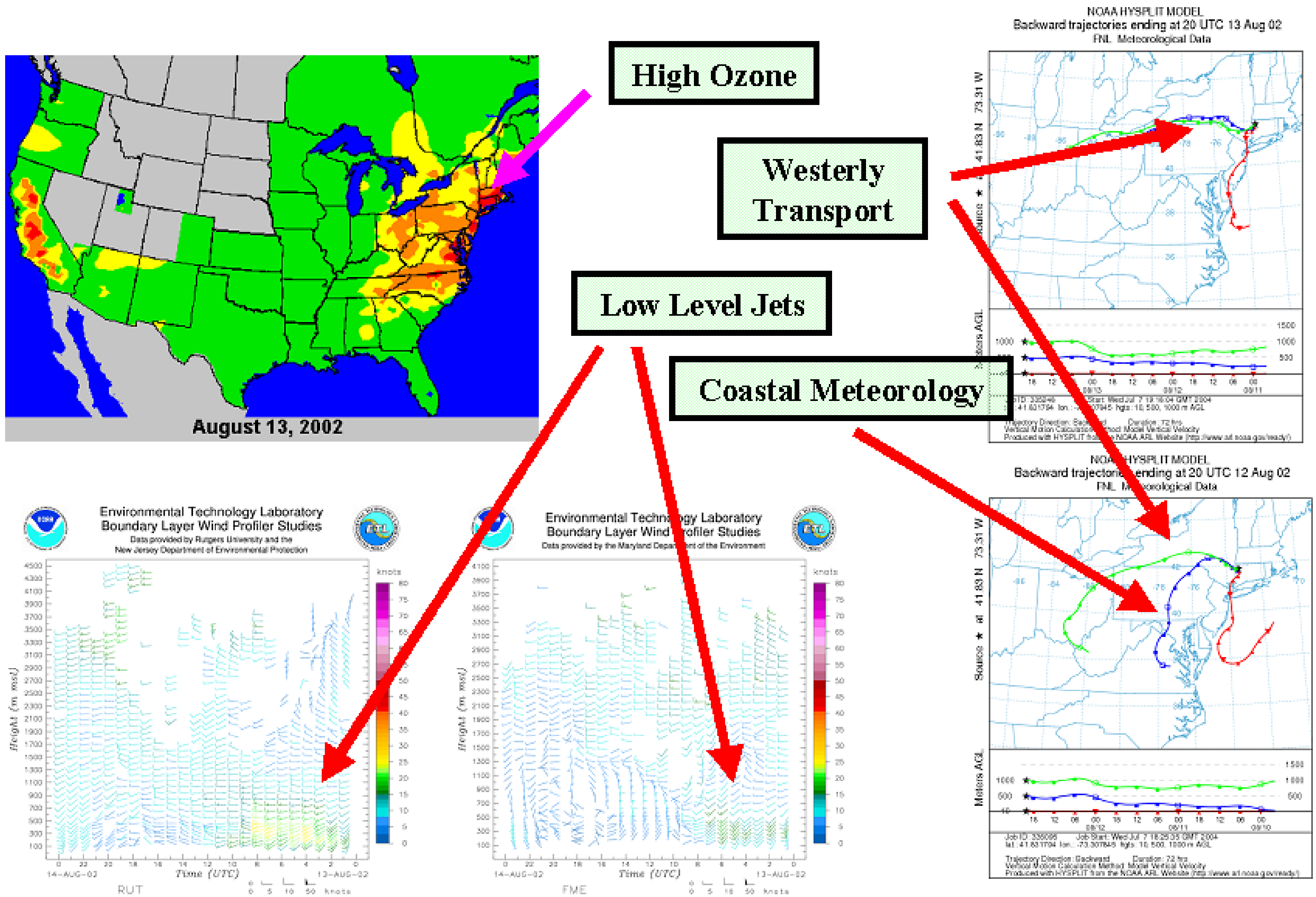
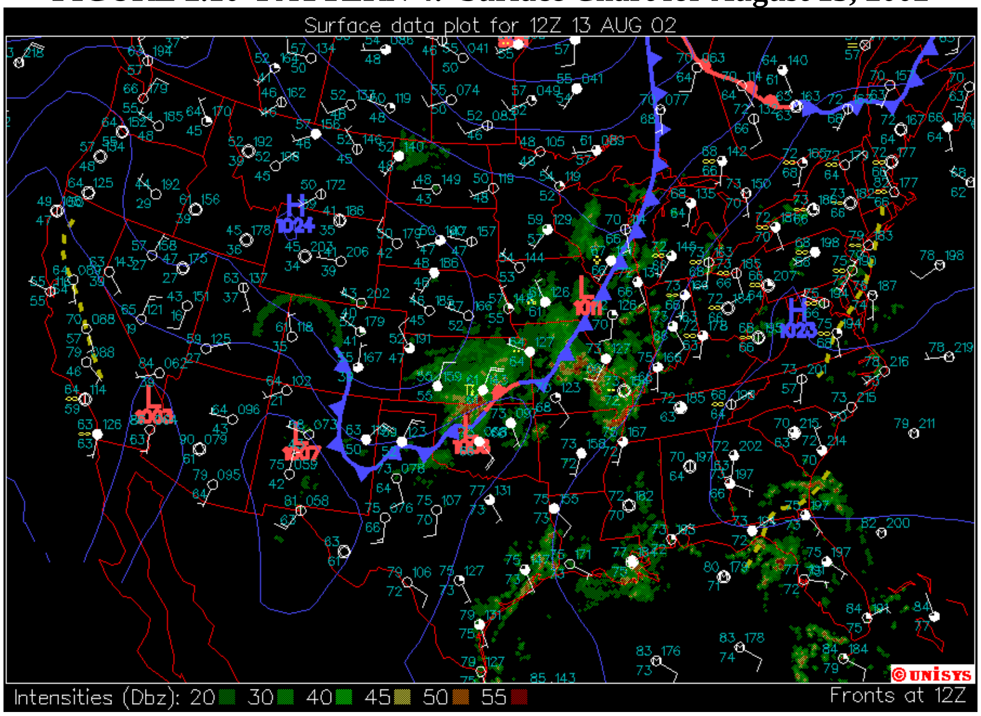


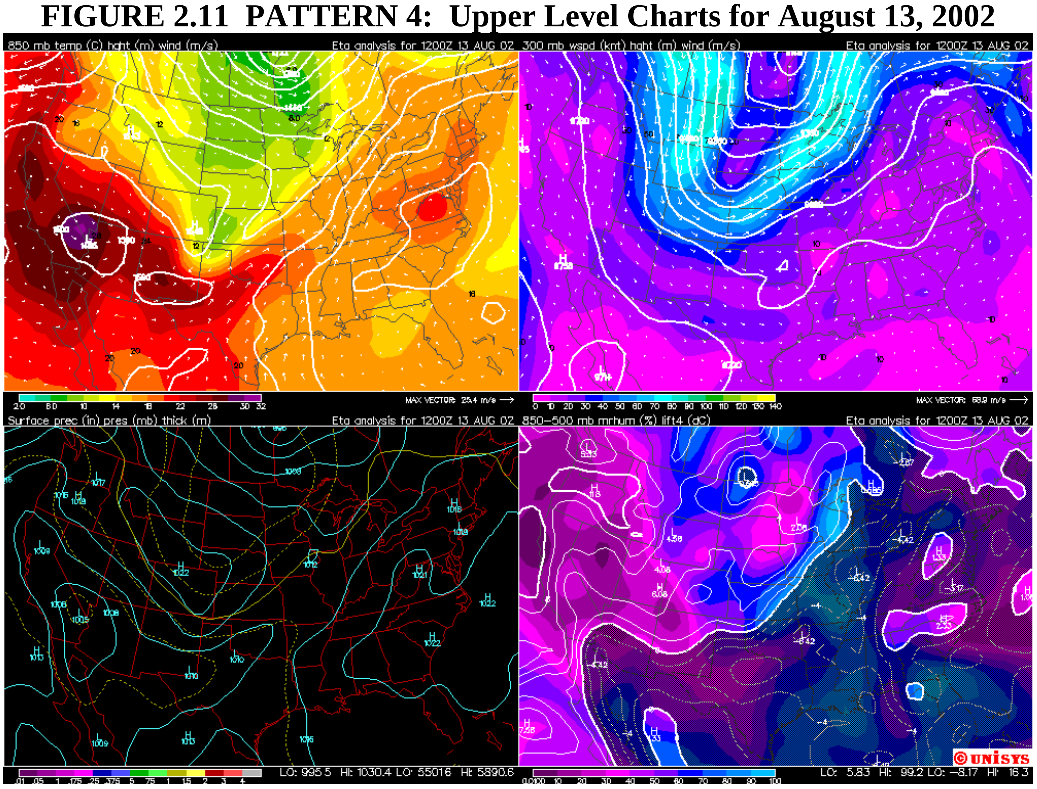
Figure 2.10 shows the surface weather features for August 13, 2002. Of note is the familiar high pressure to the south, pumping SW winds into Connecticut. Figure 2.11 shows a ridge at all levels of the atmosphere with westerly winds at transport level and hot temperatures approaching 20C at 850 mb, translating to mid-to-upper 90°F's at the surface.

FIGURE 2.10 PATTERN 4: Surface Chart for August 13, 2002



Source: UNISYS, "UNISYS Weather Image and Map Archive" 2007. http://weather.unisys.com/archive/index.html

FIGURE 2.11 PATTERN 4: Upper Level Charts for August 13, 2002



Source: UNISYS, "UNISYS Weather Image and Map Archive" 2007. http://weather.unisys.com/archive/index.html

3.0 Evidence of Transport

Although emissions from sources in Connecticut do contribute significantly to the state's poor air quality events, substantial upwind help is needed to reduce ozone in the state to healthy levels. Current emission reduction programs such as the NO_X SIP call have been effective at reducing ozone in Connecticut, primarily because they reduce ozone that is transported to the state by large power plants upwind that emit significant amounts of NO_X. This section presents evidence from modeling, air quality and meteorological analyses regarding the transport of ozone and ozone precursor emissions into Connecticut from upwind areas.

3.1 Modeling Evidence of Ozone Transport

Modeling conducted by the New Hampshire Department of Environmental Services (NHDES) for the states of the Ozone Transport Region (OTR) and by EPA in support of the Clean Air Interstate Rule (CAIR) illustrates the overwhelming level of ozone transport affecting Connecticut.

NHDES CALGRID Zero-Out Modeling

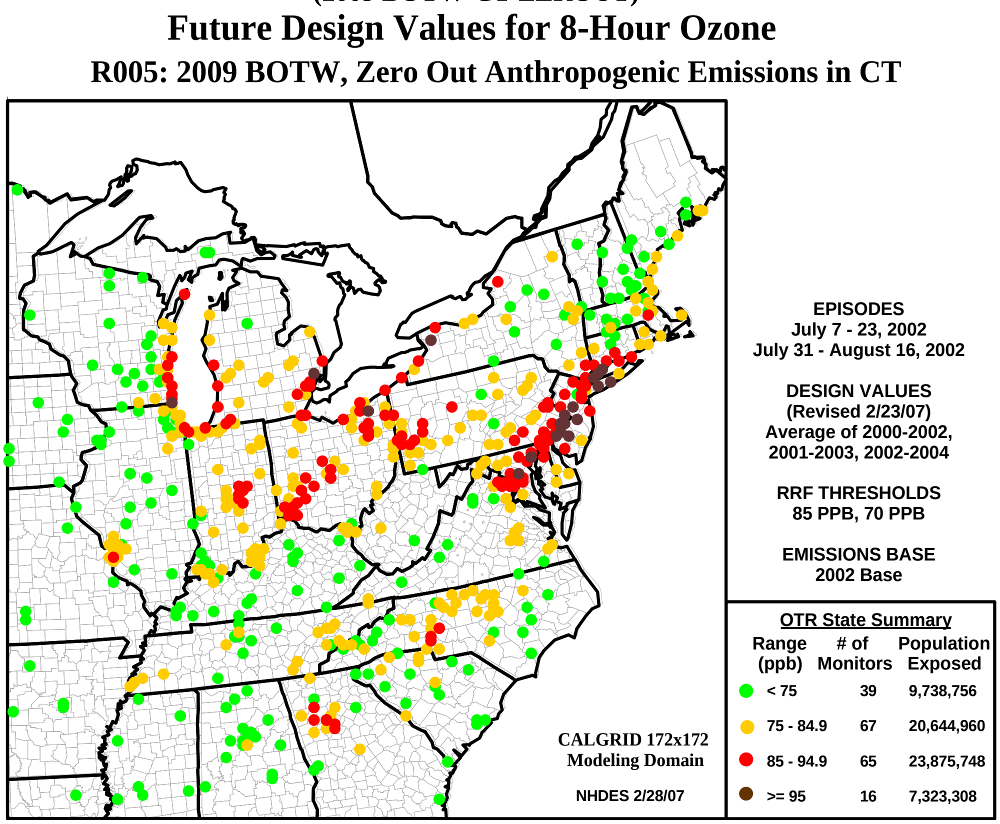
The California Photochemical Grid Model (CALGRID) was run by the NHDES to provide OTR states with additional information to inform policy decisions related to candidate control strategies. The CALGRID model is not considered to be a SIP-quality modeling tool and has a tendency to predict higher ozone levels than the SIP-quality CMAQ modeling system. Nonetheless, CALGRID analyses are less resource-intensive to produce than CMAQ analyses and can provide useful information on the relative contributions of source areas and the relative effectiveness of control strategies.

NHDES conducted CALGRID runs using meteorology simulations for the July 7 to July 21 and July 31 to August 16 periods of 2002. Base case runs used emissions representing the 2009 beyond-on-the-way (BOTW) control scenario. Comparison runs removed anthropogenic emissions for entire states (i.e., "zero-out" runs) to estimate the relative contribution of each state to the transport problem.

Figure 3.1 depicts CALGRID results based on zero-out runs for Connecticut sources**.** Even with no in-state anthropogenic emissions in 2009, the conservative CALGRID model predicts that Connecticut's coastal and boundary monitors would exceed the air quality standard due to overwhelming transport from sources outside the state. Connecticut's own contribution at these key monitors is predicted to be less than 15 ppb, indicating that transport from upwind out-of-state areas accounts for more than 80% of predicted peak ozone levels in Connecticut.

Figures 3.2 through 3.4 provide estimates of near-field transport into Connecticut, based on CALGRID zero-out runs for three nearby upwind states (New York, New Jersey and Pennsylvania, respectively). When contributions are summed for Connecticut's key coastal and boundary monitors, as much as 35 ppb can be attributed to these three nearby upwind states for the periods modeled. Given how close Connecticut is to full attainment in 2009 according to the SIP-quality CMAQ modeling (see Section 8.4 of the TSD), additional regional emission reduction measures in these states, such as the high electric demand day (HEDD) initiative (see Section 8.5.5 of the TSD), would provide greater confidence regarding projected attainment.

Figure 3.1 CALGRID Connecticut Zero-Out Run, Concentration and Difference Plot (2009 BOTW-CT ZEROUT)



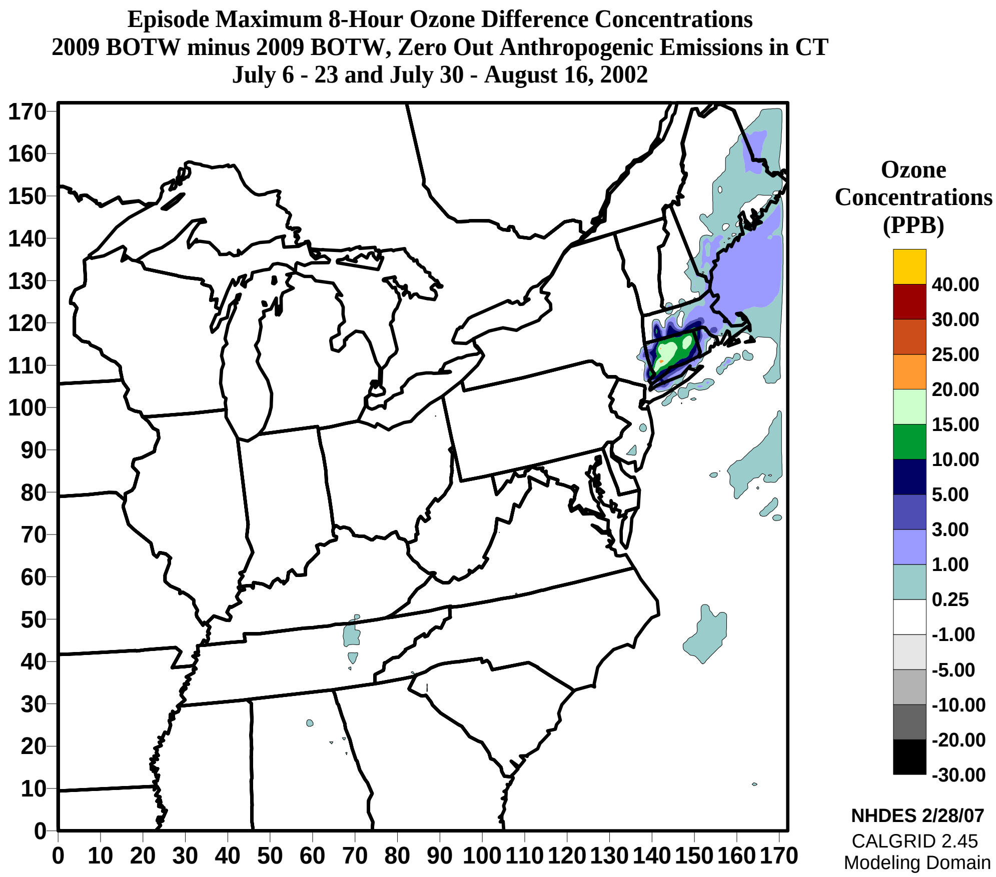


Figure 3.2 CALGRID NY Zero-Out Run, Difference Plot (2009 BOTW-NY ZEROUT)

Episode Maximum 8-Hour Ozone Difference Concentrations
2009 BOTW minus 2009 BOTW, Zero Out Anthropogenic Emissions in New York
July 6 - 23 and July 30 - August 16, 2002

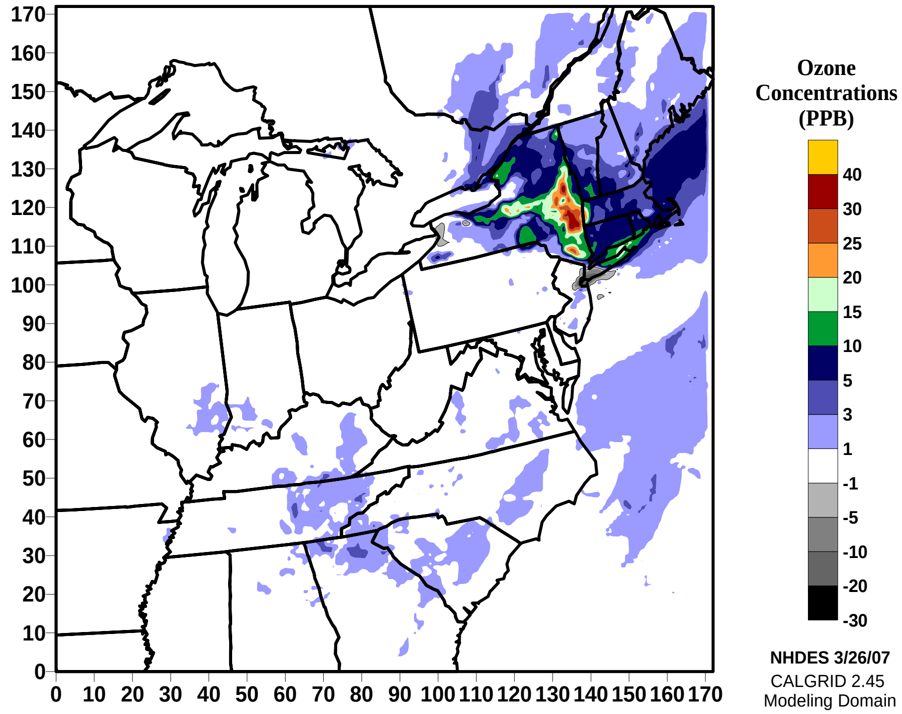


FIGURE 3.3 CALGRID NJ Zero-Out Run, Difference Plot (2009 BOTW-NJ ZEROUT)

Episode Maximum 8-Hour Ozone Difference Concentrations
2009 BOTW minus 2009 BOTW, Zero Out Anthropogenic Emissions in New Jersey
July 6 - 23 and July 30 - August 16, 2002

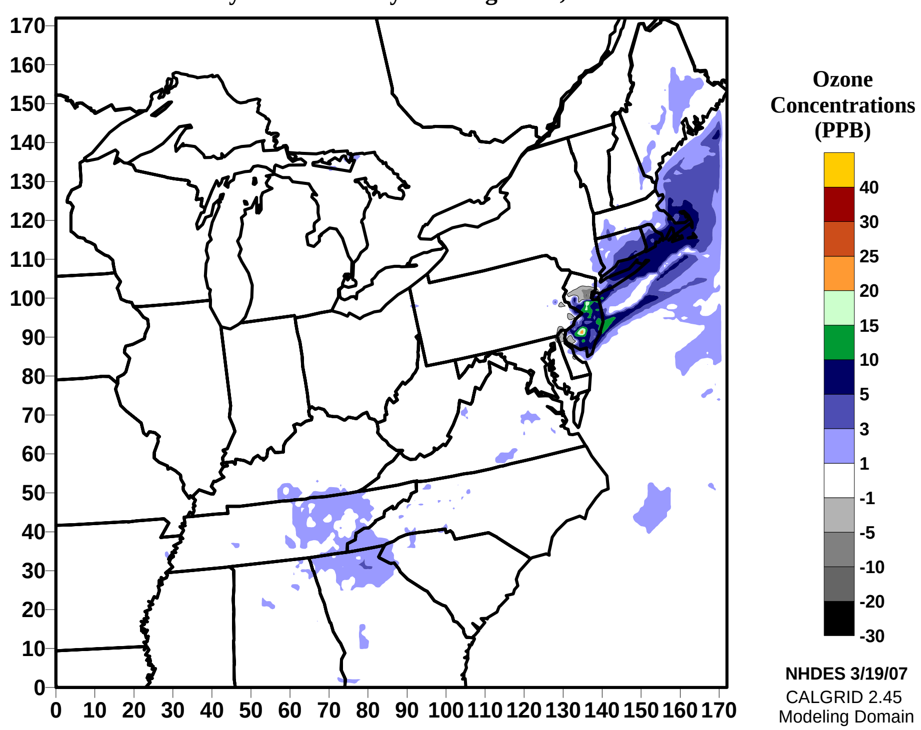
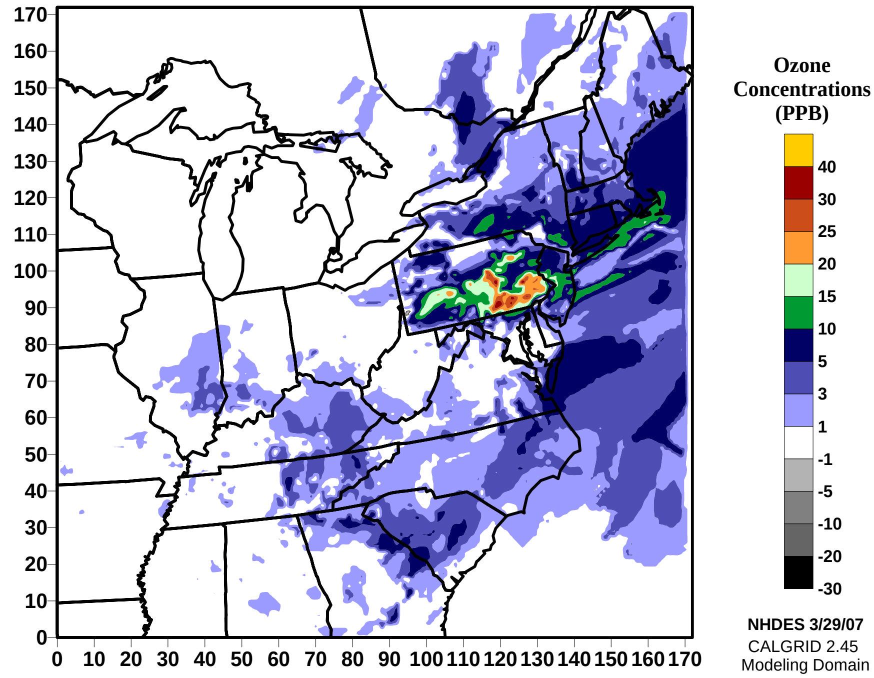


FIGURE 3.4 CALGRID PA Zero-Out Run, Difference Plot
(2009 BOTW-PA ZEROUT)
Episode Maximum 8-Hour Ozone Difference Concentrations
2009 BOTW minus 2009 BOTW, Zero Out Anthropogenic Emissions in Pennsylvania
July 6 - 23 and July 30 - August 16, 2002



EPA CAIR Modeling

EPA's CAIR program is intended to reduce interstate transport of ozone using market-based incentives targeted at electric generating units (EGUs). As more fully described in Connecticut's recent SIP revision satisfying Section 110(a)(2)(D) requirements,[2] EPA's modeling analysis[3] for CAIR identified eight upwind states as contributing significantly to 8-hour ozone NAAQS nonattainment in Connecticut (i.e., NY, PA, NJ, OH, VA, MD/DC, WV, MA). EPA's analysis concluded that transport from upwind states contributes, on average, 95% of projected 2010 ozone levels in New Haven County and 93% in Middlesex County. Connecticut is the only state subject to transport exceeding 90% of projected 2010 ozone levels; this illustrates the unique and overwhelming influence upwind emissions have on Connecticut's prospects for achieving timely attainment. EPA's CAIR modeling estimates that almost two-thirds of the transport affecting Connecticut results from emissions from the three states of New York, Pennsylvania and New Jersey.

Despite EPA's stated goals for the CAIR program, the modeling predicts that improvements due to CAIR will be inconsequential in Connecticut when compared to the overwhelming levels of transport from upwind areas that cannot be addressed by in-state controls. EPA's modeling predicts that CAIR will result in no more than a 0.4 ppb improvement in Connecticut's ozone

[2] "Revision to Connecticut's State Implementation Plan: Meeting the Interstate Air Pollution Transport Requirements of Clean Air Act Section 110(a)(2)(D)(i)"; Submitted to EPA on March 13, 2007; See: http://www.ct.gov/dep/lib/dep/air/regulations/proposed_and_reports/revsipsec110appendix.pdf.
[3] "Technical Support Document for the Final Clean Air Interstate Rule: Air Quality Modeling"; US EPA OAQPS; March 2005; See: http://www.epa.gov/cleanairinterstaterule/pdfs/finaltech02.pdf.

levels in 2010 (0.8 ppb in 2015), amounting to far less than one percent of the transport affecting the state. These results suggest that the levels of transport after CAIR implementation will remain large enough that the prospects for 2009 attainment may be in jeopardy without additional upwind emission reductions from such programs as the HEDD initiative being pursued by several Northeast states. Results also indicate that upwind states will continue to contribute significantly to any residual nonattainment remaining in Connecticut in 2009, highlighting the need for EPA to ensure that the remaining significant contributions are properly addressed in the ozone attainment demonstrations submitted by states upwind of Connecticut.

3.2 Air Quality and Meteorological Evidence of Ozone Transport

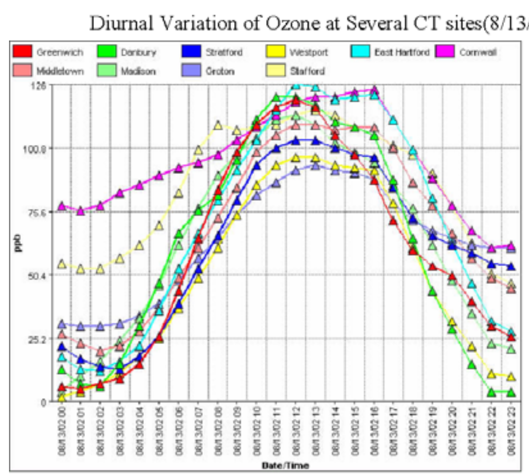
As described below, analyses of air quality and meteorological data provide further evidence of the nature and degree of ozone transport affecting Connecticut.

3.2.1 Aloft Transport of Ozone

Ozone exceedances measured in the afternoon at Connecticut's low elevation, inland monitors are often preceded by high ozone levels occurring earlier in the day at the upwind, high elevation site in Cornwall (Mohawk Mountain, or Cornwall). The Cornwall site's rural location atop the 1600-foot Mohawk Mountain, is not affected by emissions that can titrate ozone and is typically subject to higher winds than at low altitude sites. These factors allow Mohawk Mountain to be used as a good indicator of ozone transport to Connecticut that occurs aloft.

Figure 3.5 shows the diurnal variation of 8-hour ozone at all Connecticut monitors on August 13, 2002. The magenta line at Cornwall indicates that ozone levels on the evening of August 12, 2002 start off 50-75 ppb higher than at all other monitors in the state. During the day, as ozone levels begin to rise, vertical mixing brings the high ozone aloft to lower levels, and all monitors develop a similar hourly ozone distribution. An example of this mixing phenomenon is seen for New Haven, Connecticut (urban site) in Figures 3.6 and 3.7. Note the low levels of ozone at the surface on the morning profile, and the well-mixed higher ozone throughout the vertical column in the afternoon profile. Transported ozone aloft is mixed down to increase ozone at the surface.

Figure 3.5 Diurnal Variation of 8-Hour Ozone in CT on August 13, 2002



Cornwall (75ppb at 00h lcl) monitor is on top of a 500m mountain-elevated reservoir of O3

Stafford (51 ppb) monitor is rural, less fresh NO to reduce ozone at night

Greenwich (5ppb) monitor is urban, plenty of fresh NO to drive down O3 at night, produce it during the day

Source: Blumenthal D.L., Lurmann F.W., Kumar N., Dye T.S., Ray S.E., Korc M.E., Londergan R., and Moore G.(1997); Assessment of transport and mixing and OTAG model performance for Northeast U.S. ozone episodes. Summary of results. Report prepared for Ozone Transport Assessment Group, Air Quality Analysis Workgroup by Sonoma Technology, Inc., Santa Rosa, CA, and Earth Tech, Concord, MA, STI-996133-1710/1716-S, March 1997.

Figure 3.6 Morning Vertical Profile of Ozone*

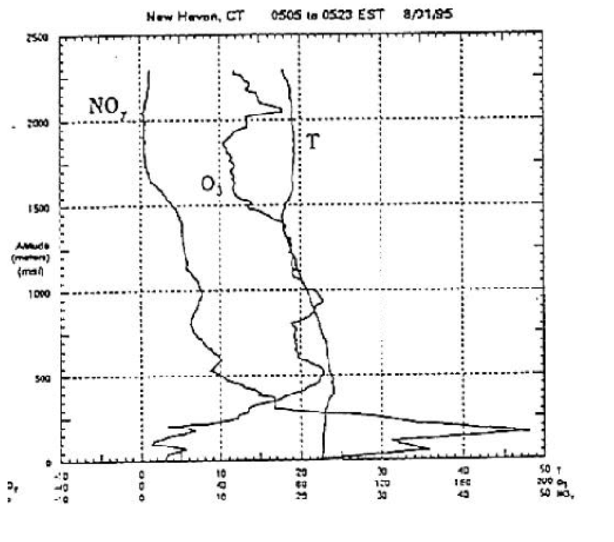
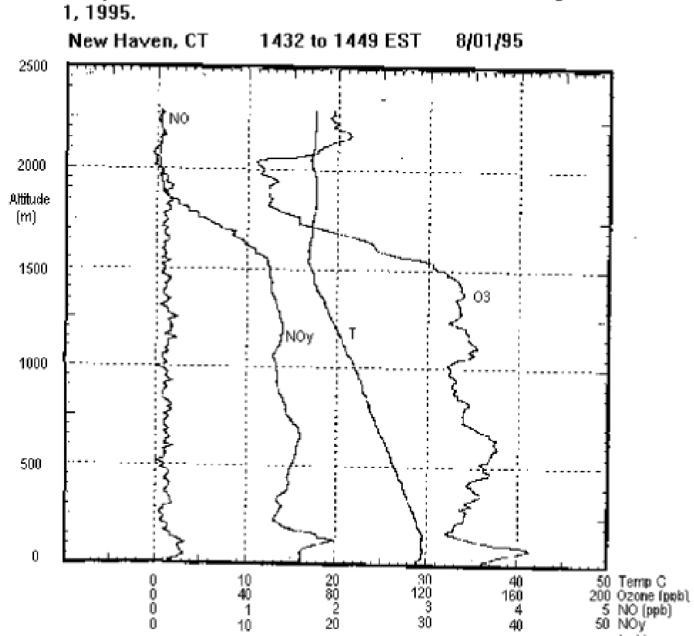


Figure 4-4. Ozone, Temperature and NOy Vertical Profiles for August 1, 1995, Early Morning Flights.

Figure 3.7 Afternoon Vertical Profile of Ozone*

Figure 4-5. Vertical Distribution of Ozone, NO, NOy and Temperature at New Haven, CT on the Afternoon of August 1, 1995.

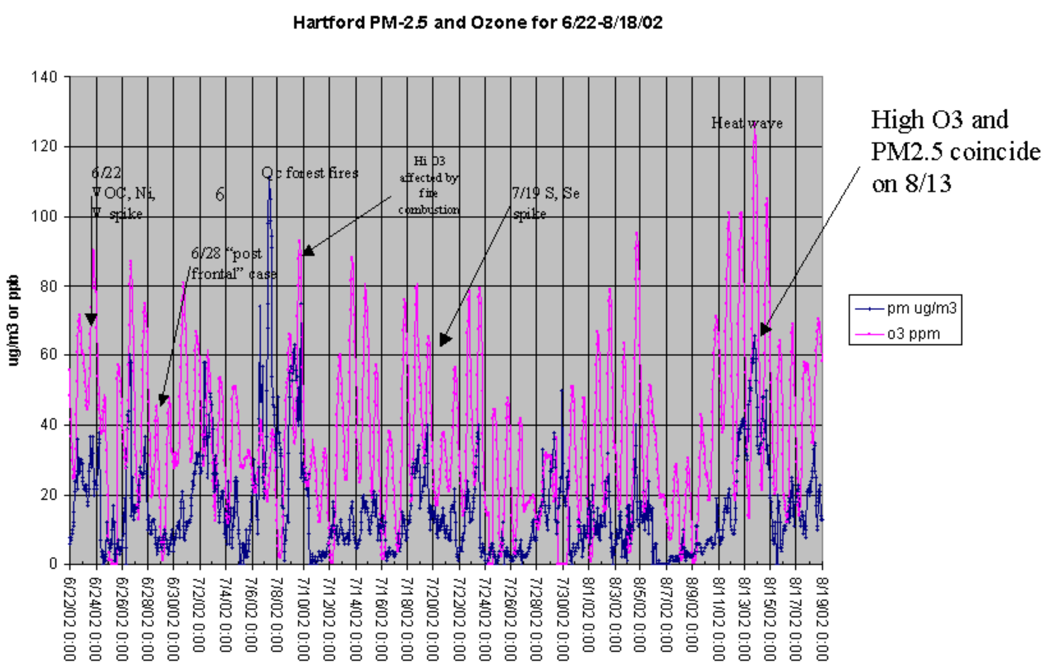


Source: Figures 3.6 and 3.7 are from Blumenthal D.L., Lurmann F.W., Kumar N., Dye T.S., Ray S.E., Korc M.E., Londergan R., and Moore G.(1997); Assessment of transport and mixing and OTAG model performance for Northeast U.S. ozone episodes. Summary of results. Report prepared for Ozone Transport Assessment Group, Air Quality Analysis Workgroup by Sonoma Technology, Inc., Santa Rosa, CA, and Earth Tech, Concord, MA, STI-996133-1710/1716-S, March 1997.

3.2.2 Transport Determined Using Tracer Species

In the summer, high ozone levels are often accompanied by high levels of fine particulate matter ($PM_{2.5}$), as shown in the example in Figure 3.8. During these events, the $PM_{2.5}$ is usually dominated by high levels of sulfate, which typically originate from large Midwestern coal burning power plants. These plants produce significant emissions of NO_X and SO_X. As these emissions move downwind, much of the NO_X is transformed to ozone and much of the SO_X combines with available ammonium to form ammonium sulfate, the most abundant $PM_{2.5}$ species on those days. Ammonium sulfate is highly hygroscopic and leads to air masses with appreciable haze, detectable by visibility measurements and satellite images. These and other tools make it possible to use high $PM_{2.5}$ and sulfate levels as potential tracer species for ozone.

Figure 3.8 Time Series of Ozone and $PM_{2.5}$

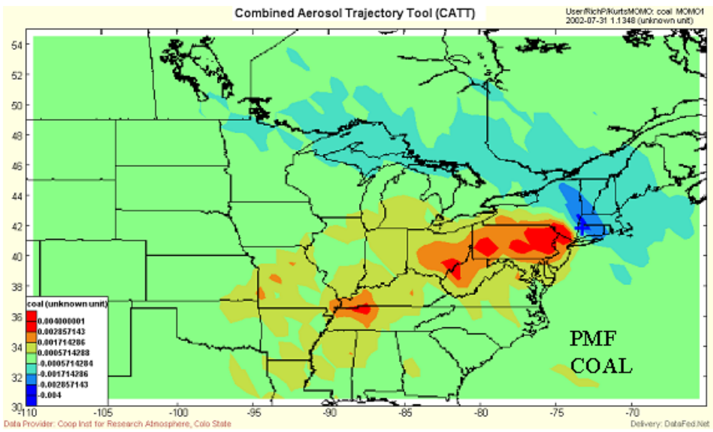


The Combined Aerosol Trajectory Tool[4] (CATT) is a relational database and query system allowing access to multiple measured aerosol and receptor model data sets along with gridded trajectory data. This resource facilitates pairing wind trajectories with aerosol data to help identify the location of sources of air pollutants that impair visibility. The results also provide useful insights into sources contributing to regional levels of $PM_{2.5}$ and as described above, ozone.

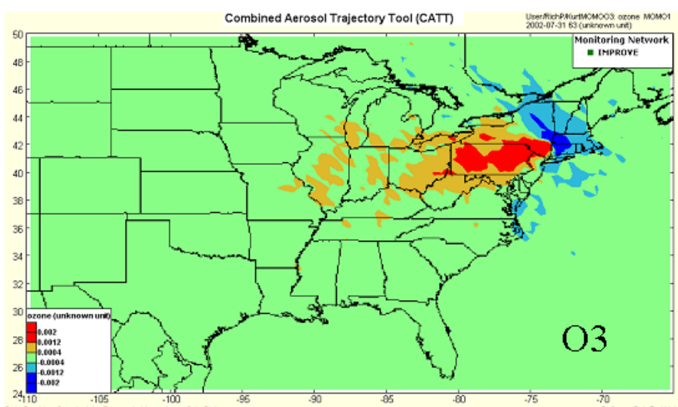
[4] Husar, R; "Combined Aerosol Trajectory Tool"; http://www.datafed.net/projects/CATT/CATT_Links.htm http://www.marama.org/visibility/NationalRPO/Presentations/Plenary/Husar%20-%20CATT%20&%20FASTNET%20Intro.pdf; 2007.

Using the CATT, high ozone and sulfate days were paired with their air mass source region. Incremental probability plots such as Figure 3.9 depict the likely source regions for high ozone and high sulfate. The incremental probability compares the number of trajectory passes through a grid cell, both the total and the number of events, when the target species (ozone or sulfate) is above a set threshold. The ratio of the two is taken and red choropleths are plotted where the ratio is high. Or, put another way, the cell is colored red when the probability is high that a back trajectory passed through a particular grid cell when the receptor concentration was high.

Figure 3.9 Source Regions of High Ozone and Sulfate



Mohawk Mt. Incremental probability plots for "PMF coal" and ozone. The high probability of high ozone in CT and trajectories passing through the red areas is high. These are regions of coal burning EGUs.



The target species on Figure 3.9 are ozone and a combination of species called "PMF coal". The Positive Matrix Factorization (PMF) model is a receptor model that breaks an observation of speciated PM into its source constituents.[5] A combination of constituents might be identified as coal combustion, oil combustion, wood smoke, crustal, industrial smelter, municipal waste combustion, etc. based on the ratio of indicator species. For coal burning plants, a ratio of sulfate, organic carbon, elemental carbon, selenium and many other species make up a unique profile for that source.

[5] Paatero, P; " Introduction to PMF - positively constrained factor analysis with individual weighting of matrix element"; ftp://rock.helsinki.fi/pub/misc/pmf/PMFINTRO.PDF; 2007

For Mohawk Mountain most trajectories on high ozone and high PMF coal days pass through Pennsylvania and the Ohio Valley, a region with many, large, coal-burning EGUs. This is noted by the coinciding red areas on the two plots, which suggest that the ozone transported to Mohawk Mountain was, in part, formed by the same sources' emitting the SO_X (later transformed to sulfate), probably coal burning EGUs.

3.2.3 Sea Breeze and Maritime Effects on Transport

Air masses over coastal waters provide another pathway for pollutants transported into Connecticut. Two examples, one traveling from the New York City/New Jersey/Eastern Pennsylvania region via Long Island Sound to Connecticut and the second from the Philadelphia area via the Atlantic Ocean to Connecticut, illustrate this phenomena.

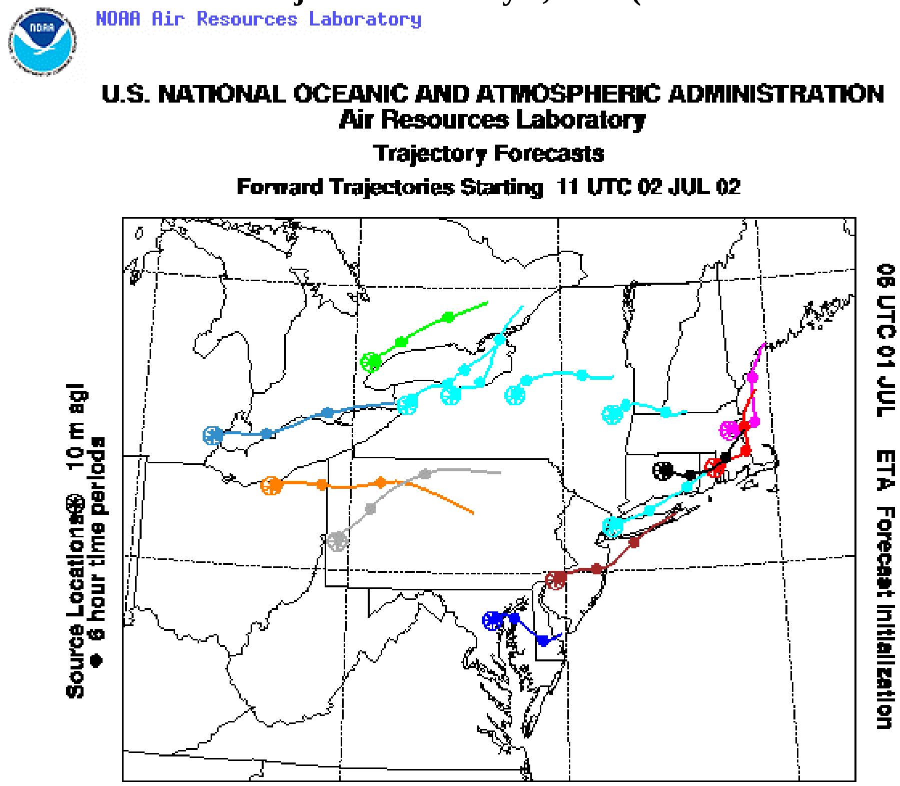
Figure 3.10 shows the forecasted forward trajectory originating in New York City on July 2, 2002 (light blue line), verifying the probable air mass path. The cold water acted to stabilize the lowest layer of the atmosphere, keeping mixing heights low, and concentrating pollutants. In the Long Island Sound (LIS) example (light blue line), strong geostrophic-synoptic westerly winds blew the ozone plume from the western to the eastern end of LIS on July 2, 2002. The ozone and ozone precursor plume originated in New York City/New Jersey/Eastern Pennsylvania and moved eastward. As the plume traversed east down Long Island Sound, the edges of the plume were blown inland by the sea breeze and detected by the coastal monitors. Figure 3.11 shows how closely the high concentration plume, shown in red and orange, hugged the coast, with a sharp concentration gradient inland (air quality in northern Connecticut is "good"). Figure 3.12 represents hourly still frames from an animation showing the progression of the ozone plume and each station's wind data every hour. The ozone plume (red circles) moved east with time as the sea breeze winds (southerly component) pulled ozone ashore. Note the wind at Madison was from the west, coinciding with the shore orientation at that point. (The monitor is on a peninsula that juts out into LIS.)

An Atlantic Ocean example occured on the same day. Figure 3.10 shows the forecasted forward trajectory out of Philadelphia (brown line). The plume blew across central New Jersey, out over the Atlantic and up towards eastern Long Island, southeast Connecticut, coastal Rhode Island and beyond. This second plume signature from July 2, 2002 resulted in the high concentration swath over eastern Long Island and coastal southern New England, as shown in Figure 3.11.

A second over-water scenario occurred on August 13, 2002. A pool of ozone moved just off the east coast as seen in the haze/smog plume in the satellite photo in Figure 3.13. The extended north-south (N-S) orientation is visible against the blue ocean on the far left side of the photo. Figure 3 is a re-projected image involving two separate satellite passes. It also shows the haze/ozone pool's orientation relative to major pollution sources and 3-level back trajectories for the period preceding the time of the image. This "pool" of ozone was oriented N-S off the coast and the low level back trajectory in Figure 3.15 is similarly oriented. The Bermuda high pressure weather system picked up this pool of ozone and transported it in concentrated form northward across the cold waters to CT. As seen in the ozone map in Figure 3.15, widespread ozone occurred from North Carolina through New England.

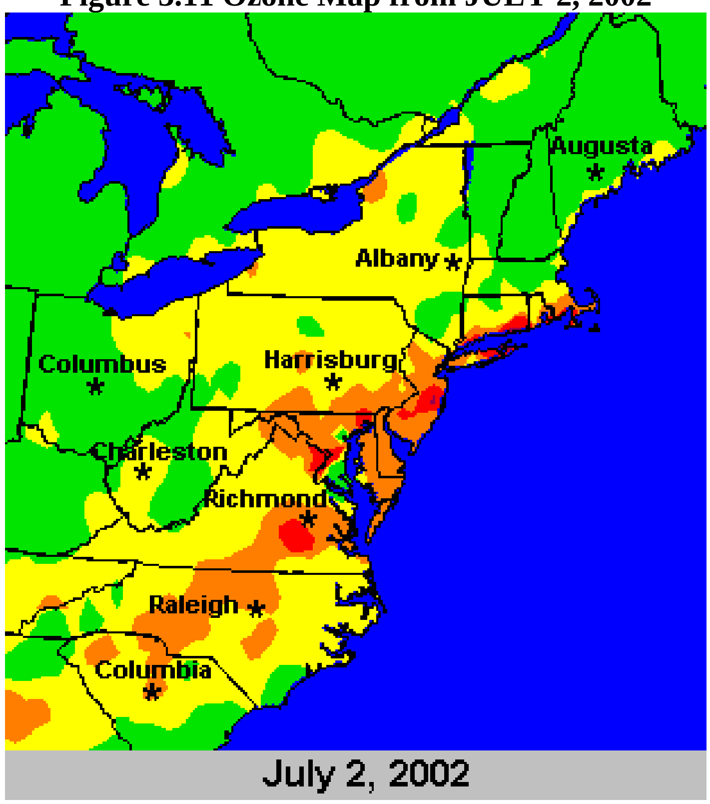
It is unusual for an Atlantic maritime air mass to result in high ozone for Connecticut. As seen in Figure 3.16, the $PM_{2.5}$ and ozone concentration peaks were in phase, verifying that the haze plume was also rich with ozone. Sulfate on the previous day was also high at the Mohawk Mountain site, suggesting that the visibility reduction seen on the satellite photo was due to residual sulfate aerosol from Midwestern power plants, accompanied by NO_X that contributed to ozone levels.

Figure 3.10 Forward Trajectories on July 2, 2002 (Sea Breeze Effect Day)



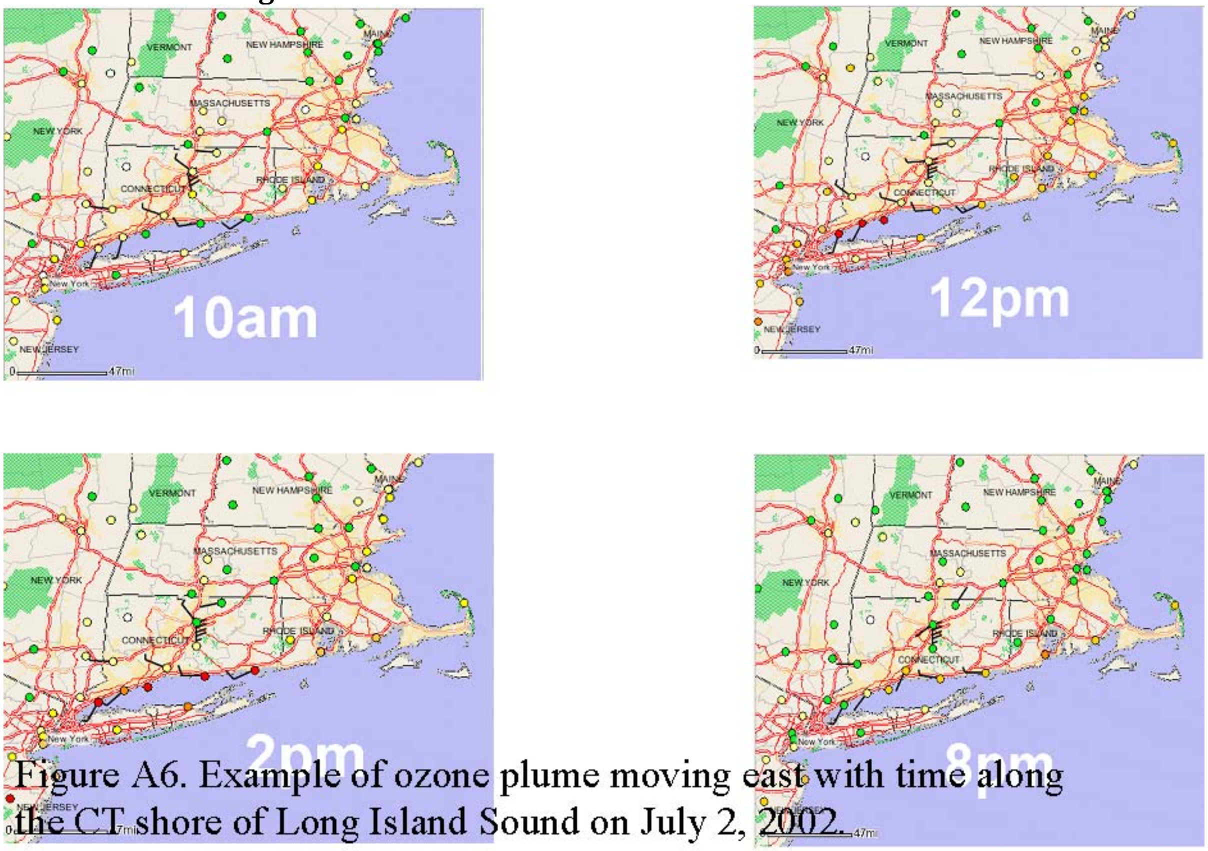
Source: Draxler, R.R. and Rolph, G.D., 2003; HYSPLIT (HYbrid Single-Particle Lagrangian Integrated Trajectory) Model; Accessed via NOAA ARL READY Website (http://www.arl.noaa.gov/ready/hysplit4.html); NOAA Air Resources Laboratory, Silver Spring, MD.

Figure 3.11 Ozone Map from JULY 2, 2002



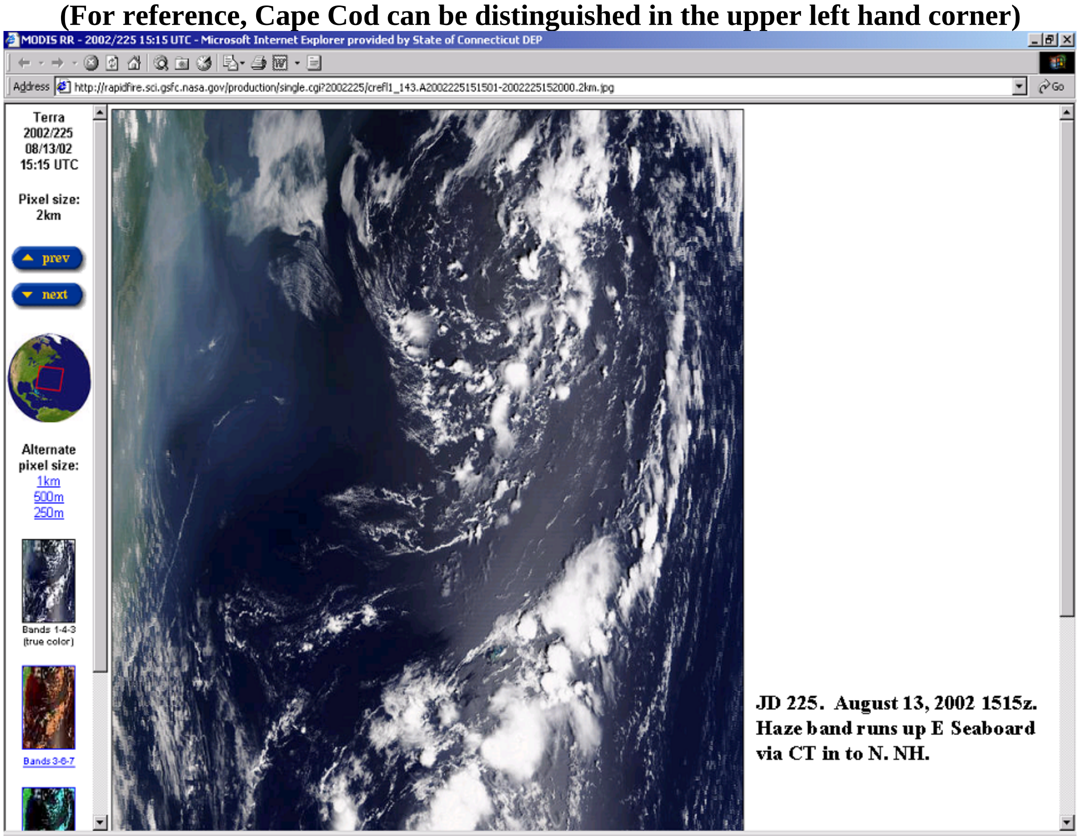
Source: EPA AIRNOW Air Quality Map Archive;
http://airnow.gov/index.cfm?action=airnow.displaymaps&StateID=8&Pollutant=OZONE

Figure 3.12 Sea Breeze Effect on CT Coastal Monitors



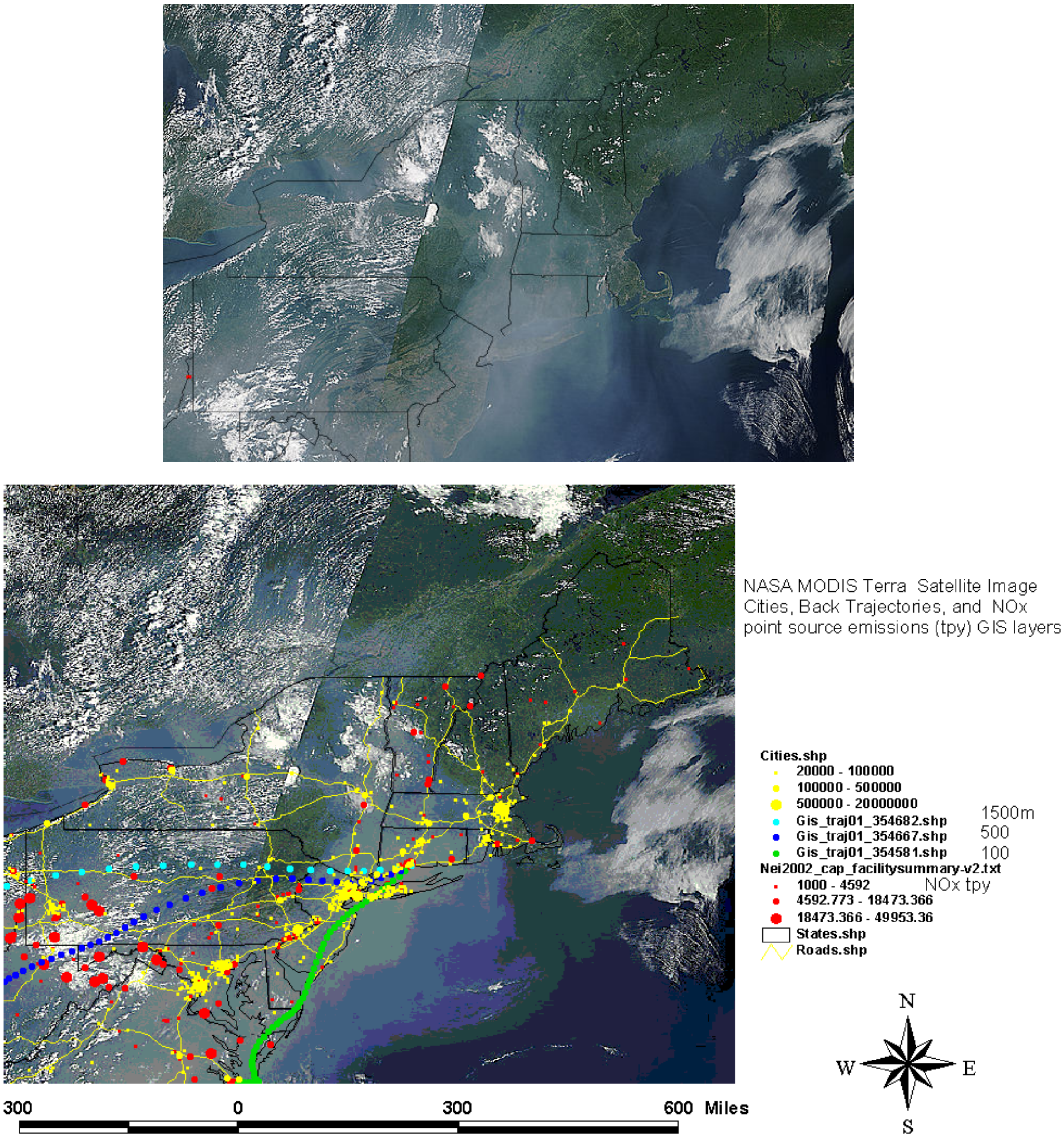
Note 1. Progression of 1hr values > 125 red dots, 85-124 orange dots, 2. wind barbs pointing toward sound (onshore breeze)

Figure 3.13 Satellite Image of Haze/Ozone Over the Eastern US and Adjacent Waters. (For reference, Cape Cod can be distinguished in the upper left hand corner)



Source: NASA; "MODIS Real-Time Rapid Response System" http://rapidfire.sci.gsfc.nasa.gov/realtime/?calendar.

Figure 3.14 NASA Re-Projected Images of Figure 3.13



Geo-referenced activity and inventory data (on top of the satellite images presented above) demonstrating the relationship between observed pollution and upper level winds (driving weather patterns from West to East), mid-level winds (tracking back to major point sources), and lower level winds (tracking back to major population centers along the East Coast).

]Figure 3.15 August 13, 2002, Ozone Map, Back Trajectories and Vertical Wind Profiles

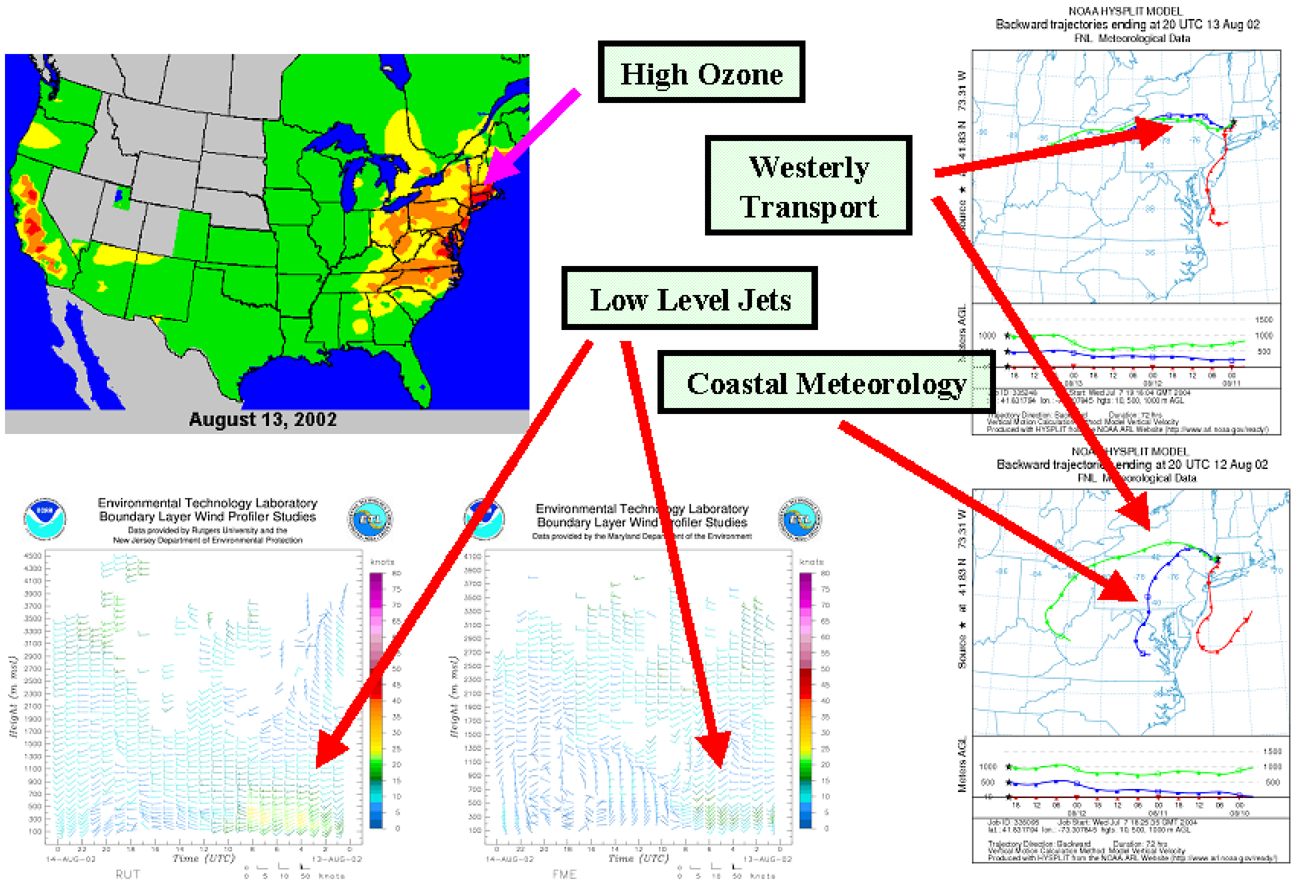
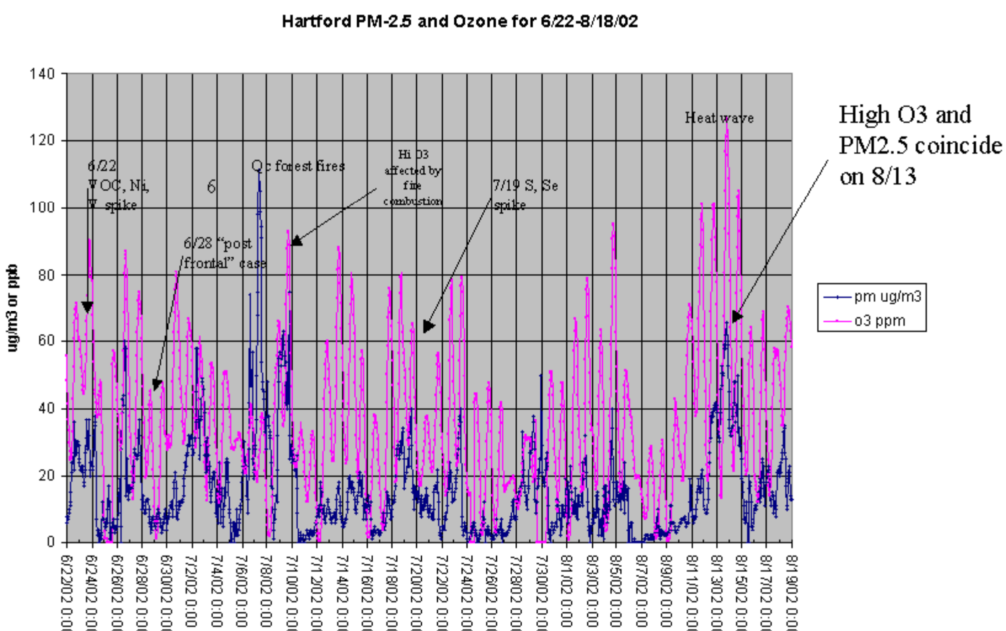


Figure 3.16 Times Series of Ozone and $PM_{2.5}$ at Hartford, CT (June 23 – August 19, 2002)



Figure

Appendix 4A
(Updated 9/28/2007)

Documentation of Mobile Source Emissions Modeling

NONROAD2005 Input Files
and
MOBILE6.2 Input Files
for
Greater Connecticut and Southwest Connecticut
Emission Estimates
2002, 2008, 2009, 2012

Greater Connecticut 2002 NONROAD2005 Input

```
Written by Nonroad interface at 2/7/2007 9:22:27 AM
This is the options file for the NONROAD program.
The data is sperated into "packets" bases on common
information.  Each packet is specified by an
identifier and a terminator. Any notes or descriptions
can be placed between the data packets.

9/2005 epa: Add growth & tech years to OPTIONS packet
  and Counties & Retrofit files to RUNFILES packet.

------------------------------------------------------

                  PERIOD PACKET

This is the packet that defines the period for
which emissions are to be estimated.  The order of the
records matter.  The selection of certain parameters
will cause some of the record that follow to be ignored.
The order of the records is as follows:

1  - Char 10  - Period type for this simulation.
                  Valid responses are: ANNUAL, SEASONAL, and MONTHLY
2  - Char 10  - Type of inventory produced.
                  Valid responses are: TYPICAL DAY and PERIOD TOTAL
3  - Integer  - year of episode (4 digit year)
4  - Char 10  - Month of episode (use complete name of month)
5  - Char 10  - Type of day
                  Valid responses are: WEEKDAY and WEEKEND
------------------------------------------------------
/PERIOD/
Period type        : Seasonal
Summation type     : Typical day
Year of episode    : 2002
Season of year     : Summer
Month of year      :
Weekday or weekend : Weekday
Year of growth calc:
Year of tech sel   :
/END/

------------------------------------------------------

                  OPTIONS PACKET

This is the packet that defines some of the user
options that drive the model.  Most parameters are
used to make episode specific emission factor
adjustments. The order of the records is fixed.
The order is as follows.

1  -  Char 80  - First title on reports
2  -  Char 80  - Second title on reports
3  -  Real 10  - Fuel RVP of gasoline for this simulation
4  -  Real 10  - Oxygen weight percent of gasoline for simulation
5  -  Real 10  - Percent sulfur for gasoline
6  -  Real 10  - Percent sulfur for diesel
7  -  Real 10  - Percent sulfur for LPG/CNG
8  -  Real 10  - Minimum daily temperature (deg. F)
9  -  Real 10  - maximum daily temperature (deg. F)
```

```
10 -  Real 10  - Representative average daily temperature (deg. F)
11 -  Char 10  - Flag to determine if region is high altitude
                      Valid responses are: HIGH and LOW
12 -  Char 10  - Flag to determine if RFG adjustments are made
                      Valid responses are: YES and NO
------------------------------------------------------
/OPTIONS/
Title 1            : TEST 2002 PEI FOR GrCT OZONE (MARINE S?)
Title 2            : FEB 7, 2007
Fuel RVP for gas   : 6.86
Oxygen Weight %    : 2.1
Gas sulfur %       : 0.0106
Diesel sulfur %    : 0.2318
Marine Dsl sulfur %: 0.2637
CNG/LPG sulfur %   : 0.003
Minimum temper. (F): 67.7
Maximum temper. (F): 95.5
Average temper. (F): 86.2
Altitude of region : LOW
/END/

------------------------------------------------------
                  REGION PACKET

This is the packet that defines the region for which
emissions are to be estimated.

The first record tells the type of region and
allocation to perform.

Valid responses are:
US TOTAL   -  emissions are for entire USA without state
              breakout.

50STATE    -  emissions are for all 50 states
              and Washington D.C., by state.

STATE      -  emissions are for a select group of states
              and are state-level estimates

COUNTY     -  emissions are for a select group of counties
              and are county level estimates.  If necessary,
              allocation from state to county will be performed.

SUBCOUNTY  -  emissions are for the specified sub counties
              and are subcounty level estimates.  If necessary,
              county to subcounty allocation will be performed.

The remaining records define the regions to be included.
The type of data which must be specified depends on the
region level.

US TOTAL   -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

50STATE    -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

STATE      -  state FIPS codes

COUNTY     -  state or county FIPS codes.  State FIPS
```

```
              code means include all counties in the
              state.

SUBCOUNTY  -  county FIPS code and subregion code.
------------------------------------------------------
/REGION/
Region Level       : COUNTY
Hartford County CT : 09003
Litchfield Count CT: 09005
New London Count CT: 09011
Tolland County CT  : 09013
Windham County CT  : 09015
/END/

or use -
Region Level       : STATE
Michigan           : 26000
------------------------------------------------------

                  SOURCE CATEGORY PACKET

This packet is used to tell the model which source
categories are to be processed.  It is optional.
If used, only those source categories list will
appear in the output data file.  If the packet is
not found, the model will process all source
categories in the population files.
------------------------------------------------------


Diesel Only -
                   :2270000000
                   :2282020000
                   :2285002015
Spark Ignition Only -
                   :2260000000
                   :2265000000
                   :2267000000
                   :2268000000
                   :2282005010
                   :2282005015
                   :2282010005
                   :2285004015
                   :2285006015
------------------------------------------------------
 This is the packet that lists the names of output files
 and some of the input data files read by the model.  If
 a drive:\path\ is not given, the location of the
 NONROAD.EXE file itself is assumed.  You will probably
 want to change the names of the Output and Message files
 to match that of the OPTion file, e.g., MICH-97.OPT,
 MICH-97.OUT, MICH-97.MSG, and if used MICH-97.AMS.
------------------------------------------------------
/RUNFILES/
ALLOC XREF         : data\allocate\allocate.xrf
ACTIVITY           : data\activity\activity.dat
EXH TECHNOLOGY     : data\tech\tech-exh.dat
EVP TECHNOLOGY     : data\tech\tech-evp.dat
SEASONALITY        : data\season\season.dat
REGIONS            : data\season\season.dat
MESSAGE            : c:\nonroad\ctpei02\peigr02.msg
```

```
OUTPUT DATA         : c:\nonroad\ctpei02\peigr02.out
EPS2 AMS            :
US COUNTIES FIPS    : data\allocate\fips.dat
RETROFIT            :
/END/

------------------------------------------------------
This is the packet that defines the equipment population
files read by the model.
------------------------------------------------------
/POP FILES/
Population File     : c:\nonroad\data\pop\ct.pop
/END/

POPULATION FILE     : c:\nonroad\data\POP\MI.POP


------------------------------------------------------
This is the packet that defines the growth files
files read by the model.
------------------------------------------------------
/GROWTH FILES/
National defaults   : data\growth\nation.grw
/END/


/ALLOC FILES/
Air trans. empl.    :c:\nonroad\data\allocate\ct_airtr.alo
Undergrnd coal prod:c:\nonroad\data\allocate\ct_coal.alo
Construction cost   :c:\nonroad\data\allocate\ct_const.alo
Harvested acres     :c:\nonroad\data\allocate\ct_farms.alo
Golf course estab. :c:\nonroad\data\allocate\ct_golf.alo
Wholesale estab.    :c:\nonroad\data\allocate\ct_holsl.alo
Family housing      :c:\nonroad\data\allocate\ct_house.alo
Logging employees   :c:\nonroad\data\allocate\ct_loggn.alo
Landscaping empl.   :c:\nonroad\data\allocate\ct_lscap.alo
Manufacturing empl.:c:\nonroad\data\allocate\ct_mnfg.alo
Oil & gas employees:c:\nonroad\data\allocate\ct_oil.alo
Census population   :c:\nonroad\data\allocate\ct_pop.alo
Allocation File     :c:\nonroad\data\allocate\ct_rail.alo
RV Park establish. :c:\nonroad\data\allocate\ct_rvprk.alo
Snowblowers comm.   :c:\nonroad\data\allocate\ct_sbc.alo
Snowblowers res.    :c:\nonroad\data\allocate\ct_sbr.alo
Snowmobiles         :c:\nonroad\data\allocate\ct_snowm.alo
Rec marine inboard :c:\nonroad\data\allocate\ct_wib.alo
Rec marine outboard:c:\nonroad\data\allocate\ct_wob.alo
/END/
------------------------------------------------------
This is the packet that defines the emssions factors
files read by the model.
------------------------------------------------------
/EMFAC FILES/
THC exhaust         : data\emsfac\exhthc.emf
CO exhaust          : data\emsfac\exhco.emf
NOX exhaust         : data\emsfac\exhnox.emf
PM exhaust          : data\emsfac\exhpm.emf
BSFC                : data\emsfac\bsfc.emf
Crankcase           : data\emsfac\crank.emf
Spillage            : data\emsfac\spillage.emf
Diurnal             : data\emsfac\evdiu.emf
TANK PERM           : data\emsfac\evtank.emf
```

```
NON-RM HOSE PERM    : data\emsfac\evhose.emf
RM FILL NECK PERM   : data\emsfac\evneck.emf
RM SUPPLY/RETURN    : data\emsfac\evsupret.emf
RM VENT PERM        : data\emsfac\evvent.emf
HOT SOAKS           : data\emsfac\evhotsk.emf
RUNINGLOSS          : data\emsfac\evrunls.emf
/END/

------------------------------------------------------
This is the packet that defines the deterioration factors
files read by the model.
------------------------------------------------------
/DETERIORATE FILES/
THC exhaust         : data\detfac\exhthc.det
CO exhaust          : data\detfac\exhco.det
NOX exhaust         : data\detfac\exhnox.det
PM exhaust          : data\detfac\exhpm.det
Diurnal             : data\detfac\evdiu.det
/END/

Optional Packets - Add initial slash "/" to activate

/STAGE II/
Control Factor      : 0.0
/END/
Enter percent control: 95 = 95% control = 0.05 x uncontrolled
Default should be zero control.

/MODELYEAR OUT/
EXHAUST BMY OUT     :
EVAP BMY OUT        :
/END/

SI REPORT/
SI report file-CSV :OUTPUTS\NRPOLLUT.CSV
/END/

/DAILY FILES/
DAILY TEMPS/RVP     :
/END/

PM Base Sulfur
 cols 1-10: dsl tech type;
 11-20: base sulfur wt%; or '1.0' means no-adjust (cert= in-use)
/PM BASE SULFUR/
T2        0.2000    0.02247
T3        0.2000    0.02247
T3B       0.0500    0.02247
T4A       0.0500    0.02247
T4B       0.0015    0.02247
T4        0.0015    0.30
T4N       0.0015    0.30
/END/
```

Southwest Connecticut 2002 NONROAD2005 Input

```
Written by Nonroad interface at 2/7/2007 8:43:31 AM
This is the options file for the NONROAD program.
The data is sperated into "packets" bases on common
information.  Each packet is specified by an
identifier and a terminator. Any notes or descriptions
can be placed between the data packets.

9/2005 epa: Add growth & tech years to OPTIONS packet
  and Counties & Retrofit files to RUNFILES packet.

------------------------------------------------------

                  PERIOD PACKET

This is the packet that defines the period for
which emissions are to be estimated.  The order of the
records matter.  The selection of certain parameters
will cause some of the record that follow to be ignored.
The order of the records is as follows:

1  - Char 10  - Period type for this simulation.
                  Valid responses are: ANNUAL, SEASONAL, and MONTHLY
2  - Char 10  - Type of inventory produced.
                  Valid responses are: TYPICAL DAY and PERIOD TOTAL
3  - Integer  - year of episode (4 digit year)
4  - Char 10  - Month of episode (use complete name of month)
5  - Char 10  - Type of day
                  Valid responses are: WEEKDAY and WEEKEND
------------------------------------------------------
/PERIOD/
Period type        : Seasonal
Summation type     : Typical day
Year of episode    : 2002
Season of year     : Summer
Month of year      :
Weekday or weekend : Weekday
Year of growth calc:
Year of tech sel   :
/END/

------------------------------------------------------

                  OPTIONS PACKET

This is the packet that defines some of the user
options that drive the model.  Most parameters are
used to make episode specific emission factor
adjustments. The order of the records is fixed.
The order is as follows.

1  -  Char 80  - First title on reports
2  -  Char 80  - Second title on reports
3  -  Real 10  - Fuel RVP of gasoline for this simulation
4  -  Real 10  - Oxygen weight percent of gasoline for simulation
5  -  Real 10  - Percent sulfur for gasoline
6  -  Real 10  - Percent sulfur for diesel
7  -  Real 10  - Percent sulfur for LPG/CNG
8  -  Real 10  - Minimum daily temperature (deg. F)
9  -  Real 10  - maximum daily temperature (deg. F)
```

```
10 -  Real 10  - Representative average daily temperature (deg. F)
11 -  Char 10  - Flag to determine if region is high altitude
                     Valid responses are: HIGH and LOW
12 -  Char 10  - Flag to determine if RFG adjustments are made
                     Valid responses are: YES and NO
------------------------------------------------------
/OPTIONS/
Title 1            : TEST TO DUPLICATE CT 2002 PEI FOR SWCT OZONE
(MARINE S?)
Title 2            : FEB 2, 2007
Fuel RVP for gas   : 6.86
Oxygen Weight %    : 2.1
Gas sulfur %       : 0.0106
Diesel sulfur %    : 0.2318
Marine Dsl sulfur %: 0.2637
CNG/LPG sulfur %   : 0.003
Minimum temper. (F): 66.5
Maximum temper. (F): 91.6
Average temper. (F): 83.2
Altitude of region : LOW
/END/

------------------------------------------------------
                  REGION PACKET

This is the packet that defines the region for which
emissions are to be estimated.

The first record tells the type of region and
allocation to perform.

Valid responses are:
US TOTAL   -  emissions are for entire USA without state
              breakout.

50STATE    -  emissions are for all 50 states
              and Washington D.C., by state.

STATE      -  emissions are for a select group of states
              and are state-level estimates

COUNTY     -  emissions are for a select group of counties
              and are county level estimates.  If necessary,
              allocation from state to county will be performed.

SUBCOUNTY  -  emissions are for the specified sub counties
              and are subcounty level estimates.  If necessary,
              county to subcounty allocation will be performed.

The remaining records define the regions to be included.
The type of data which must be specified depends on the
region level.

US TOTAL   -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

50STATE    -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

STATE      -  state FIPS codes
```

```
COUNTY     -  state or county FIPS codes.  State FIPS
              code means include all counties in the
              state.

SUBCOUNTY  -  county FIPS code and subregion code.
-------------------------------------------------------
/REGION/
Region Level       : COUNTY
Fairfield County CT: 09001
Middlesex County CT: 09007
New Haven County CT: 09009
/END/

or use -
Region Level       : STATE
Michigan           : 26000
-------------------------------------------------------

                  SOURCE CATEGORY PACKET

This packet is used to tell the model which source
categories are to be processed.  It is optional.
If used, only those source categories list will
appear in the output data file.  If the packet is
not found, the model will process all source
categories in the population files.
-------------------------------------------------------


Diesel Only -
                   :2270000000
                   :2282020000
                   :2285002015
Spark Ignition Only -
                   :2260000000
                   :2265000000
                   :2267000000
                   :2268000000
                   :2282005010
                   :2282005015
                   :2282010005
                   :2285004015
                   :2285006015
-------------------------------------------------------
 This is the packet that lists the names of output files
 and some of the input data files read by the model.  If
 a drive:\path\ is not given, the location of the
 NONROAD.EXE file itself is assumed.  You will probably
 want to change the names of the Output and Message files
 to match that of the OPTion file, e.g., MICH-97.OPT,
 MICH-97.OUT, MICH-97.MSG, and if used MICH-97.AMS.
-------------------------------------------------------
/RUNFILES/
ALLOC XREF         : data\allocate\allocate.xrf
ACTIVITY           : data\activity\activity.dat
EXH TECHNOLOGY     : data\tech\tech-exh.dat
EVP TECHNOLOGY     : data\tech\tech-evp.dat
SEASONALITY        : data\season\season.dat
REGIONS            : data\season\season.dat
MESSAGE            : c:\nonroad\ctpei02\peisw02.msg
OUTPUT DATA        : c:\nonroad\ctpei02\peisw02.out
```

```
EPS2 AMS            :
US COUNTIES FIPS    : data\allocate\fips.dat
RETROFIT            :
/END/

------------------------------------------------------
This is the packet that defines the equipment population
files read by the model.
------------------------------------------------------
/POP FILES/
Population File     : c:\nonroad\data\pop\ct.pop
/END/

POPULATION FILE     : c:\nonroad\data\POP\MI.POP


------------------------------------------------------
This is the packet that defines the growth files
files read by the model.
------------------------------------------------------
/GROWTH FILES/
National defaults   : data\growth\nation.grw
/END/


/ALLOC FILES/
Air trans. empl.    :c:\nonroad\data\allocate\ct_airtr.alo
Undergrnd coal prod:c:\nonroad\data\allocate\ct_coal.alo
Construction cost   :c:\nonroad\data\allocate\ct_const.alo
Harvested acres     :c:\nonroad\data\allocate\ct_farms.alo
Golf course estab.  :c:\nonroad\data\allocate\ct_golf.alo
Wholesale estab.    :c:\nonroad\data\allocate\ct_holsl.alo
Family housing      :c:\nonroad\data\allocate\ct_house.alo
Logging employees   :c:\nonroad\data\allocate\ct_loggn.alo
Landscaping empl.   :c:\nonroad\data\allocate\ct_lscap.alo
Manufacturing empl.:c:\nonroad\data\allocate\ct_mnfg.alo
Oil & gas employees:c:\nonroad\data\allocate\ct_oil.alo
Census population   :c:\nonroad\data\allocate\ct_pop.alo
Allocation File     :c:\nonroad\data\allocate\ct_rail.alo
RV Park establish.  :c:\nonroad\data\allocate\ct_rvprk.alo
Snowblowers comm.   :c:\nonroad\data\allocate\ct_sbc.alo
Snowblowers res.    :c:\nonroad\data\allocate\ct_sbr.alo
Snowmobiles         :c:\nonroad\data\allocate\ct_snowm.alo
Rec marine inboard  :c:\nonroad\data\allocate\ct_wib.alo
Rec marine outboard:c:\nonroad\data\allocate\ct_wob.alo
/END/
------------------------------------------------------
This is the packet that defines the emssions factors
files read by the model.
------------------------------------------------------
/EMFAC FILES/
THC exhaust         : data\emsfac\exhthc.emf
CO exhaust          : data\emsfac\exhco.emf
NOX exhaust         : data\emsfac\exhnox.emf
PM exhaust          : data\emsfac\exhpm.emf
BSFC                : data\emsfac\bsfc.emf
Crankcase           : data\emsfac\crank.emf
Spillage            : data\emsfac\spillage.emf
Diurnal             : data\emsfac\evdiu.emf
TANK PERM           : data\emsfac\evtank.emf
NON-RM HOSE PERM    : data\emsfac\evhose.emf
```

```
RM FILL NECK PERM  : data\emsfac\evneck.emf
RM SUPPLY/RETURN   : data\emsfac\evsupret.emf
RM VENT PERM       : data\emsfac\evvent.emf
HOT SOAKS          : data\emsfac\evhotsk.emf
RUNINGLOSS         : data\emsfac\evrunls.emf
/END/

-------------------------------------------------------
This is the packet that defines the deterioration factors
files read by the model.
-------------------------------------------------------
/DETERIORATE FILES/
THC exhaust        : data\detfac\exhthc.det
CO exhaust         : data\detfac\exhco.det
NOX exhaust        : data\detfac\exhnox.det
PM exhaust         : data\detfac\exhpm.det
Diurnal            : data\detfac\evdiu.det
/END/

Optional Packets - Add initial slash "/" to activate

/STAGE II/
Control Factor     : 0.0
/END/
Enter percent control: 95 = 95% control = 0.05 x uncontrolled
Default should be zero control.

/MODELYEAR OUT/
EXHAUST BMY OUT    :
EVAP BMY OUT       :
/END/

SI REPORT/
SI report file-CSV :OUTPUTS\NRPOLLUT.CSV
/END/

/DAILY FILES/
DAILY TEMPS/RVP    :
/END/

PM Base Sulfur
 cols 1-10: dsl tech type;
 11-20: base sulfur wt%; or '1.0' means no-adjust (cert= in-use)
/PM BASE SULFUR/
T2        0.2000    0.02247
T3        0.2000    0.02247
T3B       0.0500    0.02247
T4A       0.0500    0.02247
T4B       0.0015    0.02247
T4        0.0015    0.30
T4N       0.0015    0.30
/END/
```

Greater Connecticut 2008 NONROAD2005 Input

```
Written by Nonroad interface at 2/8/2007 5:19:12 PM
This is the options file for the NONROAD program.
The data is sperated into "packets" bases on common
information.  Each packet is specified by an
identifier and a terminator. Any notes or descriptions
can be placed between the data packets.

9/2005 epa: Add growth & tech years to OPTIONS packet
  and Counties & Retrofit files to RUNFILES packet.

------------------------------------------------------

                  PERIOD PACKET

This is the packet that defines the period for
which emissions are to be estimated.  The order of the
records matter.  The selection of certain parameters
will cause some of the record that follow to be ignored.
The order of the records is as follows:

1  - Char 10  - Period type for this simulation.
                  Valid responses are: ANNUAL, SEASONAL, and MONTHLY
2  - Char 10  - Type of inventory produced.
                  Valid responses are: TYPICAL DAY and PERIOD TOTAL
3  - Integer  - year of episode (4 digit year)
4  - Char 10  - Month of episode (use complete name of month)
5  - Char 10  - Type of day
                  Valid responses are: WEEKDAY and WEEKEND
------------------------------------------------------
/PERIOD/
Period type        : Seasonal
Summation type     : Typical day
Year of episode    : 2008
Season of year     : Summer
Month of year      :
Weekday or weekend : Weekday
Year of growth calc:
Year of tech sel   :
/END/

------------------------------------------------------

                  OPTIONS PACKET

This is the packet that defines some of the user
options that drive the model.  Most parameters are
used to make episode specific emission factor
adjustments. The order of the records is fixed.
The order is as follows.

1  -  Char 80  - First title on reports
2  -  Char 80  - Second title on reports
3  -  Real 10  - Fuel RVP of gasoline for this simulation
4  -  Real 10  - Oxygen weight percent of gasoline for simulation
5  -  Real 10  - Percent sulfur for gasoline
6  -  Real 10  - Percent sulfur for diesel
7  -  Real 10  - Percent sulfur for LPG/CNG
8  -  Real 10  - Minimum daily temperature (deg. F)
9  -  Real 10  - maximum daily temperature (deg. F)
```

```
10 -  Real 10  - Representative average daily temperature (deg. F)
11 -  Char 10  - Flag to determine if region is high altitude
                      Valid responses are: HIGH and LOW
12 -  Char 10  - Flag to determine if RFG adjustments are made
                      Valid responses are: YES and NO
------------------------------------------------------
/OPTIONS/
Title 1            : TEST 2008 PEI FOR GrCT OZONE (MARINE S?)
Title 2            : FEB 8, 2007
Fuel RVP for gas   : 6.86
Oxygen Weight %    : 3.5
Gas sulfur %       : 0.0030
Diesel sulfur %    : 0.0348
Marine Dsl sulfur %: 0.0408
CNG/LPG sulfur %   : 0.003
Minimum temper. (F): 67.7
Maximum temper. (F): 95.5
Average temper. (F): 86.2
Altitude of region : LOW
/END/

------------------------------------------------------
                  REGION PACKET

This is the packet that defines the region for which
emissions are to be estimated.

The first record tells the type of region and
allocation to perform.

Valid responses are:
US TOTAL   -  emissions are for entire USA without state
              breakout.

50STATE    -  emissions are for all 50 states
              and Washington D.C., by state.

STATE      -  emissions are for a select group of states
              and are state-level estimates

COUNTY     -  emissions are for a select group of counties
              and are county level estimates.  If necessary,
              allocation from state to county will be performed.

SUBCOUNTY  -  emissions are for the specified sub counties
              and are subcounty level estimates.  If necessary,
              county to subcounty allocation will be performed.

The remaining records define the regions to be included.
The type of data which must be specified depends on the
region level.

US TOTAL   -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

50STATE    -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

STATE      -  state FIPS codes

COUNTY     -  state or county FIPS codes.  State FIPS
```

```
              code means include all counties in the
              state.

SUBCOUNTY  -  county FIPS code and subregion code.
------------------------------------------------------
/REGION/
Region Level       : COUNTY
Hartford County CT : 09003
Litchfield Count CT: 09005
New London Count CT: 09011
Tolland County CT  : 09013
Windham County CT  : 09015
/END/

or use -
Region Level       : STATE
Michigan           : 26000
------------------------------------------------------

                  SOURCE CATEGORY PACKET

This packet is used to tell the model which source
categories are to be processed.  It is optional.
If used, only those source categories list will
appear in the output data file.  If the packet is
not found, the model will process all source
categories in the population files.
------------------------------------------------------


Diesel Only -
                   :2270000000
                   :2282020000
                   :2285002015
Spark Ignition Only -
                   :2260000000
                   :2265000000
                   :2267000000
                   :2268000000
                   :2282005010
                   :2282005015
                   :2282010005
                   :2285004015
                   :2285006015
------------------------------------------------------
 This is the packet that lists the names of output files
 and some of the input data files read by the model.  If
 a drive:\path\ is not given, the location of the
 NONROAD.EXE file itself is assumed.  You will probably
 want to change the names of the Output and Message files
 to match that of the OPTion file, e.g., MICH-97.OPT,
 MICH-97.OUT, MICH-97.MSG, and if used MICH-97.AMS.
------------------------------------------------------
/RUNFILES/
ALLOC XREF         : data\allocate\allocate.xrf
ACTIVITY           : data\activity\activity.dat
EXH TECHNOLOGY     : data\tech\tech-exh.dat
EVP TECHNOLOGY     : data\tech\tech-evp.dat
SEASONALITY        : data\season\season.dat
REGIONS            : data\season\season.dat
MESSAGE            : c:\nonroad\ctpei08\peigr08.msg
```

```
OUTPUT DATA         : c:\nonroad\ctpei08\peigr08.out
EPS2 AMS            :
US COUNTIES FIPS    : data\allocate\fips.dat
RETROFIT            :
/END/

------------------------------------------------------
This is the packet that defines the equipment population
files read by the model.
------------------------------------------------------
/POP FILES/
Population File     : c:\nonroad\data\pop\ct.pop
/END/

POPULATION FILE     : c:\nonroad\data\POP\MI.POP


------------------------------------------------------
This is the packet that defines the growth files
files read by the model.
------------------------------------------------------
/GROWTH FILES/
National defaults   : data\growth\nation.grw
/END/


/ALLOC FILES/
Air trans. empl.    :c:\nonroad\data\allocate\ct_airtr.alo
Undergrnd coal prod:c:\nonroad\data\allocate\ct_coal.alo
Construction cost   :c:\nonroad\data\allocate\ct_const.alo
Harvested acres     :c:\nonroad\data\allocate\ct_farms.alo
Golf course estab.  :c:\nonroad\data\allocate\ct_golf.alo
Wholesale estab.    :c:\nonroad\data\allocate\ct_holsl.alo
Family housing      :c:\nonroad\data\allocate\ct_house.alo
Logging employees   :c:\nonroad\data\allocate\ct_loggn.alo
Landscaping empl.   :c:\nonroad\data\allocate\ct_lscap.alo
Manufacturing empl.:c:\nonroad\data\allocate\ct_mnfg.alo
Oil & gas employees:c:\nonroad\data\allocate\ct_oil.alo
Census population   :c:\nonroad\data\allocate\ct_pop.alo
Allocation File     :c:\nonroad\data\allocate\ct_rail.alo
RV Park establish.  :c:\nonroad\data\allocate\ct_rvprk.alo
Snowblowers comm.   :c:\nonroad\data\allocate\ct_sbc.alo
Snowblowers res.    :c:\nonroad\data\allocate\ct_sbr.alo
Snowmobiles         :c:\nonroad\data\allocate\ct_snowm.alo
Rec marine inboard  :c:\nonroad\data\allocate\ct_wib.alo
Rec marine outboard:c:\nonroad\data\allocate\ct_wob.alo
/END/
------------------------------------------------------
This is the packet that defines the emssions factors
files read by the model.
------------------------------------------------------
/EMFAC FILES/
THC exhaust         : data\emsfac\exhthc.emf
CO exhaust          : data\emsfac\exhco.emf
NOX exhaust         : data\emsfac\exhnox.emf
PM exhaust          : data\emsfac\exhpm.emf
BSFC                : data\emsfac\bsfc.emf
Crankcase           : data\emsfac\crank.emf
Spillage            : data\emsfac\spillage.emf
Diurnal             : data\emsfac\evdiu.emf
TANK PERM           : data\emsfac\evtank.emf
```

```
NON-RM HOSE PERM   : data\emsfac\evhose.emf
RM FILL NECK PERM  : data\emsfac\evneck.emf
RM SUPPLY/RETURN   : data\emsfac\evsupret.emf
RM VENT PERM       : data\emsfac\evvent.emf
HOT SOAKS          : data\emsfac\evhotsk.emf
RUNINGLOSS         : data\emsfac\evrunls.emf
/END/

------------------------------------------------------
This is the packet that defines the deterioration factors
files read by the model.
------------------------------------------------------
/DETERIORATE FILES/
THC exhaust        : data\detfac\exhthc.det
CO exhaust         : data\detfac\exhco.det
NOX exhaust        : data\detfac\exhnox.det
PM exhaust         : data\detfac\exhpm.det
Diurnal            : data\detfac\evdiu.det
/END/

Optional Packets - Add initial slash "/" to activate

/STAGE II/
Control Factor     : 0.0
/END/
Enter percent control: 95 = 95% control = 0.05 x uncontrolled
Default should be zero control.

/MODELYEAR OUT/
EXHAUST BMY OUT    :
EVAP BMY OUT       :
/END/

SI REPORT/
SI report file-CSV :OUTPUTS\NRPOLLUT.CSV
/END/

/DAILY FILES/
DAILY TEMPS/RVP    :
/END/

PM Base Sulfur
 cols 1-10: dsl tech type;
 11-20: base sulfur wt%; or '1.0' means no-adjust (cert= in-use)
/PM BASE SULFUR/
T2        0.2000    0.02247
T3        0.2000    0.02247
T3B       0.0500    0.02247
T4A       0.0500    0.02247
T4B       0.0015    0.02247
T4        0.0015    0.30
T4N       0.0015    0.30
/END/
```

Southwest Connecticut 2008 NONROAD2005 Input

```
Written by Nonroad interface at 2/8/2007 5:26:35 PM
This is the options file for the NONROAD program.
The data is sperated into "packets" bases on common
information.  Each packet is specified by an
identifier and a terminator. Any notes or descriptions
can be placed between the data packets.

9/2005 epa: Add growth & tech years to OPTIONS packet
  and Counties & Retrofit files to RUNFILES packet.

------------------------------------------------------

                  PERIOD PACKET

This is the packet that defines the period for
which emissions are to be estimated.  The order of the
records matter.  The selection of certain parameters
will cause some of the record that follow to be ignored.
The order of the records is as follows:

1  - Char 10  - Period type for this simulation.
                  Valid responses are: ANNUAL, SEASONAL, and MONTHLY
2  - Char 10  - Type of inventory produced.
                  Valid responses are: TYPICAL DAY and PERIOD TOTAL
3  - Integer  - year of episode (4 digit year)
4  - Char 10  - Month of episode (use complete name of month)
5  - Char 10  - Type of day
                  Valid responses are: WEEKDAY and WEEKEND
------------------------------------------------------
/PERIOD/
Period type        : Seasonal
Summation type     : Typical day
Year of episode    : 2008
Season of year     : Summer
Month of year      :
Weekday or weekend : Weekday
Year of growth calc:
Year of tech sel   :
/END/

------------------------------------------------------

                  OPTIONS PACKET

This is the packet that defines some of the user
options that drive the model.  Most parameters are
used to make episode specific emission factor
adjustments. The order of the records is fixed.
The order is as follows.

1  -  Char 80  - First title on reports
2  -  Char 80  - Second title on reports
3  -  Real 10  - Fuel RVP of gasoline for this simulation
4  -  Real 10  - Oxygen weight percent of gasoline for simulation
5  -  Real 10  - Percent sulfur for gasoline
6  -  Real 10  - Percent sulfur for diesel
7  -  Real 10  - Percent sulfur for LPG/CNG
8  -  Real 10  - Minimum daily temperature (deg. F)
9  -  Real 10  - maximum daily temperature (deg. F)
```

```
10 -  Real 10  - Representative average daily temperature (deg. F)
11 -  Char 10  - Flag to determine if region is high altitude
                      Valid responses are: HIGH and LOW
12 -  Char 10  - Flag to determine if RFG adjustments are made
                      Valid responses are: YES and NO
------------------------------------------------------
/OPTIONS/
Title 1            : TEST 2008 PEI FOR SWCT OZONE (MARINE S?)
Title 2            : FEB 8, 2007
Fuel RVP for gas   : 6.86
Oxygen Weight %    : 3.5
Gas sulfur %       : 0.0030
Diesel sulfur %    : 0.0348
Marine Dsl sulfur %: 0.0408
CNG/LPG sulfur %   : 0.003
Minimum temper. (F): 66.5
Maximum temper. (F): 91.6
Average temper. (F): 83.2
Altitude of region : LOW
/END/

------------------------------------------------------
                  REGION PACKET

This is the packet that defines the region for which
emissions are to be estimated.

The first record tells the type of region and
allocation to perform.

Valid responses are:
US TOTAL   -  emissions are for entire USA without state
              breakout.

50STATE    -  emissions are for all 50 states
              and Washington D.C., by state.

STATE      -  emissions are for a select group of states
              and are state-level estimates

COUNTY     -  emissions are for a select group of counties
              and are county level estimates.  If necessary,
              allocation from state to county will be performed.

SUBCOUNTY  -  emissions are for the specified sub counties
              and are subcounty level estimates.  If necessary,
              county to subcounty allocation will be performed.

The remaining records define the regions to be included.
The type of data which must be specified depends on the
region level.

US TOTAL   -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

50STATE    -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

STATE      -  state FIPS codes

COUNTY     -  state or county FIPS codes.  State FIPS
```

```
               code means include all counties in the
               state.

SUBCOUNTY  -  county FIPS code and subregion code.
------------------------------------------------------
/REGION/
Region Level       : COUNTY
Fairfield County CT: 09001
Middlesex County CT: 09007
New Haven County CT: 09009
/END/

or use -
Region Level       : STATE
Michigan           : 26000
------------------------------------------------------

                  SOURCE CATEGORY PACKET

This packet is used to tell the model which source
categories are to be processed.  It is optional.
If used, only those source categories list will
appear in the output data file.  If the packet is
not found, the model will process all source
categories in the population files.
------------------------------------------------------


Diesel Only -
                   :2270000000
                   :2282020000
                   :2285002015
Spark Ignition Only -
                   :2260000000
                   :2265000000
                   :2267000000
                   :2268000000
                   :2282005010
                   :2282005015
                   :2282010005
                   :2285004015
                   :2285006015
------------------------------------------------------
 This is the packet that lists the names of output files
 and some of the input data files read by the model.  If
 a drive:\path\ is not given, the location of the
 NONROAD.EXE file itself is assumed.  You will probably
 want to change the names of the Output and Message files
 to match that of the OPTion file, e.g., MICH-97.OPT,
 MICH-97.OUT, MICH-97.MSG, and if used MICH-97.AMS.
------------------------------------------------------
/RUNFILES/
ALLOC XREF         : data\allocate\allocate.xrf
ACTIVITY           : data\activity\activity.dat
EXH TECHNOLOGY     : data\tech\tech-exh.dat
EVP TECHNOLOGY     : data\tech\tech-evp.dat
SEASONALITY        : data\season\season.dat
REGIONS            : data\season\season.dat
MESSAGE            : c:\nonroad\ctpei08\peisw08.msg
OUTPUT DATA        : c:\nonroad\ctpei08\peisw08.out
EPS2 AMS           :
```

```
US COUNTIES FIPS   : data\allocate\fips.dat
RETROFIT           :
/END/

------------------------------------------------------
This is the packet that defines the equipment population
files read by the model.
------------------------------------------------------
/POP FILES/
Population File    : c:\nonroad\data\pop\ct.pop
/END/

POPULATION FILE    : c:\nonroad\data\POP\MI.POP


------------------------------------------------------
This is the packet that defines the growth files
files read by the model.
------------------------------------------------------
/GROWTH FILES/
National defaults  : data\growth\nation.grw
/END/


/ALLOC FILES/
Air trans. empl.   :c:\nonroad\data\allocate\ct_airtr.alo
Undergrnd coal prod:c:\nonroad\data\allocate\ct_coal.alo
Construction cost  :c:\nonroad\data\allocate\ct_const.alo
Harvested acres    :c:\nonroad\data\allocate\ct_farms.alo
Golf course estab. :c:\nonroad\data\allocate\ct_golf.alo
Wholesale estab.   :c:\nonroad\data\allocate\ct_holsl.alo
Family housing     :c:\nonroad\data\allocate\ct_house.alo
Logging employees  :c:\nonroad\data\allocate\ct_loggn.alo
Landscaping empl.  :c:\nonroad\data\allocate\ct_lscap.alo
Manufacturing empl.:c:\nonroad\data\allocate\ct_mnfg.alo
Oil & gas employees:c:\nonroad\data\allocate\ct_oil.alo
Census population  :c:\nonroad\data\allocate\ct_pop.alo
Allocation File    :c:\nonroad\data\allocate\ct_rail.alo
RV Park establish. :c:\nonroad\data\allocate\ct_rvprk.alo
Snowblowers comm.  :c:\nonroad\data\allocate\ct_sbc.alo
Snowblowers res.   :c:\nonroad\data\allocate\ct_sbr.alo
Snowmobiles        :c:\nonroad\data\allocate\ct_snowm.alo
Rec marine inboard :c:\nonroad\data\allocate\ct_wib.alo
Rec marine outboard:c:\nonroad\data\allocate\ct_wob.alo
/END/
------------------------------------------------------
This is the packet that defines the emssions factors
files read by the model.
------------------------------------------------------
/EMFAC FILES/
THC exhaust        : data\emsfac\exhthc.emf
CO exhaust         : data\emsfac\exhco.emf
NOX exhaust        : data\emsfac\exhnox.emf
PM exhaust         : data\emsfac\exhpm.emf
BSFC               : data\emsfac\bsfc.emf
Crankcase          : data\emsfac\crank.emf
Spillage           : data\emsfac\spillage.emf
Diurnal            : data\emsfac\evdiu.emf
TANK PERM          : data\emsfac\evtank.emf
NON-RM HOSE PERM   : data\emsfac\evhose.emf
RM FILL NECK PERM  : data\emsfac\evneck.emf
```

```
RM SUPPLY/RETURN   : data\emsfac\evsupret.emf
RM VENT PERM       : data\emsfac\evvent.emf
HOT SOAKS          : data\emsfac\evhotsk.emf
RUNINGLOSS         : data\emsfac\evrunls.emf
/END/

------------------------------------------------------
This is the packet that defines the deterioration factors
files read by the model.
------------------------------------------------------
/DETERIORATE FILES/
THC exhaust        : data\detfac\exhthc.det
CO exhaust         : data\detfac\exhco.det
NOX exhaust        : data\detfac\exhnox.det
PM exhaust         : data\detfac\exhpm.det
Diurnal            : data\detfac\evdiu.det
/END/

Optional Packets - Add initial slash "/" to activate

/STAGE II/
Control Factor     : 0.0
/END/
Enter percent control: 95 = 95% control = 0.05 x uncontrolled
Default should be zero control.

/MODELYEAR OUT/
EXHAUST BMY OUT    :
EVAP BMY OUT       :
/END/

SI REPORT/
SI report file-CSV :OUTPUTS\NRPOLLUT.CSV
/END/

/DAILY FILES/
DAILY TEMPS/RVP    :
/END/

PM Base Sulfur
 cols 1-10: dsl tech type;
 11-20: base sulfur wt%; or '1.0' means no-adjust (cert= in-use)
/PM BASE SULFUR/
T2        0.2000    0.02247
T3        0.2000    0.02247
T3B       0.0500    0.02247
T4A       0.0500    0.02247
T4B       0.0015    0.02247
T4        0.0015    0.30
T4N       0.0015    0.30
/END/
```

Greater Connecticut 2009 NONROAD2005 Input

```
Written by Nonroad interface at 2/7/2007 10:53:16 AM
This is the options file for the NONROAD program.
The data is sperated into "packets" bases on common
information.  Each packet is specified by an
identifier and a terminator. Any notes or descriptions
can be placed between the data packets.

9/2005 epa: Add growth & tech years to OPTIONS packet
  and Counties & Retrofit files to RUNFILES packet.

------------------------------------------------------

                  PERIOD PACKET

This is the packet that defines the period for
which emissions are to be estimated.  The order of the
records matter.  The selection of certain parameters
will cause some of the record that follow to be ignored.
The order of the records is as follows:

1  - Char 10  - Period type for this simulation.
                  Valid responses are: ANNUAL, SEASONAL, and MONTHLY
2  - Char 10  - Type of inventory produced.
                  Valid responses are: TYPICAL DAY and PERIOD TOTAL
3  - Integer  - year of episode (4 digit year)
4  - Char 10  - Month of episode (use complete name of month)
5  - Char 10  - Type of day
                  Valid responses are: WEEKDAY and WEEKEND
------------------------------------------------------
/PERIOD/
Period type        : Seasonal
Summation type     : Typical day
Year of episode    : 2009
Season of year     : Summer
Month of year      :
Weekday or weekend : Weekday
Year of growth calc:
Year of tech sel   :
/END/

------------------------------------------------------

                  OPTIONS PACKET

This is the packet that defines some of the user
options that drive the model.  Most parameters are
used to make episode specific emission factor
adjustments. The order of the records is fixed.
The order is as follows.

1  -  Char 80  - First title on reports
2  -  Char 80  - Second title on reports
3  -  Real 10  - Fuel RVP of gasoline for this simulation
4  -  Real 10  - Oxygen weight percent of gasoline for simulation
5  -  Real 10  - Percent sulfur for gasoline
6  -  Real 10  - Percent sulfur for diesel
7  -  Real 10  - Percent sulfur for LPG/CNG
8  -  Real 10  - Minimum daily temperature (deg. F)
9  -  Real 10  - maximum daily temperature (deg. F)
```

```
10 -  Real 10  - Representative average daily temperature (deg. F)
11 -  Char 10  - Flag to determine if region is high altitude
                      Valid responses are: HIGH and LOW
12 -  Char 10  - Flag to determine if RFG adjustments are made
                      Valid responses are: YES and NO
-------------------------------------------------------
/OPTIONS/
Title 1            : TEST 2009 PEI FOR GrCT OZONE (MARINE S?)
Title 2            : FEB 2, 2007
Fuel RVP for gas   : 6.86
Oxygen Weight %    : 3.5
Gas sulfur %       : 0.0030
Diesel sulfur %    : 0.0348
Marine Dsl sulfur %: 0.0408
CNG/LPG sulfur %   : 0.003
Minimum temper. (F): 67.7
Maximum temper. (F): 95.5
Average temper. (F): 86.2
Altitude of region : LOW
/END/

-------------------------------------------------------
                  REGION PACKET

This is the packet that defines the region for which
emissions are to be estimated.

The first record tells the type of region and
allocation to perform.

Valid responses are:
US TOTAL   -  emissions are for entire USA without state
              breakout.

50STATE    -  emissions are for all 50 states
              and Washington D.C., by state.

STATE      -  emissions are for a select group of states
              and are state-level estimates

COUNTY     -  emissions are for a select group of counties
              and are county level estimates.  If necessary,
              allocation from state to county will be performed.

SUBCOUNTY  -  emissions are for the specified sub counties
              and are subcounty level estimates.  If necessary,
              county to subcounty allocation will be performed.

The remaining records define the regions to be included.
The type of data which must be specified depends on the
region level.

US TOTAL   -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

50STATE    -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

STATE      -  state FIPS codes

COUNTY     -  state or county FIPS codes.  State FIPS
```

```
              code means include all counties in the
              state.

SUBCOUNTY  -  county FIPS code and subregion code.
------------------------------------------------------
/REGION/
Region Level       : COUNTY
Hartford County CT : 09003
Litchfield Count CT: 09005
New London Count CT: 09011
Tolland County CT  : 09013
Windham County CT  : 09015
/END/

or use -
Region Level       : STATE
Michigan           : 26000
------------------------------------------------------

                  SOURCE CATEGORY PACKET

This packet is used to tell the model which source
categories are to be processed.  It is optional.
If used, only those source categories list will
appear in the output data file.  If the packet is
not found, the model will process all source
categories in the population files.
------------------------------------------------------


Diesel Only -
                   :2270000000
                   :2282020000
                   :2285002015
Spark Ignition Only -
                   :2260000000
                   :2265000000
                   :2267000000
                   :2268000000
                   :2282005010
                   :2282005015
                   :2282010005
                   :2285004015
                   :2285006015
------------------------------------------------------
 This is the packet that lists the names of output files
 and some of the input data files read by the model.  If
 a drive:\path\ is not given, the location of the
 NONROAD.EXE file itself is assumed.  You will probably
 want to change the names of the Output and Message files
 to match that of the OPTion file, e.g., MICH-97.OPT,
 MICH-97.OUT, MICH-97.MSG, and if used MICH-97.AMS.
------------------------------------------------------
/RUNFILES/
ALLOC XREF         : data\allocate\allocate.xrf
ACTIVITY           : data\activity\activity.dat
EXH TECHNOLOGY     : data\tech\tech-exh.dat
EVP TECHNOLOGY     : data\tech\tech-evp.dat
SEASONALITY        : data\season\season.dat
REGIONS            : data\season\season.dat
MESSAGE            : c:\nonroad\ctpei09\peigr09.msg
```

```
OUTPUT DATA         : c:\nonroad\ctpei09\peigr09.out
EPS2 AMS            :
US COUNTIES FIPS    : data\allocate\fips.dat
RETROFIT            :
/END/

------------------------------------------------------
This is the packet that defines the equipment population
files read by the model.
------------------------------------------------------
/POP FILES/
Population File     : c:\nonroad\data\pop\ct.pop
/END/

POPULATION FILE     : c:\nonroad\data\POP\MI.POP


------------------------------------------------------
This is the packet that defines the growth files
files read by the model.
------------------------------------------------------
/GROWTH FILES/
National defaults   : data\growth\nation.grw
/END/


/ALLOC FILES/
Air trans. empl.    :c:\nonroad\data\allocate\ct_airtr.alo
Undergrnd coal prod:c:\nonroad\data\allocate\ct_coal.alo
Construction cost   :c:\nonroad\data\allocate\ct_const.alo
Harvested acres     :c:\nonroad\data\allocate\ct_farms.alo
Golf course estab.  :c:\nonroad\data\allocate\ct_golf.alo
Wholesale estab.    :c:\nonroad\data\allocate\ct_holsl.alo
Family housing      :c:\nonroad\data\allocate\ct_house.alo
Logging employees   :c:\nonroad\data\allocate\ct_loggn.alo
Landscaping empl.   :c:\nonroad\data\allocate\ct_lscap.alo
Manufacturing empl.:c:\nonroad\data\allocate\ct_mnfg.alo
Oil & gas employees:c:\nonroad\data\allocate\ct_oil.alo
Census population   :c:\nonroad\data\allocate\ct_pop.alo
Allocation File     :c:\nonroad\data\allocate\ct_rail.alo
RV Park establish.  :c:\nonroad\data\allocate\ct_rvprk.alo
Snowblowers comm.   :c:\nonroad\data\allocate\ct_sbc.alo
Snowblowers res.    :c:\nonroad\data\allocate\ct_sbr.alo
Snowmobiles         :c:\nonroad\data\allocate\ct_snowm.alo
Rec marine inboard  :c:\nonroad\data\allocate\ct_wib.alo
Rec marine outboard:c:\nonroad\data\allocate\ct_wob.alo
/END/
------------------------------------------------------
This is the packet that defines the emssions factors
files read by the model.
------------------------------------------------------
/EMFAC FILES/
THC exhaust         : data\emsfac\exhthc.emf
CO exhaust          : data\emsfac\exhco.emf
NOX exhaust         : data\emsfac\exhnox.emf
PM exhaust          : data\emsfac\exhpm.emf
BSFC                : data\emsfac\bsfc.emf
Crankcase           : data\emsfac\crank.emf
Spillage            : data\emsfac\spillage.emf
Diurnal             : data\emsfac\evdiu.emf
TANK PERM           : data\emsfac\evtank.emf
```

```
NON-RM HOSE PERM    : data\emsfac\evhose.emf
RM FILL NECK PERM   : data\emsfac\evneck.emf
RM SUPPLY/RETURN    : data\emsfac\evsupret.emf
RM VENT PERM        : data\emsfac\evvent.emf
HOT SOAKS           : data\emsfac\evhotsk.emf
RUNINGLOSS          : data\emsfac\evrunls.emf
/END/

------------------------------------------------------
This is the packet that defines the deterioration factors
files read by the model.
------------------------------------------------------
/DETERIORATE FILES/
THC exhaust         : data\detfac\exhthc.det
CO exhaust          : data\detfac\exhco.det
NOX exhaust         : data\detfac\exhnox.det
PM exhaust          : data\detfac\exhpm.det
Diurnal             : data\detfac\evdiu.det
/END/

Optional Packets - Add initial slash "/" to activate

/STAGE II/
Control Factor      : 0.0
/END/
Enter percent control: 95 = 95% control = 0.05 x uncontrolled
Default should be zero control.

/MODELYEAR OUT/
EXHAUST BMY OUT     :
EVAP BMY OUT        :
/END/

SI REPORT/
SI report file-CSV :OUTPUTS\NRPOLLUT.CSV
/END/

/DAILY FILES/
DAILY TEMPS/RVP     :
/END/

PM Base Sulfur
 cols 1-10: dsl tech type;
 11-20: base sulfur wt%; or '1.0' means no-adjust (cert= in-use)
/PM BASE SULFUR/
T2        0.2000    0.02247
T3        0.2000    0.02247
T3B       0.0500    0.02247
T4A       0.0500    0.02247
T4B       0.0015    0.02247
T4        0.0015    0.30
T4N       0.0015    0.30
/END/
```

Southwest Connecticut 2009 NONROAD2005 Input

```
Written by Nonroad interface at 2/7/2007 10:34:16 AM
This is the options file for the NONROAD program.
The data is sperated into "packets" bases on common
information.  Each packet is specified by an
identifier and a terminator. Any notes or descriptions
can be placed between the data packets.

9/2005 epa: Add growth & tech years to OPTIONS packet
  and Counties & Retrofit files to RUNFILES packet.

------------------------------------------------------

                  PERIOD PACKET

This is the packet that defines the period for
which emissions are to be estimated.  The order of the
records matter.  The selection of certain parameters
will cause some of the record that follow to be ignored.
The order of the records is as follows:

1  - Char 10  - Period type for this simulation.
                  Valid responses are: ANNUAL, SEASONAL, and MONTHLY
2  - Char 10  - Type of inventory produced.
                  Valid responses are: TYPICAL DAY and PERIOD TOTAL
3  - Integer  - year of episode (4 digit year)
4  - Char 10  - Month of episode (use complete name of month)
5  - Char 10  - Type of day
                  Valid responses are: WEEKDAY and WEEKEND
------------------------------------------------------
/PERIOD/
Period type        : Seasonal
Summation type     : Typical day
Year of episode    : 2009
Season of year     : Summer
Month of year      :
Weekday or weekend : Weekday
Year of growth calc:
Year of tech sel   :
/END/

------------------------------------------------------

                  OPTIONS PACKET

This is the packet that defines some of the user
options that drive the model.  Most parameters are
used to make episode specific emission factor
adjustments. The order of the records is fixed.
The order is as follows.

1  -  Char 80  - First title on reports
2  -  Char 80  - Second title on reports
3  -  Real 10  - Fuel RVP of gasoline for this simulation
4  -  Real 10  - Oxygen weight percent of gasoline for simulation
5  -  Real 10  - Percent sulfur for gasoline
6  -  Real 10  - Percent sulfur for diesel
7  -  Real 10  - Percent sulfur for LPG/CNG
8  -  Real 10  - Minimum daily temperature (deg. F)
9  -  Real 10  - maximum daily temperature (deg. F)
```

```
10 -  Real 10  - Representative average daily temperature (deg. F)
11 -  Char 10  - Flag to determine if region is high altitude
                      Valid responses are: HIGH and LOW
12 -  Char 10  - Flag to determine if RFG adjustments are made
                      Valid responses are: YES and NO
------------------------------------------------------
/OPTIONS/
Title 1            : TEST 2009 PEI FOR SWCT OZONE (MARINE S?)
Title 2            : FEB 2, 2007
Fuel RVP for gas   : 6.86
Oxygen Weight %    : 3.5
Gas sulfur %       : 0.0030
Diesel sulfur %    : 0.0348
Marine Dsl sulfur %: 0.0408
CNG/LPG sulfur %   : 0.003
Minimum temper. (F): 66.5
Maximum temper. (F): 91.6
Average temper. (F): 83.2
Altitude of region : LOW
/END/

------------------------------------------------------
                  REGION PACKET

This is the packet that defines the region for which
emissions are to be estimated.

The first record tells the type of region and
allocation to perform.

Valid responses are:
US TOTAL   -  emissions are for entire USA without state
              breakout.

50STATE    -  emissions are for all 50 states
              and Washington D.C., by state.

STATE      -  emissions are for a select group of states
              and are state-level estimates

COUNTY     -  emissions are for a select group of counties
              and are county level estimates.  If necessary,
              allocation from state to county will be performed.

SUBCOUNTY  -  emissions are for the specified sub counties
              and are subcounty level estimates.  If necessary,
              county to subcounty allocation will be performed.

The remaining records define the regions to be included.
The type of data which must be specified depends on the
region level.

US TOTAL   -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

50STATE    -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

STATE      -  state FIPS codes

COUNTY     -  state or county FIPS codes.  State FIPS
```

```
               code means include all counties in the
               state.

SUBCOUNTY  -  county FIPS code and subregion code.
------------------------------------------------------
/REGION/
Region Level       : COUNTY
Fairfield County CT: 09001
Middlesex County CT: 09007
New Haven County CT: 09009
/END/

or use -
Region Level       : STATE
Michigan           : 26000
------------------------------------------------------
```

SOURCE CATEGORY PACKET

```
This packet is used to tell the model which source
categories are to be processed.  It is optional.
If used, only those source categories list will
appear in the output data file.  If the packet is
not found, the model will process all source
categories in the population files.
------------------------------------------------------


Diesel Only -
                   :2270000000
                   :2282020000
                   :2285002015
Spark Ignition Only -
                   :2260000000
                   :2265000000
                   :2267000000
                   :2268000000
                   :2282005010
                   :2282005015
                   :2282010005
                   :2285004015
                   :2285006015
------------------------------------------------------
 This is the packet that lists the names of output files
 and some of the input data files read by the model.  If
 a drive:\path\ is not given, the location of the
 NONROAD.EXE file itself is assumed.  You will probably
 want to change the names of the Output and Message files
 to match that of the OPTion file, e.g., MICH-97.OPT,
 MICH-97.OUT, MICH-97.MSG, and if used MICH-97.AMS.
------------------------------------------------------
/RUNFILES/
ALLOC XREF         : data\allocate\allocate.xrf
ACTIVITY           : data\activity\activity.dat
EXH TECHNOLOGY     : data\tech\tech-exh.dat
EVP TECHNOLOGY     : data\tech\tech-evp.dat
SEASONALITY        : data\season\season.dat
REGIONS            : data\season\season.dat
MESSAGE            : c:\nonroad\ctpei09\peisw09.msg
OUTPUT DATA        : c:\nonroad\ctpei09\peisw09.out
EPS2 AMS           :
```

```
US COUNTIES FIPS   : data\allocate\fips.dat
RETROFIT           :
/END/

------------------------------------------------------
This is the packet that defines the equipment population
files read by the model.
------------------------------------------------------
/POP FILES/
Population File    : c:\nonroad\data\pop\ct.pop
/END/

POPULATION FILE    : c:\nonroad\data\POP\MI.POP


------------------------------------------------------
This is the packet that defines the growth files
files read by the model.
------------------------------------------------------
/GROWTH FILES/
National defaults  : data\growth\nation.grw
/END/


/ALLOC FILES/
Air trans. empl.   :c:\nonroad\data\allocate\ct_airtr.alo
Undergrnd coal prod:c:\nonroad\data\allocate\ct_coal.alo
Construction cost  :c:\nonroad\data\allocate\ct_const.alo
Harvested acres    :c:\nonroad\data\allocate\ct_farms.alo
Golf course estab. :c:\nonroad\data\allocate\ct_golf.alo
Wholesale estab.   :c:\nonroad\data\allocate\ct_holsl.alo
Family housing     :c:\nonroad\data\allocate\ct_house.alo
Logging employees  :c:\nonroad\data\allocate\ct_loggn.alo
Landscaping empl.  :c:\nonroad\data\allocate\ct_lscap.alo
Manufacturing empl.:c:\nonroad\data\allocate\ct_mnfg.alo
Oil & gas employees:c:\nonroad\data\allocate\ct_oil.alo
Census population  :c:\nonroad\data\allocate\ct_pop.alo
Allocation File    :c:\nonroad\data\allocate\ct_rail.alo
RV Park establish. :c:\nonroad\data\allocate\ct_rvprk.alo
Snowblowers comm.  :c:\nonroad\data\allocate\ct_sbc.alo
Snowblowers res.   :c:\nonroad\data\allocate\ct_sbr.alo
Snowmobiles        :c:\nonroad\data\allocate\ct_snowm.alo
Rec marine inboard :c:\nonroad\data\allocate\ct_wib.alo
Rec marine outboard:c:\nonroad\data\allocate\ct_wob.alo
/END/
------------------------------------------------------
This is the packet that defines the emssions factors
files read by the model.
------------------------------------------------------
/EMFAC FILES/
THC exhaust        : data\emsfac\exhthc.emf
CO exhaust         : data\emsfac\exhco.emf
NOX exhaust        : data\emsfac\exhnox.emf
PM exhaust         : data\emsfac\exhpm.emf
BSFC               : data\emsfac\bsfc.emf
Crankcase          : data\emsfac\crank.emf
Spillage           : data\emsfac\spillage.emf
Diurnal            : data\emsfac\evdiu.emf
TANK PERM          : data\emsfac\evtank.emf
NON-RM HOSE PERM   : data\emsfac\evhose.emf
RM FILL NECK PERM  : data\emsfac\evneck.emf
```

```
RM SUPPLY/RETURN   : data\emsfac\evsupret.emf
RM VENT PERM       : data\emsfac\evvent.emf
HOT SOAKS          : data\emsfac\evhotsk.emf
RUNINGLOSS         : data\emsfac\evrunls.emf
/END/

------------------------------------------------------
This is the packet that defines the deterioration factors
files read by the model.
------------------------------------------------------
/DETERIORATE FILES/
THC exhaust        : data\detfac\exhthc.det
CO exhaust         : data\detfac\exhco.det
NOX exhaust        : data\detfac\exhnox.det
PM exhaust         : data\detfac\exhpm.det
Diurnal            : data\detfac\evdiu.det
/END/

Optional Packets - Add initial slash "/" to activate

/STAGE II/
Control Factor     : 0.0
/END/
Enter percent control: 95 = 95% control = 0.05 x uncontrolled
Default should be zero control.

/MODELYEAR OUT/
EXHAUST BMY OUT    :
EVAP BMY OUT       :
/END/

SI REPORT/
SI report file-CSV :OUTPUTS\NRPOLLUT.CSV
/END/

/DAILY FILES/
DAILY TEMPS/RVP    :
/END/

PM Base Sulfur
 cols 1-10: dsl tech type;
 11-20: base sulfur wt%; or '1.0' means no-adjust (cert= in-use)
/PM BASE SULFUR/
T2        0.2000    0.02247
T3        0.2000    0.02247
T3B       0.0500    0.02247
T4A       0.0500    0.02247
T4B       0.0015    0.02247
T4        0.0015    0.30
T4N       0.0015    0.30
/END/
```

Greater Connecticut 2012 NONROAD2005 Input

```
Written by Nonroad interface at 2/7/2007 11:39:03 AM
This is the options file for the NONROAD program.
The data is sperated into "packets" bases on common
information.  Each packet is specified by an
identifier and a terminator. Any notes or descriptions
can be placed between the data packets.

9/2005 epa: Add growth & tech years to OPTIONS packet
  and Counties & Retrofit files to RUNFILES packet.

------------------------------------------------------

                  PERIOD PACKET

This is the packet that defines the period for
which emissions are to be estimated.  The order of the
records matter.  The selection of certain parameters
will cause some of the record that follow to be ignored.
The order of the records is as follows:

1  - Char 10  - Period type for this simulation.
                  Valid responses are: ANNUAL, SEASONAL, and MONTHLY
2  - Char 10  - Type of inventory produced.
                  Valid responses are: TYPICAL DAY and PERIOD TOTAL
3  - Integer  - year of episode (4 digit year)
4  - Char 10  - Month of episode (use complete name of month)
5  - Char 10  - Type of day
                  Valid responses are: WEEKDAY and WEEKEND
------------------------------------------------------
/PERIOD/
Period type         : Seasonal
Summation type      : Typical day
Year of episode     : 2012
Season of year      : Summer
Month of year       :
Weekday or weekend : Weekday
Year of growth calc:
Year of tech sel    :
/END/

------------------------------------------------------

                  OPTIONS PACKET

This is the packet that defines some of the user
options that drive the model.  Most parameters are
used to make episode specific emission factor
adjustments. The order of the records is fixed.
The order is as follows.

1  -  Char 80  - First title on reports
2  -  Char 80  - Second title on reports
3  -  Real 10  - Fuel RVP of gasoline for this simulation
4  -  Real 10  - Oxygen weight percent of gasoline for simulation
5  -  Real 10  - Percent sulfur for gasoline
6  -  Real 10  - Percent sulfur for diesel
7  -  Real 10  - Percent sulfur for LPG/CNG
8  -  Real 10  - Minimum daily temperature (deg. F)
9  -  Real 10  - maximum daily temperature (deg. F)
```

```
10 -  Real 10  - Representative average daily temperature (deg. F)
11 -  Char 10  - Flag to determine if region is high altitude
                    Valid responses are: HIGH and LOW
12 -  Char 10  - Flag to determine if RFG adjustments are made
                    Valid responses are: YES and NO
------------------------------------------------------
/OPTIONS/
Title 1            : TEST 2012 PEI FOR GrCT OZONE (MARINE S?)
Title 2            : FEB 2, 2007
Fuel RVP for gas   : 6.86
Oxygen Weight %    : 3.5
Gas sulfur %       : 0.0030
Diesel sulfur %    : 0.0031
Marine Dsl sulfur %: 0.0123
CNG/LPG sulfur %   : 0.003
Minimum temper. (F): 67.7
Maximum temper. (F): 95.5
Average temper. (F): 86.2
Altitude of region : LOW
/END/

------------------------------------------------------
                  REGION PACKET

This is the packet that defines the region for which
emissions are to be estimated.

The first record tells the type of region and
allocation to perform.

Valid responses are:
US TOTAL   -  emissions are for entire USA without state
              breakout.

50STATE    -  emissions are for all 50 states
              and Washington D.C., by state.

STATE      -  emissions are for a select group of states
              and are state-level estimates

COUNTY     -  emissions are for a select group of counties
              and are county level estimates.  If necessary,
              allocation from state to county will be performed.

SUBCOUNTY  -  emissions are for the specified sub counties
              and are subcounty level estimates.  If necessary,
              county to subcounty allocation will be performed.

The remaining records define the regions to be included.
The type of data which must be specified depends on the
region level.

US TOTAL   -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

50STATE    -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

STATE      -  state FIPS codes

COUNTY     -  state or county FIPS codes.  State FIPS
```

```
               code means include all counties in the
               state.

SUBCOUNTY  -  county FIPS code and subregion code.
------------------------------------------------------
/REGION/
Region Level       : COUNTY
Hartford County CT : 09003
Litchfield Count CT: 09005
New London Count CT: 09011
Tolland County CT  : 09013
Windham County CT  : 09015
/END/

or use -
Region Level       : STATE
Michigan           : 26000
------------------------------------------------------

                  SOURCE CATEGORY PACKET

This packet is used to tell the model which source
categories are to be processed.  It is optional.
If used, only those source categories list will
appear in the output data file.  If the packet is
not found, the model will process all source
categories in the population files.
------------------------------------------------------


Diesel Only -
                   :2270000000
                   :2282020000
                   :2285002015
Spark Ignition Only -
                   :2260000000
                   :2265000000
                   :2267000000
                   :2268000000
                   :2282005010
                   :2282005015
                   :2282010005
                   :2285004015
                   :2285006015
------------------------------------------------------
 This is the packet that lists the names of output files
 and some of the input data files read by the model.  If
 a drive:\path\ is not given, the location of the
 NONROAD.EXE file itself is assumed.  You will probably
 want to change the names of the Output and Message files
 to match that of the OPTion file, e.g., MICH-97.OPT,
 MICH-97.OUT, MICH-97.MSG, and if used MICH-97.AMS.
------------------------------------------------------
/RUNFILES/
ALLOC XREF         : data\allocate\allocate.xrf
ACTIVITY           : data\activity\activity.dat
EXH TECHNOLOGY     : data\tech\tech-exh.dat
EVP TECHNOLOGY     : data\tech\tech-evp.dat
SEASONALITY        : data\season\season.dat
REGIONS            : data\season\season.dat
MESSAGE            : c:\nonroad\ctpei12\peigr12.msg
```

```
OUTPUT DATA         : c:\nonroad\ctpei12\peigr12.out
EPS2 AMS            :
US COUNTIES FIPS    : data\allocate\fips.dat
RETROFIT            :
/END/

------------------------------------------------------
This is the packet that defines the equipment population
files read by the model.
------------------------------------------------------
/POP FILES/
Population File     : c:\nonroad\data\pop\ct.pop
/END/

POPULATION FILE     : c:\nonroad\data\POP\MI.POP


------------------------------------------------------
This is the packet that defines the growth files
files read by the model.
------------------------------------------------------
/GROWTH FILES/
National defaults   : data\growth\nation.grw
/END/


/ALLOC FILES/
Air trans. empl.    :c:\nonroad\data\allocate\ct_airtr.alo
Undergrnd coal prod:c:\nonroad\data\allocate\ct_coal.alo
Construction cost   :c:\nonroad\data\allocate\ct_const.alo
Harvested acres     :c:\nonroad\data\allocate\ct_farms.alo
Golf course estab. :c:\nonroad\data\allocate\ct_golf.alo
Wholesale estab.    :c:\nonroad\data\allocate\ct_holsl.alo
Family housing      :c:\nonroad\data\allocate\ct_house.alo
Logging employees   :c:\nonroad\data\allocate\ct_loggn.alo
Landscaping empl.   :c:\nonroad\data\allocate\ct_lscap.alo
Manufacturing empl.:c:\nonroad\data\allocate\ct_mnfg.alo
Oil & gas employees:c:\nonroad\data\allocate\ct_oil.alo
Census population   :c:\nonroad\data\allocate\ct_pop.alo
Allocation File     :c:\nonroad\data\allocate\ct_rail.alo
RV Park establish. :c:\nonroad\data\allocate\ct_rvprk.alo
Snowblowers comm.   :c:\nonroad\data\allocate\ct_sbc.alo
Snowblowers res.    :c:\nonroad\data\allocate\ct_sbr.alo
Snowmobiles         :c:\nonroad\data\allocate\ct_snowm.alo
Rec marine inboard :c:\nonroad\data\allocate\ct_wib.alo
Rec marine outboard:c:\nonroad\data\allocate\ct_wob.alo
/END/
------------------------------------------------------
This is the packet that defines the emssions factors
files read by the model.
------------------------------------------------------
/EMFAC FILES/
THC exhaust         : data\emsfac\exhthc.emf
CO exhaust          : data\emsfac\exhco.emf
NOX exhaust         : data\emsfac\exhnox.emf
PM exhaust          : data\emsfac\exhpm.emf
BSFC                : data\emsfac\bsfc.emf
Crankcase           : data\emsfac\crank.emf
Spillage            : data\emsfac\spillage.emf
Diurnal             : data\emsfac\evdiu.emf
TANK PERM           : data\emsfac\evtank.emf
```

```
NON-RM HOSE PERM   : data\emsfac\evhose.emf
RM FILL NECK PERM  : data\emsfac\evneck.emf
RM SUPPLY/RETURN   : data\emsfac\evsupret.emf
RM VENT PERM       : data\emsfac\evvent.emf
HOT SOAKS          : data\emsfac\evhotsk.emf
RUNINGLOSS         : data\emsfac\evrunls.emf
/END/

------------------------------------------------------
This is the packet that defines the deterioration factors
files read by the model.
------------------------------------------------------
/DETERIORATE FILES/
THC exhaust        : data\detfac\exhthc.det
CO exhaust         : data\detfac\exhco.det
NOX exhaust        : data\detfac\exhnox.det
PM exhaust         : data\detfac\exhpm.det
Diurnal            : data\detfac\evdiu.det
/END/

Optional Packets - Add initial slash "/" to activate

/STAGE II/
Control Factor     : 0.0
/END/
Enter percent control: 95 = 95% control = 0.05 x uncontrolled
Default should be zero control.

/MODELYEAR OUT/
EXHAUST BMY OUT    :
EVAP BMY OUT       :
/END/

SI REPORT/
SI report file-CSV :OUTPUTS\NRPOLLUT.CSV
/END/

/DAILY FILES/
DAILY TEMPS/RVP    :
/END/

PM Base Sulfur
 cols 1-10: dsl tech type;
 11-20: base sulfur wt%; or '1.0' means no-adjust (cert= in-use)
/PM BASE SULFUR/
T2        0.2000    0.02247
T3        0.2000    0.02247
T3B       0.0500    0.02247
T4A       0.0500    0.02247
T4B       0.0015    0.02247
T4        0.0015    0.30
T4N       0.0015    0.30
/END/
```

Southwest Connecticut 2012 NONROAD2005 Input

```
Written by Nonroad interface at 2/7/2007 11:48:33 AM
This is the options file for the NONROAD program.
The data is sperated into "packets" bases on common
information.  Each packet is specified by an
identifier and a terminator. Any notes or descriptions
can be placed between the data packets.

9/2005 epa: Add growth & tech years to OPTIONS packet
  and Counties & Retrofit files to RUNFILES packet.

------------------------------------------------------

                  PERIOD PACKET

This is the packet that defines the period for
which emissions are to be estimated.  The order of the
records matter.  The selection of certain parameters
will cause some of the record that follow to be ignored.
The order of the records is as follows:

1  - Char 10  - Period type for this simulation.
                  Valid responses are: ANNUAL, SEASONAL, and MONTHLY
2  - Char 10  - Type of inventory produced.
                  Valid responses are: TYPICAL DAY and PERIOD TOTAL
3  - Integer  - year of episode (4 digit year)
4  - Char 10  - Month of episode (use complete name of month)
5  - Char 10  - Type of day
                  Valid responses are: WEEKDAY and WEEKEND
------------------------------------------------------
/PERIOD/
Period type        : Seasonal
Summation type     : Typical day
Year of episode    : 2012
Season of year     : Summer
Month of year      :
Weekday or weekend : Weekday
Year of growth calc:
Year of tech sel   :
/END/

------------------------------------------------------

                  OPTIONS PACKET

This is the packet that defines some of the user
options that drive the model.  Most parameters are
used to make episode specific emission factor
adjustments. The order of the records is fixed.
The order is as follows.

1  -  Char 80  - First title on reports
2  -  Char 80  - Second title on reports
3  -  Real 10  - Fuel RVP of gasoline for this simulation
4  -  Real 10  - Oxygen weight percent of gasoline for simulation
5  -  Real 10  - Percent sulfur for gasoline
6  -  Real 10  - Percent sulfur for diesel
7  -  Real 10  - Percent sulfur for LPG/CNG
8  -  Real 10  - Minimum daily temperature (deg. F)
9  -  Real 10  - maximum daily temperature (deg. F)
```

```
10 -  Real 10  - Representative average daily temperature (deg. F)
11 -  Char 10  - Flag to determine if region is high altitude
                      Valid responses are: HIGH and LOW
12 -  Char 10  - Flag to determine if RFG adjustments are made
                      Valid responses are: YES and NO
------------------------------------------------------
/OPTIONS/
Title 1            : TEST 2012 PEI FOR SWCT OZONE (MARINE S?)
Title 2            : FEB 2, 2007
Fuel RVP for gas   : 6.86
Oxygen Weight %    : 3.5
Gas sulfur %       : 0.0030
Diesel sulfur %    : 0.0031
Marine Dsl sulfur %: 0.0123
CNG/LPG sulfur %   : 0.003
Minimum temper. (F): 66.5
Maximum temper. (F): 91.6
Average temper. (F): 83.2
Altitude of region : LOW
/END/

------------------------------------------------------
                  REGION PACKET

This is the packet that defines the region for which
emissions are to be estimated.

The first record tells the type of region and
allocation to perform.

Valid responses are:
US TOTAL   -  emissions are for entire USA without state
              breakout.

50STATE    -  emissions are for all 50 states
              and Washington D.C., by state.

STATE      -  emissions are for a select group of states
              and are state-level estimates

COUNTY     -  emissions are for a select group of counties
              and are county level estimates.  If necessary,
              allocation from state to county will be performed.

SUBCOUNTY  -  emissions are for the specified sub counties
              and are subcounty level estimates.  If necessary,
              county to subcounty allocation will be performed.

The remaining records define the regions to be included.
The type of data which must be specified depends on the
region level.

US TOTAL   -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

50STATE    -  Nothing needs to be specified.  The FIPS
              code 00000 is used automatically.

STATE      -  state FIPS codes

COUNTY     -  state or county FIPS codes.  State FIPS
```

```
              code means include all counties in the
              state.

SUBCOUNTY  -  county FIPS code and subregion code.
------------------------------------------------------
/REGION/
Region Level       : COUNTY
Fairfield County CT: 09001
Middlesex County CT: 09007
New Haven County CT: 09009
/END/

or use -
Region Level       : STATE
Michigan           : 26000
------------------------------------------------------

                  SOURCE CATEGORY PACKET

This packet is used to tell the model which source
categories are to be processed.  It is optional.
If used, only those source categories list will
appear in the output data file.  If the packet is
not found, the model will process all source
categories in the population files.
------------------------------------------------------


Diesel Only -
                   :2270000000
                   :2282020000
                   :2285002015
Spark Ignition Only -
                   :2260000000
                   :2265000000
                   :2267000000
                   :2268000000
                   :2282005010
                   :2282005015
                   :2282010005
                   :2285004015
                   :2285006015
------------------------------------------------------
 This is the packet that lists the names of output files
 and some of the input data files read by the model.  If
 a drive:\path\ is not given, the location of the
 NONROAD.EXE file itself is assumed.  You will probably
 want to change the names of the Output and Message files
 to match that of the OPTion file, e.g., MICH-97.OPT,
 MICH-97.OUT, MICH-97.MSG, and if used MICH-97.AMS.
------------------------------------------------------
/RUNFILES/
ALLOC XREF         : data\allocate\allocate.xrf
ACTIVITY           : data\activity\activity.dat
EXH TECHNOLOGY     : data\tech\tech-exh.dat
EVP TECHNOLOGY     : data\tech\tech-evp.dat
SEASONALITY        : data\season\season.dat
REGIONS            : data\season\season.dat
MESSAGE            : c:\nonroad\ctpei12\peisw12.msg
OUTPUT DATA        : c:\nonroad\ctpei12\peisw12.out
EPS2 AMS           :
```

```
US COUNTIES FIPS   : data\allocate\fips.dat
RETROFIT           :
/END/

------------------------------------------------------
This is the packet that defines the equipment population
files read by the model.
------------------------------------------------------
/POP FILES/
Population File    : c:\nonroad\data\pop\ct.pop
/END/

POPULATION FILE    : c:\nonroad\data\POP\MI.POP


------------------------------------------------------
This is the packet that defines the growth files
files read by the model.
------------------------------------------------------
/GROWTH FILES/
National defaults  : data\growth\nation.grw
/END/


/ALLOC FILES/
Air trans. empl.   :c:\nonroad\data\allocate\ct_airtr.alo
Undergrnd coal prod:c:\nonroad\data\allocate\ct_coal.alo
Construction cost  :c:\nonroad\data\allocate\ct_const.alo
Harvested acres    :c:\nonroad\data\allocate\ct_farms.alo
Golf course estab. :c:\nonroad\data\allocate\ct_golf.alo
Wholesale estab.   :c:\nonroad\data\allocate\ct_holsl.alo
Family housing     :c:\nonroad\data\allocate\ct_house.alo
Logging employees  :c:\nonroad\data\allocate\ct_loggn.alo
Landscaping empl.  :c:\nonroad\data\allocate\ct_lscap.alo
Manufacturing empl.:c:\nonroad\data\allocate\ct_mnfg.alo
Oil & gas employees:c:\nonroad\data\allocate\ct_oil.alo
Census population  :c:\nonroad\data\allocate\ct_pop.alo
Allocation File    :c:\nonroad\data\allocate\ct_rail.alo
RV Park establish. :c:\nonroad\data\allocate\ct_rvprk.alo
Snowblowers comm.  :c:\nonroad\data\allocate\ct_sbc.alo
Snowblowers res.   :c:\nonroad\data\allocate\ct_sbr.alo
Snowmobiles        :c:\nonroad\data\allocate\ct_snowm.alo
Rec marine inboard :c:\nonroad\data\allocate\ct_wib.alo
Rec marine outboard:c:\nonroad\data\allocate\ct_wob.alo
/END/
------------------------------------------------------
This is the packet that defines the emssions factors
files read by the model.
------------------------------------------------------
/EMFAC FILES/
THC exhaust        : data\emsfac\exhthc.emf
CO exhaust         : data\emsfac\exhco.emf
NOX exhaust        : data\emsfac\exhnox.emf
PM exhaust         : data\emsfac\exhpm.emf
BSFC               : data\emsfac\bsfc.emf
Crankcase          : data\emsfac\crank.emf
Spillage           : data\emsfac\spillage.emf
Diurnal            : data\emsfac\evdiu.emf
TANK PERM          : data\emsfac\evtank.emf
NON-RM HOSE PERM   : data\emsfac\evhose.emf
RM FILL NECK PERM  : data\emsfac\evneck.emf
```

```
RM SUPPLY/RETURN   : data\emsfac\evsupret.emf
RM VENT PERM       : data\emsfac\evvent.emf
HOT SOAKS          : data\emsfac\evhotsk.emf
RUNINGLOSS         : data\emsfac\evrunls.emf
/END/

------------------------------------------------------
This is the packet that defines the deterioration factors
files read by the model.
------------------------------------------------------
/DETERIORATE FILES/
THC exhaust        : data\detfac\exhthc.det
CO exhaust         : data\detfac\exhco.det
NOX exhaust        : data\detfac\exhnox.det
PM exhaust         : data\detfac\exhpm.det
Diurnal            : data\detfac\evdiu.det
/END/

Optional Packets - Add initial slash "/" to activate

/STAGE II/
Control Factor     : 0.0
/END/
Enter percent control: 95 = 95% control = 0.05 x uncontrolled
Default should be zero control.

/MODELYEAR OUT/
EXHAUST BMY OUT    :
EVAP BMY OUT       :
/END/

SI REPORT/
SI report file-CSV :OUTPUTS\NRPOLLUT.CSV
/END/

/DAILY FILES/
DAILY TEMPS/RVP    :
/END/

PM Base Sulfur
 cols 1-10: dsl tech type;
 11-20: base sulfur wt%; or '1.0' means no-adjust (cert= in-use)
/PM BASE SULFUR/
T2        0.2000    0.02247
T3        0.2000    0.02247
T3B       0.0500    0.02247
T4A       0.0500    0.02247
T4B       0.0015    0.02247
T4        0.0015    0.30
T4N       0.0015    0.30
/END/
```

MOBILE6.2 Modeling – Files that Differ from 2002 PEI

1) 2002 MOBILE6.2 Primary Input File ("02TEST.IN")

MOBILE6 INPUT FILE :
* For VOC and NOx Only
SPREADSHEET :
DATABASE OUTPUT :
POLLUTANTS : HC NOX
DATABASE OPTIONS : CTdb.opt

RUN DATA
> 2002 test input file for 8-hr ozone SIP using 8-hr ozone inputs; created 3/22/07 PMB

>*******************Fairfield Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt1S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :

0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD   : Fairfield County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES   : 29.53

END OF RUN

>******************Fairfield Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE   : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt1S.cty
VMT BY FACILITY   : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Fairfield County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************Fairfield Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data

VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt1S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Fairfield County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt1S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD   : Fairfield County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES   : 29.53

END OF RUN

>********************Hartford Expressway
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI

I/M DESC FILE   : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt2S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD   : Hartford County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*****************Hartford Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

```
EXPRESS HC AS VOC  :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE      : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002
PEI
SPEED VMT          : 02svmt2S.cty
VMT BY FACILITY    : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly
from 2002 PEI)
VMT FRACTIONS      :
0.5116  0.0777  0.2586  0.0797  0.0367  0.0107  0.0011  0.0008
0.0006  0.0024  0.0028  0.0031  0.0109  0.0005  0.0003  0.0025

SCENARIO RECORD    : Hartford County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr
met
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP           : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN


>*****************Hartford  Local *****************************************

* Northeast NLEV inputs
94+ LDG IMP        : NLEVNE.D

* Fuel Data
```

FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt2S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Hartford County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Hartford Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE   : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt2S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD   : Hartford County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*******************Litchfield Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt3S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Litchfield County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Litchfield Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt3S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Litchfield County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").

* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Litchfield Local ***

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt3S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Litchfield County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Litchfield Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt3S.cty
VMT BY FACILITY : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Litchfield County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>********************Middlesex Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def

> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt4S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Middlesex County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************Middlesex Arterials/Collectors *************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)

REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt4S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Middlesex County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************Middlesex Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line

ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt4S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Middlesex County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Middlesex Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE   : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt4S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD   : Middlesex County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES   : 29.53

END OF RUN

>********************New Haven Expressway
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N

NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE   : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt5S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD   : New Haven County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES   : 29.53

END OF RUN

>*****************New Haven Arterials/Collectors ***************************

* Northeast NLEV inputs

94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt5S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : New Haven County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************New Haven Local ***

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE   : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt5S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : New Haven County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6

RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************New Haven Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt5S.cty
VMT BY FACILITY : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : New Haven County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP

* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************New London Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt6S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : New London County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************New London Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt6S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)

VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : New London County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************New London Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI

SPEED VMT : 02svmt6S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : New London County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************New London Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt6S.cty
VMT BY FACILITY : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : New London County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>********************Tolland Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :

83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt7S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Tolland County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Tolland Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt7S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Tolland County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Tolland Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt7S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Tolland County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Tolland Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

```
* Fuel Data
FUEL PROGRAM      : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE     : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG    :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT         : 02svmt7S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS     :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD   : Tolland County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR     : 2002
EVALUATION MONTH  : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP          : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP      : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                    47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN
```

```
>*******************Windham Expressway
***************************************************

* Northeast NLEV inputs
94+ LDG IMP       : NLEVNE.D

* Fuel Data
FUEL PROGRAM      : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE      : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002
PEI
SPEED VMT         : 02svmt8S.cty
VMT BY FACILITY    : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs
slightly from 2002 PEI)
VMT FRACTIONS      :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : Windham County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr
met
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP          : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP      : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
```

47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Windham Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt8S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Windham County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Windham Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt8S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Windham County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2002

```
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP          : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP      : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                  47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>*********************Windham Ramp
**********************************************************

* Northeast NLEV inputs
94+ LDG IMP       : NLEVNE.D

* Fuel Data
FUEL PROGRAM      : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; 2002 program same as in 2002 PEI
I/M DESC FILE      : CTIM02.D
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 78 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002
PEI
SPEED VMT         : 02svmt8S.cty
VMT BY FACILITY    : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs
slightly from 2002 PEI)
VMT FRACTIONS      :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
```

0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD   : Windham County 2002 O3 SEASON w/ASM I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

2) 2008 MOBILE6.2 Primary Input File (“08TEST.IN”)

```
MOBILE6 INPUT FILE :
* For VOC and NOx Only
SPREADSHEET       :
DATABASE OUTPUT   :
POLLUTANTS        : HC NOX
DATABASE OPTIONS  : CTdb.opt

RUN DATA
> 2008 test input file for 8-hr ozone SIP using 8-hr ozone inputs; created 3/23/07 PMB
> Sticking with NLEV inputs until figure out how to do CALEV2 (expect little difference since CALEV2
not until 2008MY)

>********************Fairfield Expressway
*******************************************************

* Northeast NLEV inputs
94+ LDG IMP       : NLEVNE.D

* Fuel Data
FUEL PROGRAM      : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; reflects  Agbar OBD/ASM/Idle tests
I/M DESC FILE     : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG    :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT         : 08svmt1S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS     :
0.3963  0.0880  0.2932  0.0903  0.0415  0.0289  0.0028  0.0023
0.0018  0.0065  0.0076  0.0083  0.0296  0.0015  0.0007  0.0007
```

SCENARIO RECORD : Fairfield County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt1S.cty
VMT BY FACILITY : FCVMTA.cty

> 2008 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4201 0.0934 0.3109 0.0958 0.0440 0.0107 0.0010 0.0009

0.0007 0.0024 0.0028 0.0031 0.0109 0.0006 0.0002 0.0025

SCENARIO RECORD   : Fairfield County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES   : 29.53

END OF RUN

>*****************Fairfield Local ***

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT   : 08svmt1S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2008 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4240 0.0942 0.3138 0.0967 0.0444 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Fairfield County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)

SPEED VMT : 08svmt1S.cty
VMT BY FACILITY : FCVMTR.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD : Fairfield County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************Hartford Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

```
* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT          : 08svmt2S.cty
VMT BY FACILITY    : FCVMTF.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS      :
0.3963  0.0880  0.2932  0.0903  0.0415  0.0289  0.0028  0.0023
0.0018  0.0065  0.0076  0.0083  0.0296  0.0015  0.0007  0.0007

SCENARIO RECORD    : Hartford County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP,
RFG2, 8-hr met
CALENDAR YEAR      : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP           : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>*****************Hartford Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP        : NLEVNE.D

* Fuel Data
FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; reflects  Agbar OBD/ASM/Idle tests
I/M DESC FILE      : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
```

REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt2S.cty
VMT BY FACILITY : FCVMTA.cty

> 2008 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4201 0.0934 0.3109 0.0958 0.0440 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0006 0.0002 0.0025

SCENARIO RECORD : Hartford County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Hartford Local ***

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT   : 08svmt2S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2008 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.4240 0.0942 0.3138 0.0967 0.0444 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : Hartford County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************Hartford Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d

* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt2S.cty
VMT BY FACILITY : FCVMTR.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD : Hartford County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Litchfield Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT   : 08svmt3S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD   : Litchfield County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*****************Litchfield Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

```
EXPRESS HC AS VOC  :

> I/M Data; reflects  Agbar OBD/ASM/Idle tests
I/M DESC FILE      : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT          : 08svmt3S.cty
VMT BY FACILITY    : FCVMTA.cty

> 2008 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS      :
0.4201  0.0934  0.3109  0.0958  0.0440  0.0107  0.0010  0.0009
0.0007  0.0024  0.0028  0.0031  0.0109  0.0006  0.0002  0.0025

SCENARIO RECORD    : Litchfield County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP,
RFG2, 8-hr met
CALENDAR YEAR      : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP           : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN


>******************Litchfield  Local ********************************************

* Northeast NLEV inputs
94+ LDG IMP        : NLEVNE.D

* Fuel Data
FUEL PROGRAM       : 2 N
NO REFUELING       :
```

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt3S.cty
VMT BY FACILITY : FCVMTL.cty

> 2008 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4240 0.0942 0.3138 0.0967 0.0444 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Litchfield County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Litchfield Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt3S.cty
VMT BY FACILITY : FCVMTR.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD : Litchfield County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Middlesex Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt4S.cty
VMT BY FACILITY : FCVMTF.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD : Middlesex County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************Middlesex Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt4S.cty
VMT BY FACILITY : FCVMTA.cty

> 2008 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4201 0.0934 0.3109 0.0958 0.0440 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0006 0.0002 0.0025

SCENARIO RECORD : Middlesex County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Middlesex Local **

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT   : 08svmt4S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2008 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.4240 0.0942 0.3138 0.0967 0.0444 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : Middlesex County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9

56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Middlesex Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt4S.cty
VMT BY FACILITY : FCVMTR.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD : Middlesex County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

```
> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP      : 66.5 91.6
RELATIVE HUMIDITY  : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
                  56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES    : 29.53

END OF RUN

>*******************New Haven Expressway
*************************************************

* Northeast NLEV inputs
94+ LDG IMP       : NLEVNE.D

* Fuel Data
FUEL PROGRAM      : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; reflects  Agbar OBD/ASM/Idle tests
I/M DESC FILE      : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT         : 08svmt5S.cty
VMT BY FACILITY    : FCVMTF.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS      :
0.3963  0.0880  0.2932  0.0903  0.0415  0.0289  0.0028  0.0023
0.0018  0.0065  0.0076  0.0083  0.0296  0.0015  0.0007  0.0007

SCENARIO RECORD    : New Haven County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP,
RFG2, 8-hr met
CALENDAR YEAR      : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
```

* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************New Haven Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt5S.cty
VMT BY FACILITY : FCVMTA.cty

> 2008 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4201 0.0934 0.3109 0.0958 0.0440 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0006 0.0002 0.0025

SCENARIO RECORD : New Haven County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7

* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************New Haven Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt5S.cty
VMT BY FACILITY : FCVMTL.cty

> 2008 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4240 0.0942 0.3138 0.0967 0.0444 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : New Haven County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>********************New Haven Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt5S.cty
VMT BY FACILITY : FCVMTR.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :

0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD   : New Haven County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES   : 29.53

END OF RUN

>********************New London Expressway
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT   : 08svmt6S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD : New London County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************New London Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)

SPEED VMT : 08svmt6S.cty
VMT BY FACILITY : FCVMTA.cty

> 2008 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4201 0.0934 0.3109 0.0958 0.0440 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0006 0.0002 0.0025

SCENARIO RECORD : New London County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************New London Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT   : 08svmt6S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2008 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.4240 0.0942 0.3138 0.0967 0.0444 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : New London County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************New London Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT   : 08svmt6S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD   : New London County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*******************Tolland Expressway
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line

ANTI-TAMP PROG   :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT   : 08svmt7S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD   : Tolland County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*****************Tolland Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests

I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt7S.cty
VMT BY FACILITY : FCVMTA.cty

> 2008 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4201 0.0934 0.3109 0.0958 0.0440 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0006 0.0002 0.0025

SCENARIO RECORD : Tolland County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Tolland Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt7S.cty
VMT BY FACILITY : FCVMTL.cty

> 2008 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4240 0.0942 0.3138 0.0967 0.0444 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Tolland County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Tolland Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt7S.cty
VMT BY FACILITY : FCVMTR.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD : Tolland County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Windham Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data

FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt8S.cty
VMT BY FACILITY : FCVMTF.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD : Windham County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Windham Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt8S.cty
VMT BY FACILITY : FCVMTA.cty

> 2008 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4201 0.0934 0.3109 0.0958 0.0440 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0006 0.0002 0.0025

SCENARIO RECORD : Windham County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Windham Local ***

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT : 08svmt8S.cty
VMT BY FACILITY : FCVMTL.cty

> 2008 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4240 0.0942 0.3138 0.0967 0.0444 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Windham County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Windham Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 84 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2008 estimates (Series 28D)
SPEED VMT   : 08svmt8S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2008 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3963 0.0880 0.2932 0.0903 0.0415 0.0289 0.0028 0.0023
0.0018 0.0065 0.0076 0.0083 0.0296 0.0015 0.0007 0.0007

SCENARIO RECORD   : Windham County 2008 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6

BAROMETRIC PRES : 29.89

END OF RUN

3) 2009 MOBILE6.2 Primary Input File ("09TEST.IN")

MOBILE6 INPUT FILE :
* For VOC and NOx Only
SPREADSHEET :
DATABASE OUTPUT :
POLLUTANTS : HC NOX
DATABASE OPTIONS : CTdb.opt

RUN DATA
> 2009 test input file for 8-hr ozone SIP using 8-hr ozone inputs; created 3/23/07 PMB
> Sticking with NLEV inputs until figure out how to do CALEV2 (expect little difference since CALEV2 not until 2008MY)

>********************Fairfield Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt1S.cty
VMT BY FACILITY : FCVMTF.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD : Fairfield County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt1S.cty
VMT BY FACILITY : FCVMTA.cty

> 2009 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4050 0.0959 0.3195 0.0985 0.0453 0.0107 0.0010 0.0009

0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD   : Fairfield County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
                     56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES   : 29.53

END OF RUN

>******************Fairfield Local **

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt1S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2009 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4088 0.0968 0.3225 0.0994 0.0457 0.0070 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Fairfield County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)

SPEED VMT : 09svmt1S.cty
VMT BY FACILITY : FCVMTR.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD : Fairfield County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************Hartford Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

```
* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT         : 09svmt2S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS     :
0.3821  0.0905  0.3013  0.0929  0.0427  0.0288  0.0028  0.0024
0.0018  0.0064  0.0076  0.0083  0.0295  0.0015  0.0007  0.0007

SCENARIO RECORD   : Hartford County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP,
RFG2, 8-hr met
CALENDAR YEAR     : 2009
EVALUATION MONTH  : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP          : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP      : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                    47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*****************Hartford Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP       : NLEVNE.D

* Fuel Data
FUEL PROGRAM      : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; reflects  Agbar OBD/ASM/Idle tests
I/M DESC FILE     : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG    :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
```

REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt2S.cty
VMT BY FACILITY : FCVMTA.cty

> 2009 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4050 0.0959 0.3195 0.0985 0.0453 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Hartford County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Hartford Local ***

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt2S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2009 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.4088 0.0968 0.3225 0.0994 0.0457 0.0070 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : Hartford County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************Hartford Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d

* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt2S.cty
VMT BY FACILITY : FCVMTR.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD : Hartford County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Litchfield Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt3S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD   : Litchfield County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*****************Litchfield Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt3S.cty
VMT BY FACILITY : FCVMTA.cty

> 2009 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4050 0.0959 0.3195 0.0985 0.0453 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Litchfield County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Litchfield Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt3S.cty
VMT BY FACILITY : FCVMTL.cty

> 2009 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4088 0.0968 0.3225 0.0994 0.0457 0.0070 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Litchfield County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Litchfield Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt3S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD   : Litchfield County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*******************Middlesex Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt4S.cty
VMT BY FACILITY : FCVMTF.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD : Middlesex County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************Middlesex Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt4S.cty
VMT BY FACILITY : FCVMTA.cty

> 2009 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4050 0.0959 0.3195 0.0985 0.0453 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Middlesex County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Middlesex Local **

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt4S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2009 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.4088 0.0968 0.3225 0.0994 0.0457 0.0070 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : Middlesex County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9

```
                    56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES    : 29.53

END OF RUN

>******************Middlesex Ramp
***************************************************

* Northeast NLEV inputs
94+ LDG IMP        : NLEVNE.D

* Fuel Data
FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; reflects  Agbar OBD/ASM/Idle tests
I/M DESC FILE      : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT          : 09svmt4S.cty
VMT BY FACILITY    : FCVMTR.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS      :
0.3821  0.0905  0.3013  0.0929  0.0427  0.0288  0.0028  0.0024
0.0018  0.0064  0.0076  0.0083  0.0295  0.0015  0.0007  0.0007

SCENARIO RECORD    : Middlesex County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP,
RFG2, 8-hr met
CALENDAR YEAR      : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP           : 6.8
```

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************New Haven Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt5S.cty
VMT BY FACILITY : FCVMTF.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD : New Haven County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP

* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************New Haven Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt5S.cty
VMT BY FACILITY : FCVMTA.cty

> 2009 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4050 0.0959 0.3195 0.0985 0.0453 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : New Haven County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7

* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************New Haven Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt5S.cty
VMT BY FACILITY : FCVMTL.cty

> 2009 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4088 0.0968 0.3225 0.0994 0.0457 0.0070 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : New Haven County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES   : 29.53

END OF RUN

>*******************New Haven Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt5S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :

0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD   : New Haven County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES   : 29.53

END OF RUN

>********************New London Expressway
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt6S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD : New London County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************New London Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)

SPEED VMT : 09svmt6S.cty
VMT BY FACILITY : FCVMTA.cty

> 2009 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4050 0.0959 0.3195 0.0985 0.0453 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : New London County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************New London Local ***

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt6S.cty
VMT BY FACILITY : FCVMTL.cty

> 2009 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4088 0.0968 0.3225 0.0994 0.0457 0.0070 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : New London County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************New London Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt6S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD   : New London County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*******************Tolland Expressway
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line

ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt7S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD   : Tolland County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************Tolland Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests

```
I/M DESC FILE      : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT          : 09svmt7S.cty
VMT BY FACILITY    : FCVMTA.cty

> 2009 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS      :
0.4050  0.0959  0.3195  0.0985  0.0453  0.0107  0.0010  0.0009
0.0007  0.0024  0.0028  0.0031  0.0109  0.0005  0.0003  0.0025

SCENARIO RECORD    : Tolland County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP,
RFG2, 8-hr met
CALENDAR YEAR      : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP           : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN


>*****************Tolland  Local *******************************************

* Northeast NLEV inputs
94+ LDG IMP        : NLEVNE.D

* Fuel Data
FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D
```

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt7S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2009 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.4088 0.0968 0.3225 0.0994 0.0457 0.0070 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : Tolland County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************Tolland Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt7S.cty
VMT BY FACILITY : FCVMTR.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD : Tolland County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>********************Windham Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data

FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt8S.cty
VMT BY FACILITY : FCVMTF.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD : Windham County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Windham Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt8S.cty
VMT BY FACILITY : FCVMTA.cty

> 2009 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4050 0.0959 0.3195 0.0985 0.0453 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Windham County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Windham Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT : 09svmt8S.cty
VMT BY FACILITY : FCVMTL.cty

> 2009 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.4088 0.0968 0.3225 0.0994 0.0457 0.0070 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Windham County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2009
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Windham Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2009 estimates (Series 28D)
SPEED VMT   : 09svmt8S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2009 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3821 0.0905 0.3013 0.0929 0.0427 0.0288 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0295 0.0015 0.0007 0.0007

SCENARIO RECORD   : Windham County 2009 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2009
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6

BAROMETRIC PRES : 29.89

END OF RUN

4) 2012 MOBILE6.2 Primary Input File (“12TEST.IN”)

```
MOBILE6 INPUT FILE :
* For VOC and NOx Only
SPREADSHEET        :
DATABASE OUTPUT    :
POLLUTANTS         : HC NOX
DATABASE OPTIONS   : CTdb.opt

RUN DATA
> 2012 test input file for 8-hr ozone SIP using 8-hr ozone inputs; created 3/27/07 PMB
> Sticking with NLEV inputs until figure out how to do CALEV2 (expect little difference since CALEV2
not until 2008MY)

>********************Fairfield Expressway
******************************************************

* Northeast NLEV inputs
94+ LDG IMP        : NLEVNE.D

* Fuel Data
FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; reflects  Agbar OBD/ASM/Idle tests
I/M DESC FILE      : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT          : 12svmt1S.cty
VMT BY FACILITY    : FCVMTF.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS      :
0.3495  0.0962  0.3201  0.0986  0.0453  0.0287  0.0028  0.0024
0.0018  0.0064  0.0076  0.0083  0.0294  0.0015  0.0007  0.0007
```

SCENARIO RECORD : Fairfield County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt1S.cty
VMT BY FACILITY : FCVMTA.cty

> 2012 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3704 0.1020 0.3392 0.1045 0.0481 0.0107 0.0010 0.0009

0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Fairfield County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************Fairfield Local ***

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt1S.cty
VMT BY FACILITY : FCVMTL.cty

> 2012 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3738 0.1029 0.3424 0.1055 0.0485 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Fairfield County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)

SPEED VMT : 12svmt1S.cty
VMT BY FACILITY : FCVMTR.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD : Fairfield County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************Hartford Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt2S.cty
VMT BY FACILITY : FCVMTF.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD : Hartford County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Hartford Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)

REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt2S.cty
VMT BY FACILITY : FCVMTA.cty

> 2012 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3704 0.1020 0.3392 0.1045 0.0481 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Hartford County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Hartford Local ***

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt2S.cty
VMT BY FACILITY : FCVMTL.cty

> 2012 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3738 0.1029 0.3424 0.1055 0.0485 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Hartford County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Hartford Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d

* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt2S.cty
VMT BY FACILITY : FCVMTR.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD : Hartford County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Litchfield Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT   : 12svmt3S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD   : Litchfield County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2012
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*****************Litchfield Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

```
EXPRESS HC AS VOC  :

> I/M Data; reflects  Agbar OBD/ASM/Idle tests
I/M DESC FILE      : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT          : 12svmt3S.cty
VMT BY FACILITY    : FCVMTA.cty

> 2012 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS      :
0.3704  0.1020  0.3392  0.1045  0.0481  0.0107  0.0010  0.0009
0.0007  0.0024  0.0028  0.0031  0.0109  0.0005  0.0003  0.0025

SCENARIO RECORD    : Litchfield County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP,
RFG2, 8-hr met
CALENDAR YEAR      : 2012
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP           : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN


>******************Litchfield  Local *******************************************

* Northeast NLEV inputs
94+ LDG IMP        : NLEVNE.D

* Fuel Data
FUEL PROGRAM       : 2 N
NO REFUELING       :
```

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt3S.cty
VMT BY FACILITY : FCVMTL.cty

> 2012 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3738 0.1029 0.3424 0.1055 0.0485 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Litchfield County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Litchfield Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt3S.cty
VMT BY FACILITY : FCVMTR.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD : Litchfield County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Middlesex Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt4S.cty
VMT BY FACILITY : FCVMTF.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD : Middlesex County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************Middlesex Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt4S.cty
VMT BY FACILITY : FCVMTA.cty

> 2012 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3704 0.1020 0.3392 0.1045 0.0481 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Middlesex County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Middlesex Local ***

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT   : 12svmt4S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2012 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3738 0.1029 0.3424 0.1055 0.0485 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : Middlesex County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2012
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9

56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES   : 29.53

END OF RUN

>*******************Middlesex Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT   : 12svmt4S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD   : Middlesex County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2012
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************New Haven Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt5S.cty
VMT BY FACILITY : FCVMTF.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD : New Haven County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP

* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************New Haven Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt5S.cty
VMT BY FACILITY : FCVMTA.cty

> 2012 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3704 0.1020 0.3392 0.1045 0.0481 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : New Haven County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7

* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************New Haven Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt5S.cty
VMT BY FACILITY : FCVMTL.cty

> 2012 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3738 0.1029 0.3424 0.1055 0.0485 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : New Haven County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************New Haven Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt5S.cty
VMT BY FACILITY : FCVMTR.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :

0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD : New Haven County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>********************New London Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt6S.cty
VMT BY FACILITY : FCVMTF.cty

```
> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS      :
0.3495  0.0962  0.3201  0.0986  0.0453  0.0287  0.0028  0.0024
0.0018  0.0064  0.0076  0.0083  0.0294  0.0015  0.0007  0.0007

SCENARIO RECORD    : New London County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap,
ATP, RFG2, 8-hr met
CALENDAR YEAR      : 2012
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP           : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>*****************New London Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP        : NLEVNE.D

* Fuel Data
FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; reflects  Agbar OBD/ASM/Idle tests
I/M DESC FILE      : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
```

SPEED VMT   : 12svmt6S.cty
VMT BY FACILITY   : FCVMTA.cty

> 2012 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3704 0.1020 0.3392 0.1045 0.0481 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD   : New London County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2012
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*****************New London Local **

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT   : 12svmt6S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2012 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3738 0.1029 0.3424 0.1055 0.0485 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : New London County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2012
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************New London Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt6S.cty
VMT BY FACILITY : FCVMTR.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD : New London County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Tolland Expressway
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line

ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT   : 12svmt7S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD   : Tolland County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2012
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************Tolland Arterials/Collectors ***************************

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests

```
I/M DESC FILE      : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT          : 12svmt7S.cty
VMT BY FACILITY    : FCVMTA.cty

> 2012 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS      :
0.3704  0.1020  0.3392  0.1045  0.0481  0.0107  0.0010  0.0009
0.0007  0.0024  0.0028  0.0031  0.0109  0.0005  0.0003  0.0025

SCENARIO RECORD    : Tolland County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP,
RFG2, 8-hr met
CALENDAR YEAR      : 2012
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP           : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN


>******************Tolland  Local *******************************************

* Northeast NLEV inputs
94+ LDG IMP        : NLEVNE.D

* Fuel Data
FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D
```

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt7S.cty
VMT BY FACILITY : FCVMTL.cty

> 2012 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3738 0.1029 0.3424 0.1055 0.0485 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Tolland County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Tolland Ramp
****

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

```
> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

> I/M Data; reflects  Agbar OBD/ASM/Idle tests
I/M DESC FILE      : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG     :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program
(same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT          : 12svmt7S.cty
VMT BY FACILITY    : FCVMTR.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS      :
0.3495  0.0962  0.3201  0.0986  0.0453  0.0287  0.0028  0.0024
0.0018  0.0064  0.0076  0.0083  0.0294  0.0015  0.0007  0.0007

SCENARIO RECORD    : Tolland County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP,
RFG2, 8-hr met
CALENDAR YEAR      : 2012
EVALUATION MONTH   : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP           : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>*******************Windham Expressway
*******************************************************

* Northeast NLEV inputs
94+ LDG IMP        : NLEVNE.D

* Fuel Data
```

FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt8S.cty
VMT BY FACILITY : FCVMTF.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD : Windham County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Windham Arterials/Collectors **************************

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt8S.cty
VMT BY FACILITY : FCVMTA.cty

> 2012 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3704 0.1020 0.3392 0.1045 0.0481 0.0107 0.0010 0.0009
0.0007 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Windham County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Windham Local **

* Northeast NLEV inputs
94+ LDG IMP : NLEVNE.D

* Fuel Data
FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT : 12svmt8S.cty
VMT BY FACILITY : FCVMTL.cty

> 2012 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS :
0.3738 0.1029 0.3424 0.1055 0.0485 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Windham County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Windham Ramp
****

* Northeast NLEV inputs
94+ LDG IMP   : NLEVNE.D

* Fuel Data
FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

> I/M Data; reflects Agbar OBD/ASM/Idle tests
I/M DESC FILE   : CTIM07p4.d
* M6 User's Guide says ATP parameters must be on 2nd line
ANTI-TAMP PROG   :
83 85 50 22222 21111111 1 12 095. 12111112

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2012 estimates (Series 28D)
SPEED VMT   : 12svmt8S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2012 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls")
VMT FRACTIONS   :
0.3495 0.0962 0.3201 0.0986 0.0453 0.0287 0.0028 0.0024
0.0018 0.0064 0.0076 0.0083 0.0294 0.0015 0.0007 0.0007

SCENARIO RECORD   : Windham County 2012 O3 SEASON w/OBD/ASM/idle I/M W/gascap, ATP, RFG2, 8-hr met
CALENDAR YEAR   : 2012
EVALUATION MONTH : 7
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
FUEL RVP   : 6.8

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6

BAROMETRIC PRES : 29.89

END OF RUN

5) 2008 and Later Vehicle I/M Input File ("CTIM07p4.d")

>CT I/M PROGRAMS for all years 2007 and later (modified Jun 05 PMB/AG to reflect DMV info that 8,500-10,000 lb get TSI & GC (no OBD)
>Biennial OBDII I/M "tailpipe" test for post-MY1995 gasoline vehicles up to 8,500 lbs GVWR
I/M PROGRAM : 1 1983 2050 2 TRC OBD I/M
I/M MODEL YEARS : 1 1996 2050
I/M GRACE PERIOD : 1 4
I/M EXEMPTION AGE : 1 25
I/M VEHICLES : 1 22222 11111111 1
I/M STRINGENCY : 1 22.0
I/M COMPLIANCE : 1 96.0
I/M WAIVER RATES : 1 1.0 1.0

>Biennial OBDII evaporative "test" for post-MY1995 gasoline vehicles up to 8,500 lbs GVWR
I/M PROGRAM : 2 1983 2050 2 TRC EVAP OBD
I/M MODEL YEARS : 2 1996 2050
I/M GRACE PERIOD : 2 4
I/M EXEMPTION AGE : 2 25
I/M VEHICLES : 2 22222 11111111 1
I/M COMPLIANCE : 2 96.0
I/M WAIVER RATES : 2 1.0 1.0

>Biennial 2500/IDLE I/M tailpipe test for all HDGT 8,500 - 10,000 lbs GVWR (per above comment)
I/M PROGRAM : 3 1983 2050 2 TRC 2500/IDLE
I/M MODEL YEARS : 3 1981 2050
I/M GRACE PERIOD : 3 4
I/M EXEMPTION AGE : 3 25
I/M VEHICLES : 3 11111 21111111 1
I/M STRINGENCY : 3 22.0
I/M COMPLIANCE : 3 96.0
I/M WAIVER RATES : 3 1.0 1.0

>Biennial GC evaporative "test" for all HDGT 8,500 - 10,000 lbs (per above comment)
I/M PROGRAM : 4 1983 2050 2 TRC GC
I/M MODEL YEARS : 4 1981 2050
I/M GRACE PERIOD : 4 4
I/M EXEMPTION AGE : 4 25
I/M VEHICLES : 4 11111 21111111 1
I/M COMPLIANCE : 4 96.0
I/M WAIVER RATES : 4 1.0 1.0

>Biennial ASM I/M tailpipe test for pre-96 gasoline vehicles up to 8,500 lbs GVWR
I/M PROGRAM : 5 1983 2050 2 TRC ASM 2525 FINAL
I/M MODEL YEARS : 5 1981 1995
I/M GRACE PERIOD : 5 4
I/M EXEMPTION AGE : 5 25
I/M VEHICLES : 5 22222 11111111 1
I/M STRINGENCY : 5 22.0
I/M COMPLIANCE : 5 96.0
I/M WAIVER RATES : 5 1.0 1.0

>Biennial Gas Cap evaporative test for pre-96 gasoline vehicles up to 8,500 lbs GVWR
I/M PROGRAM : 6 1983 2050 2 TRC GC
I/M MODEL YEARS : 6 1981 1995
I/M GRACE PERIOD : 6 4
I/M EXEMPTION AGE : 6 25
I/M VEHICLES : 6 22222 11111111 1
I/M COMPLIANCE : 6 96.0
I/M WAIVER RATES : 6 1.0 1.0

Appendix 4B

Portable Fuel Container Emission Estimates for 2005

Excerpted from

CTDEP's Draft 2005 Periodic Emissions Inventory

(draft dated April 16, 2007)

4.6.14 Portable Fuel Containers (Gas-Cans)

The activity and Uncontrolled VOC emissions from portable fuel containers are presented in Tables 4.6.14-1 through 4.6.14-3. Controlled VOC emissions are presented in Table 4.6.14-4. Emissions were estimated following the methodology outlined in the California's Air Resource Board's "Notice of Public Meeting to Consider the Approval of California's Portable Gasoline-Container Emissions Inventory"[37]. Portable fuel containers or gas-cans have five different emission modes: permeation and diurnal (associated with storage), transport-spillage (associated with filling the gas-can), refueling spillage and refueling-vapor displacement (associated with equipment refueling). The emissions associated with equipment refueling are already estimated by the EPA's non-road model and are included in the non-road portion of the inventory. The emissions from gas-cans associated with filling the gas-can and storage were not estimated in previous Periodic Emission Inventories.

Emission estimates were made depending on how the gas-can was stored (open or closed), what material the gas-can was made of (metal or plastic) and whether the gas-can was used by a homeowner (residential) or a business (commercial). A gas can is considered open when it is stored with an open breathing hole or an uncapped nozzle. A closed system exists when the breathing hole is closed and the nozzle is capped. Emissions were calculated separately for residential and commercial use, because the profile of gas-cans and their usage differ. For example the average residential and commercial gas-can capacity is 2.34 and 3.43 gallons, respectively.

Residential Gas-Cans.

The following equation was used to calculate the residential gas-can population for each county in Connecticut:

$$Pop_R = (N)(A)(CountR)$$

Where:

- Pop_R = number of residential gas-cans,
- N = number of occupied housing units by county in CT,
- A = percentage of households with gas-cans (46%),
- $Count_R$ = average number of residential gas-cans per household (1.8).

A sample calculation of the number of residential gas-cans in Fairfield County in 2005 is as follows:

$$Pop_R = (324{,}735)(0.46)(1.8)$$

$$Pop_R = 268{,}881 \text{ gas-cans}$$

Permeation emissions are produced after fuel has been stored long enough in a can for fuel to infiltrate and saturate the can material.

The following equation was used to calculate the uncontrolled permeation emissions from residential gas-cans:

$$HC_{PR} = Pop_R \text{ x } S \text{ x } EF_P \text{ x } B_R \text{ x } Size_R \text{ x } Level \text{ x } CF$$

Where:

HC_{PR} = permeation emissions in pounds per day,
Pop_R = residential gas-can population,
EF_P = appropriate permeation emission factor with respect to material (plastic 1.57 g/gal-day; metal 0.06 g/gal-day),
S = percentage of gas-cans stored with fuel (70%),
B_R = percentage of cans stored in closed condition with respect to material (plastic 53%; metal 13%),
$Size_R$ = weighted average capacity of residential gas-cans (2.34 gallons),
Level = weighted average amount of stored fuel (49%),
CF = conversion factor 0.002205 pounds per gram.

A sample calculation estimating the uncontrolled permeation emissions from plastic residential gas-cans in Fairfield County is as follows:

$$HC_{PR(PLASTIC)} = 268{,}881 \text{ x } 0.70 \text{ x } 1.57 \text{ x } 0.53 \text{ x } 2.34 \text{ x } 0.49 \text{ x } 0.002205$$

$$HC_{PR(PLASTIC)} = 396 \text{ pounds per day}$$

A sample calculation estimating the uncontrolled permeation emissions from metal residential gas-cans in Fairfield County is as follows:

$$HC_{PR(METAL)} = 268{,}881 \text{ x } 0.70 \text{ x } 0.06 \text{ x } 0.13 \text{ x } 2.34 \text{ x } 0.49 \text{ x } 0.002205$$

$$HC_{PR(METAL)} = 4 \text{ pounds per day}$$

Total uncontrolled permeation emissions from plastic and metal residential gas- cans in Fairfield County is as follows:

$$HC_{PR} = 396 + 4$$

$$HC_{PR} = 400 \text{ pounds of VOC per day.}$$

Diurnal emissions result when stored fuel vapors escape to the ambient air through openings while the gas-can is subjected to the daily cycle of increasing and decreasing ambient temperatures. Diurnal emissions vary depending on a number of factors including the material the gas-can is made of, and whether the gas can is properly sealed (i.e. whether or not the vents, breathing holes or nozzle are tightly closed on the gas-can).

Uncontrolled diurnal emissions from both open and closed residential gas-cans were calculated as follows:

$$HC_{DR} = Pop_R \text{ x } S \text{ x } EF_D \text{ x } B_R \text{ x } Size_R \text{ x } Level \text{ x } CF$$

Where:

HC_{DR} = uncontrolled diurnal emissions expressed in pounds per day for residential gas-cans with respect to storage condition (open or closed) and material (plastic or metal),
Pop_R = statewide residential gas-can population,
S = percentage of gas-can population stored with fuel (70%),
EF_D = appropriate diurnal emission factor with respect to storage condition and material (closed plastic 1.38 g/gal-day; closed metal 0.44 g/gal-day; or open 21.8 g/day applies for both metal or plastic),
B_R = percentage of gas-can population with respect to storage condition and material (plastic open 23%, closed 53%; metal open 11%, closed 13%),
$Size_R$ = weighted average capacity of residential gas-cans (2.34 gal.),
Level = weighted average amount of stored fuel (49%),
CF = conversion factor 0.002205 pounds per gram.

A sample calculation estimating uncontrolled diurnal emissions from properly closed plastic residential gas-cans in Fairfield County is as follows:

$$HC_{DR(PLASTIC)} = 268{,}881 \text{ x } 0.7 \text{ x } 1.38 \text{ x } 0.53 \text{ x } 2.34 \text{ x } 0.49 \text{ x } 0.002205$$

$$HC_{DR(PLASTIC)} = 348 \text{ pounds of VOC per day}$$

A sample calculation estimating uncontrolled diurnal emissions from properly closed metal residential gas-cans in Fairfield County is as follows:

$$HC_{DR(METAL)} = 268{,}881 \text{ x } 0.7 \text{ x } 0.44 \text{ x } 0.13 \text{ x } 2.34 \text{ x } 0.49 \text{ x } 0.002205$$

$$HC_{DR(METAL)} = 27 \text{ pounds of VOC per day}$$

A sample calculation estimating uncontrolled diurnal emissions from open residential gas-cans in Fairfield County is as follows:

$HC_{DR(OPEN)}$ = 268,881 x 0.7 x 21.8 x 0.34 x 0.002205

$HC_{DR(OPEN)}$ = 3,076 pounds of VOC per day.

Total uncontrolled diurnal emissions from open and closed residential gas-cans in Fairfield County is as follows:

HC_{DR} = 348+ 27 +3,076

HC_{DR} = 3,451 pounds of VOC per day.

Transport-spillage emissions arise when fuel escapes (e.g. spill, etc.) from gas-cans while in transit.

The uncontrolled emissions from the transport-spillage of residential gas-cans were determine using the following equation:

$$HC_{TR} = Pop_R \times S \times Refill_R \times EF_T \times B_R \times CF$$

Where:

HC_{TR} =uncontrolled residential gas-can transport spillage emissions, expressed in pounds per day
Pop_R =statewide residential gas-can population
S =percentage of gas-cans stored with fuel (70%)
$Refill_R$ = average number of residential gas-cans-pump-refills per day per can (0.0174 gas-can refill/day)
EF_T =transport emission factor with respect to storage condition; 23.0 grams per gas-can refill (g/refill) for a closed gas-can, and 32.5 g/refill for an open gas can)
B_R =percentage of gas-cans with respect to storage condition (open 34%, and closed 66%),
CF =conversion factor 0.002205 pounds per gram.

A sample calculation estimating uncontrolled transport-spillage emissions from properly closed residential gas-cans in Fairfield County is as follows:

$HC_{TR(CLOSED)}$ = 268,881 x 0.7 x 0.0174 x 23.0 x 0.66 x 0.002205

$HC_{TR(CLOSED)}$ = 110 pounds of VOC per day

A sample calculation estimating uncontrolled transport-spillage emissions from open residential gas-cans in Fairfield County is as follows:

$$HC_{TR(OPEN)} = 268{,}881 \times 0.7 \times 0.0174 \times 32.5 \times 0.34 \times 0.002205$$

$$HC_{TR(OPEN)} = 80 \text{ pounds of VOC per day.}$$

Total uncontrolled transport-spillage emissions from plastic and metal residential gas- cans in Fairfield County is as follows:

$$HC_{DR} = 110 + 80$$

$$HC_{DR} = 190 \text{ pounds of VOC per day.}$$

Commercial Gas-Cans.

Businesses identified by the following North American Industrial Classification System (NAICS) were assumed to have at least one gas-can: 111, 112, 113,114*, 115, 23, 311119, 326212, 4411, 447, 452990, 488410, 5321, 541320, 541620, 541690, 81111 and 812930[38]. This list was provided by Judy Rand of the New Jersey Department of Environmental Protection, which is an adaptation of the Standard Industrial Classification (SICs) listed on page 9 of the Pechan report titled "Control Measure Development Support Analysis of Ozone Transport Commission Model Rules"[36]. The NAICs list includes fishing and landscaping which did not appear in the Pechan SIC list.

The Connecticut DOL provided the number of businesses by county that fall under any of the aforementioned NAICS[39]. To determine the emissions from commercially used gas-cans the commercial gas-can population was calculated as follows:

$$Pop_C = (N_C)(Count_C)(A)$$

Where:

Pop_C =statewide commercial gas-can population,
N_C =number of occupied businesses in each county,
$Count_C$ = average number of gas-cans per business (6.9)
A =percentage of businesses with gas-cans (80%).

A sample calculation of the number of commercial gas-cans in Fairfield County in 2005 is as follows:

$$Pop_C = (3{,}868)(6.9)(.80)$$

$$Pop_C = 21{,}351 \text{ gas-cans}$$

The following equation was used to calculate the uncontrolled permeation emissions from commercial gas-cans:

$$HC_{PC} = Pop_{C} \text{ x } S \text{ x } EF_{P} \text{ x } B_{C} \text{ x } Size_{C} \text{ x } Level \text{ x } CF$$

Where:

HC_{PC} = uncontrolled permeation Emissions in pounds per day,
Pop_{C} = residential gas-can population,
EF_{P} = appropriate permeation emission factor with respect to material (plastic 1.57 g/gal-day; metal 0.06 g/gal-day),
S = percentage of gas-cans stored with fuel (70%),
B_{C} = percentage of cans stored in closed condition with respect to material (plastic 33%; metal 18%),
$Size_{C}$ = weighted average capacity of residential gas-cans (3.43 gallons),
Level = weighted average amount of stored fuel (49%),
CF = conversion factor 0.002205 pounds per gram.

A sample calculation estimating the uncontrolled permeation emissions from plastic commercial gas-cans in Fairfield County is as follows:

$$HC_{PC(PLASTIC)} = 21,351 \text{ x } 0.70 \text{ x } 1.57 \text{ x } 0.33 \text{ x } 3.43 \text{ x } 0.49 \text{ x } 0.002205$$

$$HC_{PC(PLASTIC)} = 29 \text{ pounds per day}$$

A sample calculation estimating the uncontrolled permeation emissions from metal commercial gas-cans in Fairfield County is as follows:

$$HC_{PC(METAL)} = 21,351 \text{ x } 0.70 \text{ x } 0.06 \text{ x } 0.18 \text{ x } 3.43 \text{ x } 0.49 \text{ x } 0.002205$$

$$HC_{PC(METAL)} = 1 \text{ pounds per day}$$

Total uncontrolled permeation emissions from plastic and metal residential gas- cans in Fairfield County is as follows:

$$HC_{PC} = 29 + 1$$

$$HC_{PC} = 30 \text{ pounds of VOC per day.}$$

Uncontrolled diurnal emissions from both open and closed commercial gas-cans were calculated as follows:

$$HC_{DC} = Pop_C \times S \times EF_D \times B_C \times Size_C \times Level \times CF$$

Where:

HC_{DC} = uncontrolled diurnal emissions expressed in pounds per day for commercial gas-cans with respect to storage condition (open or closed) and material (plastic or metal),
Pop_C = statewide commercial gas-can population,
S = percentage of gas-can population stored with fuel (70%),
EF_D = appropriate diurnal emission factor with respect to storage condition and material (closed plastic 1.38 g/gal-day; closed metal 0.44 g/gal-day; or open 21.8 g/day applies for both metal or plastic),
B_C = percentage of gas-can population with respect to storage condition and material (plastic open 39%, closed 33%; metal open 10%, closed 18%),
$Size_C$ = weighted average capacity of commercial gas-cans (3.43 gal.),
Level = weighted average amount of stored fuel (49%),
CF = conversion factor 0.002205 pounds per gram.

A sample calculation estimating uncontrolled diurnal emissions from properly closed plastic commercial gas-cans in Fairfield County is as follows:

$$HC_{DC(PLASTIC)} = 21{,}351 \times 0.7 \times 1.38 \times 0.33 \times 3.43 \times 0.49 \times 0.002205$$

$$HC_{DC(PLASTIC)} = 25 \text{ pounds of VOC per day}$$

A sample calculation estimating uncontrolled diurnal emissions from properly closed metal commercial gas-cans in Fairfield County is as follows:

$$HC_{DC(METAL)} = 21{,}351 \times 0.7 \times 0.44 \times 0.18 \times 3.43 \times 0.49 \times 0.002205$$

$$HC_{DC(METAL)} = 4 \text{ pounds of VOC per day}$$

A sample calculation estimating uncontrolled diurnal emissions from an open commercial gas-cans in Fairfield County is as follows:

$$HC_{DC(OPEN)} = 21{,}351 \times 0.7 \times 21.8 \times 0.49 \times 0.002205$$

$$HC_{DC(OPEN)} = 352 \text{ pounds of VOC per day}$$

Total uncontrolled diurnal emissions from open and closed residential gas-cans in Fairfield County is as follows:

$$HC_{DC} = 25 + 4 + 352$$

$$HC_{DC} = 381 \text{ pounds of VOC per day.}$$

Transport-spillage emissions factors for commercial gas-cans are expected to be the same as those for residential gas-cans: 23.0 g/refill per can for a closed container, and 32.5 g/refill per can for an open container. The refueling of gas-cans used for commercial lawn and garden equipment occurs much more frequently than gas-cans used to refuel other commercial equipment. In fact the frequency of gas-cans used for the refueling of commercial lawn and garden equipment are estimated to occur 0.964 times per day while gas-cans used for non-lawn and garden commercial equipment are estimated to be refilled only 0.12 times per day.[37] For this reason the differences in refilling activity between commercial lawn and garden equipment, and non-lawn and garden equipment were accounted for when estimating transport-spillage emissions.

All businesses associated with NAICS 541320 “Landscape Architectural Services” were assumed to operate commercial lawn and garden equipment. All other businesses were not. Table 4.6.14-1 contains the number of gas-cans per county that were assumed to refuel commercial lawn and garden equipment.

The uncontrolled emissions from the transport-spillage of commercial gas-cans were determine using the following equation:

$$HC_{TC} = Pop_C \times S \times Refill_C \times EF_T \times B_C \times CF$$

Where:

- HC_{TC} =uncontrolled commercial gas-can transport spillage emissions, expressed in pounds per day
- Pop_C =gas-can population used to refuel commercial lawn and garden equipment or non-lawn and garden equipment
- S =percentage of gas-cans stored with fuel (70%)
- $Refill_C$ = average number of commercial gas-cans-pump-refills per day per can (0.964 refill/day for commercial lawn and garden equipment or 0.12 refill/day for non-lawn and garden commercial equipment)
- EF_T =transport emission factor with respect to storage condition; 23.0 grams per gas-can refill (g/refill) for a closed gas-can, and 32.5 g/refill for an open gas can)
- B_C =percentage of gas-cans with respect to storage condition (open 49%, and closed 51%),
- CF =conversion factor 0.002205 pounds per gram.

A sample calculation estimating uncontrolled transport-spillage emissions from properly closed gas-cans used to refuel commercial lawn and garden equipment in Fairfield County is as follows:

$$HC_{TC(LawnClosed)} = 270 \times 0.7 \times 0.964 \times 23.0 \times 0.51 \times 0.002205$$

$$HC_{TC(LawnClosed)} = 5 \text{ pounds per day}$$

A sample calculation estimating uncontrolled transport-spillage emissions from open gas-cans used to refuel commercial lawn and garden equipment in Fairfield County is as follows:

$$HC_{TC(LawnOpen)} = 270 \times 0.7 \times 0.964 \times 32.5 \times 0.49 \times 0.002205$$

$$HC_{TC(LawnOpen)} = 6 \text{ pounds per day}$$

A sample calculation estimating uncontrolled transport-spillage emissions from properly closed gas-cans used to refuel commercial **non**-lawn and garden equipment in Fairfield County is as follows:

$$HC_{TC(Non\text{-}LawnClosed)} = 21{,}081 \times 0.7 \times 0.12 \times 23.0 \times 0.51 \times 0.002205$$

$$HC_{TC(Non\text{-}LawnClosed)} = 46 \text{ pounds per day}$$

A sample calculation estimating uncontrolled transport-spillage emissions from an open gas-cans used to refuel commercial **non**-lawn and garden equipment in Fairfield County is as follows:

$$HC_{TC(Non\text{-}LawnOpen)} = 21{,}081 \times 0.7 \times 0.12 \times 32.5 \times 0.49 \times 0.002205$$

$$HC_{TC(Non\text{-}LawnOpen)} = 62 \text{ pounds per day}$$

Total uncontrolled transport-spillage emissions from all commercial gas-cans in Fairfield County is as follows:

$$HC_{TC} = 5 + 6 + 46 + 62$$

$$HC_{TC} = 119 \text{ pounds of VOC per day.}$$

Total Controlled Emissions.

Recently Connecticut adopted a new regulation (Section 22a-174-43) which s requires portable fuel containers and spouts sold on or after May 1, 2004 to meet specified permeation and fuel flow rates and to have automatic shut-offs to prevent tank overflows during refueling. The regulation includes a pass through provision allowing units manufactured prior to May 1, 2004 to be sold through May 1, 2005. In addition, the regulation specifies labeling requirements and test procedures to be used by manufacturers to demonstrate product compliance.

Connecticut's regulation regarding portable fuel containers has equivalent requirements to those specified in the model rule developed by the Ozone Transport Commission (OTC). An analysis done by the OTC, assuming 80% rule effectiveness, estimates that the new regulation will reduce VOC emissions from portable fuel containers by 6.82 percent in Connecticut in 2005.

The total controlled area source portable fuel container emissions are summed as follows:

$$Ep_S = (HC_{PR} + HC_{DR} + HC_{TR} + HC_{PC} + HC_{DC} + HC_{TC}) \text{ x } (1\text{-}\%CNTRL)$$

Where:

Ep_S = typical after controls summer day emissions from all residential and commercial gas-cans, expressed in pounds per day,

%CNTRL = Connecticut's portable fuel container regulation is estimated to reduce uncontrolled emissions by 6.82% in 2005.

Total controlled VOC emissions from all residential and commercial gas-cans on a typical summer day in Fairfield County is as follows:

$$Ep_S = (400 + 3{,}451 + 190 + 30 + 381 + 119) \text{ x } (1 - 0.0682)$$

$$Ep_S = 4{,}259 \text{ pounds of VOC per day.}$$

According to EPA's "Estimating Emissions Associated with Portable Fuel Containers (PFCs)"[40], 38 percent of the number of portable fuel container refills occurs in the summer.

Annual emissions were calculated using the following equation:

$$Ep_A = \frac{Ep_S \text{ x Days x Weeks}}{SAF \ x \ 2{,}000}$$

Where:

Ep_A =annual emissions expressed in tons per year,
Days =days per week activity occurs (7 days),
Weeks =weeks per summer activity occurs (13),
SAF =percent activity that occurs in the summer (38%)
2,000 =conversion factor 2,000 pounds per ton.

Total annual controlled VOC emissions from all residential and commercial gas-cans in Fairfield County is as follows:

$$Ep_A = \frac{4{,}259 \text{ x } 7 \text{ x } 13}{0.38 \ x \ 2{,}000}$$

Ep_A = 510 tons of VOC per year.

Table 4.6.14-1
Commercial and Residential Gas-Can Population

County	Number Of Residential Gas-Cans	Number Of Commercial Gas-Cans	Number Of Commercial Lawn and Garden Gas-Cans	Number Of Commercial Non-Lawn and Garden Gas-Cans
Fairfield	268,881	21,351	270	21,081
Hartford	279,609	18,564	83	18,481
Litchfield	61,140	6,133	33	6,100
Middlesex	53,257	4,223	22	4,201
New Haven	268,724	17,427	61	17,366
New	86,962	6,017	22	5,995
Tolland	42,458	3,240	11	3,229
Windham	35,108	2,495	6	2,489
State Total:	**1,096,139**	**79,450**	**508**	**78,942**

Table 4.6.14-2
Summary of Daily Uncontrolled VOC Emissions From Residential Gas-Cans

County	Permeation Emissions From Plastic Gas-Cans (lbs/day)	Permeation Emissions From Metal Gas-Cans (lbs/day)	Diurnal Emissions From Closed Plastic Gas-Cans (lbs/day)	Diurnal Emissions From Closed Metal Gas-Cans (lbs/day)	Diurnal Emissions From Open Gas-Cans (lbs/day)	Transport-Spillage Emissions From Closed Gas-Cans (lbs/day)	Transport-Spillage Emissions From Open Gas-Cans (lbs/day)
Fairfield	396	4	348	27	3,076	110	80
Hartford	412	4	362	28	3,199	114	83
Litchfield	90	1	79	6	699	25	18
Middlesex	78	1	69	5	609	22	16
New Haven	396	4	348	27	3,074	110	80
New	128	1	113	9	995	35	26
Tolland	63	1	55	4	486	17	13
Windham	52	0	45	4	402	14	10
State Total:	**1,615**	**16**	**1,419**	**110**	**12,540**	**447**	**326**

Table 4.6.14-3
Summary of Daily Uncontrolled VOC Emissions From Commercial Gas-Cans

County	Permeation Emissions From Plastic Gas-Cans (lbs/day)	Permeation Emissions From Metal Gas-Cans (lbs/day)	Diurnal Emissions From Closed Plastic Gas-Cans (lbs/day)	Diurnal Emissions From Closed Metal Gas-Cans (lbs/day)	Diurnal Emissions From Open Gas-Cans (lbs/day)	Transport-Spillage Emissions From Closed Lawn Gas-Cans (lbs/day)	Transport-Spillage Emissions From Open Lawn Gas-Cans (lbs/day)	Transport-Spillage Emissions From Closed Non-Lawn Gas-Cans (lbs/day)	Transport-Spillage Emissions From Open Non-Lawn Gas-Cans (lbs/day)
Fairfield	29	1	25	4	352	5	6	46	62
Hartford	25	1	22	4	306	1	2	40	55
Litchfield	8	0	7	1	101	1	1	13	18
Middlesex	6	0	5	1	70	0	1	9	12
New Haven	23	0	21	4	287	1	1	38	51
New	8	0	7	1	99	0	1	13	18
Tolland	4	0	4	1	53	0	0	7	10
Windham	3	0	3	1	41	0	0	5	7
State Total:	**106**	**2**	**94**	**17**	**1,309**	**8**	**12**	**171**	**233**

Table 4.6.14-4
Summary of Daily and Annual Controlled VOC Emissions From Residential and Commercial Gas-Cans

County	Total Daily Gas-Can Emissions (lbs/day)	Total Annual Gas-Can Emissions (tons/year)
Fairfield	4,259	510
Hartford	4,340	520
Litchfield	995	119
Middlesex	842	101
New Haven	4,160	498
New London	1,355	162
Tolland	669	80
Windham	547	65
State Total:	**17,167**	**2,055**

Appendix 4C

2002 Base Year Inventory Used to Develop Rate-of-Progress Emission Target Levels

SWCT 2002 Base Year VOC Inventory

STATIONARY SOURCES	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	
VOC STORAGE/TRANSPORT/MARKETING			
Gasoline/Crude Oil Storage All (exc float roof)	48.52		
Gasoline/Crude Oil Storage Floating Roof	827.51		
Volatile Organic Liquid (VOL) Storage			
VOL Ship/Barge Transfer			
Barge/Tanker Cleaning			
Bulk Gas Terminals	6,177.75		
Gasoline Bulk Plants			
Tank Truck Unloading		1,333.37	
Vehicle Fuel		4,120.81	
Underground Tank Breathing		1,382.58	
Aircraft Refueling		87.15	
Gasoline Trucks in Transit		161.96	
Leaking Underground Storage Tanks		158.31	
Spills		324.33	
Unaccounted Gas Can Emissions (not in 2002 PEI)		9,406.14	**New: Not in Dec 2005 Final 2002 PEI**
Sub-Total: VOC Stor/Trans/Market	7,053.78	16,974.65	
INDUSTRIAL PROCESSES			
Organic Chemical Manufacture	4,942.96		
SOCMI Fugitive			
SOCMI Storage Tanks		263.66	
Inorganic Chemical Manufacture			
Fermentation Processes		1.01	
Pharmaceutical Manufacture			
Plastic Products Manufacture	1,207.77		
Rubber Tire Manufacture			
SBR Rubber Manufacture	414.33		
Textile Polymers & Resin Mfg			
Synthetic Fiber Manufacture			
Iron & Steel Manufacture	1.37		
Other	948.56		
Sub-Total: Industrial Processes	7,514.99	264.67	

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	
INDUSTRIAL SURFACE COATING	2,602.92	10,512.87	
Large Appliances			
Magnet Wire			
Autos and Light Trucks			
Cans			
Metal Coils			
Paper			
Fabric			
Metal and Wood Furniture			
Miscellaneous Metal Products			
Flatwood Products			
Plastic Products			
Large Ships			
Large Aircraft			
High Performance Maintenance Coating			
Special Purpose Coating			
Others			
Sub-Total: Ind Surface Coating	2,602.92	10,512.87	
NON - INDUSTRIAL SURFACE COATING			
Architectural Coatings		22,495.79	
Auto Refinishing		2,352.27	
Traffic Markings		867.88	
Sub-Total: Non-Ind Surf Coating	0.00	25,715.94	
OTHER SOLVENT USE			
Degreasing	98.75	32,675.15	
Petroleum Dry Cleaning		113.53	
Graphic Arts	1,463.99	7,993.70	
Adhesives	25.92	4,730.15	**New: Area source portion not in Dec 2005 Final 2002 PEI**
Cutback Asphalt Paving		813.30	
Emulsified Asphalt Paving		1,507.72	
Solvent Extraction Processes	4.00		
Consumer/Commercial Solvent Use		47,596.89	
Other	698.16		
Sub-Total: Other Solvent Use	2,290.82	95,430.44	

SWCT 2002 Base Year VOC Inventory

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)
WASTE DISPOSAL		
Municipal Waste Combustion	358.24	
Municipal Waste Landfills		529.38
TSDFs		1,143.73
POTWs		3,682.21
ITWs		
Sub-Total: Waste Disposal	358.24	5,355.32
OTHER STATIONARY SOURCES		
Utility Fuel Combustion	1,208.48	
Industrial Fuel Combustion	86.02	117.17
Commercial Fuel Combustion	62.83	264.27
Residential Fuel Combustion		237.51
Wood Stoves		5,392.10
Forest Fires		1.18
Structural Fires		284.08
Open Burning		53.27
Slash Burning		
Agricultural Burning		
Orchard Heaters		
Pesticide Applications		5,968.20
Asphalt Roofing		
Internal Combustion Engines	733.22	
Sub-Total: Other Stationary Sources	2,090.55	12,317.78
COMMERCIAL PROCESSES		
Bakeries	664.26	1700.17
Breweries		1.01
Sub-Total: Commercial Processes	664.26	1,701.18

MOBILE SOURCES	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	
ON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses CTDOT Series 28D updated traffic inputs**
Light Duty Gas Vehicles		50,588.13	
Light Duty Gas Truck 1 & 2		27,232.72	
Light Duty Gas Truck 3 & 4		12,534.23	
Heavy Duty Gas Vehicles		2,612.48	
Light Duty Diesel Vehicle		36.55	
Light Duty Diesel Truck		114.61	
Heavy Duty Diesel Vehicle		2,538.87	
Motorcycles		885.06	
Sub-Total: On-Road Mobile Sources	0.00	96,542.64	
NON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses EPA's NONROAD2005 model**
Airport Equipment		0.00	
Commercial Equipment		9,340.00	
Construction Equipment		5,060.00	
Farm Equipment		60.00	
Industrial Equipment		5,040.00	
Lawn & Garden		59,100.00	
Logging Equipment		40.00	
Recreational Equipment		3,740.00	
Recreational Vessels		48,240.00	
Rail (equipment + engines)		445.34	
Aircraft		729.46	
Commercial Vessels		172.07	
Sub-Total: Non-Road Mobile Sources	0.00	131,966.87	

	2002 PI VOC	
	Point	Area
VOC EMISSION TOTALS	(lbs/day)	(lbs/day)
STATIONARY SOURCES		
Sub-Total: VOC Stor/Trans/Market	7,053.78	16,974.65
Sub-Total: Industrial Processes	7,514.99	264.67
Sub-Total: Ind Surface Coating	2,602.92	10,512.87
Sub-Total: Non-Ind Surf Coating	0.00	25,715.94
Sub-Total: Other Solvent Use	2,290.82	95,430.44
Sub-Total: Waste Disposal	358.24	5,355.32
Sub-Total: Other Stationary Srcs	2,090.55	12,317.78
Sub-Total: Commercial Processes	664.26	1,701.18
Sub-Total: Stationary Sources	22,575.56	168,272.85

MOBILE SOURCES		
Sub-Total: On-Road Mobile Sources	0.00	96,542.64
Sub-Total: Non-Road Mobile Sources	0.00	131,966.87
Sub-Total: Mobile Sources	0.00	228,509.51

Sub-Total: Biogenic VOC Emissions	0.00	251,261.51
GRAND TOTAL VOC	22,575.56	648,043.87

	2002 Actual	
	(lbs/day)	**(tons/day)**
Stationary Point	22,575.56	11.3
Stationary Area	168,272.85	84.1
On - Road Mobile	96,542.64	48.3
Non - Road Mobile	131,966.87	66.0
TOTAL ANTHROPOGENIC VOC	419,357.92	209.7

335.3

GrCT 2002 Base Year VOC Inventory

STATIONARY SOURCES	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	
VOC STORAGE/TRANSPORT/MARKETING			
Gasoline/Crude Oil Storage All (exc float roof)			
Gasoline/Crude Oil Storage Floating Roof	131.48		
Volatile Organic Liquid (VOL) Storage			
VOL Ship/Barge Transfer			
Barge/Tanker Cleaning			
Bulk Gas Terminals	791.74		
Gasoline Bulk Plants			
Tank Truck Unloading		1,271.03	
Vehicle Fuel		4,077.58	
Underground Tank Breathing		1,317.94	
Aircraft Refueling		284.00	
Gasoline Trucks in Transit		153.00	
Leaking Underground Storage Tanks		150.77	
Spills		497.20	
Unaccounted Gas Can Emissions (not in 2002 PEI)		8,029.28	**New: Not in Dec 2005 Final 2002 PEI**
Sub-Total: VOC Stor/Trans/Market	923.22	15,780.80	
INDUSTRIAL PROCESSES			
Organic Chemical Manufacture	251.43		
SOCMI Fugitive			
SOCMI Storage Tanks		399.85	
Inorganic Chemical Manufacture			
Fermentation Processes		2.01	
Pharmaceutical Manufacture	107.40		
Plastic Products Manufacture	488.00		
Rubber Tire Manufacture			
SBR Rubber Manufacture	32.60		
Textile Polymers & Resin Mfg			
Synthetic Fiber Manufacture			
Iron & Steel Manufacture	4.32		
Other	364.26		
Sub-Total: Industrial Processes	1,248.01	401.86	

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	
INDUSTRIAL SURFACE COATING	3,380.23	9,041.96	
Large Appliances			
Magnet Wire			
Autos and Light Trucks			
Cans			
Metal Coils			
Paper			
Fabric			
Metal and Wood Furniture			
Miscellaneous Metal Products			
Flatwood Products			
Plastic Products			
Large Ships			
Large Aircraft			
High Performance Maintenance Coating			
Special Purpose Coating			
Others			
Sub-Total: Ind Surface Coating	3,380.23	9,041.96	
NON - INDUSTRIAL SURFACE COATING			
Architectural Coatings		18,659.48	
Auto Refinishing		1,951.13	
Traffic Markings		719.88	
Sub-Total: Non-Ind Surf Coating	0.00	21,330.49	
OTHER SOLVENT USE			
Degreasing	127.19	31,572.93	
Petroleum Dry Cleaning		77.01	
Graphic Arts	126.18	7,718.64	
Adhesives	41.60	4,848.27	**New: Area source portion not in Dec 2005 Final 2002 PEI**
Cutback Asphalt Paving		3,103.22	
Emulsified Asphalt Paving		3,647.98	
Solvent Extraction Processes			
Consumer/Commercial Solvent Use		32,539.84	
Other	142.20		
Sub-Total: Other Solvent Use	437.17	83,507.89	

GrCT 2002 Base Year VOC Inventory

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)
WASTE DISPOSAL		
Municipal Waste Combustion	959.66	
Municipal Waste Landfills		1,776.01
TSDFs		527.12
POTWs		3,031.86
ITWs		
Sub-Total: Waste Disposal	959.66	5,334.99
OTHER STATIONARY SOURCES		
Utility Fuel Combustion	446.66	
Industrial Fuel Combustion	188.21	104.58
Commercial Fuel Combustion	29.49	235.75
Residential Fuel Combustion		201.90
Wood Stoves		8,302.76
Forest Fires		13.65
Structural Fires		180.23
Open Burning		56.76
Slash Burning		
Agricultural Burning		
Orchard Heaters		
Pesticide Applications		4,603.95
Asphalt Roofing		
Internal Combustion Engines	1,490.06	
Sub-Total: Other Stationary Sources	2,154.42	13,699.58
COMMERCIAL PROCESSES		
Bakeries	0.58	1960.63
Breweries		2.01
Sub-Total: Commercial Processes	0.58	1,962.64

MOBILE SOURCES	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	
ON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses CTDOT Series 28D updated traffic inputs**
Light Duty Gas Vehicles		47,630.65	
Light Duty Gas Truck 1 &2		25,538.99	
Light Duty Gas Truck 3 & 4		11,761.13	
Heavy Duty Gas Vehicles		2,217.56	
Light Duty Diesel Vehicle		33.20	
Light Duty Diesel Truck		104.35	
Heavy Duty Diesel Vehicle		2,066.89	
Motorcycles		908.15	
Sub-Total: On-Road Mobile Sources	0.00	90,260.92	
NON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses EPA's NONROAD2005 model**
Airport Equipment		40.00	
Commercial Equipment		6,200.00	
Construction Equipment		4,020.00	
Farm Equipment		280.00	
Industrial Equipment		4,400.00	
Lawn & Garden		37,500.00	
Logging Equipment		100.00	
Recreational Equipment		11,820.00	
Recreational Vessels		45,840.00	
Rail (equipment + engines)		219.71	
Aircraft		1,843.69	
Commercial Vessels		82.81	
Sub-Total: Non-Road Mobile Sources	0.00	112,346.21	

GrCT 2002 Base Year VOC Inventory

	2002 PI VOC	
	Point	Area
VOC EMISSION TOTALS	(lbs/day)	(lbs/day)
STATIONARY SOURCES		
Sub-Total: VOC Stor/Trans/Market	923.22	15,780.80
Sub-Total: Industrial Processes	1,248.01	401.86
Sub-Total: Ind Surface Coating	3,380.23	9,041.96
Sub-Total: Non-Ind Surf Coating	0.00	21,330.49
Sub-Total: Other Solvent Use	437.17	83,507.89
Sub-Total: Waste Disposal	959.66	5,334.99
Sub-Total: Other Stationary Srcs	2,154.42	13,699.58
Sub-Total: Commercial Processes	0.58	1,962.64
Sub-Total: Stationary Sources	9,103.29	151,060.21

MOBILE SOURCES		
Sub-Total: On-Road Mobile Sources	0.00	90,260.92
Sub-Total: Non-Road Mobile Sources	0.00	112,346.21
Sub-Total: Mobile Sources	0.00	202,607.13

Sub-Total: Biogenic VOC Emissions	0.00	537,197.30

GRAND TOTAL VOC	9,103.29	890,864.64

	2002 Actual	
	(lbs/day)	**(tons/day)**
Stationary Point	9,103.29	4.6
Stationary Area	151,060.21	75.5
On - Road Mobile	90,260.92	45.1
Non - Road Mobile	112,346.21	56.2
TOTAL ANTHROPOGENIC VOC	362,770.63	181.4

450.0

CT Total 2002 Base Year VOC Inventory

STATIONARY SOURCES	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	
VOC STORAGE/TRANSPORT/MARKETING			
Gasoline/Crude Oil Storage All (exc float roof)	48.52	0.00	
Gasoline/Crude Oil Storage Floating Roof	958.99	0.00	
Volatile Organic Liquid (VOL) Storage	0.00	0.00	
VOL Ship/Barge Transfer	0.00	0.00	
Barge/Tanker Cleaning	0.00	0.00	
Bulk Gas Terminals	6969.49	0.00	
Gasoline Bulk Plants	0.00	0.00	
Tank Truck Unloading	0.00	2,604.40	
Vehicle Fuel	0.00	8,198.39	
Underground Tank Breathing	0.00	2,700.52	
Aircraft Refueling	0.00	371.15	
Gasoline Trucks in Transit	0.00	314.96	
Leaking Underground Storage Tanks	0.00	309.08	
Spills	0.00	821.53	
Unaccounted Gas Can Emissions (not in 2002 PEI)	0.00	17,435.42	**New: Not in Dec 2005 Final 2002 PEI**
Sub-Total: VOC Stor/Trans/Market	7,977.00	32,755.45	
INDUSTRIAL PROCESSES			
Organic Chemical Manufacture	5194.39	0.00	
SOCMI Fugitive	0.00	0.00	
SOCMI Storage Tanks	0.00	663.51	
Inorganic Chemical Manufacture	0.00	0.00	
Fermentation Processes	0.00	3.02	
Pharmaceutical Manufacture	107.40	0.00	
Plastic Products Manufacture	1695.77	0.00	
Rubber Tire Manufacture	0.00	0.00	
SBR Rubber Manufacture	446.93	0.00	
Textile Polymers & Resin Mfg	0.00	0.00	
Synthetic Fiber Manufacture	0.00	0.00	
Iron & Steel Manufacture	5.69	0.00	
Other	1312.82	0.00	
Sub-Total: Industrial Processes	8,763.00	666.53	

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	
INDUSTRIAL SURFACE COATING	5,983.15	19,554.83	
Large Appliances			
Magnet Wire			
Autos and Light Trucks			
Cans			
Metal Coils			
Paper			
Fabric			
Metal and Wood Furniture			
Miscellaneous Metal Products			
Flatwood Products			
Plastic Products			
Large Ships			
Large Aircraft			
High Performance Maintenance Coating			
Special Purpose Coating			
Others			
Sub-Total: Ind Surface Coating	5,983.15	19,554.83	
NON - INDUSTRIAL SURFACE COATING			
Architectural Coatings	0.00	41,155.27	
Auto Refinishing	0.00	4,303.40	
Traffic Markings	0.00	1,587.76	
Sub-Total: Non-Ind Surf Coating	0.00	47,046.43	
OTHER SOLVENT USE			
Degreasing	225.94	64,248.08	
Petroleum Dry Cleaning	0.00	190.54	
Graphic Arts	1,590.17	15,712.34	
Adhesives	67.52	9,578.42	**New: Area source portion not in Dec 2005 Final 2002 PEI**
Cutback Asphalt Paving	0.00	3,916.52	
Emulsified Asphalt Paving	0.00	5,155.70	
Solvent Extraction Processes	4.00	0.00	
Consumer/Commercial Solvent Use	0.00	80,136.73	
Other	840.36	0.00	
Sub-Total: Other Solvent Use	2,727.99	178,938.33	

CT Total 2002 Base Year VOC Inventory

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)
WASTE DISPOSAL		
Municipal Waste Combustion	1,317.90	0.00
Municipal Waste Landfills	0.00	2,305.39
TSDFs	0.00	1,670.85
POTWs	0.00	6,714.07
ITWs	0.00	0.00
Sub-Total: Waste Disposal	1,317.90	10,690.31
OTHER STATIONARY SOURCES		
Utility Fuel Combustion	1,655.14	0.00
Industrial Fuel Combustion	274.23	221.75
Commercial Fuel Combustion	92.32	500.02
Residential Fuel Combustion	0.00	439.41
Wood Stoves	0.00	13,694.86
Forest Fires	0.00	14.83
Structural Fires	0.00	464.31
Open Burning	0.00	110.03
Slash Burning	0.00	0.00
Agricultural Burning	0.00	0.00
Orchard Heaters	0.00	0.00
Pesticide Applications	0.00	10,572.15
Asphalt Roofing	0.00	0.00
Internal Combustion Engines	2,223.28	0.00
Sub-Total: Other Stationary Sources	4,244.97	26,017.36
COMMERCIAL PROCESSES		
Bakeries	664.84	3660.8
Breweries	0.00	3.02
Sub-Total: Commercial Processes	664.84	3,663.82

MOBILE SOURCES	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	
ON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses CTDOT Series 28D updated traffic inputs**
Light Duty Gas Vehicles	0.00	98,218.78	
Light Duty Gas Truck 1 &2	0.00	52,771.70	
Light Duty Gas Truck 3 & 4	0.00	24,295.36	
Heavy Duty Gas Vehicles	0.00	4,830.03	
Light Duty Diesel Vehicle	0.00	69.75	
Light Duty Diesel Truck	0.00	218.96	
Heavy Duty Diesel Vehicle	0.00	4,605.76	
Motorcycles	0.00	1,793.21	
Sub-Total: On-Road Mobile Sources	0.00	186,803.56	
NON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses EPA's NONROAD2005 model**
Airport Equipment	0.00	40.00	
Commercial Equipment	0.00	15,540.00	
Construction Equipment	0.00	9,080.00	
Farm Equipment	0.00	340.00	
Industrial Equipment	0.00	9,440.00	
Lawn & Garden	0.00	96,600.00	
Logging Equipment	0.00	140.00	
Recreational Equipment	0.00	15,560.00	
Recreational Vessels	0.00	94,080.00	
Rail (equipment + engines)	0.00	665.05	
Aircraft	0.00	2,573.15	
Commercial Vessels	0.00	254.88	
Sub-Total: Non-Road Mobile Sources	0.00	244,313.08	

CT Total 2002 Base Year VOC Inventory

	2002 PI VOC	
	Point	Area
VOC EMISSION TOTALS	(lbs/day)	(lbs/day)
STATIONARY SOURCES		
Sub-Total: VOC Stor/Trans/Market	7,977.00	32,755.45
Sub-Total: Industrial Processes	8,763.00	666.53
Sub-Total: Ind Surface Coating	5,983.15	19,554.83
Sub-Total: Non-Ind Surf Coating	0.00	47,046.43
Sub-Total: Other Solvent Use	2,727.99	178,938.33
Sub-Total: Waste Disposal	1,317.90	10,690.31
Sub-Total: Other Stationary Srcs	4,244.97	26,017.36
Sub-Total: Commercial Processes	664.84	3,663.82
Sub-Total: Stationary Sources	31,678.85	319,333.06

MOBILE SOURCES		
Sub-Total: On-Road Mobile Sources	0.00	186,803.56
Sub-Total: Non-Road Mobile Sources	0.00	244,313.08
Sub-Total: Mobile Sources	0.00	431,116.64

Sub-Total: Biogenic VOC Emissions	0.00	788,458.81
GRAND TOTAL VOC	31,678.85	1,538,908.51

	2002 Actual	
	(lbs/day)	**(tons/day)**
Stationary Point	31,678.85	15.8
Stationary Area	319,333.06	159.7
On - Road Mobile	186,803.56	93.4
Non - Road Mobile	244,313.08	122.2
TOTAL ANTHROPOGENIC VOC	782,128.55	391.1
		785.3

SWCT 2002 Base Year NOx Inventory

STATIONARY SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)
VOC STORAGE/TRANSPORT/MARKETING		
Gasoline/Crude Oil Storage All (exc float roof)		
Gasoline/Crude Oil Storage Floating Roof		
Volatile Organic Liquid (VOL) Storage		
VOL Ship/Barge Transfer		
Barge/Tanker Cleaning		
Bulk Gas Terminals		
Gasoline Bulk Plants		
Tank Truck Unloading		
Vehicle Fuel		
Underground Tank Breathing		
Aircraft Refueling		
Gasoline Trucks in Transit		
Leaking Underground Storage Tanks		
Spills		
Sub-Total: VOC Stor/Trans/Market	0.00	0.00
INDUSTRIAL PROCESSES		
Organic Chemical Manufacture	9.80	
SOCMI Fugitive		
SOCMI Storage Tanks		
Inorganic Chemical Manufacture		
Fermentation Processes		
Pharmaceutical Manufacture		
Plastic Products Manufacture	4.10	
Rubber Tire Manufacture		
SBR Rubber Manufacture		
Textile Polymers & Resin Mfg		
Synthetic Fiber Manufacture		
Iron & Steel Manufacture	209.32	
Other	26.11	
Sub-Total: Industrial Processes	249.33	0.00

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)
INDUSTRIAL SURFACE COATING	34.64	
Large Appliances		
Magnet Wire		
Autos and Light Trucks		
Cans		
Metal Coils		
Paper		
Fabric		
Metal and Wood Furniture		
Miscellaneous Metal Products		
Flatwood Products		
Plastic Products		
Large Ships		
Large Aircraft		
High Performance Maintenance Coating		
Special Purpose Coating		
Others		
Sub-Total: Ind Surface Coating	34.64	0.00
NON - INDUSTRIAL SURFACE COATING		
Architectural Coatings		
Auto Refinishing		
Traffic Markings		
Sub-Total: Non-Ind Surf Coating	0.00	0.00
OTHER SOLVENT USE		
Degreasing		
Petroleum Dry Cleaning		
Graphic Arts	42.32	
Adhesives		
Cutback Asphalt Paving		
Emulsified Asphalt Paving		
Solvent Extraction Processes		
Consumer/Commercial Solvent Use		
Other		
Sub-Total: Other Solvent Use	42.32	0.00

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)
WASTE DISPOSAL		
Municipal Waste Combustion	9,583.21	
Municipal Waste Landfills		
TSDFs		
POTWs		
ITWs		
Sub-Total: Waste Disposal	9,583.21	0.00
OTHER STATIONARY SOURCES		
Utility Fuel Combustion	42,887.50	
Industrial Fuel Combustion	2,819.26	2,837.91
Commercial Fuel Combustion	1,130.20	6,130.74
Residential Fuel Combustion		5,186.68
Wood Stoves		106.21
Forest Fires		0.54
Structural Fires		36.16
Open Burning		2.59
Slash Burning		
Agricultural Burning		
Orchard Heaters		
Pesticide Applications		
Asphalt Roofing		
Internal Combustion Engines	18,697.95	
Sub-Total: Other Stationary Sources	65,534.91	14,300.83
COMMERCIAL PROCESSES		
Bakeries	52.40	
Breweries		
Sub-Total: Commercial Processes	52.40	0.00

MOBILE SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	
ON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses CTDOT Series 28D updated traffic inputs**
Light Duty Gas Vehicles		52,114.72	
Light Duty Gas Truck 1 & 2		35,998.74	
Light Duty Gas Truck 3 & 4		14,802.85	
Heavy Duty Gas Vehicles		10,237.58	
Light Duty Diesel Vehicle		91.98	
Light Duty Diesel Truck		286.20	
Heavy Duty Diesel Vehicle		91,611.96	
Motorcycles		215.46	
Sub-Total: On-Road Mobile Sources	0.00	205,359.49	
NON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses EPA's NONROAD2005 model**
Airport Equipment		0.00	
Commercial Equipment		5,680.00	
Construction Equipment		27,440.00	
Farm Equipment		360.00	
Industrial Equipment		20,340.00	
Lawn & Garden		8,840.00	
Logging Equipment		60.00	
Recreational Equipment		260.00	
Recreational Vessels		4,540.00	
Rail (equipment + engines)		8,764.00	
Aircraft		231.04	
Commercial Vessels		943.45	
Sub-Total: Non-Road Mobile Sources	0.00	77,458.49	

SWCT 2002 Base Year NOx Inventory

NOx EMISSION TOTALS	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)
STATIONARY SOURCES		
Sub-Total: VOC Stor/Trans/Market	0.00	0.00
Sub-Total: Industrial Processes	249.33	0.00
Sub-Total: Ind Surface Coating	34.64	0.00
Sub-Total: Non-Ind Surf Coating	0.00	0.00
Sub-Total: Other Solvent Use	42.32	0.00
Sub-Total: Waste Disposal	9,583.21	0.00
Sub-Total: Other Stationary Srcs	65,534.91	14,300.83
Sub-Total: Commercial Processes	52.40	0.00
Sub-Total: Stationary Sources	75,496.81	14,300.83

MOBILE SOURCES		
Sub-Total: On-Road Mobile Sources	0.00	205,359.49
Sub-Total: Non-Road Mobile Sources	0.00	77,458.49
Sub-Total: Mobile Sources	0.00	282,817.98

Sub-Total: Biogenic NOx Emissions	0.00	1,315.10

GRAND TOTAL NOx	75,496.81	298,433.91

	2002 Actual (lbs/day)	2002 Actual (tons/day)
Stationary Point	75,496.81	37.7
Stationary Area	14,300.83	7.2
On - Road Mobile	205,359.49	102.7
Non - Road Mobile	77,458.49	38.7
TOTAL ANTHROPOGENIC NOx	372,615.62	186.3

GrCT 2002 Base Year NOx Inventory

STATIONARY SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)
VOC STORAGE/TRANSPORT/MARKETING		
Gasoline/Crude Oil Storage All (exc float roof)		
Gasoline/Crude Oil Storage Floating Roof		
Volatile Organic Liquid (VOL) Storage		
VOL Ship/Barge Transfer		
Barge/Tanker Cleaning		
Bulk Gas Terminals	14.74	
Gasoline Bulk Plants		
Tank Truck Unloading		
Vehicle Fuel		
Underground Tank Breathing		
Aircraft Refueling		
Gasoline Trucks in Transit		
Leaking Underground Storage Tanks		
Spills		
Sub-Total: VOC Stor/Trans/Market	14.74	0.00
INDUSTRIAL PROCESSES		
Organic Chemical Manufacture	6.40	
SOCMI Fugitive		
SOCMI Storage Tanks		
Inorganic Chemical Manufacture		
Fermentation Processes		
Pharmaceutical Manufacture	4.69	
Plastic Products Manufacture		
Rubber Tire Manufacture		
SBR Rubber Manufacture		
Textile Polymers & Resin Mfg		
Synthetic Fiber Manufacture		
Iron & Steel Manufacture	251.08	
Other	158.80	
Sub-Total: Industrial Processes	420.97	0.00

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)
INDUSTRIAL SURFACE COATING	109.46	
Large Appliances		
Magnet Wire		
Autos and Light Trucks		
Cans		
Metal Coils		
Paper		
Fabric		
Metal and Wood Furniture		
Miscellaneous Metal Products		
Flatwood Products		
Plastic Products		
Large Ships		
Large Aircraft		
High Performance Maintenance Coating		
Special Purpose Coating		
Others		
Sub-Total: Ind Surface Coating	109.46	0.00
NON - INDUSTRIAL SURFACE COATING		
Architectural Coatings		
Auto Refinishing		
Traffic Markings		
Sub-Total: Non-Ind Surf Coating	0.00	0.00
OTHER SOLVENT USE		
Degreasing		
Petroleum Dry Cleaning		
Graphic Arts	21.94	
Adhesives		
Cutback Asphalt Paving		
Emulsified Asphalt Paving		
Solvent Extraction Processes		
Consumer/Commercial Solvent Use		
Other		
Sub-Total: Other Solvent Use	21.94	0.00

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)
WASTE DISPOSAL		
Municipal Waste Combustion	12,971.32	
Municipal Waste Landfills		
TSDFs		
POTWs		
ITWs		
Sub-Total: Waste Disposal	12,971.32	0.00
OTHER STATIONARY SOURCES		
Utility Fuel Combustion	6,743.56	
Industrial Fuel Combustion	5,748.19	2,532.95
Commercial Fuel Combustion	688.31	5,469.24
Residential Fuel Combustion		4,489.10
Wood Stoves		177.21
Forest Fires		6.22
Structural Fires		22.94
Open Burning		2.76
Slash Burning		
Agricultural Burning		
Orchard Heaters		
Pesticide Applications		
Asphalt Roofing		
Internal Combustion Engines	11,363.26	
Sub-Total: Other Stationary Sources	24,543.32	12,700.42
COMMERCIAL PROCESSES		
Bakeries	10.20	
Breweries		
Sub-Total: Commercial Processes	10.20	0.00

MOBILE SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	
ON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses CTDOT Series 28D updated traffic inputs**
Light Duty Gas Vehicles		47,966.47	
Light Duty Gas Truck 1 & 2		33,027.47	
Light Duty Gas Truck 3 & 4		13,560.06	
Heavy Duty Gas Vehicles		8,437.28	
Light Duty Diesel Vehicle		83.63	
Light Duty Diesel Truck		261.44	
Heavy Duty Diesel Vehicle		75,081.25	
Motorcycles		213.91	
Sub-Total: On-Road Mobile Sources	0.00	178,631.50	
NON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses EPA's NONROAD2005 model**
Airport Equipment		300.00	
Commercial Equipment		3,640.00	
Construction Equipment		21,780.00	
Farm Equipment		1,960.00	
Industrial Equipment		17,680.00	
Lawn & Garden		4,920.00	
Logging Equipment		180.00	
Recreational Equipment		520.00	
Recreational Vessels		2,380.00	
Rail (equipment + engines)		3,993.76	
Aircraft		3,818.11	
Commercial Vessels		456.57	
Sub-Total: Non-Road Mobile Sources	0.00	61,628.44	

	2002 PI NOx	
NOx EMISSION TOTALS	Point (lbs/day)	Area (lbs/day)
STATIONARY SOURCES		
Sub-Total: VOC Stor/Trans/Market	14.74	0.00
Sub-Total: Industrial Processes	420.97	0.00
Sub-Total: Ind Surface Coating	109.46	0.00
Sub-Total: Non-Ind Surf Coating	0.00	0.00
Sub-Total: Other Solvent Use	21.94	0.00
Sub-Total: Waste Disposal	12,971.32	0.00
Sub-Total: Other Stationary Srcs	24,543.32	12,700.42
Sub-Total: Commercial Processes	10.20	0.00
Sub-Total: Stationary Sources	38,091.95	12,700.42
NOx Reductions due to OTC/MOU & NBP		

MOBILE SOURCES		
Sub-Total: On-Road Mobile Sources	0.00	178,631.50
Sub-Total: Non-Road Mobile Sources	0.00	61,628.44
Sub-Total: Mobile Sources	0.00	240,259.94

Sub-Total: Biogenic NOx Emissions	0.00	2,508.43

GRAND TOTAL NOx	38,091.95	255,468.79

	2002 Actual	
	(lbs/day)	**(tons/day)**
Stationary Point	38,091.95	19.0
Stationary Area	12,700.42	6.4
On - Road Mobile	178,631.50	89.3
Non - Road Mobile	61,628.44	30.8
TOTAL ANTHROPOGENIC NOx	291,052.31	145.5

CT Total 2002 Base Year NOx Inventory

STATIONARY SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)
VOC STORAGE/TRANSPORT/MARKETING		
Gasoline/Crude Oil Storage All (exc float roof)	0.00	0.00
Gasoline/Crude Oil Storage Floating Roof	0.00	0.00
Volatile Organic Liquid (VOL) Storage	0.00	0.00
VOL Ship/Barge Transfer	0.00	0.00
Barge/Tanker Cleaning	0.00	0.00
Bulk Gas Terminals	14.74	0.00
Gasoline Bulk Plants	0.00	0.00
Tank Truck Unloading	0.00	0.00
Vehicle Fuel	0.00	0.00
Underground Tank Breathing	0.00	0.00
Aircraft Refueling	0.00	0.00
Gasoline Trucks in Transit	0.00	0.00
Leaking Underground Storage Tanks	0.00	0.00
Spills	0.00	0.00
Sub-Total: VOC Stor/Trans/Market	14.74	0.00
INDUSTRIAL PROCESSES		
Organic Chemical Manufacture	16.20	0.00
SOCMI Fugitive	0.00	0.00
SOCMI Storage Tanks	0.00	0.00
Inorganic Chemical Manufacture	0.00	0.00
Fermentation Processes	0.00	0.00
Pharmaceutical Manufacture	4.69	0.00
Plastic Products Manufacture	4.10	0.00
Rubber Tire Manufacture	0.00	0.00
SBR Rubber Manufacture	0.00	0.00
Textile Polymers & Resin Mfg	0.00	0.00
Synthetic Fiber Manufacture	0.00	0.00
Iron & Steel Manufacture	460.40	0.00
Other	184.91	0.00
Sub-Total: Industrial Processes	670.30	0.00

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)
INDUSTRIAL SURFACE COATING	144.1	0
Large Appliances		
Magnet Wire		
Autos and Light Trucks		
Cans		
Metal Coils		
Paper		
Fabric		
Metal and Wood Furniture		
Miscellaneous Metal Products		
Flatwood Products		
Plastic Products		
Large Ships		
Large Aircraft		
High Performance Maintenance Coating		
Special Purpose Coating		
Others		
Sub-Total: Ind Surface Coating	144.10	0.00
NON - INDUSTRIAL SURFACE COATING		
Architectural Coatings	0.00	0.00
Auto Refinishing	0.00	0.00
Traffic Markings	0.00	0.00
Sub-Total: Non-Ind Surf Coating	0.00	0.00
OTHER SOLVENT USE		
Degreasing	0.00	0.00
Petroleum Dry Cleaning	0.00	0.00
Graphic Arts	64.26	0.00
Adhesives	0.00	0.00
Cutback Asphalt Paving	0.00	0.00
Emulsified Asphalt Paving	0.00	0.00
Solvent Extraction Processes	0.00	0.00
Consumer/Commercial Solvent Use	0.00	0.00
Other	0.00	0.00
Sub-Total: Other Solvent Use	64.26	0.00

CT Total 2002 Base Year NOx Inventory

STATIONARY SOURCES (cont)	2002 PI NOx Point (lbs/day)	Area (lbs/day)
WASTE DISPOSAL		
Municipal Waste Combustion	22,554.53	0.00
Municipal Waste Landfills	0.00	0.00
TSDFs	0.00	0.00
POTWs	0.00	0.00
ITWs	0.00	0.00
Sub-Total: Waste Disposal	22,554.53	0.00
OTHER STATIONARY SOURCES		
Utility Fuel Combustion	49,631.06	0.00
Industrial Fuel Combustion	8,567.45	5,370.86
Commercial Fuel Combustion	1,818.51	11,599.98
Residential Fuel Combustion	0.00	9,675.78
Wood Stoves	0.00	283.42
Forest Fires	0.00	6.76
Structural Fires	0.00	59.10
Open Burning	0.00	5.35
Slash Burning	0.00	0.00
Agricultural Burning	0.00	0.00
Orchard Heaters	0.00	0.00
Pesticide Applications	0.00	0.00
Asphalt Roofing	0.00	0.00
Internal Combustion Engines	30,061.21	0.00
Sub-Total: Other Stationary Sources	90,078.23	27,001.25
COMMERCIAL PROCESSES		
Bakeries	62.60	0.00
Breweries	0.00	0.00
Sub-Total: Commercial Processes	62.60	0.00

MOBILE SOURCES	2002 PI NOx Point (lbs/day)	Area (lbs/day)	
ON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses CTDOT Series 28D updated traffic inputs**
Light Duty Gas Vehicles	0.00	100,081.19	
Light Duty Gas Truck 1 &2	0.00	69,026.22	
Light Duty Gas Truck 3 & 4	0.00	28,362.90	
Heavy Duty Gas Vehicles	0.00	18,674.85	
Light Duty Diesel Vehicle	0.00	175.62	
Light Duty Diesel Truck	0.00	547.64	
Heavy Duty Diesel Vehicle	0.00	166,693.21	
Motorcycles	0.00	429.36	
Sub-Total: On-Road Mobile Sources	0.00	383,990.99	
NON - ROAD MOBILE SOURCES			**Differs from Dec 2005 Final 2002 PEI: Uses EPA's NONROAD2005 model**
Airport Equipment	0.00	300.00	
Commercial Equipment	0.00	9,320.00	
Construction Equipment	0.00	49,220.00	
Farm Equipment	0.00	2,320.00	
Industrial Equipment	0.00	38,020.00	
Lawn & Garden	0.00	13,760.00	
Logging Equipment	0.00	240.00	
Recreational Equipment	0.00	780.00	
Recreational Vessels	0.00	6,920.00	
Rail (equipment + engines)	0.00	12,757.76	
Aircraft	0.00	4,049.15	
Commercial Vessels	0.00	1,400.02	
Sub-Total: Non-Road Mobile Sources	0.00	139,086.93	

CT Total 2002 Base Year NOx Inventory

NOx EMISSION TOTALS	2002 PI NOx Point (lbs/day)	Area (lbs/day)
STATIONARY SOURCES		
Sub-Total: VOC Stor/Trans/Market	14.74	0.00
Sub-Total: Industrial Processes	670.30	0.00
Sub-Total: Ind Surface Coating	144.10	0.00
Sub-Total: Non-Ind Surf Coating	0.00	0.00
Sub-Total: Other Solvent Use	64.26	0.00
Sub-Total: Waste Disposal	22,554.53	0.00
Sub-Total: Other Stationary Srcs	90,078.23	27,001.25
Sub-Total: Commercial Processes	62.60	0.00
Sub-Total: Stationary Sources	113,588.76	27,001.25
NOx Reductions due to OTC/MOU & NBP		

MOBILE SOURCES		
Sub-Total: On-Road Mobile Sources	0.00	383,990.99
Sub-Total: Non-Road Mobile Sources	0.00	139,086.93
Sub-Total: Mobile Sources	0.00	523,077.92

Sub-Total: Biogenic NOx Emissions	0.00	3,823.53
GRAND TOTAL NOx	113,588.76	553,902.70

	2002 Actual (lbs/day)	(tons/day)
Stationary Point	113,588.76	56.8
Stationary Area	27,001.25	13.5
On - Road Mobile	383,990.99	192.0
Non - Road Mobile	139,086.93	69.5
TOTAL ANTHROPOGENIC NOx	663,667.93	331.8

Appendix 4D

Documentation of Growth Factors
Used to Project Emissions for 2008, 2009 and 2012

Table 4D-1

CT CURRENT and PROJECTED EMPLOYMENT by MAJOR INDUSTRY GROUPS

Source: "Connecticut's Industries and Occupations: Forecast 2014"; CT Employment Projections; CTDOL; Summer 2006

These values will be used for 8-hour ozone ROP calculations, since based on most recent CTDOL data.

	Employment		10 Year Change		%/year	Growth Factor from 2002		
Industry Title	**2004**	**2014**	**Net**	**Percent**	growth	**2008**	**2009**	**2012**
Total, All Occupations	**1,760,690**	**1,910,870**	**150,180**	**8.5%**	0.853%	**1.051**	**1.060**	**1.085**
Self-Employed and Unpaid Workers, Primary Job	**122,800**	**130,440**	**7,640**	**6.2%**	0.622%	**1.037**	**1.044**	**1.062**
Agriculture, Forestry, Fishing and Hunting	**5,540**	**5,680**	**140**	**2.5%**	0.253%	**1.015**	**1.018**	**1.025**
Utilities	**8,660**	**8,410**	**-250**	**-2.9%**	-0.289%	**0.983**	**0.980**	**0.971**
Construction	**65,810**	**70,210**	**4,400**	**6.7%**	0.669%	1.040	1.047	1.067
Construction of Buildings	14,060	14,460	400	2.8%	0.284%	1.017	1.020	1.028
Heavy and Civil Engineering Construction	6,340	6,160	-180	-2.8%	-0.284%	0.983	0.980	0.972
Specialty Trade Contractors	45,410	49,590	4,180	9.2%	0.921%	1.055	1.064	1.092
Manufacturing	**197,190**	**186,730**	**-10,460**	**-5.3%**	-0.530%	**0.968**	**0.963**	**0.947**
Food Manufacturing	7,200	6,780	-420	-5.8%	-0.583%	0.965	0.959	0.942
Beverage and Tobacco Product Manufacturing	1,090	1,450	360	33.0%	3.303%	1.198	1.231	1.330
Textile Mills	1,050	570	-480	-45.7%	-4.571%	0.726	0.680	0.543
Textile Product Mills	1,300	1,230	-70	-5.4%	-0.538%	0.968	0.962	0.946
Wood Product Manufacturing	1,810	1,940	130	7.2%	0.718%	1.043	1.050	1.072
Paper Manufacturing	5,620	4,700	-920	-16.4%	-1.637%	0.902	0.885	0.836
Printing and Related Support Activities	8,410	7,180	-1,230	-14.6%	-1.463%	0.912	0.898	0.854
Chemical Manufacturing	17,290	18,030	740	4.3%	0.428%	1.026	1.030	1.043
Plastics and Rubber Products Manufacturing	7,630	7,280	-350	-4.6%	-0.459%	0.972	0.968	0.954
Nonmetallic Mineral Product Manufacturing	2,690	2,750	60	2.2%	0.223%	1.013	1.016	1.022
Primary Metal Manufacturing	4,560	4,350	-210	-4.6%	-0.461%	0.972	0.968	0.954
Fabricated Metal Product Manufacturing	33,730	33,200	-530	-1.6%	-0.157%	0.991	0.989	0.984
Machinery Manufacturing	18,690	16,540	-2,150	-11.5%	-1.150%	0.931	0.919	0.885
Computer and Electronic Product Manufacturing	15,370	13,860	-1,510	-9.8%	-0.982%	0.941	0.931	0.902
Electrical Equipment, Appliances and Component Mfg	10,410	9,190	-1,220	-11.7%	-1.172%	0.930	0.918	0.883
Transportation Equipment Manufacturing	43,130	41,300	-1,830	-4.2%	-0.424%	0.975	0.970	0.958
Furniture and Related Product Manufacturing	3,460	3,740	280	8.1%	0.809%	1.049	1.057	1.081
Miscellaneous Manufacturing	12,570	11,540	-1,030	-8.2%	-0.819%	0.951	0.943	0.918
Wholesale Trade	**65,790**	**71,380**	**5,590**	**8.5%**	0.850%	**1.051**	**1.059**	**1.085**
Merchant Wholesalers, Durable Goods	31,570	33,690	2,120	6.7%	0.672%	1.040	1.047	1.067
Merchant Wholesalers, Nondurable Goods	21,370	22,680	1,310	6.1%	0.613%	1.037	1.043	1.061
Wholesale Electronic Markets and Agents and Brokers	12,850	15,010	2,160	16.8%	1.681%	1.101	1.118	1.168
Retail Trade	**193,060**	**210,450**	**17,390**	**9.0%**	0.901%	**1.054**	**1.063**	**1.090**
Motor Vehicle and Parts Dealers	22,900	27,020	4,120	18.0%	1.799%	1.108	1.126	1.180
Furniture and Home Furnishings Stores	8,410	9,640	1,230	14.6%	1.463%	1.088	1.102	1.146
Electronics and Appliance Stores	6,100	6,620	520	8.5%	0.852%	1.051	1.060	1.085
Building Material, Garden Equipment and Supplies Dealers	16,010	18,670	2,660	16.6%	1.661%	1.100	1.116	1.166
Food and Beverage Stores	43,890	46,170	2,280	5.2%	0.519%	1.031	1.036	1.052
Health and Personal Care Stores	14,470	15,190	720	5.0%	0.498%	1.030	1.035	1.050
Gasoline Stations	6,310	6,430	120	1.9%	0.190%	1.011	1.013	1.019
Clothing and Clothing Accessories Stores	20,170	22,640	2,470	12.2%	1.225%	1.073	1.086	1.122
Sporting Goods, Hobby, Book, and Music Stores	9,250	9,830	580	6.3%	0.627%	1.038	1.044	1.063
General Merchandise Stores	24,940	28,080	3,140	12.6%	1.259%	1.076	1.088	1.126
Miscellaneous Store Retailers	11,330	10,900	-430	-3.8%	-0.380%	0.977	0.973	0.962
Nonstore Retailers	9,290	9,260	-30	-0.3%	-0.032%	0.998	0.998	0.997
Transportation and Warehousing	**40,790**	**43,970**	**3,180**	**7.8%**	0.780%	**1.047**	**1.055**	**1.078**
Air Transportation	1,850	2,400	550	29.7%	2.973%	1.178	1.208	1.297
Rail Transportation	1,960	1,880	-80	-4.1%	-0.408%	0.976	0.971	0.959
Truck Transportation	7,090	7,280	190	2.7%	0.268%	1.016	1.019	1.027
Transit and Ground Passenger Transport	11,590	12,740	1,150	9.9%	0.992%	1.060	1.069	1.099
Support Activities for Transportation	3,700	4,290	590	15.9%	1.595%	1.096	1.112	1.159
Couriers and Messengers	7,250	6,990	-260	-3.6%	-0.359%	0.978	0.975	0.964
Warehousing and Storage	6,040	7,050	1,010	16.7%	1.672%	1.100	1.117	1.167
Information	**38,970**	**44,100**	**5,130**	**13.2%**	1.316%	**1.079**	**1.092**	**1.132**
Publishing Industries	12,470	13,960	1,490	11.9%	1.195%	1.072	1.084	1.119
Motion Picture and Sound Recording Industries	2,220	2,980	760	34.2%	3.423%	1.205	1.240	1.342
Broadcasting (except Internet)	4,510	5,490	980	21.7%	2.173%	1.130	1.152	1.217
Telecommunications	13,770	14,410	640	4.6%	0.465%	1.028	1.033	1.046
Internet Service Providers, Web Search, and Data Processing	4,190	5,030	840	20.0%	2.005%	1.120	1.140	1.200
Other Information Services	1,190	1,420	230	19.3%	1.933%	1.116	1.135	1.193
Finance and Insurance	**120,550**	**131,130**	**10,580**	**8.8%**	0.878%	**1.053**	**1.061**	**1.088**
Credit Intermediation and Related Activities	31,660	33,320	1,660	5.2%	0.524%	1.031	1.037	1.052
Securities, Commodity Contracts, Other Financial	18,400	23,850	5,450	29.6%	2.962%	1.178	1.207	1.296
Insurance Carriers and Related Activities	65,640	68,310	2,670	4.1%	0.407%	1.024	1.028	1.041
Funds, Trusts, and Other Financial Vehicles	4,750	5,550	800	16.8%	1.684%	1.101	1.118	1.168
Real Estate and Rental and Leasing	**20,260**	**22,230**	**1,970**	**9.7%**	0.972%	**1.058**	**1.068**	**1.097**
Real Estate	13,500	15,080	1,580	11.7%	1.170%	1.070	1.082	1.117
Rental and Leasing Services	6,070	6,190	120	2.0%	0.198%	1.012	1.014	1.020
Professional, Scientific, and Technical Services	**87,760**	**100,780**	**13,020**	**14.8%**	1.484%	**1.089**	**1.104**	**1.148**
Management of Companies and Enterprises	**25,490**	**26,640**	**1,150**	**4.5%**	0.451%	**1.027**	**1.032**	**1.045**
Administrative and Support and Waste Management and Remediation S	**84,250**	**95,500**	**11,250**	**13.4%**	1.335%	**1.080**	**1.093**	**1.134**
Administrative and Support Services	78,210	88,470	10,260	13.1%	1.312%	1.079	1.092	1.131
Waste Management and Remediation Service	6,040	7,030	990	16.4%	1.639%	1.098	1.115	1.164
Educational Services	**152,290**	**165,260**	**12,970**	**8.5%**	0.852%	**1.051**	**1.060**	**1.085**
Health Care and Social Assistance	**221,660**	**260,370**	**38,710**	**17.5%**	1.746%	**1.105**	**1.122**	**1.175**
Ambulatory Health Care Services	71,710	87,000	15,290	21.3%	2.132%	1.128	1.149	1.213
Hospitals	59,150	64,590	5,440	9.2%	0.920%	1.055	1.064	1.092
Nursing and Residential Care Facilities	57,200	64,360	7,160	12.5%	1.252%	1.075	1.088	1.125
Social Assistance	33,600	44,420	10,820	32.2%	3.220%	1.193	1.225	1.322
Arts, Entertainment, and Recreation	**45,670**	**53,110**	**7,440**	**16.3%**	1.629%	**1.098**	**1.114**	**1.163**
Performing Arts, Spectator Sports, and Related Industries	4,770	5,520	750	15.7%	1.572%	1.094	1.110	1.157
Museums, Historical Sites, and Similar Institution	2,000	2,330	330	16.5%	1.650%	1.099	1.116	1.165
Amusement, Gambling, and Recreation Industries	38,900	45,260	6,360	16.3%	1.635%	1.098	1.114	1.163
Accommodation and Food Services	**103,030**	**116,230**	**13,200**	**12.8%**	1.281%	**1.077**	**1.090**	**1.128**
Accommodation	11,220	13,990	2,770	24.7%	2.469%	1.148	1.173	1.247
Food Services and Drinking Places	91,810	102,240	10,430	11.4%	1.136%	1.068	1.080	1.114
Other Services (Except Government)	**56,150**	**61,380**	**5,230**	**9.3%**	0.931%	**1.056**	**1.065**	**1.093**
Repair and Maintenance	14,500	15,610	1,110	7.7%	0.766%	1.046	1.054	1.077
Personal and Laundry Services	18,980	21,260	2,280	12.0%	1.201%	1.072	1.084	1.120
Religious, Grantmaking, Civic, Professional, and Similar Organizations	15,610	17,140	1,530	9.8%	0.980%	1.059	1.069	1.098
Private Households	7,050	7,370	320	4.5%	0.454%	1.027	1.032	1.045
Government	**104,270**	**106,150**	**1,880**	**1.8%**	0.180%	**1.011**	**1.013**	**1.018**
Federal Government	20,190	19,080	-1,110	-5.5%	-0.550%	0.967	0.962	0.945
State Government, Excluding Education and Hospitals	38,600	39,000	400	1.0%	0.104%	1.006	1.007	1.010
Local Government, Excluding Education and Hospitals	45,480	48,080	2,600	5.7%	0.572%	1.034	1.040	1.057
Non-Manufacturing Employment (all but manufacturing)	1,563,500	1,724,140	160,640	10.3%	1.027%	1.062	1.072	1.103

Table 4D-2

CT
MOTOR-FUEL USE 1996 - 2005

OCTOBER 2006 (THOUSANDS OF GALLONS) TABLE MF-21

YEAR	COMBINED GASOLINE AND GASOHOL											SPECIAL FUEL	SUMMARY OF TOTAL USE			
	HIGHWAY USE					NONHIGHWAY USE							HIGHWAY			
		PUBLIC USE														
	PRIVATE AND COMMERCIAL	FEDERAL CIVILIAN	STATE, COUNTY, AND MUNICIPAL	TOTAL	TOTAL	PRIVATE AND COMMERCIAL	STATE, COUNTY, AND MUNICIPAL	TOTAL	TOTAL USE	LOSSES ALLOWED FOR EVAPORATION, HANDLING, ETC. 2/	TOTAL CONSUMPTION	PRIVATE AND COMMERCIAL HIGHWAY USE	AMOUNT	PERCENT CHANGE FROM PRIOR YEAR	NON-HIGHWAY (GASOLINE ONLY)	TOTAL
2005	1,538,648	2,348	25,908	28,256	1,566,904	53,512	1,000	54,512	1,621,416	(6,719)	1,614,697	307,303	1,874,207	(10.0)	54,512	1,928,719
2004	1,774,969	2,348	19,265	21,613	1,796,582	54,373	1,004	55,377	1,851,959	8,949	1,860,908	285,813	2,082,395	18.9	55,377	2,137,772
2003	1,588,790	2,348	19,353	21,701	1,610,491	42,008	1,009	43,017	1,653,508	1,745	1,655,253	267,048	1,877,539	4.6	43,017	1,920,556
2002	1,498,140	2,348	19,442	21,790	1,519,930	68,859	1,014	69,873	1,589,803	(223)	1,589,580	229,112	1,749,042	0.8	69,873	1,818,915
2001	1,436,555	2,348	19,376	21,724	1,458,279	48,755	1,010	49,765	1,508,044	(11,575)	1,496,469	273,178	1,731,457	2.0	49,765	1,781,222
2000	1,401,857	2,401	18,706	21,107	1,422,964	59,777	996	60,773	1,483,737	(7,397)	1,476,340	274,914	1,697,878	1.0	60,773	1,758,651
1999	1,470,716	2,302	18,642	20,944	1,491,660	56,993	992	57,985	1,549,645	1,801	1,551,446	237,293	1,728,953	7.9	57,985	1,786,938
1998	1,352,487	2,215	18,578	20,793	1,373,280	50,909	989	51,898	1,425,178	896	1,426,074	223,417	1,596,697	1.3	51,898	1,648,595
1997	1,309,058	3,203	18,514	21,717	1,330,775	64,796	986	65,782	1,396,557	3,459	1,400,016	244,903	1,575,678	1.7	65,782	1,641,460
1996	1,304,135	2,914	19,169	22,083	1,326,218	58,291	999	59,290	1,385,508	4,877	1,390,385	177,626	1,503,844	3.2	59,290	1,563,134

Source: FHWA Highway Statistic Series; Tables MF-2; See http://www.fhwa.dot.gov/policy/ohpi/qffuel.htm

% Increase from 1996 to 2005: 17.0%

Average Annual % Increase from 1996 to 2005: 1.89%

(Use for annual growth rate in gasoline usage from 2002 to 2008, 2009, and 2012)

Table 4D-3

File 1. Interim State Projections of Population by Sex: July 1, 2004 to 2030
Source: U.S.Census Bureau, Population Division, Interim State Population Projections, 2005.

FIPS	Region	Division	State	Sex	Age	Census 2000	Projection 2004	Projection 2005	Projection 2006	Projection 2007	Projection 2008	Projection 2009	Projection 2010	Projection 2011	Projection 2012
0	0	0	US	T	Total	281421906	292800571	2.96E+08	2.98E+08	3.01E+08	3.04E+08	3.06E+08	3.09E+08	3.12E+08	3.14E+08
9	1	1	CT	T	Total	3405565	3485593	3503185	3519930	3535579	3550416	3564393	3577490	3590023	3602158
			2002 CT Interpolation Using 2000 & 2004:			3,445,579				**Growth Factor vs 2002:**	**1.030**	**1.034**	**1.045443**		**1.045**

Source: All of the above from US Census Bureau; http://www.census.gov/population/www/projections/projectionsagesex.html

Table 4D-4
Summer Average Daily Traffic (ADT) in Connecticut
CTDOT Series 28D Projected Vehicle Miles Traveled (VMT)
for 2002, 2008, 2009 and 2012

2002	Greater CT Summer ADT (Series 28D VMT)	Southwest CT Summer ADT (Series 28D VMT)	State Total Summer ADT (Series 28D VMT)
Expressway	17,094,099	23,662,020	40,756,119
Arterial/Collector	22,966,798	19,913,353	42,880,151
Local	3,725,559	3,921,396	7,646,955
Ramp	639,190	922,716	1,561,906
Totals	**44,425,646**	**48,419,485**	**92,845,131**

2008	Greater CT Summer ADT (Series 28D VMT)	Southwest CT Summer ADT (Series 28D VMT)	State Total Summer ADT (Series 28D VMT)
Expressway	18,842,822	25,188,877	44,031,699
Arterial/Collector	24,807,626	21,129,160	45,936,786
Local	4,003,072	4,115,585	8,118,657
Ramp	705,347	982,693	1,688,040
Totals	**48,358,867**	**51,416,315**	**99,775,182**

2009	Greater CT Summer ADT (Series 28D VMT)	Southwest CT Summer ADT (Series 28D VMT)	State Total Summer ADT (Series 28D VMT)
Expressway	19,153,677	25,600,392	44,754,069
Arterial/Collector	25,115,712	21,358,145	46,473,857
Local	4,052,234	4,154,809	8,207,043
Ramp	639,203	791,765	1,430,968
Totals	**48,960,826**	**51,905,111**	**100,865,937**

2012	Greater CT Summer ADT (Series 28D VMT)	Southwest CT Summer ADT (Series 28D VMT)	State Total Summer ADT (Series 28D VMT)
Expressway	20,056,817	26,320,096	46,376,913
Arterial/Collector	25,675,553	21,825,479	47,501,032
Local	4,173,086	4,262,344	8,435,430
Ramp	665,712	814,024	1,479,736
Totals	**50,571,168**	**53,221,943**	**103,793,111**

Appendix 4E

Emission Projections for 2008, 2009, & 2012 Including Calculation of Emission Reductions Resulting from Control Strategies

DRAFT SWCT VOC Summer Day Emission Projections

	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)	48.52		1.11	1.13	1.19	54.03	0.00	54.95	0.00	57.70	0.00	
Gasoline/Crude Oil Storage Floating Roof	827.51		1.11	1.13	1.19	921.44	0.00	937.10	0.00	984.07	0.00	
Volatile Organic Liquid (VOL) Storage			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals	6,177.75		1.11	1.13	1.19	6,879.01	0.00	6,995.89	0.00	7,346.52	0.00	
Gasoline Bulk Plants			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading		1,333.37	1.11	1.13	1.19	0.00	1,484.73	0.00	1,509.95	0.00	1,585.63	
Vehicle Fuel		4,120.81	1.11	1.13	1.19	0.00	4,588.58	0.00	4,666.54	0.00	4,900.43	PV-Vent Control reductions listed below
Underground Tank Breathing		1,382.58	1.11	1.13	1.19	0.00	1,539.52	0.00	1,565.68	0.00	1,644.15	PV-Vent Control reductions listed below
Aircraft Refueling		87.15	1.18	1.21	1.30	0.00	102.70	0.00	105.29	0.00	113.06	
Gasoline Trucks in Transit		161.96	1.11	1.13	1.19	0.00	180.34	0.00	183.41	0.00	192.60	
Leaking Underground Storage Tanks		158.31	0.97	0.96	0.95	0.00	153.27	0.00	152.43	0.00	149.91	
Spills		324.33	0.97	0.96	0.95	0.00	314.01	0.00	312.29	0.00	307.13	
Unaccounted Gas Can Emissions (not in 2002 PEI)		9,406.14	1.11	1.13	1.19	0.00	10,473.86	0.00	10,651.82	0.00	11,185.68	Permeation, diurnal, transport-spillage emissions. Gas Can Control reductions listed below.
Sub-Total: VOC Stor/Trans/Market	7,053.78	16,974.65				7,854.48	18,837.01	7,987.93	19,147.41	8,388.28	20,078.59	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	4,942.96		1.03	1.03	1.04	5,069.89	0.00	5,091.05	0.00	5,154.52	0.00	
SOCMI Fugitive			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks		263.66	1.03	1.03	1.04	0.00	270.43	0.00	271.56	0.00	274.94	
Inorganic Chemical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes		1.01	1.20	1.23	1.33	0.00	1.21	0.00	1.24	0.00	1.34	
Pharmaceutical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Plastic Products Manufacture	1,207.77		0.97	0.97	0.95	1,174.53	0.00	1,168.99	0.00	1,152.37	0.00	
Rubber Tire Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture	414.33		0.97	0.97	0.95	402.93	0.00	401.03	0.00	395.32	0.00	
Textile Polymers & Resin Mfg			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	1.37		0.97	0.97	0.95	1.33	0.00	1.33	0.00	1.31	0.00	
Other	948.56		0.95	0.94	0.92	901.92	0.00	894.15	0.00	870.83	0.00	
Sub-Total: Industrial Processes	7,514.99	264.67				7,550.60	271.64	7,556.54	272.80	7,574.35	276.29	

DRAFT SWCT VOC Summer Day Emission Projections

	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls Implemented After 2002
	Point	Area				Point	Area	Point	Area	Point	Area	
STATIONARY SOURCES (cont)	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	
INDUSTRIAL SURFACE COATING	2,602.92	10,512.87	0.97	0.96	0.95	2,520.08	10,178.28	2,506.27	10,122.51	2,464.85	9,955.21	All sub-categories grouped togeher in 2002 PEI.
Large Appliances												
Magnet Wire												
Autos and Light Trucks												
Cans												
Metal Coils												
Paper												
Fabric												
Metal and Wood Furniture												
Miscellaneous Metal Products												
Flatwood Products												
Plastic Products												
Large Ships												
Large Aircraft												
High Performance Maintenance Coating												
Special Purpose Coating												
Others												
Sub-Total: Ind Surface Coating	2,602.92	10,512.87				2,520.08	10,178.28	2,506.27	10,122.51	2,464.85	9,955.21	
NON - INDUSTRIAL SURFACE COATING												
Architectural Coatings		22,495.79	1.03	1.03	1.05	0.00	23,180.26	0.00	23,271.51	0.00	23,518.08	AIM Control reductions listed below.
Auto Refinishing		2,352.27	1.05	1.05	1.08	0.00	2,460.31	0.00	2,478.32	0.00	2,532.34	Assumes HVLP Control reductions accounted for in 2002 PEI.
Traffic Markings		867.88	1.07	1.09	1.12	0.00	932.66	0.00	942.86	0.00	970.22	
Sub-Total: Non-Ind Surf Coating	0.00	25,715.94				0.00	26,573.23	0.00	26,692.69	0.00	27,020.63	
OTHER SOLVENT USE												
Degreasing	98.75	32,675.15	0.97	0.96	0.947	95.61	31,635.19	95.08	31,461.87	93.51	30,941.89	Solvent Cleaning control reductions listed below.
Petroleum Dry Cleaning		113.53	1.03	1.03	1.05	0.00	116.98	0.00	117.44	0.00	118.69	
Graphic Arts	1,463.99	7,993.70	1.07	1.08	1.119	1,568.95	8,566.78	1,586.44	8,662.30	1,638.92	8,948.84	
Adhesives	25.92	4,730.15	0.97	0.96	0.947	25.10	6,235.90	24.96	6,487.64	24.55	7,242.88	Area adhesives added per OTC estimates for 2002, then grown. Adhesive/Sealant Control reductions listed below.
Cutback Asphalt Paving		813.30	1.07	1.09	1.118	0.00	874.01	0.00	883.56	0.00	909.20	Asphalt Paving Control reductions listed below.
Emulsified Asphalt Paving		1,507.72	1.07	1.09	1.118	0.00	1,620.26	0.00	1,637.97	0.00	1,685.51	Asphalt Paving Control reductions listed below.
Solvent Extraction Processes	4.00		0.97	0.96	0.947	3.87	0.00	3.85	0.00	3.79	0.00	
Consumer/Commercial Solvent Use		47,596.89	1.03	1.03	1.05	0.00	49,045.10	0.00	49,238.17	0.00	49,759.86	Consumer Product Controls (OTC2001 & 2006) listed below.
Other	698.16		0.97	0.96	0.947	675.94	0.00	672.24	0.00	661.13	0.00	
Sub-Total: Other Solvent Use	2,290.82	95,430.44				2,369.46	98,094.22	2,382.57	98,488.96	2,421.89	99,606.86	

DRAFT SWCT VOC Summer Day Emission Projections

	2002 PI VOC		Growth Factor			2008 VOC		2009 VOC		2012 VOC		Controls
	Point	Area	vs. 2002			Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES (cont)	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
WASTE DISPOSAL												
Municipal Waste Combustion	358.24		1.00	1.00	1.00	358.24	0.00	358.24	0.00	358.24	0.00	
Municipal Waste Landfills		529.38	1.00	1.00	1.00	0.00	529.38	0.00	529.38	0.00	529.38	
TSDFs		1,143.73	0.97	0.96	0.95	0.00	1,107.33	0.00	1,101.26	0.00	1,083.06	
POTWs		3,682.21	1.03	1.03	1.05	0.00	3,794.25	0.00	3,809.18	0.00	3,849.54	
ITWs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	358.24	5,355.32				358.24	5,430.96	358.24	5,439.83	358.24	5,461.98	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	1,208.48		1.09	1.10	1.14	1,311.94	0.00	1,329.19	0.00	1,380.92	0.00	
Industrial Fuel Combustion	86.02	117.17	0.97	0.96	0.95	83.28	113.44	82.83	112.82	81.46	110.95	
Commercial Fuel Combustion	62.83	264.27	1.06	1.07	1.10	66.70	280.56	67.35	283.28	69.29	291.42	
Residential Fuel Combustion		237.51	1.03	1.03	1.05	0.00	244.74	0.00	245.70	0.00	248.30	
Wood Stoves		5,392.10	1.03	1.03	1.05	0.00	5,556.16	0.00	5,578.04	0.00	5,637.14	
Forest Fires		1.18	1.00	1.00	1.00	0.00	1.18	0.00	1.18	0.00	1.18	
Structural Fires		284.08	1.03	1.03	1.05	0.00	292.72	0.00	293.88	0.00	296.99	
Open Burning		53.27	1.03	1.03	1.05	0.00	54.89	0.00	55.11	0.00	55.69	
Slash Burning			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications		5,968.20	1.02	1.02	1.03	0.00	6,058.69	0.00	6,073.77	0.00	6,119.02	
Asphalt Roofing			1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	733.22		1.05	1.06	1.09	770.74	0.00	777.00	0.00	795.76	0.00	
Sub-Total: Other Stationary Sources	2,090.55	12,317.78				2,232.67	12,602.39	2,256.36	12,643.77	2,327.42	12,760.70	
COMMERCIAL PROCESSES												
Bakeries	664.26	1700.17	0.97	0.96	0.94	641.01	1,640.66	637.14	1,630.75	625.51	1,600.99	
Breweries		1.01	1.20	1.23	1.33	0.00	1.21	0.00	1.24	0.00	1.34	
Sub-Total: Commercial Processes	664.26	1,701.18				641.01	1,641.87	637.14	1,631.99	625.51	1,602.34	

MOBILE SOURCES	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	Growth Factor vs. 2002 2009	Growth Factor vs. 2002 2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)
Light Duty Gas Vehicles		50,588.13					25,555.26		22,553.54		14,833.31	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 1 & 2		27,232.72					19,194.77		18,231.93		14,651.71	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 3 & 4		12,534.23					9,174.90		8,914.69		7,413.98	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Gas Vehicles		2,612.48					1,552.55		1,371.48		1,116.89	Federal HDT & Fuel Standards included.
Light Duty Diesel Vehicle		36.55					10.05		7.21		3.55	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Diesel Truck		114.61					77.44		71.63		55.15	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Diesel Vehicle		2,538.87					1,754.18		1,659.23		1,402.26	Federal HDT & Fuel Standards included.
Motorcycles		885.06					835.20		823.00		823.87	
Sub-Total: On-Road Mobile Sources	0.00	96,542.64					58,154.36		53,632.70		40,300.73	w/o 2% contingency for conformity budgets
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)
Airport Equipment		0.00				0.00	0.00	0.00	0.00	0.00	0.00	Federal Engine & Fuel Standards included.
Commercial Equipment		9,340.00				0.00	7,500.00	0.00	7,160.00	0.00	7,220.00	Federal Engine & Fuel Standards included.
Construction Equipment		5,060.00				0.00	3,460.00	0.00	3,300.00	0.00	2,940.00	Federal Engine & Fuel Standards included.
Farm Equipment		60.00				0.00	40.00	0.00	40.00	0.00	40.00	Federal Engine & Fuel Standards included.
Industrial Equipment		5,040.00				0.00	3,160.00	0.00	2,740.00	0.00	1,520.00	Federal Engine & Fuel Standards included.
Lawn & Garden		59,100.00				0.00	39,080.00	0.00	37,460.00	0.00	36,600.00	Federal Engine & Fuel Standards included.
Logging Equipment		40.00				0.00	20.00	0.00	20.00	0.00	20.00	Federal Engine & Fuel Standards included.
Recreational Equipment		3,740.00				0.00	5,100.00	0.00	5,060.00	0.00	4,840.00	Federal Engine & Fuel Standards included.
Recreational Vessels		48,240.00				0.00	39,240.00	0.00	37,840.00	0.00	34,280.00	Federal Engine & Fuel Standards included.
Rail (equipment + engines)		445.34	0.98	0.97	0.96	0.00	435.41	0.00	433.76	0.00	408.80	
Aircraft		729.46	1.18	1.21	1.30	0.00	859.58	0.00	881.27	0.00	946.33	
Commercial Vessels		172.07	1.05	1.05	1.08	0.00	180.12	0.00	181.46	0.00	185.48	
Sub-Total: Non-Road Mobile Sources	0.00	131,966.87				0.00	99,075.11	0.00	95,116.49	0.00	89,000.61	

DRAFT SWCT VOC Summer Day Emission Projections

VOC EMISSION TOTALS	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	7,053.78	16,974.65				7,854.48	18,837.01	7,987.93	19,147.41	8,388.28	20,078.59	
Sub-Total: Industrial Processes	7,514.99	264.67				7,550.60	271.64	7,556.54	272.80	7,574.35	276.29	
Sub-Total: Ind Surface Coating	2,602.92	10,512.87				2,520.08	10,178.28	2,506.27	10,122.51	2,464.85	9,955.21	
Sub-Total: Non-Ind Surf Coating	0.00	25,715.94				0.00	26,573.23	0.00	26,692.69	0.00	27,020.63	
Sub-Total: Other Solvent Use	2,290.82	95,430.44				2,369.46	98,094.22	2,382.57	98,488.96	2,421.89	99,606.86	
Sub-Total: Waste Disposal	358.24	5,355.32				358.24	5,430.96	358.24	5,439.83	358.24	5,461.98	
Sub-Total: Other Stationary Srcs	2,090.55	12,317.78				2,232.67	12,602.39	2,256.36	12,643.77	2,327.42	12,760.70	
Sub-Total: Commercial Processes	664.26	1,701.18				641.01	1,641.87	637.14	1,631.99	625.51	1,602.34	
Sub-Total: Stationary Sources	22,575.56	168,272.85				23,526.55	173,629.59	23,685.05	174,439.95	24,160.54	176,762.60	
MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	96,542.64				0.00	59,317.45	0.00	54,705.36	0.00	41,106.75	**Includes 2% contingency for conformity budgets**
Sub-Total: Non-Road Mobile Sources	0.00	131,966.87				0.00	99,075.11	0.00	95,116.49	0.00	89,000.61	
Sub-Total: Mobile Sources	0.00	228,509.51				0.00	158,392.56	0.00	149,821.84	0.00	130,107.35	
Sub-Total: Biogenic VOC Emissions	0.00	251,261.51	1.00	1.00	1.00	0.00	251,261.51	0.00	251,261.51	0.00	251,261.51	
GRAND TOTAL VOC	22,575.56	648,043.87				23,526.55	583,283.67	23,685.05	575,523.30	24,160.54	558,131.46	

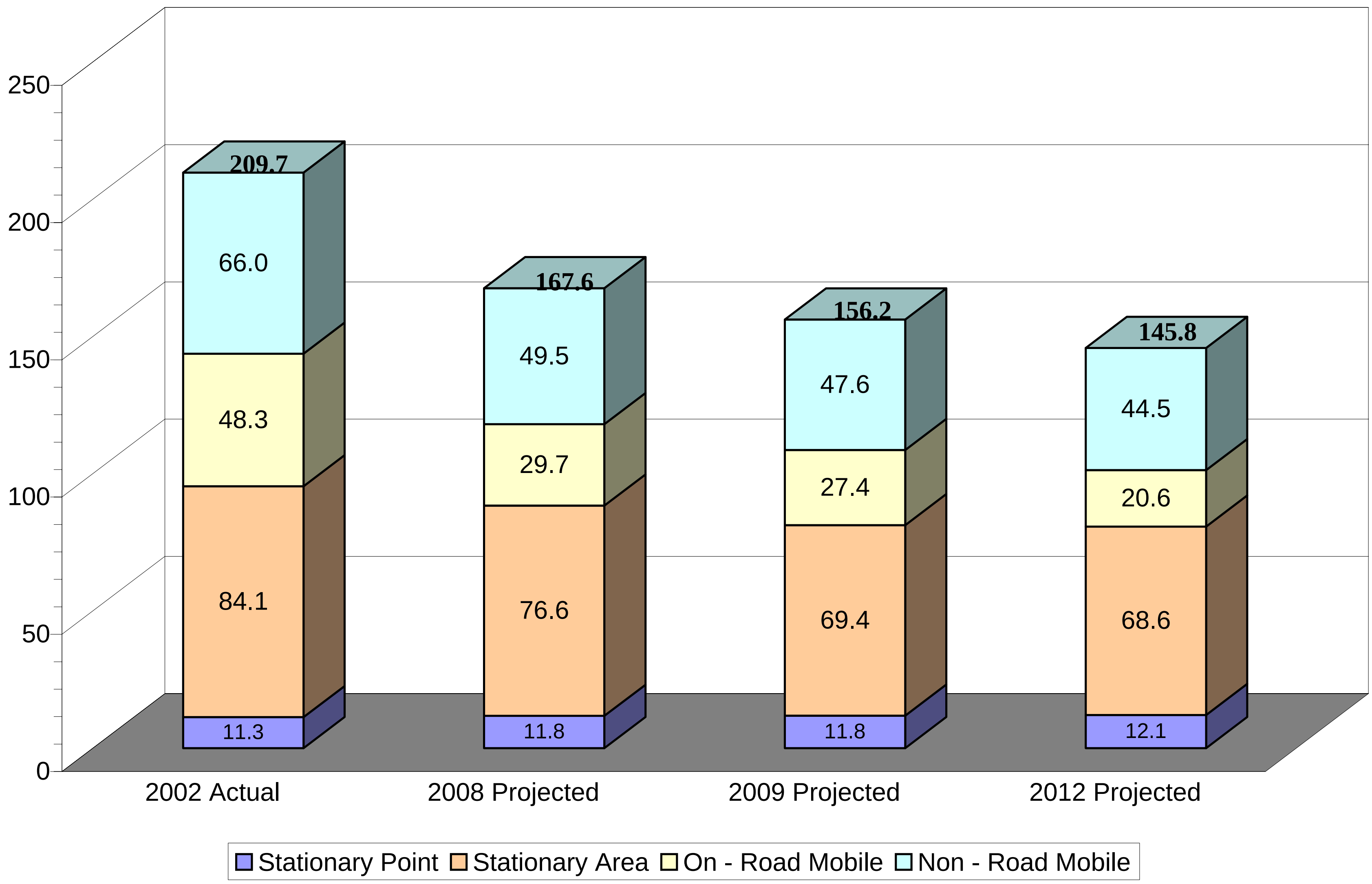
POST-2002 CONTROL REDUCTIONS

	2008 Point	2008	2009 Point	2009	2012 Point	2012	
PV Vent Valves at Gasoline Stations		-756.59		-769.45		-808.01	Underground tank breathing reductions
Automobile Refinishing (HVLP Guns)		0.00		0.00		0.00	Assumed accounted for in 2002 base inventory
Portable Fuel Containers		-2042.40		-3226.65		-6503.80	Not including reductions from non-road refueling
Solvent Cleaning Volatilty & Work Practices		-10433.10		-10371.76		-10206.04	Based on OTC calcs, with updated population & 80% RE & RP
Consumer Products (2006 OTC Model Rule)		0.00		-7836.75		-7919.78	Includes OTC2001 & OTC2006 Model Rules effective May 2009
AIM Coatings (2001 OTC Model Rule)		-7185.88		-7214.17		-7290.60	
Asphalt Paving (2006 OTC Model Rule)		0.00		-2017.22		-2075.76	Assumes reg effective May 2009
Adhesives & Sealants (2006 OTC Model Rule):							Assumes reg effective May 2009 (may actually be 2008)
Point Source	0.00		0.00		0.00		
Area Source		0.00		-4178.04		-4664.41	Uses OTC/MACTEC growth rate for area sources

SUMMARY BY SOURCE CATEGORY (includes listed Post-2002 controls)

	2002 Actual (lbs/day)	2002 Actual (tons/day)	2008 Projected (lbs/day)	2008 Projected (tons/day)	2009 Projected (lbs/day)	2009 Projected (tons/day)	2012 Projected (lbs/day)	2012 Projected (tons/day)	
Stationary Point	22,575.56	11.3	23,526.55	11.8	23,685.05	11.8	24,160.54	12.1	
Stationary Area	168,272.85	84.1	153,211.62	76.6	138,825.91	69.4	137,294.19	68.6	
On - Road Mobile	96,542.64	48.3	59,317.45	29.7	54,705.36	27.4	41,106.75	20.6	**Conformity Budgets for 2002, 2005, and 2007**
Non - Road Mobile	131,966.87	66.0	99,075.11	49.5	95,116.49	47.6	89,000.61	44.5	
TOTAL ANTHROPOGENIC VOC	419,357.92	209.7	335,130.73	167.6	312,332.80	156.2	291,562.09	145.8	
			vs 2002	-20.1%	vs 2002	-25.5%	vs 2002	-30.5%	
		335.3		293.2		281.8		271.4	

Projected VOC Emission Trends for Greater Connecticut



DRAFT GrCT VOC Summer Day Emission Projections

	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline/Crude Oil Storage Floating Roof	131.48		1.11	1.13	1.19	146.40	0.00	148.89	0.00	156.35	0.00	
Volatile Organic Liquid (VOL) Storage			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals	791.74		1.11	1.13	1.19	881.61	0.00	896.59	0.00	941.53	0.00	
Gasoline Bulk Plants			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading		1,271.03	1.11	1.13	1.19	0.00	1,415.31	0.00	1,439.36	0.00	1,511.50	
Vehicle Fuel		4,077.58	1.11	1.13	1.19	0.00	4,540.44	0.00	4,617.59	0.00	4,849.02	PV-Vent Control reductions listed below
Underground Tank Breathing		1,317.94	1.11	1.13	1.19	0.00	1,467.54	0.00	1,492.48	0.00	1,567.28	PV-Vent Control reductions listed below
Aircraft Refueling		284.00	1.18	1.21	1.30	0.00	334.66	0.00	343.10	0.00	368.43	
Gasoline Trucks in Transit		153.00	1.11	1.13	1.19	0.00	170.37	0.00	173.26	0.00	181.95	
Leaking Underground Storage Tanks		150.77	0.97	0.96	0.95	0.00	145.97	0.00	145.17	0.00	142.77	
Spills		497.20	0.97	0.96	0.95	0.00	481.38	0.00	478.74	0.00	470.83	
Unaccounted Gas Can Emissions (not in 2002 PEI)		8,029.28	1.11	1.13	1.19	0.00	8,940.72	0.00	9,092.62	0.00	9,548.34	Permeation, diurnal, transport-spillage emissions. Gas Can Control reductions listed below.
Sub-Total: VOC Stor/Trans/Market	923.22	15,780.80				1,028.02	17,496.39	1,045.48	17,782.32	1,097.88	18,640.11	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	251.43		1.03	1.03	1.04	257.89	0.00	258.96	0.00	262.19	0.00	
SOCMI Fugitive			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks		399.85	1.03	1.03	1.04	0.00	410.12	0.00	411.83	0.00	416.96	
Inorganic Chemical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes		2.01	1.20	1.23	1.33	0.00	2.41	0.00	2.47	0.00	2.67	
Pharmaceutical Manufacture	107.40		1.03	1.03	1.04	110.16	0.00	110.62	0.00	112.00	0.00	
Plastic Products Manufacture	488.00		0.97	0.97	0.95	474.57	0.00	472.33	0.00	465.61	0.00	
Rubber Tire Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture	32.60		0.97	0.97	0.95	31.70	0.00	31.55	0.00	31.10	0.00	
Textile Polymers & Resin Mfg			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	4.32		0.97	0.97	0.95	4.20	0.00	4.18	0.00	4.12	0.00	
Other	364.26		0.95	0.94	0.92	346.35	0.00	343.37	0.00	334.41	0.00	
Sub-Total: Industrial Processes	1,248.01	401.86				1,224.87	412.53	1,221.01	414.30	1,209.44	419.64	

DRAFT GrCT VOC Summer Day Emission Projections

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002	
INDUSTRIAL SURFACE COATING	3,380.23	9,041.96	0.97	0.96	0.95	3,272.65	8,754.18	3,254.72	8,706.22	3,200.92	8,562.33	All sub-categories grouped togeher in 2002 PEI.	
Large Appliances													
Magnet Wire													
Autos and Light Trucks													
Cans													
Metal Coils													
Paper													
Fabric													
Metal and Wood Furniture													
Miscellaneous Metal Products													
Flatwood Products													
Plastic Products													
Large Ships													
Large Aircraft													
High Performance Maintenance Coating													
Special Purpose Coating													
Others													
Sub-Total: Ind Surface Coating	3,380.23	9,041.96				3,272.65	8,754.18	3,254.72	8,706.22	3,200.92	8,562.33		
NON - INDUSTRIAL SURFACE COATING													
Architectural Coatings		18,659.48	1.03	1.03	1.05	0.00	19,227.22	0.00	19,302.92	0.00	19,507.43	AIM Control reductions listed below.	
Auto Refinishing		1,951.13	1.05	1.05	1.08	0.00	2,040.75	0.00	2,055.68	0.00	2,100.49	Assumes HVLP Control reductions accounted for in 2002 PEI.	
Traffic Markings		719.88	1.07	1.09	1.12	0.00	773.61	0.00	782.07	0.00	804.77		
Sub-Total: Non-Ind Surf Coating	0.00	21,330.49				0.00	22,041.58	0.00	22,140.67	0.00	22,412.69		
OTHER SOLVENT USE													
Degreasing	127.19	31,572.93	0.97	0.96	0.95	123.14	30,568.05	122.47	30,400.57	120.44	29,898.13	Solvent Cleaning control reductions listed below.	
Petroleum Dry Cleaning		77.01	1.03	1.03	1.05	0.00	79.35	0.00	79.67	0.00	80.51		
Graphic Arts	126.18	7,718.64	1.07	1.08	1.12	135.23	8,272.01	136.73	8,364.23	141.26	8,640.92		
Adhesives	41.60	4,848.27	0.97	0.96	0.95	40.28	6,391.61	40.06	6,649.65	39.39	7,423.74	Area adhesives added per OTC estimates for 2002, then grown. Adhesive/Sealant Control reductions listed below.	
Cutback Asphalt Paving		3,103.22	1.07	1.09	1.12	0.00	3,334.85	0.00	3,371.30	0.00	3,469.14	Asphalt Paving Control reductions listed below.	
Emulsified Asphalt Paving		3,647.98	1.07	1.09	1.12	0.00	3,920.27	0.00	3,963.13	0.00	4,078.14	Asphalt Paving Control reductions listed below.	
Solvent Extraction Processes			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00		
Consumer/Commercial Solvent Use		32,539.84	1.03	1.03	1.05	0.00	33,529.91	0.00	33,661.91	0.00	34,018.56	Consumer Product Controls (OTC2001 & 2006) listed below.	Big jump from 1996 base year/Chris?
Other	142.20		0.97	0.96	0.95	137.67	0.00	136.92	0.00	134.66	0.00		
Sub-Total: Other Solvent Use	437.17	83,507.89				436.32	86,096.06	436.18	86,490.46	435.75	87,609.14		

	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls Implemented After 2002
STATIONARY SOURCES (cont)	Point (lbs/day)	Area (lbs/day)	2008	2009	2012	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	
WASTE DISPOSAL												
Municipal Waste Combustion	959.66		1.00	1.00	1.00	959.66	0.00	959.66	0.00	959.66	0.00	
Municipal Waste Landfills		1,776.01	1.00	1.00	1.00	0.00	1,776.01	0.00	1,776.01	0.00	1,776.01	
TSDFs		527.12	0.97	0.96	0.95	0.00	510.34	0.00	507.55	0.00	499.16	
POTWs		3,031.86	1.03	1.03	1.05	0.00	3,124.11	0.00	3,136.41	0.00	3,169.64	
ITWs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	959.66	5,334.99				959.66	5,410.46	959.66	5,419.96	959.66	5,444.81	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	446.66		1.09	1.10	1.14	484.90	0.00	491.27	0.00	510.39	0.00	
Industrial Fuel Combustion	188.21	104.58	0.97	0.96	0.95	182.22	101.25	181.22	100.70	178.23	99.03	
Commercial Fuel Combustion	29.49	235.75	1.06	1.07	1.10	31.31	250.28	31.61	252.71	32.52	259.97	
Residential Fuel Combustion		201.90	1.03	1.03	1.05	0.00	208.04	0.00	208.86	0.00	211.08	
Wood Stoves		8,302.76	1.03	1.03	1.05	0.00	8,555.38	0.00	8,589.06	0.00	8,680.07	
Forest Fires		13.65	1.00	1.00	1.00	0.00	13.65	0.00	13.65	0.00	13.65	
Structural Fires		180.23	1.03	1.03	1.05	0.00	185.71	0.00	186.44	0.00	188.42	
Open Burning		56.76	1.03	1.03	1.05	0.00	58.49	0.00	58.72	0.00	59.34	
Slash Burning			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications		4,603.95	1.02	1.02	1.03	0.00	4,673.76	0.00	4,685.39	0.00	4,720.30	
Asphalt Roofing			1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	1,490.06		1.05	1.06	1.09	1,566.32	0.00	1,579.03	0.00	1,617.16	0.00	
Sub-Total: Other Stationary Sources	2,154.42	13,699.58				2,264.75	14,046.57	2,283.13	14,095.53	2,338.30	14,231.85	
COMMERCIAL PROCESSES												
Bakeries	0.58	1960.63	0.97	0.96	0.94	0.56	1,892.01	0.56	1,880.57	0.55	1,846.26	
Breweries		2.01	1.20	1.23	1.33	0.00	2.41	0.00	2.47	0.00	2.67	
Sub-Total: Commercial Processes	0.58	1,962.64				0.56	1,894.42	0.56	1,883.05	0.55	1,848.93	

DRAFT GrCT VOC Summer Day Emission Projections

	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls Implemented After 2002
	Point	Area				Point	Area	Point	Area	Point	Area	
MOBILE SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)
Light Duty Gas Vehicles		47,630.65					24,667.70		21,833.43		14,399.40	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 1 &2		25,538.99					18,502.05		17,627.67		14,195.02	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 3 & 4		11,761.13					8,827.12		8,605.83		7,186.33	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Gas Vehicles		2,217.56					1,356.10		1,197.82		984.79	Federal HDT & Fuel Standards included.
Light Duty Diesel Vehicle		33.20					9.39		6.95		3.35	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Diesel Truck		104.35					73.10		67.52		52.56	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Diesel Vehicle		2,066.89					1,471.09		1,395.73		1,195.58	Federal HDT & Fuel Standards included.
Motorcycles		908.15					885.92		876.23		879.82	
Sub-Total: On-Road Mobile Sources	0.00	90,260.92					55,792.48		51,611.19		38,896.85	w/o 2% contingency for conformity budgets
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)
Airport Equipment		40.00				0.00	20.00	0.00	20.00	0.00	20.00	Federal Engine & Fuel Standards included.
Commercial Equipment		6,200.00				0.00	5,060.00	0.00	4,840.00	0.00	4,900.00	Federal Engine & Fuel Standards included.
Construction Equipment		4,020.00				0.00	2,760.00	0.00	2,640.00	0.00	2,340.00	Federal Engine & Fuel Standards included.
Farm Equipment		280.00				0.00	220.00	0.00	200.00	0.00	180.00	Federal Engine & Fuel Standards included.
Industrial Equipment		4,400.00				0.00	2,760.00	0.00	2,400.00	0.00	1,340.00	Federal Engine & Fuel Standards included.
Lawn & Garden		37,500.00				0.00	26,360.00	0.00	25,460.00	0.00	24,980.00	Federal Engine & Fuel Standards included.
Logging Equipment		100.00				0.00	60.00	0.00	60.00	0.00	60.00	Federal Engine & Fuel Standards included.
Recreational Equipment		11,820.00				0.00	16,760.00	0.00	16,620.00	0.00	15,840.00	Federal Engine & Fuel Standards included.
Recreational Vessels		45,840.00				0.00	37,040.00	0.00	35,660.00	0.00	32,180.00	Federal Engine & Fuel Standards included.
Rail (equipment + engines)		219.71	0.98	0.97	0.96	fix	195.31	fix	194.58	fix	192.37	
Aircraft		1,843.69	1.18	1.21	1.30	0.00	2172.56	0.00	2227.38	0.00	2391.81	
Commercial Vessels		82.81	1.05	1.05	1.08	0.00	86.68	0.00	87.33	0.00	89.27	
Sub-Total: Non-Road Mobile Sources	0.00	112,346.21				0.00	93,494.56	0.00	90,409.28	0.00	84,513.45	

DRAFT GrCT VOC Summer Day Emission Projections

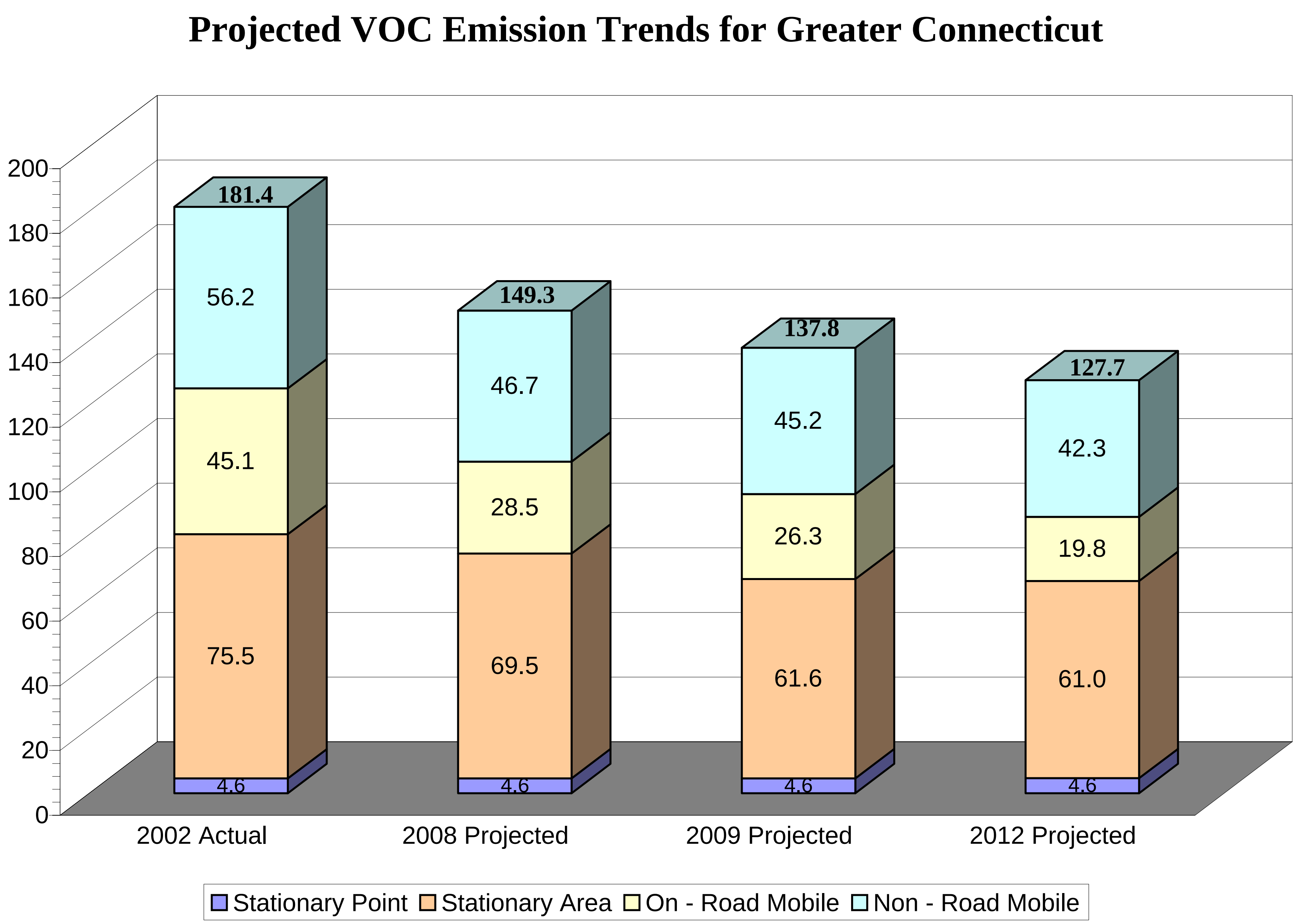
VOC EMISSION TOTALS	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002: 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	923.22	15,780.80				1,028.02	17,496.39	1,045.48	17,782.32	1,097.88	18,640.11	
Sub-Total: Industrial Processes	1,248.01	401.86				1,224.87	412.53	1,221.01	414.30	1,209.44	419.64	
Sub-Total: Ind Surface Coating	3,380.23	9,041.96				3,272.65	8,754.18	3,254.72	8,706.22	3,200.92	8,562.33	
Sub-Total: Non-Ind Surf Coating	0.00	21,330.49				0.00	22,041.58	0.00	22,140.67	0.00	22,412.69	
Sub-Total: Other Solvent Use	437.17	83,507.89				436.32	86,096.06	436.18	86,490.46	435.75	87,609.14	
Sub-Total: Waste Disposal	959.66	5,334.99				959.66	5,410.46	959.66	5,419.96	959.66	5,444.81	
Sub-Total: Other Stationary Srcs	2,154.42	13,699.58				2,264.75	14,046.57	2,283.13	14,095.53	2,338.30	14,231.85	
Sub-Total: Commercial Processes	0.58	1,962.64				0.56	1,894.42	0.56	1,883.05	0.55	1,848.93	
Sub-Total: Stationary Sources	9,103.29	151,060.21				9,186.82	156,152.18	9,200.74	156,932.51	9,242.50	159,169.50	
MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	90,260.92				0.00	56,908.33	0.00	52,643.41	0.00	39,674.79	**Includes 2% contingency for conformity budgets**
Sub-Total: Non-Road Mobile Sources	0.00	112,346.21				0.00	93,494.56	0.00	90,409.28	0.00	84,513.45	
Sub-Total: Mobile Sources	0.00	202,607.13				0.00	150,402.89	0.00	143,052.69	0.00	124,188.24	
Sub-Total: Biogenic VOC Emissions	0.00	537,197.30	1.00	1.00	1.00	0.00	537,197.30	0.00	537,197.30	0.00	537,197.30	
GRAND TOTAL VOC	9,103.29	890,864.64				9,186.82	843,752.37	9,200.74	837,182.51	9,242.50	820,555.04	

POST-2002 CONTROL REDUCTIONS

	2008 Point	2008 Area	2009 Point	2009 Area	2012 Point	2012 Area	
PV Vent Valves at Gasoline Stations		-721.22		-733.47		-770.23	Underground tank breathing reductions
Automobile Refinishing (HVLP Guns)		0.00		0.00		0.00	Assumed accounted for in 2002 base inventory
Portable Fuel Containers		-1743.44		-2754.34		-5551.79	Not including reductions from non-road refueling
Solvent Cleaning Volatilty & Work Practices		-8716.85		-8665.60		-8527.14	Based on OTC calcs, with updated population & 80% RE & RP
Consumer Products (~ 2006 OTC Model Rule)		0.00		-5357.63		-5414.3944	Includes OTC2001 & OTC2006 Model Rules effective May 2009
AIM Coatings (2001 OTC Model Rule)		-5960.44		-5983.90		-6047.30	
Asphalt Paving (2006 OTC Model Rule)		0.00		-5867.55		-6037.83	Assumes reg effective May 2009
Adhesives & Sealants (2006 OTC Model Rule):							Assumes reg effective May 2009 (may actually be 2008)
Point Source	0.00		-25.80		-25.37		
Area Source		0.00		-4282.37		-4780.89	Uses OTC/MACTEC growth rate for area sources

SUMMARY BY SOURCE CATEGORY

	2002 Actual (lbs/day)	2002 Actual (tons/day)	2008 Projected (lbs/day)	2008 Projected (tons/day)	2009 Projected (lbs/day)	2009 Projected (tons/day)	2012 Projected (lbs/day)	2012 Projected (tons/day)	
Stationary Point	9,103.29	4.6	9,186.82	4.6	9,174.94	4.6	9,217.13	4.6	
Stationary Area	151,060.21	75.5	139,010.24	69.5	123,287.64	61.6	122,039.92	61.0	
On - Road Mobile	90,260.92	45.1	56,908.33	28.5	52,643.41	26.3	39,674.79	19.8	**Conformity Budgets for 2008 and 2009 (2012?)**
Non - Road Mobile	112,346.21	56.2	93,494.56	46.7	90,409.28	45.2	84,513.45	42.3	
TOTAL ANTHROPOGENIC VOC	362,770.63	181.4	298,599.94	149.3	275,515.28	137.8	255,445.30	127.7	
			vs 2002	-17.7%	vs 2002	-24.1%	vs 2002	-29.6%	



Projected VOC Emission Trends for Greater Connecticut
200
180
160
140
120
100
80
60
40
20
0
181.4
56.2
45.1
75.5
4.6
149.3
46.7
28.5
69.5
4.6
137.8
45.2
26.3
61.6
4.6
127.7
42.3
19.8
61.0
4.6
2002 Actual
2008 Projected
2009 Projected
2012 Projected
Stationary Point
Stationary Area
On - Road Mobile
Non - Road Mobile

	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)	48.52	0.00	1.11	1.13	1.19	54.03	0.00	54.95	0.00	57.70	0.00	
Gasoline/Crude Oil Storage Floating Roof	958.99	0.00	1.11	1.13	1.19	1,067.85	0.00	1,085.99	0.00	1,140.42	0.00	
Volatile Organic Liquid (VOL) Storage	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals	6969.49	0.00	1.11	1.13	1.19	7,760.62	0.00	7,892.48	0.00	8,288.05	0.00	
Gasoline Bulk Plants	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading	0.00	2,604.40	1.11	1.13	1.19	0.00	2,900.04	0.00	2,949.31	0.00	3,097.13	
Vehicle Fuel	0.00	8,198.39	1.11	1.13	1.19	0.00	9,129.02	0.00	9,284.13	0.00	9,749.44	PV-Vent Control reductions listed below
Underground Tank Breathing	0.00	2,700.52	1.11	1.13	1.19	0.00	3,007.07	0.00	3,058.16	0.00	3,211.43	PV-Vent Control reductions listed below
Aircraft Refueling	0.00	371.15	1.18	1.21	1.30	0.00	437.36	0.00	448.39	0.00	481.49	
Gasoline Trucks in Transit	0.00	314.96	1.11	1.13	1.19	0.00	350.71	0.00	356.67	0.00	374.55	
Leaking Underground Storage Tanks	0.00	309.08	0.97	0.96	0.95	0.00	299.24	0.00	297.60	0.00	292.68	
Spills	0.00	821.53	0.97	0.96	0.95	0.00	795.38	0.00	791.03	0.00	777.95	
Unaccounted Gas Can Emissions (not in 2002 PEI)	0.00	17,435.42	1.11	1.13	1.19	0.00	19,414.58	0.00	19,744.44	0.00	20,734.02	Permeation, diurnal, transport-spillage emissions. Gas Can Control reductions listed below.
Sub-Total: VOC Stor/Trans/Market	7,977.00	32,755.45				8,882.50	36,333.40	9,033.42	36,929.73	9,486.17	38,718.70	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	5194.39	0.00	1.03	1.03	1.04	5,327.78	0.00	5,350.01	0.00	5,416.71	0.00	
SOCMI Fugitive	0.00	0.00	1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks	0.00	663.51	1.03	1.03	1.04	0.00	680.55	0.00	683.39	0.00	691.91	
Inorganic Chemical Manufacture	0.00	0.00	1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes	0.00	3.02	1.20	1.23	1.33	0.00	3.62	0.00	3.72	0.00	4.02	
Pharmaceutical Manufacture	107.40	0.00	1.03	1.03	1.04	110.16	0.00	110.62	0.00	112.00	0.00	
Plastic Products Manufacture	1695.77	0.00	0.97	0.97	0.95	1,649.10	0.00	1,641.32	0.00	1,617.98	0.00	
Rubber Tire Manufacture	0.00	0.00	0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture	446.93	0.00	0.97	0.97	0.95	434.63	0.00	432.58	0.00	426.43	0.00	
Textile Polymers & Resin Mfg	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	5.69	0.00	0.97	0.97	0.95	5.53	0.00	5.51	0.00	5.43	0.00	
Other	1312.82	0.00	0.95	0.94	0.92	1,248.28	0.00	1,237.52	0.00	1,205.25	0.00	
Sub-Total: Industrial Processes	8,763.00	666.53				8,775.47	684.17	8,777.55	687.11	8,783.79	695.93	

DRAFT State of CT VOC Summer Day Emission Projections

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	Growth Factor vs. 2002 2009	Growth Factor vs. 2002 2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
INDUSTRIAL SURFACE COATING	5,983.15	19,554.83	0.97	0.96	0.95	5,792.72	18,932.46	5,760.99	18,828.73	5,665.77	18,517.54	All sub-categories grouped togeher in 2002 PEI.
Large Appliances												
Magnet Wire												
Autos and Light Trucks												
Cans												
Metal Coils												
Paper												
Fabric												
Metal and Wood Furniture												
Miscellaneous Metal Products												
Flatwood Products												
Plastic Products												
Large Ships												
Large Aircraft												
High Performance Maintenance Coating												
Special Purpose Coating												
Others												
Sub-Total: Ind Surface Coating	5,983.15	19,554.83				5,792.72	18,932.46	5,760.99	18,828.73	5,665.77	18,517.54	
NON - INDUSTRIAL SURFACE COATING												
Architectural Coatings	0.00	41,155.27	1.03	1.03	1.05	0.00	42,407.48	0.00	42,574.43	0.00	43,025.51	AIM Control reductions listed below.
Auto Refinishing	0.00	4,303.40	1.05	1.05	1.08	0.00	4,501.06	0.00	4,534.00	0.00	4,632.83	Assumes HVLP Control reductions accounted for in 2002 PEI.
Traffic Markings	0.00	1,587.76	1.07	1.09	1.12	0.00	1,706.27	0.00	1,724.93	0.00	1,774.98	
Sub-Total: Non-Ind Surf Coating	0.00	47,046.43				0.00	48,614.81	0.00	48,833.36	0.00	49,433.32	
OTHER SOLVENT USE												
Degreasing	225.94	64,248.08	0.968	0.963	0.947	218.75	62,203.25	217.55	61,862.44	213.95	60,840.02	Solvent Cleaning control reductions listed below.
Petroleum Dry Cleaning	0.00	190.54	1.03	1.03	1.05	0.00	196.34	0.00	197.11	0.00	199.20	
Graphic Arts	1,590.17	15,712.34	1.072	1.084	1.119	1,704.17	16,838.79	1,723.17	17,026.53	1,780.17	17,589.76	
Adhesives	67.52	9,578.42	0.968	0.963	0.947	65.37	12,627.51	65.01	13,137.29	63.94	14,666.62	Area adhesives added per OTC estimates for 2002, then grown. Adhesive/Sealant Control reductions listed below.
Cutback Asphalt Paving	0.00	3,916.52	1.075	1.086	1.118	0.00	4,208.85	0.00	4,254.86	0.00	4,378.34	Asphalt Paving Control reductions listed below.
Emulsified Asphalt Paving	0.00	5,155.70	1.075	1.086	1.118	0.00	5,540.53	0.00	5,601.10	0.00	5,763.64	Asphalt Paving Control reductions listed below.
Solvent Extraction Processes	4.00	0.00	0.968	0.963	0.947	3.87	0.00	3.85	0.00	3.79	0.00	
Consumer/Commercial Solvent Use	0.00	80,136.73	1.03	1.03	1.05	0.00	82,575.01	0.00	82,900.09	0.00	83,778.42	Consumer Product Controls (OTC2001 & 2006) listed below.
Other	840.36	0.00	0.968	0.963	0.947	813.61	0.00	809.16	0.00	795.78	0.00	
Sub-Total: Other Solvent Use	2,727.99	178,938.33				2,805.78	184,190.27	2,818.74	184,979.42	2,857.64	187,216.00	

DRAFT State of CT VOC Summer Day Emission Projections

STATIONARY SOURCES (cont)	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
WASTE DISPOSAL												
Municipal Waste Combustion	1,317.90	0.00	1.00	1.00	1.00	1,317.90	0.00	1,317.90	0.00	1,317.90	0.00	
Municipal Waste Landfills	0.00	2,305.39	1.00	1.00	1.00	0.00	2,305.39	0.00	2,305.39	0.00	2,305.39	
TSDFs	0.00	1,670.85	0.97	0.96	0.95	0.00	1,617.67	0.00	1,608.81	0.00	1,582.22	
POTWs	0.00	6,714.07	1.03	1.03	1.05	0.00	6,918.36	0.00	6,945.59	0.00	7,019.18	
ITWs	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	1,317.90	10,690.31				1,317.90	10,841.42	1,317.90	10,859.79	1,317.90	10,906.79	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	1,655.14	0.00	1.09	1.10	1.14	1,796.85	0.00	1,820.46	0.00	1,891.32	0.00	
Industrial Fuel Combustion	274.23	221.75	0.97	0.96	0.95	265.50	214.69	264.05	213.52	259.68	209.99	
Commercial Fuel Combustion	92.32	500.02	1.06	1.07	1.10	98.01	530.84	98.96	535.98	101.81	551.39	
Residential Fuel Combustion	0.00	439.41	1.03	1.03	1.05	0.00	452.78	0.00	454.56	0.00	459.38	
Wood Stoves	0.00	13,694.86	1.03	1.03	1.05	0.00	14,111.55	0.00	14,167.10	0.00	14,317.20	
Forest Fires	0.00	14.83	1.00	1.00	1.00	0.00	14.83	0.00	14.83	0.00	14.83	
Structural Fires	0.00	464.31	1.03	1.03	1.05	0.00	478.44	0.00	480.32	0.00	485.41	
Open Burning	0.00	110.03	1.03	1.03	1.05	0.00	113.38	0.00	113.82	0.00	115.03	
Slash Burning	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning	0.00	0.00	1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters	0.00	0.00	1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications	0.00	10,572.15	1.02	1.02	1.03	0.00	10,732.45	0.00	10,759.17	0.00	10,839.32	
Asphalt Roofing	0.00	0.00	1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	2,223.28	0.00	1.05	1.06	1.09	2,337.06	0.00	2,356.03	0.00	2,412.92	0.00	
Sub-Total: Other Stationary Sources	4,244.97	26,017.36				4,497.42	26,648.96	4,539.50	26,739.30	4,665.72	26,992.55	
COMMERCIAL PROCESSES												
Bakeries	664.84	3660.8	0.97	0.96	0.94	641.57	3,532.67	637.69	3,511.32	626.06	3,447.25	
Breweries	0.00	3.02	1.20	1.23	1.33	0.00	3.62	0.00	3.72	0.00	4.02	
Sub-Total: Commercial Processes	664.84	3,663.82				641.57	3,536.29	637.69	3,515.04	626.06	3,451.27	

DRAFT State of CT VOC Summer Day Emission Projections

	2002 PI VOC		Growth Factor vs. 2002			2008 VOC		2009 VOC		2012 VOC		Controls Implemented After 2002
MOBILE SOURCES	Point (lbs/day)	Area (lbs/day)	2008	2009	2012	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)
Light Duty Gas Vehicles	0.00	98,218.78				0.00	50,222.97	0.00	44,386.97	0.00	29,232.71	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 1 &2	0.00	52,771.70				0.00	37,696.82	0.00	35,859.60	0.00	28,846.73	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Gas Truck 3 & 4	0.00	24,295.36				0.00	18,002.02	0.00	17,520.53	0.00	14,600.31	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Gas Vehicles	0.00	4,830.03				0.00	2,908.65	0.00	2,569.29	0.00	2,101.68	Federal HDT & Fuel Standards included.
Light Duty Diesel Vehicle	0.00	69.75				0.00	19.44	0.00	14.15	0.00	6.91	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Light Duty Diesel Truck	0.00	218.96				0.00	150.54	0.00	139.15	0.00	107.71	Federal Tier 2; CT OBD2/ASM2525 I&M included.
Heavy Duty Diesel Vehicle	0.00	4,605.76				0.00	3,225.28	0.00	3,054.96	0.00	2,597.84	Federal HDT & Fuel Standards included.
Motorcycles	0.00	1,793.21				0.00	1,721.13	0.00	1,699.24	0.00	1,703.69	
Sub-Total: On-Road Mobile Sources	0.00	186,803.56				0.00	113,946.84	0.00	105,243.89	0.00	79,197.58	w/o 2% contingency for conformity budgets
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)
Airport Equipment	0.00	40.00				0.00	20.00	0.00	20.00	0.00	20.00	Federal Engine & Fuel Standards included.
Commercial Equipment	0.00	15,540.00				0.00	12,560.00	0.00	12,000.00	0.00	12,120.00	Federal Engine & Fuel Standards included.
Construction Equipment	0.00	9,080.00				0.00	6,220.00	0.00	5,940.00	0.00	5,280.00	Federal Engine & Fuel Standards included.
Farm Equipment	0.00	340.00				0.00	260.00	0.00	240.00	0.00	220.00	Federal Engine & Fuel Standards included.
Industrial Equipment	0.00	9,440.00				0.00	5,920.00	0.00	5,140.00	0.00	2,860.00	Federal Engine & Fuel Standards included.
Lawn & Garden	0.00	96,600.00				0.00	65,440.00	0.00	62,920.00	0.00	61,580.00	Federal Engine & Fuel Standards included.
Logging Equipment	0.00	140.00				0.00	80.00	0.00	80.00	0.00	80.00	Federal Engine & Fuel Standards included.
Recreational Equipment	0.00	15,560.00				0.00	21,860.00	0.00	21,680.00	0.00	20,680.00	Federal Engine & Fuel Standards included.
Recreational Vessels	0.00	94,080.00				0.00	76,280.00	0.00	73,500.00	0.00	66,460.00	Federal Engine & Fuel Standards included.
Rail (equipment + engines)	0.00	665.05	0.976	0.97	0.96	0.00	630.72	0.00	628.33	0.00	601.17	
Aircraft	0.00	2,573.15	1.18	1.21	1.30	0.00	3,032.14	0.00	3,108.64	0.00	3,338.14	
Commercial Vessels	0.00	254.88	1.05	1.05	1.08	0.00	266.80	0.00	268.79	0.00	274.75	
Sub-Total: Non-Road Mobile Sources	0.00	244,313.08				0.00	192,569.67	0.00	185,525.77	0.00	173,514.06	

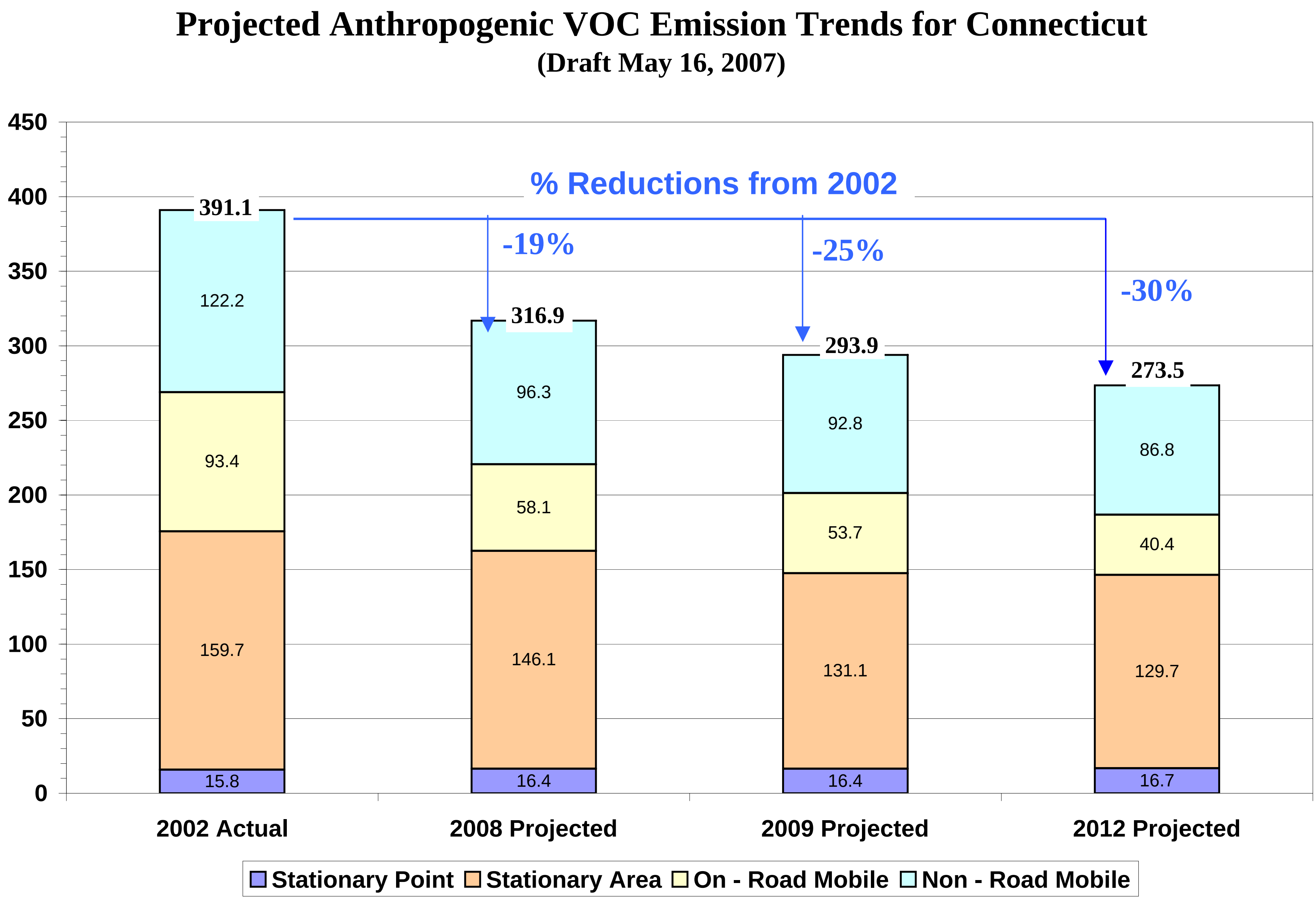
DRAFT State of CT VOC Summer Day Emission Projections

VOC EMISSION TOTALS	2002 PI VOC Point (lbs/day)	2002 PI VOC Area (lbs/day)	Growth Factor vs. 2002: 2008	2009	2012	2008 VOC Point (lbs/day)	2008 VOC Area (lbs/day)	2009 VOC Point (lbs/day)	2009 VOC Area (lbs/day)	2012 VOC Point (lbs/day)	2012 VOC Area (lbs/day)	Controls Implemented After 2002
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	7,977.00	32,755.45				8,882.50	36,333.40	9,033.42	36,929.73	9,486.17	38,718.70	
Sub-Total: Industrial Processes	8,763.00	666.53				8,775.47	684.17	8,777.55	687.11	8,783.79	695.93	
Sub-Total: Ind Surface Coating	5,983.15	19,554.83				5,792.72	18,932.46	5,760.99	18,828.73	5,665.77	18,517.54	
Sub-Total: Non-Ind Surf Coating	0.00	47,046.43				0.00	48,614.81	0.00	48,833.36	0.00	49,433.32	
Sub-Total: Other Solvent Use	2,727.99	178,938.33				2,805.78	184,190.27	2,818.74	184,979.42	2,857.64	187,216.00	
Sub-Total: Waste Disposal	1,317.90	10,690.31				1,317.90	10,841.42	1,317.90	10,859.79	1,317.90	10,906.79	
Sub-Total: Other Stationary Srcs	4,244.97	26,017.36				4,497.42	26,648.96	4,539.50	26,739.30	4,665.72	26,992.55	
Sub-Total: Commercial Processes	664.84	3,663.82				641.57	3,536.29	637.69	3,515.04	626.06	3,451.27	
Sub-Total: Stationary Sources	31,678.85	319,333.06				32,713.37	329,781.78	32,885.79	331,372.46	33,403.05	335,932.10	
MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	186,803.56				0.00	116,225.78	0.00	107,348.77	0.00	80,781.53	**Includes 2% contingency for conformity budgets**
Sub-Total: Non-Road Mobile Sources	0.00	244,313.08				0.00	192,569.67	0.00	185,525.77	0.00	173,514.06	
Sub-Total: Mobile Sources	0.00	431,116.64				0.00	308,795.45	0.00	292,874.54	0.00	254,295.59	
Sub-Total: Biogenic VOC Emissions	0.00	788,458.81	1.00	1.00	1.00	0.00	788,458.81	0.00	788,458.81	0.00	788,458.81	
GRAND TOTAL VOC	31,678.85	1,538,908.51				32,713.37	1,427,036.04	32,885.79	1,412,705.80	33,403.05	1,378,686.50	

	2008 Point	2008 Area	2009 Point	2009 Area	2012 Point	2012 Area	
PV Vent Valves at Gasoline Stations		-1,477.81		-1,502.92		-1,578.25	Underground tank breathing reductions
Automobile Refinishing (HVLP Guns)		0.00		0.00		0.00	Assumed accounted for in 2002 base inventory
Portable Fuel Containers (OTC MR#1 (1-hr) and #2 (8-hr))		-3,785.84		-5,980.99		-12,055.59	Not including reductions from non-road refueling
Solvent Cleaning Volatilty & Work Practices		-19,149.94		-19,037.36		-18,733.17	Based on OTC calcs, with updated population & 80% RE & RP
Consumer Products (~ 2006 OTC Model Rule)		0.00		-13,194.38		-13,334.17	Includes OTC2001 & OTC2006 Model Rules effective May 2009
AIM Coatings (2001 OTC Model Rule)		-13,146.32		-13,198.07		-13,337.91	
Asphalt Paving (2006 OTC Model Rule)		0.00		-7,884.77		-8,113.59	Assumes reg effective May 2009
Adhesives & Sealants (2006 OTC Model Rule):							Assumes reg effective May 2009 (may actually be 2008)
Point Source	0.00		-25.80		-25.37		
Area Source		0.00		-8,460.41		-9,445.30	Uses OTC/MACTEC growth rate for area sources

SUMMARY BY SOURCE CATEGORY (including listed Post-2002 controls)

	2002 Actual (lbs/day)	2002 Actual (tons/day)	2008 Projected (lbs/day)	2008 Projected (tons/day)	2009 Projected (lbs/day)	2009 Projected (tons/day)	2012 Projected (lbs/day)	2012 Projected (tons/day)	
Stationary Point	31,678.85	15.8	32,713.37	16.4	32,859.99	16.4	33,377.68	16.7	
Stationary Area	319,333.06	159.7	292,221.86	146.1	262,113.55	131.1	259,334.11	129.7	
On - Road Mobile	186,803.56	93.4	116,225.78	58.1	107,348.77	53.7	80,781.53	40.4	**Conformity Budgets for 2008 and 2009 (2012?)**
Non - Road Mobile	244,313.08	122.2	192,569.67	96.3	185,525.77	92.8	173,514.06	86.8	
TOTAL ANTHROPOGENIC VOC	782,128.55	391.1	633,730.67	316.9	587,848.08	293.9	547,007.38	273.5	
			vs 2002	-19%	vs 2002	-25%	vs 2002	-30%	
		785.3							



Projected Anthropogenic VOC Emission Trends for Connecticut
(Draft May 16, 2007)
% Reductions from 2002
-19%
-25%
-30%
391.1
316.9
293.9
273.5
122.2
93.4
159.7
15.8
96.3
58.1
146.1
16.4
92.8
53.7
131.1
16.4
86.8
40.4
129.7
16.7
0
50
100
150
200
250
300
350
400
450
2002 Actual
2008 Projected
2009 Projected
2012 Projected
Stationary Point
Stationary Area
On - Road Mobile
Non - Road Mobile

DRAFT SWCT NOx Summer Day Emission Projections

STATIONARY SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	Growth Factor vs. 2002 2009	Growth Factor vs. 2002 2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline/Crude Oil Storage Floating Roof			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Volatile Organic Liquid (VOL) Storage			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline Bulk Plants			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Vehicle Fuel			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Underground Tank Breathing			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Aircraft Refueling			1.18	1.21	1.30	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline Trucks in Transit			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Leaking Underground Storage Tanks			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Spills			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: VOC Stor/Trans/Market	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	9.80		1.03	1.03	1.04	10.05	0.00	10.09	0.00	10.22	0.00	
SOCMI Fugitive			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Inorganic Chemical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes			1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Pharmaceutical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Plastic Products Manufacture	4.10		0.97	0.97	0.95	3.99	0.00	3.97	0.00	3.91	0.00	
Rubber Tire Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Textile Polymers & Resin Mfg			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	209.32		0.97	0.97	0.95	203.54	0.00	202.57	0.00	199.68	0.00	
Other	26.11		0.95	0.94	0.92	24.83	0.00	24.61	0.00	23.97	0.00	
Sub-Total: Industrial Processes	249.33	0.00				242.40	0.00	241.25	0.00	237.78	0.00	

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES (cont)	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
INDUSTRIAL SURFACE COATING	34.64		0.97	0.96	0.95	33.54	0.00	33.35	0.00	32.80	0.00	check w/ChrisM on subcategories
Large Appliances												
Magnet Wire												
Autos and Light Trucks												
Cans												
Metal Coils												
Paper												
Fabric												
Metal and Wood Furniture												
Miscellaneous Metal Products												
Flatwood Products												
Plastic Products												
Large Ships												
Large Aircraft												
High Performance Maintenance Coating												
Special Purpose Coating												
Others												
Sub-Total: Ind Surface Coating	34.64	0.00				33.54	0.00	33.35	0.00	32.80	0.00	
NON - INDUSTRIAL SURFACE COATING												
Architectural Coatings			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Auto Refinishing			1.05	1.05	1.08	0.00	0.00	0.00	0.00	0.00	0.00	
Traffic Markings			1.07	1.09	1.12	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
OTHER SOLVENT USE												
Degreasing			0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Petroleum Dry Cleaning			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Graphic Arts	42.32		1.072	1.084	1.119	45.35	0.00	45.86	0.00	47.38	0.00	
Adhesives			0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Cutback Asphalt Paving			1.075	1.086	1.118	0.00	0.00	0.00	0.00	0.00	0.00	
Emulsified Asphalt Paving			1.075	1.086	1.118	0.00	0.00	0.00	0.00	0.00	0.00	
Solvent Extraction Processes			0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Consumer/Commercial Solvent Use			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Other			0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	42.32	0.00				45.35	0.00	45.86	0.00	47.38	0.00	

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES (cont)	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
WASTE DISPOSAL												
Municipal Waste Combustion	9,583.21		1.00	1.00	1.00	9,583.21	0.00	9,583.21	0.00	9,583.21	0.00	CT MWC Rule-Phase 2 (2003) reductions included below
Municipal Waste Landfills			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
TSDFs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
POTWs			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
ITWs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	9,583.21	0.00				9,583.21	0.00	9,583.21	0.00	9,583.21	0.00	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	42,887.50		1.03	1.00	1.00	43,964.05	0.00	42,887.50	0.00	42,887.50	0.00	See Post-2002 Control section below for 2009/2012 reductions
Industrial Fuel Combustion	2,819.26	2,837.91	0.97	0.96	0.95	2,729.53	2,747.59	2,714.58	2,732.53	2,669.71	2,687.37	Check on CAIR budgets; ICI ??? Wendy???
Commercial Fuel Combustion	1,130.20	6,130.74	1.06	1.07	1.10	1,199.87	6,508.68	1,211.48	6,571.67	1,246.32	6,760.64	ICI controls???
Residential Fuel Combustion		5,186.68	1.03	1.03	1.05	0.00	5,344.49	0.00	5,365.53	0.00	5,422.38	
Wood Stoves		106.21	1.03	1.03	1.05	0.00	109.44	0.00	109.87	0.00	111.04	
Forest Fires		0.54	1.00	1.00	1.00	0.00	0.54	0.00	0.54	0.00	0.54	
Structural Fires		36.16	1.03	1.03	1.05	0.00	37.26	0.00	37.41	0.00	37.80	
Open Burning		2.59	1.03	1.03	1.05	0.00	2.67	0.00	2.68	0.00	2.71	
Slash Burning			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Asphalt Roofing			1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	18,697.95		1.05	1.06	1.09	19,654.87	0.00	19,814.35	0.00	20,292.81	0.00	Sec 22 controls??
Sub-Total: Other Stationary Sources	65,534.91	14,300.83				67,548.32	14,750.67	66,627.91	14,820.23	67,096.34	15,022.48	
COMMERCIAL PROCESSES												
Bakeries	52.40		0.97	0.96	0.94	50.57	0.00	50.26	0.00	49.34	0.00	
Breweries			1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Commercial Processes	52.40	0.00				50.57	0.00	50.26	0.00	49.34	0.00	

DRAFT SWCT NOx Summer Day Emission Projections

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls Implemented After 2002	
MOBILE SOURCES	Point (lbs/day)	Area (lbs/day)	2008	2009	2012	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)		
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)	
Light Duty Gas Vehicles		52,114.72					22,142.53		19,346.50		12,893.49	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Gas Truck 1 & 2		35,998.74					23,872.80		21,702.37		16,248.57	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Gas Truck 3 & 4		14,802.85					11,753.84		10,960.24		8,788.41	Federal Tier 2; CT OBD2/ASM2525 I&M	
Heavy Duty Gas Vehicles		10,237.58					6,531.46		5,834.03		3,928.47	Federal HDT & Fuel Standarda	
Light Duty Diesel Vehicle		91.98					25.81		16.70		7.72	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Diesel Truck		286.20					165.50		147.63		100.07	Federal Tier 2; CT OBD2/ASM2525 I&M	
Heavy Duty Diesel Vehicle		91,611.96					53,885.95		48,761.70		32,614.50	Federal HDT & Fuel Standarda	
Motorcycles		215.46					232.73		235.02		240.48		
Sub-Total: On-Road Mobile Sources	0.00	205,359.49				0.00	118,610.62	0.00	107,004.20	0.00	74,821.71	w/o 2% contingency for conformity budgets	
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)	
Airport Equipment		0.00				0.00	0.00	0.00	0.00	0.00	0.00	Federal Engine & Fuel Standards	
Commercial Equipment		5,680.00				0.00	5,460.00	0.00	5,360.00	0.00	5,160.00	Federal Engine & Fuel Standards	
Construction Equipment		27,440.00				0.00	23,820.00	0.00	23,000.00	0.00	19,880.00	Federal Engine & Fuel Standards	
Farm Equipment		360.00				0.00	320.00	0.00	320.00	0.00	280.00	Federal Engine & Fuel Standards	
Industrial Equipment		20,340.00				0.00	14,320.00	0.00	12,760.00	0.00	8,340.00	Federal Engine & Fuel Standards	
Lawn & Garden		8,840.00				0.00	8,420.00	0.00	8,180.00	0.00	7,960.00	Federal Engine & Fuel Standards	
Logging Equipment		60.00				0.00	40.00	0.00	40.00	0.00	20.00	Federal Engine & Fuel Standards	
Recreational Equipment		260.00				0.00	300.00	0.00	300.00	0.00	300.00	Federal Engine & Fuel Standards	
Recreational Vessels		4,540.00				0.00	6,120.00	0.00	6,320.00	0.00	6,820.00	Federal Engine & Fuel Standards	
Rail (equipment + engines)		8,764.00	0.976	0.97	0.96	fix	8,552.80	fix	8,517.60	fix	8,392.00	Federal Rules(2000+ phase-in)	2007 Rule Controls??
Aircraft		231.04	1.18	1.21	1.30	0.00	272.25	0.00	279.12	0.00	299.73		
Commercial Vessels		943.45	1.05	1.05	1.08	0.00	987.58	0.00	994.94	0.00	1,017.00		2007 Rule Controls??
Sub-Total: Non-Road Mobile Sources	0.00	77,458.49				0.00	68,612.63	0.00	66,071.66	0.00	58,468.73		(see http://www.epa.gov/otaq/marine.htm

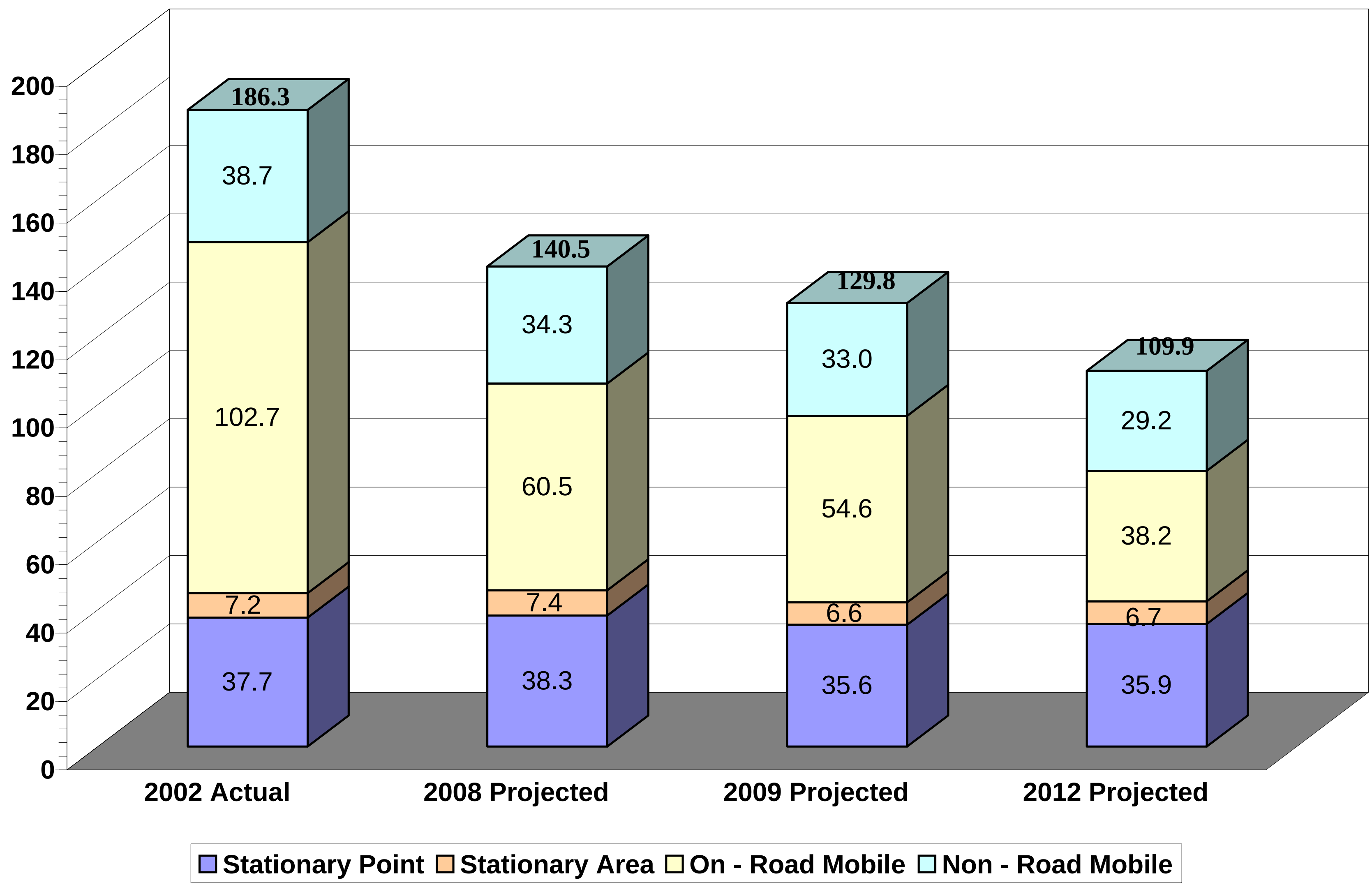
DRAFT SWCT NOx Summer Day Emission Projections

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls Implemented After 2002
NOx EMISSION TOTALS	Point (lbs/day)	Area (lbs/day)	2008	2009	2012	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Industrial Processes	249.33	0.00				242.40	0.00	241.25	0.00	237.78	0.00	
Sub-Total: Ind Surface Coating	34.64	0.00				33.54	0.00	33.35	0.00	32.80	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	42.32	0.00				45.35	0.00	45.86	0.00	47.38	0.00	
Sub-Total: Waste Disposal	9,583.21	0.00				9,583.21	0.00	9,583.21	0.00	9,583.21	0.00	
Sub-Total: Other Stationary Srcs	65,534.91	14,300.83				67,548.32	14,750.67	66,627.91	14,820.23	67,096.34	15,022.48	
Sub-Total: Commercial Processes	52.40	0.00				50.57	0.00	50.26	0.00	49.34	0.00	
Sub-Total: Stationary Sources	75,496.81	14,300.83				77,503.39	14,750.67	76,581.84	14,820.23	77,046.86	15,022.48	
NOx Reductions due to OTC/MOU & NBP						0.00		0.00		0.00		Modify for whatever controls apply now
MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	205,359.49				0.00	120,982.83	0.00	109,144.28	0.00	76,318.14	**Includes 2% contingency for conformity budgets**
Sub-Total: Non-Road Mobile Sources	0.00	77,458.49				0.00	68,612.63	0.00	66,071.66	0.00	58,468.73	
Sub-Total: Mobile Sources	0.00	282,817.98				0.00	189,595.46	0.00	175,215.94	0.00	134,786.87	
Sub-Total: Biogenic NOx Emissions	0.00	1,315.10	1.00	1.00	1.00	0.00	1,315.10	0.00	1,315.10	0.00	1,315.10	
GRAND TOTAL NOx	75,496.81	298,433.91				77,503.39	205,661.23	76,581.84	191,351.27	77,046.86	151,124.45	

SUMMARY BY SOURCE CATEGORY (without Post-2002 controls, except includes on-road & non-road)

	2002 Actual		**2008 Projected**		**2009 Projected**		**2012 Projected**		
	(lbs/day)	**(tons/day)**	**(lbs/day)**	**(tons/day)**	**(lbs/day)**	**(tons/day)**	**(lbs/day)**	**(tons/day)**	
Stationary Point	75,496.81	37.7	77,503.39	38.8	76,581.84	38.3	77,046.86	38.5	
Stationary Area	14,300.83	7.2	14,750.67	7.4	14,820.23	7.4	15,022.48	7.5	
On - Road Mobile	205,359.49	102.7	120,982.83	60.5	109,144.28	54.6	76,318.14	38.2	**Conformity Budgets for 2008, 2009 and (?) 2012**
Non - Road Mobile	77,458.49	38.7	68,612.63	34.3	66,071.66	33.0	58,468.73	29.2	
TOTAL ANTHROPOGENIC NOx	372,615.62	186.3	281,849.52	140.9	266,618.02	133.3	226,856.21	113.4	
			vs 2002	-24.4%	vs 2002	-28.4%	vs 2002	-39.1%	

Projected NOx Emission Trends for Southwest Connecticut



DRAFT GrCT NOx Summer Day Emission Projections

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls Implemented After 2002
	Point	Area				Point	Area	Point	Area	Point	Area	
STATIONARY SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline/Crude Oil Storage Floating Roof			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Volatile Organic Liquid (VOL) Storage			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals	14.74		1.11	1.13	1.19	16.41	0.00	16.69	0.00	17.53	0.00	
Gasoline Bulk Plants			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Vehicle Fuel			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Underground Tank Breathing			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Aircraft Refueling			1.18	1.21	1.30	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline Trucks in Transit			1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Leaking Underground Storage Tanks			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Spills			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: VOC Stor/Trans/Market	14.74	0.00				16.41	0.00	16.69	0.00	17.53	0.00	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	6.40		1.03	1.03	1.04	6.56	0.00	6.59	0.00	6.67	0.00	
SOCMI Fugitive			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Inorganic Chemical Manufacture			1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes			1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Pharmaceutical Manufacture	4.69		1.03	1.03	1.04	4.81	0.00	4.83	0.00	4.89	0.00	
Plastic Products Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Rubber Tire Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture			0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Textile Polymers & Resin Mfg			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	251.08		0.97	0.97	0.95	244.14	0.00	242.99	0.00	239.52	0.00	
Other	158.80		0.95	0.94	0.92	150.99	0.00	149.69	0.00	145.79	0.00	
Sub-Total: Industrial Processes	420.97	0.00				406.51	0.00	404.10	0.00	396.87	0.00	

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls Implemented After 2002
STATIONARY SOURCES (cont)	Point (lbs/day)	Area (lbs/day)	2008	2009	2012	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	
INDUSTRIAL SURFACE COATING	109.46		0.97	0.96	0.95	105.98	0.00	105.40	0.00	103.65	0.00	check w/ChrisM on subcategories
Large Appliances												
Magnet Wire												
Autos and Light Trucks												
Cans												
Metal Coils												
Paper												
Fabric												
Metal and Wood Furniture												
Miscellaneous Metal Products												
Flatwood Products												
Plastic Products												
Large Ships												
Large Aircraft												
High Performance Maintenance Coating												
Special Purpose Coating												
Others												
Sub-Total: Ind Surface Coating	109.46	0.00				105.98	0.00	105.40	0.00	103.65	0.00	
NON - INDUSTRIAL SURFACE COATING												
Architectural Coatings			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Auto Refinishing			1.05	1.05	1.08	0.00	0.00	0.00	0.00	0.00	0.00	
Traffic Markings			1.07	1.09	1.12	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
OTHER SOLVENT USE												
Degreasing			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Petroleum Dry Cleaning			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Graphic Arts	21.94		1.07	1.08	1.12	23.51	0.00	23.78	0.00	24.56	0.00	
Adhesives			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Cutback Asphalt Paving			1.07	1.09	1.12	0.00	0.00	0.00	0.00	0.00	0.00	
Emulsified Asphalt Paving			1.07	1.09	1.12	0.00	0.00	0.00	0.00	0.00	0.00	
Solvent Extraction Processes			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Consumer/Commercial Solvent Use			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Other			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	21.94	0.00				23.51	0.00	23.78	0.00	24.56	0.00	

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls Implemented After 2002
STATIONARY SOURCES (cont)	Point (lbs/day)	Area (lbs/day)	2008	2009	2012	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	
WASTE DISPOSAL												
Municipal Waste Combustion	12,971.32		1.00	1.00	1.00	12,971.32	0.00	12,971.32	0.00	12,971.32	0.00	CT MWC Rule-Phase 2 (2003) reductions included below
Municipal Waste Landfills			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
TSDFs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
POTWs			1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
ITWs			0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	12,971.32	0.00				12,971.32	0.00	12,971.32	0.00	12,971.32	0.00	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	6,743.56		1.03	1.00	1.00	6,912.84	0.00	6,743.56	0.00	6,743.56	0.00	See Post-2002 Control section below for 2009/2012 reductions
Industrial Fuel Combustion	5,748.19	2,532.95	0.97	0.96	0.95	5,565.24	2,452.33	5,534.75	2,438.90	5,443.28	2,398.59	Check on CAIR budgets; ICI ??? Wendy???
Commercial Fuel Combustion	688.31	5,469.24	1.06	1.07	1.10	730.74	5,806.40	737.81	5,862.59	759.03	6,031.17	ICI controls???
Residential Fuel Combustion		4,489.10	1.03	1.03	1.05	0.00	4,625.69	0.00	4,643.90	0.00	4,693.10	
Wood Stoves		177.21	1.03	1.03	1.05	0.00	182.60	0.00	183.32	0.00	185.26	
Forest Fires		6.22	1.00	1.00	1.00	0.00	6.22	0.00	6.22	0.00	6.22	
Structural Fires		22.94	1.03	1.03	1.05	0.00	23.64	0.00	23.73	0.00	23.98	
Open Burning		2.76	1.03	1.03	1.05	0.00	2.84	0.00	2.86	0.00	2.89	
Slash Burning			1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications			1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Asphalt Roofing			1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	11,363.26		1.05	1.06	1.09	11,944.81	0.00	12,041.73	0.00	12,332.50	0.00	Sec 22 controls??
Sub-Total: Other Stationary Sources	24,543.32	12,700.42				25,153.62	13,099.72	25,057.85	13,161.51	25,278.37	13,341.21	
COMMERCIAL PROCESSES												
Bakeries	10.20		0.97	0.96	0.94	9.84	0.00	9.78	0.00	9.61	0.00	
Breweries			1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Commercial Processes	10.20	0.00				9.84	0.00	9.78	0.00	9.61	0.00	

DRAFT GrCT NOx Summer Day Emission Projections

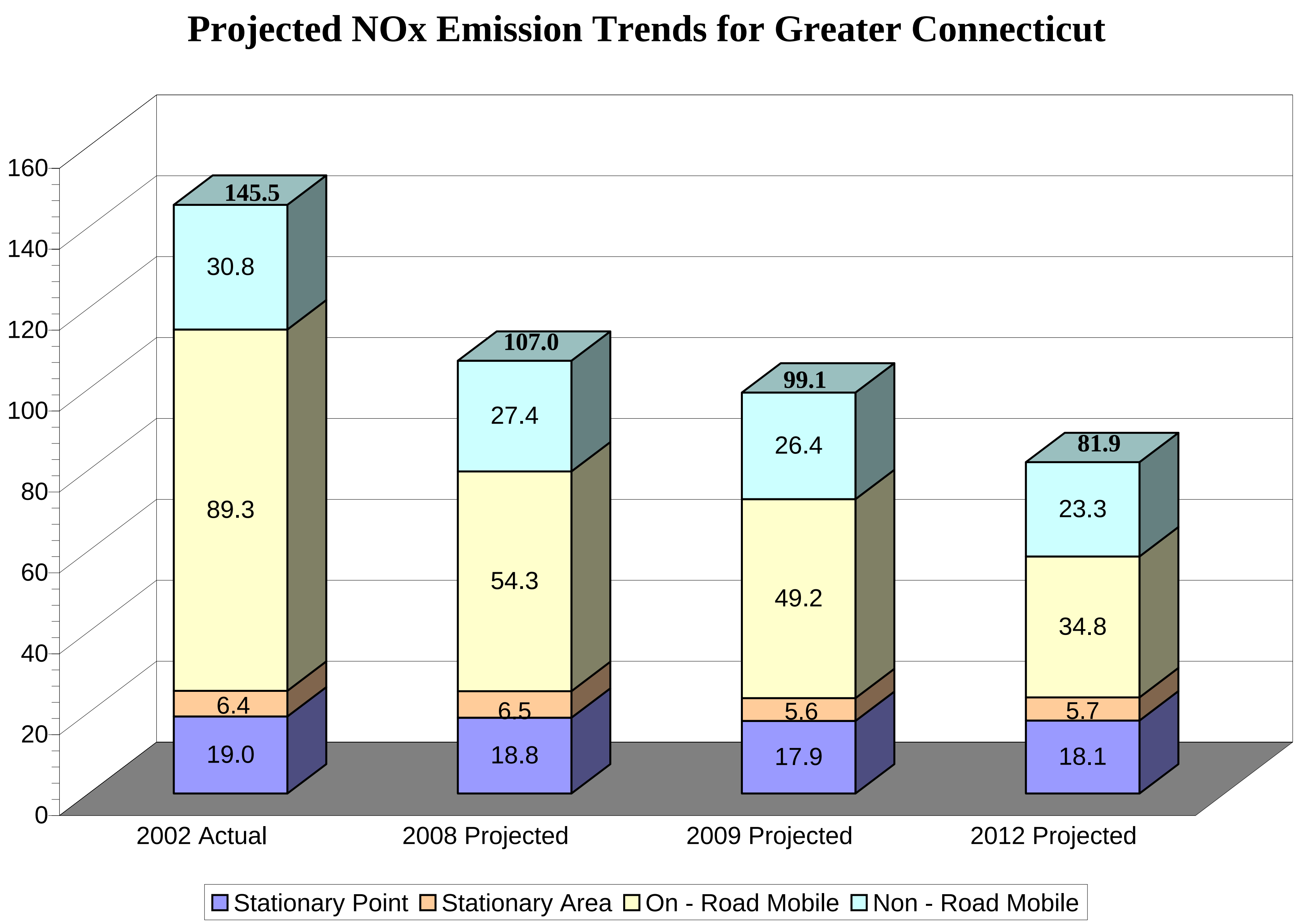
	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls Implemented	
	Point	Area				Point	Area	Point	Area	Point	Area		
MOBILE SOURCES	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002	
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)	
Light Duty Gas Vehicles		47,966.47					21,006.30		18,424.82		12,381.01	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Gas Truck 1 & 2		33,027.47					22,494.12		20,518.32		15,485.92	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Gas Truck 3 & 4		13,560.06					11,075.25		10,366.05		8,369.75	Federal Tier 2; CT OBD2/ASM2525 I&M	
Heavy Duty Gas Vehicles		8,437.28					5,565.66		5,001.54		3,403.63	Federal HDT & Fuel Standarda	
Light Duty Diesel Vehicle		83.63					24.16		16.08		7.31	Federal Tier 2; CT OBD2/ASM2525 I&M	
Light Duty Diesel Truck		261.44					156.26		139.12		95.41	Federal Tier 2; CT OBD2/ASM2525 I&M	
Heavy Duty Diesel Vehicle		75,081.25					45,954.28		41,732.70		28,310.15	Federal HDT & Fuel Standarda	
Motorcycles		213.91					235.53		238.31		244.88		
Sub-Total: On-Road Mobile Sources	0.00	178,631.50				0.00	106,511.57	0.00	96,436.93	0.00	68,298.08	w/o 2% contingency for conformity budgets	
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)	
Airport Equipment		300.00				0.00	280.00	0.00	280.00	0.00	240.00	Federal Engine & Fuel Standards	
Commercial Equipment		3,640.00				0.00	3,500.00	0.00	3,440.00	0.00	3,300.00	Federal Engine & Fuel Standards	
Construction Equipment		21,780.00				0.00	18,900.00	0.00	18,260.00	0.00	15,780.00	Federal Engine & Fuel Standards	
Farm Equipment		1,960.00				0.00	1,740.00	0.00	1,700.00	0.00	1,540.00	Federal Engine & Fuel Standards	
Industrial Equipment		17,680.00				0.00	12,440.00	0.00	11,080.00	0.00	7,220.00	Federal Engine & Fuel Standards	
Lawn & Garden		4,920.00				0.00	4,720.00	0.00	4,580.00	0.00	4,460.00	Federal Engine & Fuel Standards	
Logging Equipment		180.00				0.00	120.00	0.00	100.00	0.00	80.00	Federal Engine & Fuel Standards	
Recreational Equipment		520.00				0.00	660.00	0.00	660.00	0.00	700.00	Federal Engine & Fuel Standards	
Recreational Vessels		2,380.00				0.00	3,500.00	0.00	3,640.00	0.00	4,020.00	Federal Engine & Fuel Standards	
Rail (equipment + engines)		3,993.76	0.98	0.97	0.96	fix	3,898.89	fix	3,883.08	fix	3,815.65	Federal Rules(2000+ phase-in)	2007 Rule Controls??
Aircraft		3,818.11	1.18	1.21	1.30	0.00	4,499.18	0.00	4,612.69	0.00	4,953.22		
Commercial Vessels		456.57	1.05	1.05	1.08	0.00	477.93	0.00	481.49	0.00	492.16		2007 Rule Controls??
Sub-Total: Non-Road Mobile Sources	0.00	61,628.44				0.00	54,736.00	0.00	52,717.26	0.00	46,601.04		(see http://www.epa.gov/otaq/marine.htm

DRAFT GrCT NOx Summer Day Emission Projections

NOx EMISSION TOTALS	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	Growth Factor vs. 2002 2009	Growth Factor vs. 2002 2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	14.74	0.00				16.41	0.00	16.69	0.00	17.53	0.00	
Sub-Total: Industrial Processes	420.97	0.00				406.51	0.00	404.10	0.00	396.87	0.00	
Sub-Total: Ind Surface Coating	109.46	0.00				105.98	0.00	105.40	0.00	103.65	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	21.94	0.00				23.51	0.00	23.78	0.00	24.56	0.00	
Sub-Total: Waste Disposal	12,971.32	0.00				12,971.32	0.00	12,971.32	0.00	12,971.32	0.00	
Sub-Total: Other Stationary Srcs	24,543.32	12,700.42				25,153.62	13,099.72	25,057.85	13,161.51	25,278.37	13,341.21	
Sub-Total: Commercial Processes	10.20	0.00				9.84	0.00	9.78	0.00	9.61	0.00	
Sub-Total: Stationary Sources	38,091.95	12,700.42				38,687.20	13,099.72	38,588.92	13,161.51	38,801.91	13,341.21	
NOx Reductions due to OTC/MOU & NBP						0.00		0.00		0.00		Modify for whatever controls apply now
MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	178,631.50				0.00	108,641.80	0.00	98,365.67	0.00	69,664.04	**Includes 2% contingency for conformity budgets**
Sub-Total: Non-Road Mobile Sources	0.00	61,628.44				0.00	54,736.00	0.00	52,717.26	0.00	46,601.04	
Sub-Total: Mobile Sources	0.00	240,259.94				0.00	163,377.80	0.00	151,082.93	0.00	116,265.07	
Sub-Total: Biogenic NOx Emissions	0.00	2,508.43	1.00	1.00	1.00	0.00	2,508.43	0.00	2,508.43	0.00	2,508.43	
GRAND TOTAL NOx	38,091.95	255,468.79				38,687.20	178,985.95	38,588.92	166,752.87	38,801.91	132,114.71	

SUMMARY BY SOURCE CATEGORY

	2002 Actual (lbs/day)	2002 Actual (tons/day)	2008 Projected (lbs/day)	2008 Projected (tons/day)	2009 Projected (lbs/day)	2009 Projected (tons/day)	2012 Projected (lbs/day)	2012 Projected (tons/day)	
Stationary Point	38,091.95	19.0	38,687.20	19.3	38,588.92	19.3	38,801.91	19.4	
Stationary Area	12,700.42	6.4	13,099.72	6.5	13,161.51	6.6	13,341.21	6.7	
On - Road Mobile	178,631.50	89.3	108,641.80	54.3	98,365.67	49.2	69,664.04	34.8	**Conformity Budgets for 2008 and 2009 (2012?)**
Non - Road Mobile	61,628.44	30.8	54,736.00	27.4	52,717.26	26.4	46,601.04	23.3	
TOTAL ANTHROPOGENIC NOx	291,052.31	145.5	215,164.72	107.6	202,833.36	101.4	168,408.19	84.2	
			vs 2002	-26.1%	vs 2002	-30.3%	vs 2002	-42.1%	


Projected NOx Emission Trends for Greater Connecticut
0
20
40
60
80
100
120
140
160
145.5
30.8
89.3
6.4
19.0
107.0
27.4
54.3
6.5
18.8
99.1
26.4
49.2
5.6
17.9
81.9
23.3
34.8
5.7
18.1
2002 Actual
2008 Projected
2009 Projected
2012 Projected
Stationary Point
Stationary Area
On - Road Mobile
Non - Road Mobile

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STATIONARY SOURCES	2002 PI NOx Point (lbs/day)	2002 PI NOx Area (lbs/day)	Growth Factor vs. 2002 2008	2009	2012	2008 NOx Point (lbs/day)	2008 NOx Area (lbs/day)	2009 NOx Point (lbs/day)	2009 NOx Area (lbs/day)	2012 NOx Point (lbs/day)	2012 NOx Area (lbs/day)	Controls Implemented After 2002
VOC STORAGE/TRANSPORT/MARKETING												
Gasoline/Crude Oil Storage All (exc float roof)	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline/Crude Oil Storage Floating Roof	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Volatile Organic Liquid (VOL) Storage	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
VOL Ship/Barge Transfer	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Barge/Tanker Cleaning	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Bulk Gas Terminals	14.74	0.00	1.11	1.13	1.19	16.41	0.00	16.69	0.00	17.53	0.00	
Gasoline Bulk Plants	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Tank Truck Unloading	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Vehicle Fuel	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Underground Tank Breathing	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Aircraft Refueling	0.00	0.00	1.18	1.21	1.30	0.00	0.00	0.00	0.00	0.00	0.00	
Gasoline Trucks in Transit	0.00	0.00	1.11	1.13	1.19	0.00	0.00	0.00	0.00	0.00	0.00	
Leaking Underground Storage Tanks	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Spills	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: VOC Stor/Trans/Market	14.74	0.00				16.41	0.00	16.69	0.00	17.53	0.00	
INDUSTRIAL PROCESSES												
Organic Chemical Manufacture	16.20	0.00	1.03	1.03	1.04	16.62	0.00	16.69	0.00	16.89	0.00	
SOCMI Fugitive	0.00	0.00	1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
SOCMI Storage Tanks	0.00	0.00	1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Inorganic Chemical Manufacture	0.00	0.00	1.03	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	
Fermentation Processes	0.00	0.00	1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Pharmaceutical Manufacture	4.69	0.00	1.03	1.03	1.04	4.81	0.00	4.83	0.00	4.89	0.00	
Plastic Products Manufacture	4.10	0.00	0.97	0.97	0.95	3.99	0.00	3.97	0.00	3.91	0.00	
Rubber Tire Manufacture	0.00	0.00	0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
SBR Rubber Manufacture	0.00	0.00	0.97	0.97	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Textile Polymers & Resin Mfg	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Synthetic Fiber Manufacture	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Iron & Steel Manufacture	460.40	0.00	0.97	0.97	0.95	447.68	0.00	445.56	0.00	439.20	0.00	
Other	184.91	0.00	0.95	0.94	0.92	175.82	0.00	174.30	0.00	169.76	0.00	
Sub-Total: Industrial Processes	670.30	0.00				648.91	0.00	645.35	0.00	634.65	0.00	

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	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls
	Point	Area				Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES (cont)	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
INDUSTRIAL SURFACE COATING	144.1	0	0.97	0.96	0.95	139.51	0.00	138.75	0.00	136.46	0.00	check w/ChrisM on subcategories
Large Appliances												
Magnet Wire												
Autos and Light Trucks												
Cans												
Metal Coils												
Paper												
Fabric												
Metal and Wood Furniture												
Miscellaneous Metal Products												
Flatwood Products												
Plastic Products												
Large Ships												
Large Aircraft												
High Performance Maintenance Coating												
Special Purpose Coating												
Others												
Sub-Total: Ind Surface Coating	144.10	0.00				139.51	0.00	138.75	0.00	136.46	0.00	
NON - INDUSTRIAL SURFACE COATING												
Architectural Coatings	0.00	0.00	1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Auto Refinishing	0.00	0.00	1.05	1.05	1.08	0.00	0.00	0.00	0.00	0.00	0.00	
Traffic Markings	0.00	0.00	1.07	1.09	1.12	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
OTHER SOLVENT USE												
Degreasing	0.00	0.00	0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Petroleum Dry Cleaning	0.00	0.00	1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Graphic Arts	64.26	0.00	1.072	1.084	1.119	68.87	0.00	69.63	0.00	71.94	0.00	
Adhesives	0.00	0.00	0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Cutback Asphalt Paving	0.00	0.00	1.075	1.086	1.118	0.00	0.00	0.00	0.00	0.00	0.00	
Emulsified Asphalt Paving	0.00	0.00	1.075	1.086	1.118	0.00	0.00	0.00	0.00	0.00	0.00	
Solvent Extraction Processes	0.00	0.00	0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Consumer/Commercial Solvent Use	0.00	0.00	1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
Other	0.00	0.00	0.968	0.963	0.947	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	64.26	0.00				68.87	0.00	69.63	0.00	71.94	0.00	

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	2002 PI NOx		Growth Factor			2008 NOx		2009 NOx		2012 NOx		Controls
	Point	Area	vs. 2002			Point	Area	Point	Area	Point	Area	Implemented
STATIONARY SOURCES (cont)	(lbs/day)	(lbs/day)	2008	2009	2012	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	(lbs/day)	After 2002
WASTE DISPOSAL												
Municipal Waste Combustion	22,554.53	0.00	1.00	1.00	1.00	22,554.53	0.00	22,554.53	0.00	22,554.53	0.00	CT MWC Rule-Phase 2 (2003) reductions included below
Municipal Waste Landfills	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
TSDFs	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
POTWs	0.00	0.00	1.03	1.03	1.05	0.00	0.00	0.00	0.00	0.00	0.00	
ITWs	0.00	0.00	0.97	0.96	0.95	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Waste Disposal	22,554.53	0.00				22,554.53	0.00	22,554.53	0.00	22,554.53	0.00	
OTHER STATIONARY SOURCES												
Utility Fuel Combustion	49,631.06	0.00	1.03	1.00	1.00	50,876.89	0.00	49,631.06	0.00	49,631.06	0.00	See Post-2002 Control section below for 2009/2012 reductions
Industrial Fuel Combustion	8,567.45	5,370.86	0.97	0.96	0.95	8,294.77	5,199.92	8,249.33	5,171.43	8,112.99	5,085.96	Check on CAIR budgets; ICI ??? Wendy???
Commercial Fuel Combustion	1,818.51	11,599.98	1.06	1.07	1.10	1,930.61	12,315.08	1,949.30	12,434.26	2,005.35	12,791.81	ICI controls???
Residential Fuel Combustion	0.00	9,675.78	1.03	1.03	1.05	0.00	9,970.18	0.00	10,009.43	0.00	10,115.48	
Wood Stoves	0.00	283.42	1.03	1.03	1.05	0.00	292.04	0.00	293.19	0.00	296.30	
Forest Fires	0.00	6.76	1.00	1.00	1.00	0.00	6.76	0.00	6.76	0.00	6.76	
Structural Fires	0.00	59.10	1.03	1.03	1.05	0.00	60.90	0.00	61.14	0.00	61.79	
Open Burning	0.00	5.35	1.03	1.03	1.05	0.00	5.51	0.00	5.53	0.00	5.59	
Slash Burning	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	
Agricultural Burning	0.00	0.00	1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Orchard Heaters	0.00	0.00	1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Pesticide Applications	0.00	0.00	1.02	1.02	1.03	0.00	0.00	0.00	0.00	0.00	0.00	
Asphalt Roofing	0.00	0.00	1.04	1.05	1.07	0.00	0.00	0.00	0.00	0.00	0.00	
Internal Combustion Engines	30,061.21	0.00	1.05	1.06	1.09	31,599.67	0.00	31,856.08	0.00	32,625.31	0.00	Sec 22 controls??
Sub-Total: Other Stationary Sources	90,078.23	27,001.25				92,701.95	27,850.39	91,685.77	27,981.75	92,374.71	28,363.69	
COMMERCIAL PROCESSES												
Bakeries	62.60	0.00	0.97	0.96	0.94	60.41	0.00	60.04	0.00	58.95	0.00	
Breweries	0.00	0.00	1.20	1.23	1.33	0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Commercial Processes	62.60	0.00				60.41	0.00	60.04	0.00	58.95	0.00	

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls Implemented After 2002
MOBILE SOURCES	Point (lbs/day)	Area (lbs/day)	2008	2009	2012	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	
ON - ROAD MOBILE SOURCES												New M6.2 Run (slight diff vs 2002 PEI)
Light Duty Gas Vehicles	0.00	100,081.19				0.00	43,148.83	0.00	37,771.33	0.00	25,274.50	Federal Tier 2; CT OBD2/ASM2525 I&M
Light Duty Gas Truck 1 &2	0.00	69,026.22				0.00	46,366.92	0.00	42,220.69	0.00	31,734.49	Federal Tier 2; CT OBD2/ASM2525 I&M
Light Duty Gas Truck 3 & 4	0.00	28,362.90				0.00	22,829.09	0.00	21,326.29	0.00	17,158.16	Federal Tier 2; CT OBD2/ASM2525 I&M
Heavy Duty Gas Vehicles	0.00	18,674.85				0.00	12,097.12	0.00	10,835.57	0.00	7,332.10	Federal HDT & Fuel Standarda
Light Duty Diesel Vehicle	0.00	175.62				0.00	49.97	0.00	32.78	0.00	15.04	Federal Tier 2; CT OBD2/ASM2525 I&M
Light Duty Diesel Truck	0.00	547.64				0.00	321.76	0.00	286.74	0.00	195.48	Federal Tier 2; CT OBD2/ASM2525 I&M
Heavy Duty Diesel Vehicle	0.00	166,693.21				0.00	99,840.23	0.00	90,494.40	0.00	60,924.65	Federal HDT & Fuel Standarda
Motorcycles	0.00	429.36				0.00	468.27	0.00	473.33	0.00	485.37	
Sub-Total: On-Road Mobile Sources	0.00	383,990.99				0.00	225,122.18	0.00	203,441.13	0.00	143,119.78	w/o 2% contingency for conformity budgets
NON - ROAD MOBILE SOURCES												New NONROAD (differs from 2002 PEI)
Airport Equipment	0.00	300.00				0.00	280.00	0.00	280.00	0.00	240.00	Federal Engine & Fuel Standards
Commercial Equipment	0.00	9,320.00				0.00	8,960.00	0.00	8,800.00	0.00	8,460.00	Federal Engine & Fuel Standards
Construction Equipment	0.00	49,220.00				0.00	42,720.00	0.00	41,260.00	0.00	35,660.00	Federal Engine & Fuel Standards
Farm Equipment	0.00	2,320.00				0.00	2,060.00	0.00	2,020.00	0.00	1,820.00	Federal Engine & Fuel Standards
Industrial Equipment	0.00	38,020.00				0.00	26,760.00	0.00	23,840.00	0.00	15,560.00	Federal Engine & Fuel Standards
Lawn & Garden	0.00	13,760.00				0.00	13,140.00	0.00	12,760.00	0.00	12,420.00	Federal Engine & Fuel Standards
Logging Equipment	0.00	240.00				0.00	160.00	0.00	140.00	0.00	100.00	Federal Engine & Fuel Standards
Recreational Equipment	0.00	780.00				0.00	960.00	0.00	960.00	0.00	1,000.00	Federal Engine & Fuel Standards
Recreational Vessels	0.00	6,920.00				0.00	9,620.00	0.00	9,960.00	0.00	10,840.00	Federal Engine & Fuel Standards
Rail (equipment + engines)	0.00	12,757.76	0.976	0.97	0.96	0.00	12,451.69	0.00	12,400.68	0.00	12,207.65	Federal Rules(2000+ phase-in)
Aircraft	0.00	4,049.15	1.18	1.21	1.30	0.00	4,771.43	0.00	4,891.81	0.00	5,252.95	
Commercial Vessels	0.00	1,400.02	1.05	1.05	1.08	0.00	1,465.51	0.00	1,476.42	0.00	1,509.17	
Sub-Total: Non-Road Mobile Sources	0.00	139,086.93				0.00	123,348.63	0.00	118,788.91	0.00	105,069.76	

	2002 PI NOx		Growth Factor vs. 2002			2008 NOx		2009 NOx		2012 NOx		Controls Implemented After 2002
NOx EMISSION TOTALS	Point (lbs/day)	Area (lbs/day)	2008	2009	2012	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	Point (lbs/day)	Area (lbs/day)	
STATIONARY SOURCES												
Sub-Total: VOC Stor/Trans/Market	14.74	0.00				16.41	0.00	16.69	0.00	17.53	0.00	
Sub-Total: Industrial Processes	670.30	0.00				648.91	0.00	645.35	0.00	634.65	0.00	
Sub-Total: Ind Surface Coating	144.10	0.00				139.51	0.00	138.75	0.00	136.46	0.00	
Sub-Total: Non-Ind Surf Coating	0.00	0.00				0.00	0.00	0.00	0.00	0.00	0.00	
Sub-Total: Other Solvent Use	64.26	0.00				68.87	0.00	69.63	0.00	71.94	0.00	
Sub-Total: Waste Disposal	22,554.53	0.00				22,554.53	0.00	22,554.53	0.00	22,554.53	0.00	
Sub-Total: Other Stationary Srcs	90,078.23	27,001.25				92,701.95	27,850.39	91,685.77	27,981.75	92,374.71	28,363.69	
Sub-Total: Commercial Processes	62.60	0.00				60.41	0.00	60.04	0.00	58.95	0.00	
Sub-Total: Stationary Sources	113,588.76	27,001.25				116,190.59	27,850.39	115,170.76	27,981.75	115,848.77	28,363.69	
NOx Reductions due to OTC/MOU & NBP												Modify for whatever controls apply now

MOBILE SOURCES												
Sub-Total: On-Road Mobile Sources	0.00	383,990.99				0.00	229,624.63	0.00	207,509.95	0.00	145,982.18	**Includes 2% contingency for conformity budgets**
Sub-Total: Non-Road Mobile Sources	0.00	139,086.93				0.00	123,348.63	0.00	118,788.91	0.00	105,069.76	
Sub-Total: Mobile Sources	0.00	523,077.92				0.00	352,973.26	0.00	326,298.87	0.00	251,051.94	

Sub-Total: Biogenic NOx Emissions	0.00	3,823.53	1.00	1.00	1.00	0.00	3,823.53	0.00	3,823.53	0.00	3,823.53	
GRAND TOTAL NOx	113,588.76	553,902.70				116,190.59	384,647.18	115,170.76	358,104.14	115,848.77	283,239.16	

SUMMARY BY SOURCE CATEGORY (No Post-2002 controls, except on-road & non-road)

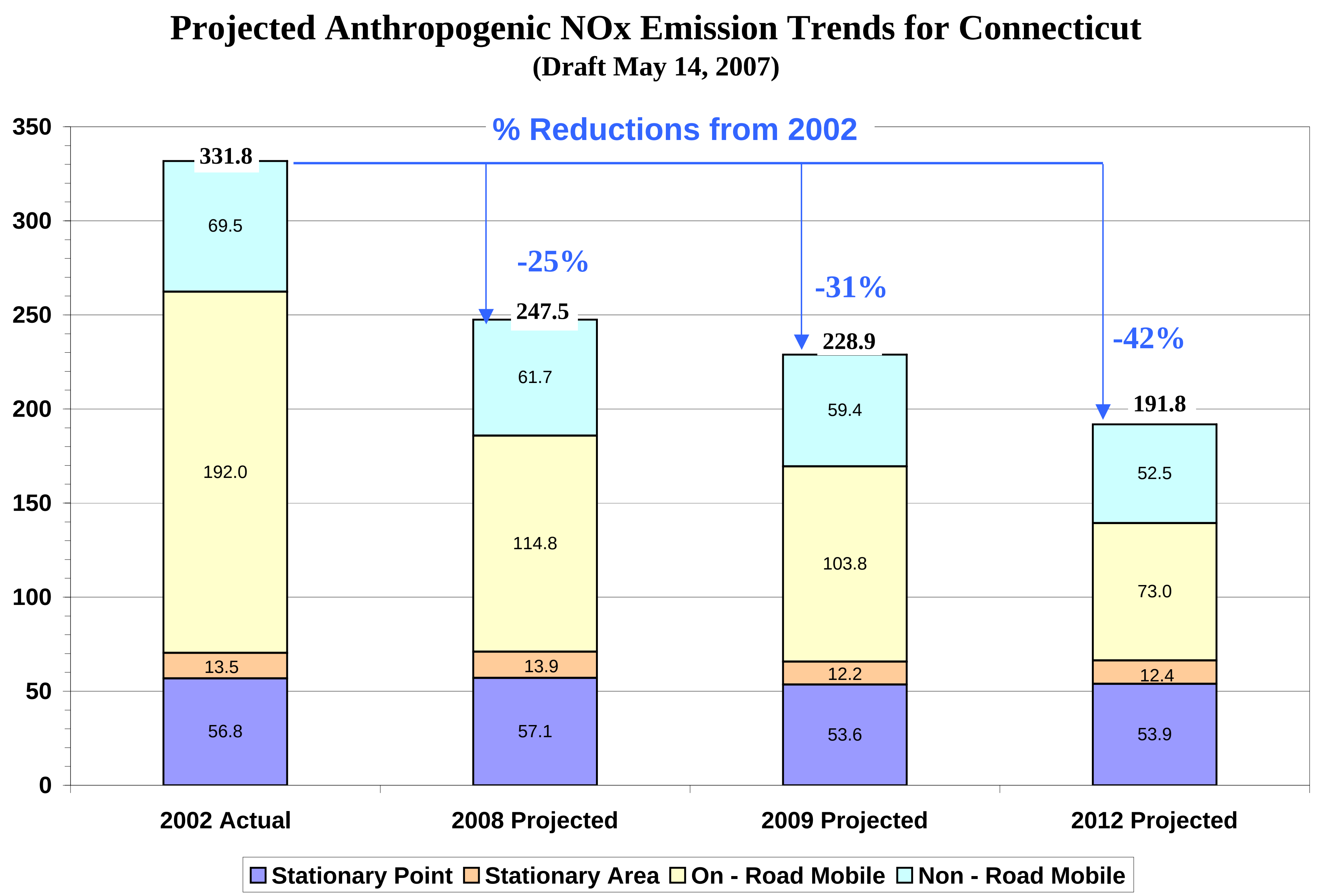
	2002 Actual		2008 Projected		2009 Projected		2012 Projected		
	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	
Stationary Point	113,588.76	56.8	116,190.59	58.1	115,170.76	57.6	115,848.77	57.9	
Stationary Area	27,001.25	13.5	27,850.39	13.9	27,981.75	14.0	28,363.69	14.2	
On - Road Mobile	383,990.99	192.0	229,624.63	114.8	207,509.95	103.8	145,982.18	73.0	Sum of Conformity Budgets for 2008, 2009 and (?) 2012
Non - Road Mobile	139,086.93	69.5	123,348.63	61.7	118,788.91	59.4	105,069.76	52.5	
TOTAL ANTHROPOGENIC NOx	663,667.93	331.8	497,014.24	248.5	469,451.38	234.7	395,264.40	197.6	
			vs 2002	-25.1%	vs 2002	-29.3%	vs 2002	-40.4%	

POST-2002 CONTROL REDUCTIONS

	2008 (lbs/day)	2008 (tons/day)	2009 (lbs/day)	2009 (tons/day)	2012 (lbs/day)	2012 (tons/day)	
CT 1-Hour Ozone Shortfall Measures							
MWC Phase 2 (2003)	-1,999.02		-1,999.02		-1,999.02		
CT 8-Hour Ozone Measures							
2009 CAIR Budget			-3,359.48		-3,359.48		Reductions based on difference of seasonal 2002 actual & 2009 CAIR budget, divided by 153 to get typical summer day. Result allocated to GrCT & SWCT based on relative proportion of utility emissions in 2002 PEI (i.e., 86.4% in SWCT; 13.6% in GrCT).
ICI Boilers			-2,656.39	-3,613.97	-2,656.39	-3,613.97	Based on OTC calculations, with 80% RP & 80% RE. Assumes new limits start 2009. Cobines point/area reductions.

SUMMARY BY SOURCE CATEGORY (Including listed Post-2002 controls)

	2002 Actual		2008 Projected		2009 Projected		2012 Projected		
	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	(lbs/day)	(tons/day)	
Stationary Point	113,588.76	56.8	114,191.57	57.1	107,155.87	53.6	107,833.87	53.9	
Stationary Area	27,001.25	13.5	27,850.39	13.9	24,367.78	12.2	24,749.72	12.4	
On - Road Mobile	383,990.99	192.0	229,624.63	114.8	207,509.95	103.8	145,982.18	73.0	Sum of Conformity Budgets for 2008, 2009 and (?) 2012
Non - Road Mobile	139,086.93	69.5	123,348.63	61.7	118,788.91	59.4	105,069.76	52.5	
TOTAL ANTHROPOGENIC VOC	663,667.93	331.8	495,015.22	247.5	457,822.52	228.9	383,635.53	191.8	
			vs 2002	-25%	vs 2002	-31%	vs 2002	-42%	
		333.7							



Projected Anthropogenic NOx Emission Trends for Connecticut
(Draft May 14, 2007)
% Reductions from 2002
350
300
250
200
150
100
50
0
331.8
69.5
192.0
13.5
56.8
247.5
61.7
114.8
13.9
57.1
228.9
59.4
103.8
12.2
53.6
191.8
52.5
73.0
12.4
53.9
-25%
-31%
-42%
2002 Actual
2008 Projected
2009 Projected
2012 Projected
Stationary Point
Stationary Area
On - Road Mobile
Non - Road Mobile

PV-Valves

2002 PEI Calculations of Underground Tank Breathing VOC emissions:

E = ((Q x EF x POT)/DAYS) x (1 - (CE x RE x RP))

E = Breathing emissions (lbs/day)
EF = 1.0 lbs/1,000 gallons
Q = thousands of gallons sold during 2002 = 1548165.50 thousand gallons
POT = fraction of gasoline sold during June-Aug of 2002 = .2642
CE = fraction controlled by PV vent caps = 0.90
RE = fractional rule effectiveness = 0.80 (presumed)
RP = fractional rule penetration = .5454 (in 2002, representing fraction of stations with vacuum assist Stage II)

E2002 = 2700.064 lbs/day = 1.35 tons/day (which represents emissions in 2002, with 55% of gasoline controlled by PV vent valves at vacuum assist stations)
(this value is in the 2002 PEI) (uncontrolled emissions in 2002 would be E = 4445.926298 lbs/day = 2.22 tons/day)

Applying 2002 PEI Procedures and Projecting Growth to 2008, 2009, and 2012:

	2008	2009	2012	
Use same growth factors (relative to 2002) as used for gasoline marketing:	1.1135	1.1324	1.1892	for 2008, 2009, & 2012 respective

CT shortfall PV-Vent rule requires vents on all Stage II operations (not just vacuum assist).
2002 PEI indicates (conservatively) that 58,200,000 gallons, out of 1,548,165,500 total gallons sold in CT, were at non-Stage II stations.
This means that at least 96.24% of gasoline sold in 2002 was from Stage II stations that are now required to have PV-vents.

(Statewide) First, calculate emissions in 2008, 2009, 2012 assuming PV_vents only at vacuum assist stations (as in 2002):

E2008=	3006.5595	lbs/day =	1.50327975	tons/day	
E2009=	3057.64202	lbs/day =	1.52882101	tons/day	
E2012=	3210.88957	lbs/day =	1.60544479	tons/day	(each of these are essentially equal to those calculated in "StateVOC" worksheet)

Then, calculate emissions in 2008, 2009, 2012 assuming PV-vents at all Stage II stations and no PV vents at other stations.
Use the fraction of 2002 gasoline sales at Stage II and non-Stage II stations (see above) for the calculation (equivalent to rule penetration).
Continue to use a conrol efficiency of 90% and a conservative rule effectiveness value of 80%.

E2008=	1528.74564	lbs/day =	0.76437282	tons/day	**2008 Reduction for "State VOC" worksheet =**	**1477.81386**	**lbs/day =**	**0.74**	**tons/day**
E2009=	1554.71958	lbs/day =	0.77735979	tons/day	**2009 Reduction for "State VOC" worksheet =**	**1502.92244**	**lbs/day =**	**0.75**	**tons/day**
E2012=	1632.64138	lbs/day =	0.81632069	tons/day	**2012 Reduction for "State VOC" worksheet =**	**1578.2482**	**lbs/day =**	**0.79**	**tons/day**

Apportion emissions to each nonattainment area based on 2002 PEI gasoline sales by counties in each area:

Statewide sales =	1,548,165,500		
SWCT sales =	792,612,330	or	51.2%
GrCT sales =	755,553,160	or	48.8%

(SWCT) First, calculate emissions in 2008, 2009, 2012 assuming PV_vents only at vacuum assist stations (as in 2002):

E2008=	1539.26446	lbs/day =	0.76963223	tons/day	
E2009=	1565.41711	lbs/day =	0.78270856	tons/day	
E2012=	1643.87507	lbs/day =	0.82193753	tons/day	(each of these are essentially equal to those calculated in "StateVOC" worksheet)

Then, calculate emissions in 2008, 2009, 2012 assuming PV-vents at all Stage II stations and no PV vents at other stations.
Use the fraction of 2002 gasoline sales at Stage II and non-Stage II stations (see above) for the calculation (equivalent to rule penetration).
Continue to use a conrol efficiency of 90% and a conservative rule effectiveness value of 80%.

E2008=	782.6700	lbs/day =	0.39133499	tons/day	**2008 Reduction for "SWCT VOC" worksheet =**	**756.594489**	**lbs/day =**	**0.38**	**tons/day**
E2009=	795.9678	lbs/day =	0.39798391	tons/day	**2009 Reduction for "SWCT VOC" worksheet =**	**769.449299**	**lbs/day =**	**0.38**	**tons/day**
E2012=	835.8613	lbs/day =	0.41793067	tons/day	**2012 Reduction for "SWCT VOC" worksheet =**	**808.01373**	**lbs/day =**	**0.40**	**tons/day**

(GrCT) First, calculate emissions in 2008, 2009, 2012 assuming PV_vents only at vacuum assist stations (as in 2002):

E2008=	1467.29502	lbs/day =	0.73364751	tons/day	
E2009=	1492.22489	lbs/day =	0.74611244	tons/day	
E2012=	1567.01449	lbs/day =	0.78350724	tons/day	(each of these are essentially equal to those calculated in "StateVOC" worksheet)

Then, calculate emissions in 2008, 2009, 2012 assuming PV-vents at all Stage II stations and no PV vents at other stations.
Use the fraction of 2002 gasoline sales at Stage II and non-Stage II stations (see above) for the calculation (equivalent to rule penetration).
Continue to use a conrol efficiency of 90% and a conservative rule effectiveness value of 80%.

E2008=	746.0757	lbs/day =	0.37303783	tons/day	**2008 Reduction for "GrCT VOC" worksheet =**	**721.21936**	**lbs/day =**	**0.36**	**tons/day**
E2009=	758.7518	lbs/day =	0.37937588	tons/day	**2009 Reduction for "GrCT VOC" worksheet =**	**733.473134**	**lbs/day =**	**0.37**	**tons/day**
E2012=	796.7800	lbs/day =	0.39839001	tons/day	**2012 Reduction for "GrCT VOC" worksheet =**	**770.234456**	**lbs/day =**	**0.39**	**tons/day**

Auto Refinishing

Based on a comparison to 1990 emission estimates used for 1-hour attainment modeling base year, it appears that the 2002 PEI accounts for significant use of HVLP spray equipment.
Therefore, to be conservative, no further reductions will be assumed as a result of RCSA 22a-174-3b HVLP requirements.

1990 PEI

Used a per employee emission factor of 3519 lbs VOC/year, or (where employment info was confidential) 2.3 lbs Voc/capita.
Resulted in statewide summer day emission estimate of 39723.5 lbs/day = 19.9 tons/day

2002 PEI

Used a per employee emission factor of 0.216 tons VOC/year (432 lbs/year). Didn't use a per capita factor; instead apportioned state employment to counties by population.
Resulted in a statewide summer day emission estimate of 4303.4 lbs/day = 2.2 tons/day

2008, 2009, & 2012 Projected Emissions

Will assume 2002 PEI included affects of HVLP & EPA 1998 VOC national rule on VOC content limits. No further reductions incorporated for 2002, 2009, & 2012.
Only growth is included, as depicted in VOC worksheets elsewhere in this spreadsheet.

Calculation of 2002, 2008, 2009, & 2012 Portable Fuel Container Emissions
Based on CARB Method Included in CTDEP's Draft 2005 PEI

Step 1: The following three tables are from the 3/28/2007 version of CT's Draft 2005 PEI

(Note that these tables do not include emissions from spillage or vapor displacement that occur when filling non-road equipment. Those emissions are already included in emission estimates developed with the NONROAD model and included in the PEI.)

Table 4.6.14-2
Summary of Daily Uncontrolled VOC Emissions From Residential Gas-Cans

County	Permeation Emissions From Plastic Gas-Cans (lbs/day)	Permeation Emissions From Metal Gas-Cans (lbs/day)	Diurnal Emissions From Closed Plastic Gas-Cans (lbs/day)	Diurnal Emissions From Closed Metal Gas-Cans (lbs/day)	Diurnal Emissions From Open Gas-Cans (lbs/day)	Transport-Spillage Emissions From Closed Gas-Cans (lbs/day)	Transport-Spillage Emissions From Open Gas-Cans (lbs/day)		2005 Uncontrolled Residential Grand Total
Fairfield	396	4	348	27	3,076	110	80		
Hartford	412	4	362	28	3,199	114	83		
Litchfield	90	1	79	6	699	25	18		
Middlesex	78	1	69	5	609	22	16		
New Haven	396	4	348	27	3,074	110	80		
New	128	1	113	9	995	35	26		
Tolland	63	1	55	4	486	17	13		
Windham	52	0	45	4	402	14	10		
State Total:	**1,615**	**16**	**1,419**	**110**	**12,540**	**447**	**326**	**CT**	**16,473**
								SWCT	**8880**
								GrCT	**7593**

Table 4.6.14-3
Summary of Daily Uncontrolled VOC Emissions From Commercial Gas-Cans

County	Permeation Emissions From Plastic Gas-Cans (lbs/day)	Permeation Emissions From Metal Gas-Cans (lbs/day)	Diurnal Emissions From Closed Plastic Gas-Cans (lbs/day)	Diurnal Emissions From Closed Metal Gas-Cans (lbs/day)	Diurnal Emissions From Open Gas-Cans (lbs/day)	Transport-Spillage Emissions From Closed Lawn Gas-Cans (lbs/day)	Transport-Spillage Emissions From Open Lawn Gas-Cans (lbs/day)	Transport-Spillage Emissions From Closed Non-Lawn Gas-Cans (lbs/day)	Transport-Spillage Emissions From Open Non-Lawn Gas-Cans (lbs/day)		2005 Uncontrolled Commercial Grand Total
Fairfield	29	1	25	4	352	5	6	46	62		
Hartford	25	1	22	4	306	1	2	40	55		
Litchfield	8	0	7	1	101	1	1	13	18		
Middlesex	6	0	5	1	70	0	1	9	12		
New Haven	23	0	21	4	287	1	1	38	51		
New	8	0	7	1	99	0	1	13	18		
Tolland	4	0	4	1	53	0	0	7	10		
Windham	3	0	3	1	41	0	0	5	7		
State Total:	**106**	**2**	**94**	**17**	**1,309**	**8**	**12**	**171**	**233**	**CT**	**1,952**
										SWCT	**1060**
										GrCT	**892**

2005 CT Overall Uncontrolled Total (lbs/day)	**CT:**	**18,425**
	SWCT	**9,940**
	GrCT	**8,485**

Table 4.6.14-4
Summary of Daily and Annual Controlled VOC Emissions From Residential and Commercial Gas-Cans

County	Total Daily Gas-Can Emissions (lbs/day)	Total Annual Gas-Can Emissions (tons/year)
Fairfield	4,259	510
Hartford	4,340	520
Litchfield	995	119
Middlesex	842	101
New Haven	4,160	498
New London	1,355	162
Tolland	669	80
Windham	547	65
State Total:	**17,167**	**2,055**

Table 4.6.14-4 incorporates a 6.82% reduction in 2005 due to CT's phase 1 PFC rule, as estimated by OTC.

Step 2: Using the Uncontrolled 2005 draft PEI estimates, apply the gasoline growth factor for the 2002 to 2008 period to project back to 2002 uncontrolled.

	2005 Uncontrolled (lbs/day)	2002 to 2008 Growth Factor	2005 to 2002 Growth Factor	2002 Uncontrolled (lbs/day)	2002 Uncontrolled (tons/day)
State Total	18,425	1.114	1.057	17,435	8.72
SWCT	9,940	1.114	1.057	9,406	4.70
GrCT	8,485	1.114	1.057	8,029	4.01

Step 3: The estimated 2002 emissions need to be added to CT's 2002 PEI, which did not include them. They will be added as a line item with the other gasoline categories. See VOC workheets for each area & all of CT.

Step 4: Account for reductions from OTC 2001 Model Rule and OTC 2006 Model Rule.

Page 3-15 of the Feb 2007 OTC Control Measure TSD (MACTEC) indicates that OTC Model Rule #1 would achieve 65% reduction from uncontrolled after the 10-year fleet turnover period. OTC Model Rule #2 would achieve an additional 58% reduction beyond OTC MR#1 after the 10-year fleet turnover period. CT implemented OTC MR#1 in the summer of 2004, with a one-year pass through. CT will implement the OTC MR#2 in the summer of 2008. The following table summarizes the combined effects in 2008, 2009, & 2012. Note that reductions associated with fueling of non-road engines are not included.

Year	Years after MR#1 (2005*)	Years after MR#2 (2008)	Total %Reduction From #1 & #2	SWCT Total Reduction (lbs/day)	GrCT Total Reduction (lbs/day)	State of CT Total Reduction (lbs/day)
2008	3	0	19.5%	2042.4	1743.4	3785.8
2009	4	1	30.3%	3226.6	2754.3	5981.0
2012	7	4	58.1%	6503.8	5551.8	12055.6
2018	10	10	85.3%			

* Assumes no sales of compliant cans during the one-year pass-through period.

Note: These calcs were provided by Chris Nelson for use in Post-1999 ROP Plan & 1-hr shortfall analysis.
For Post-2002 8-hr ROP, the incremental reduction between "Phase I" and "Phase II" is used (Col L - Col M).

MUNICIPAL WASTE COMBUSTORS

									Ozone Season (May-Sept) Emissions (tons)					
FACILITY	PROJECTED ANNUAL HEAT INPUT (MMBtu) - FACILITY TOTAL (90% of MRC)	Lower of RACT / PERMIT / Trading Limit (lb/MMBtu)	CURRENT EMISSION RATE w/o SNCR (or pre-SNCR rate)	MWC Rule Phase I Limits (ppmv)	MWC Rule Phase I Limits (lb/MMBtu)	MWC Rule Phase II Limits (ppmv)	MWC Rule Phase II Limits (lb/MMBtu)	Actual 1996 Emissions (tpd) from BIG96	EMISSIONS AT LOWER OF RACT OR CURRENT RATES	EMISSIONS AT LOWER OF PHASE I OR CURRENT RATES	EMISSIONS AT LOWER OF PHASE II OR CURRENT RATES	ADDITIONAL REDUCTIONS PHASE II VS PHASE I LIMITS[@]	ADDITIONAL REDUCTIONS PHASE II VS RACT LIMITS[@]	SOURCE SPECIFIC F-FACTOR
Bridgeport RESCO Co., L.P.	7,686,900	0.38	0.42	205	0.356	177	0.308		1,461	1,370	1,183	187	278	9685
								SWCT	*4.00*	*3.75*	*3.24*	*0.51*	*0.76*	
Resource Recovery Systems (Mid-CT)	7,710,552	0.31	0.31	220	0.386	147	0.258		1,195	1,195	995	200	200	9780
American Ref-Fuel Co. of SE CT	2,270,592	0.38	0.42	205	0.362	177	0.312		431	411	355	56	77	1774
Ogden Martin Systems of Bristol	1,923,696	0.38	0.51	205	0.355	200	0.346		366	342	333	8	32	1741
Ogden Projects of Wallingford	1,371,816	0.38	0.23	185	0.313	177	0.299		158	158	158	0	0	1700
Riley Energy Systems of Lisbon	1,702,944	0.31	n/a	180	0.309	177	0.304		264	263	259	4	5	9570
								GrCT	*6.61*	*6.49*	*5.75*	*0.74*	*0.86*	
	22,666,500						ANNUAL (tons)		3,874	3,739	3,283	456	592	
							OZONE SEASON (tons)		1,624	1,567	1,376	191	248	
							(TPD)	*State*	10.61	10.24	8.99	1.25	1.62	

[@] Or "current" rate, whichever is lower.

Note: Bridgeport RESCO facility is the only MWC facility located in Southwest Connecticut.

Phase II Incremental Reduction		80% RE
SWCT	0.51	0.41
GrCT	0.74	0.59
STATE	1.25	1.00

1999 - 2006 OZONE SEASON ACTUAL EMISSIONS AND PROJECTION METHODS TO 2012 FOR CT NBP UNITS (tons per season)

PLANT NAME	ARD ORIS CODE	BOILER / UNIT ID	PLANT POINT #	1999 EMISSIONS	2000 EMISSIONS	2001 EMISSIONS	2002 EMISSIONS	2003 EMISSIONS	2004 EMISSIONS	2005 EMISSIONS	2006 EMISSIONS prelim
CJP - BRANFORD	540	10	008	9.86	0.26	2.24	3.30	1.70	1.20	2.30	1.65
CJP - COS COB	542	10	052	9.03	0.33	3.13	6.75	4.10	1.20	7.00	7.50
CJP - COS COB	542	11	053	9.63	0.35	1.41	6.00	4.40	1.00	6.00	4.95
CJP - COS COB	542	12	054	11.73	0.26	4.07	4.35	3.80	1.10	7.10	7.50
NRG - DEVON	544	3	042								
NRG - DEVON	544	6	052								
NRG - DEVON	544	7	055	194.95	130.18	144.87	55.04	44.05	6.45	0.00	0.00
NRG - DEVON	544	8	058	194.83	162.18	113.75	50.86	44.05	6.45	0.00	0.00
NRG - DEVON	544	10	P26	3.35	0.57	0.89	4.28	2.10	0.00	0.00	1.52
NRG - DEVON	544	4A	044								
NRG - DEVON	544	4B	045								
NRG - DEVON	544	5A	048								
NRG - DEVON	544	5B	049								
NRG - MONTVILLE	546	5	017	127.48	106.46	118.94	40.56	8.30	10.00	68.60	18.47
NRG - MONTVILLE	546	6	020	495.34	331.84	151.82	224.23	63.90	22.50	227.50	50.04
NRG - NORWALK HARBOR	548	1	028	317.89	289.37	205.78	90.75	50.45	75.60	95.76	127.61
NRG - NORWALK HARBOR	548	2	030	331.22	260.08	170.62	102.63	50.45	75.60	136.34	156.81
NRG - NORWALK HARBOR	548	10		1.51	1.22	0.85	0.00	2.80	1.90	2.10	2.09
NGS - TUNNEL	557	10	001	9.24	1.78	2.87	1.38	0.00	1.20	4.60	4.56
CJP - FRANKLIN DR	561	10	067	9.04	0.59	0.53	3.00	3.30	2.60	1.40	2.25
NRG - MIDDLETOWN	562	1	096								
NRG - MIDDLETOWN	562	2	098	211.32	117.50	145.48	66.94	48.30	133.80	119.60	72.72
NRG - MIDDLETOWN	562	3	100	642.54	452.02	699.73	264.56	146.10	131.70	422.20	206.27
NRG - MIDDLETOWN	562	4	P03	495.57	384.08	221.77	122.48	24.70	13.00	143.90	85.36
NRG - MIDDLETOWN	562	10	102	8.96	0.29	2.32	1.95	3.10	1.40	1.80	4.65
CRRA - SOUTH MEADOW	563	11A	260	8.00	3.15	5.00	3.95	4.70	1.00	1.30	2.37
CRRA - SOUTH MEADOW	563	11B	261	9.63	1.28	5.04	3.98	4.70	0.90	1.30	2.09
CRRA - SOUTH MEADOW	563	12A	262	9.73	1.27	5.99	3.73	5.20	1.20	2.20	2.29
CRRA - SOUTH MEADOW	563	12B	263	9.74	1.15	6.24	3.89	5.40	1.20	2.00	3.14
CRRA - SOUTH MEADOW	563	13A	264	12.08	1.13	4.76	2.94	4.50	1.40	2.30	4.66
CRRA - SOUTH MEADOW	563	13B	265	11.44	1.07	4.68	2.89	4.40	1.30	2.20	4.47
CRRA - SOUTH MEADOW	563	14A	266	6.86	0.92	4.68	3.14	2.00	1.10	3.70	3.22
CRRA - SOUTH MEADOW	563	14B	267	6.87	0.92	4.61	3.10	5.00	1.00	3.10	2.74
CJP - TORRINGTON TERMINAL	565	10	068	11.39	0.45	2.05	2.70	1.20	1.20	0.80	1.05
BRIDGEPORT HARBOR	568	BHB1	160	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRIDGEPORT HARBOR	568	BHB2	162	133.97	15.07	71.49	45.54	30.60	5.00	23.50	30.91
BRIDGEPORT HARBOR	568	BHB3	P89	747.55	1,147.96	1,320.12	610.78	790.70	936.60	862.80	947.67
BRIDGEPORT HARBOR	568	BHB4	166	1.41	0.31	0.69	0.67	2.90	0.40	1.20	0.38
ENGLISH STATION	569	EB13	142								
ENGLISH STATION	569	EB14	144								
NEW HAVEN HARBOR	6156	NHB1	P31	883.61	757.28	715.68	506.21	183.60	122.60	275.80	130.93
PRATT & WHITNEY COGEN	54605	001	P49	10.57	9.74	5.13	10.05	7.40	3.50	4.90	8.84
SPRAGUE PAPERBOARD - SPRAGUE MIL	54657	1	003	186.20	96.12	92.41	136.85	98.00	156.30	140.50	97.84
NORWICH PUBLIC UTILITIES	880022	TRBINE	001	8.92	0.73	1.58	1.34	1.30	0.50	1.30	3.16
NRG - DEVON	544	11	P40	19.52	0.91	9.68	8.54	2.20	1.00	1.40	3.05
NRG - DEVON	544	12	P41	18.08	1.46	8.03	7.97	1.70	0.90	1.30	3.66
NRG - DEVON	544	13	P42	19.54	1.08	7.54	8.91	2.00	1.10	1.10	4.93
NRG - DEVON	544	14	P43	19.85	1.40	9.07	7.74	2.20	0.90	1.50	4.89

1999 - 2006 OZONE SEASON ACTUAL EMISSIONS AND PROJECTION METHODS TO 2012 FOR CT NBP UNITS (tons per season)

PLANT NAME	ARD ORIS CODE	BOILER / UNIT ID	PLANT POINT #	1999 EMISSIONS	2000 EMISSIONS	2001 EMISSIONS	2002 EMISSIONS	2003 EMISSIONS	2004 EMISSIONS	2005 EMISSIONS	2006 EMISSIONS prelim
SOUTH NORWALK ELECTRIC & WATER	6598	U7						10.30			
BRIDGEPORT ENERGY	55042	BE1		93.31	22.60	35.89	46.44	41.10	41.90	43.30	39.31
BRIDGEPORT ENERGY	55042	BE2		86.83	23.56	22.70	43.97	33.00	35.90	40.40	36.87
MILFORD POWER PROJECT	55126	CT01					5.90	0.00	24.90	20.00	21.21
MILFORD POWER PROJECT	55126	CT02					4.56	0.00	24.80	19.10	18.56
LAKE ROAD GENERATING COMPANY	55149	LRG1				3.40	13.85	6.50	14.70	0.70	12.78
LAKE ROAD GENERATING COMPANY	55149	LRG2					14.47	11.40	14.10	17.70	12.61
LAKE ROAD GENERATING COMPANY	55149	LRG3					17.80	12.90	14.10	16.30	9.58
WALLINGFORD ENERGY	55517	CT01					3.18	1.00	0.90	1.70	0.90
WALLINGFORD ENERGY	55517	CT02				0.33	1.52	0.80	0.60	1.20	1.58
WALLINGFORD ENERGY	55517	CT03				1.24	1.45	0.60	0.50	1.40	2.82
WALLINGFORD ENERGY	55517	CT04				2.05	1.69	1.00	0.30	0.70	1.15
WALLINGFORD ENERGY	55517	CT05				4.15	1.52	0.60	0.50	1.30	1.49
WATERSIDE POWER	56189	4							4.40	1.10	1.32
WATERSIDE POWER	56189	5							3.60	2.20	1.30
WATERSIDE POWER	56189	6							2.70	0.70	
WATERSIDE POWER	880069	1					2.51	0.00			
WATERSIDE POWER	880069	2					2.30	1.30			
WATERSIDE POWER	880069	3					2.15	2.00			
ALGONQUIN POWER WINDSOR LOCKS	10567	GT1	P29	103.48	104.51	110.53	110.25	116.30	105.20	107.10	102.68
AES THAMES	10675	UNITA	P10	66.00	53.03	110.42	74.76	72.80	76.85	62.56	100.74
AES THAMES	10675	UNITB	P11	78.13	53.26	107.44	71.87	72.80	76.85	62.74	90.81
COASTAL TECHNOLOGY, INC. (CDEC)	50498	GT	P64	84.25	79.05	88.09	51.83	4.80	0.60	0.90	6.60
PFIZER	54236	5	012	0.42	38.77	23.38	27.14	16.90	17.80	35.50	23.85
PFIZER	54236	8	P01	28.96	7.88	18.85	21.23	8.30	7.60	5.10	7.29
PRATT & WHITNEY WILLGOOS LAB	880021	B1	163	0.00	0.00	0.00	0.00				
PRATT & WHITNEY WILLGOOS LAB	880021	B2	164	9.62	10.94	0.92	1.11				
PRATT & WHITNEY WILLGOOS LAB	880021	B4	166	11.30	9.62	11.42	1.27				
PRATT & WHITNEY WILLGOOS LAB	880021	B5	167	13.32	6.60	7.23	1.08	0.00			
PRATT & WHITNEY WILLGOOS LAB	880021	B6	168	15.53	5.09	7.31	0.66	0.00			
			TOTAL	**5,810**	**4,698**	**4,831**	**2,948**	**2,080**	**2,195**	**3,022**	**2,510**

Method for determining future emissions:

2008 (still under NBP): Assume emissions growth rate to 2008 equals ratio of highest post-2002 seasonal NOx under NBP (3022 tons in 2005) to 2002 actual seasonal (2948 tons),

2009 (first year under CAIR budget): Reductions based on difference of seasonal 2002 actual (2948 tons) & 2009 CAIR budget (2691 tons), divided by 153 to get typical summer day reduction of
Result allocated to GrCT & SWCT based on relative proportion of utility emissions in 2002 PEI (i.e., 86.4% or 1.45 tons/day in GrCT; 13.6% or 0.23 tons/day

2012 (still under CAIR budget): Same as for 2009 since operating under same CAIR budget.

See Emission Projection tables for projected emissions in 2008, 2009 and 2012 developed with these methods.

1999 - 2006 HEAT INPUT FOR CT NBP UNITS

PLANT NAME	RECEIVING ACCOUNT	ARD ORIS CODE	BOILER / UNIT ID	PLANT POINT #	1999 HEAT INPUT	2000 HEAT INPUT	2001 HEAT INPUT	2002 HEAT INPUT	2003 HEAT INPUT	2004 HEAT INPUT	2005 HEAT INPUT	2006 HEAT INPUT prelim
CJP - BRANFORD	0000010	540	10	008	26,658	705	6,056	5,500	2,750	2,000	3,750	2,750
CJP - COS COB	2000010	542	10	052	26,366	953	9,447	11,250	6,750	2,000	11,500	12,500
CJP - COS COB	2000011	542	11	053	30,627	1,109	4,801	10,000	7,250	1,500	10,000	8,250
CJP - COS COB	2000012	542	12	054	30,917	689	11,128	7,250	6,250	1,750	11,750	12,500
NRG - DEVON	4000003	544	3	042								
NRG - DEVON	4000006	544	6	052								
NRG - DEVON	4000007	544	7	055	2,821,974	1,386,163	1,623,883	1,345,761	454,775	65,618	0	
NRG - DEVON	4000008	544	8	058	2,729,566	1,654,419	1,414,338	1,281,675	454,775	65,618	0	
NRG - DEVON	4000010	544	10	P26	9,471	1,622	2,435	7,130	3,450	0	0	2,530
NRG - DEVON	4000011	544	11	P40	481,259	22,984	215,409	190,159	49,355	23,185	22,209	72,283
NRG - DEVON	4000012	544	12	P41	452,787	37,220	202,884	200,858	44,237	22,805	19,400	77,842
NRG - DEVON	4000013	544	13	P42	482,244	27,548	178,629	210,664	49,383	26,087	18,121	95,403
NRG - DEVON	4000014	544	14	P43	487,680	35,546	210,627	180,469	49,157	21,156	22,932	113,966
NRG - DEVON	400004A	544	4A	044								
NRG - DEVON	400004B	544	4B	045								
NRG - DEVON	400005A	544	5A	048								
NRG - DEVON	400005B	544	5B	049								
NRG - MONTVILLE	6000005	546	5	017	1,584,627	1,143,878	1,225,998	587,502	88,964	107,106	759,357	383,894
NRG - MONTVILLE	6000006	546	6	020	5,159,469	3,605,787	1,433,049	2,220,534	958,238	233,712	2,098,472	675,517
NRG - NORWALK HARBOR	8000001	548	1	028	3,134,104	2,756,058	2,101,078	920,585	709,893	1,026,567	1,315,368	1,560,250
NRG - NORWALK HARBOR	8000002	548	2	030	3,315,196	2,512,625	1,803,687	1,040,847	709,893	1,026,567	1,872,810	1,889,890
NRG - NORWALK HARBOR	8000010	548	10		6,496	2,958	3,647		4,640	3,248	3,480	3,480
NGS - TUNNEL	7000010	557	10	001	28,001	5,346	10,352	5,091	109	4,340	16,432	12,765
CJP - FRANKLIN DR	1000010	561	10	067	29,032	1,882	1,485	5,000	5,500	4,250	2,250	3,750
NRG - MIDDLETOWN	2000001	562	1	096								
NRG - MIDDLETOWN	2000002	562	2	098	2,802,926	1,380,068	1,646,391	1,040,197	529,561	1,360,394	1,442,435	1,141,793
NRG - MIDDLETOWN	2000003	562	3	100	4,671,692	3,799,143	4,285,937	2,063,952	982,246	911,272	2,772,351	1,785,320
NRG - MIDDLETOWN	2000004	562	4	P03	5,436,069	3,651,238	1,971,259	1,207,505	256,007	96,966	1,235,853	993,935
NRG - MIDDLETOWN	2000010	562	10	102	28,662	940	7,607	3,250	5,000	2,250	3,000	7,750
CRRA - SOUTH MEADOW	300011A	563	11A	260	21,947	8,636	12,991	10,247	11,994	2,571	2,875	5,892
CRRA - SOUTH MEADOW	300011B	563	11B	261	26,445	3,521	12,991	10,247	11,994	2,264	3,642	5,892
CRRA - SOUTH MEADOW	300012A	563	12A	262	28,071	3,669	15,404	9,608	13,285	2,906	5,360	5,734
CRRA - SOUTH MEADOW	300012B	563	12B	263	31,060	3,669	15,404	9,608	13,285	2,906	5,360	8,742
CRRA - SOUTH MEADOW	300013A	563	13A	264	30,199	2,823	13,160	8,124	12,422	3,572	5,460	11,333
CRRA - SOUTH MEADOW	300013B	563	13B	265	30,199	2,823	13,160	8,124	12,422	3,572	5,460	11,333
CRRA - SOUTH MEADOW	300014A	563	14A	266	19,360	2,595	12,684	8,525	5,153	2,755	8,580	7,927
CRRA - SOUTH MEADOW	300014B	563	14B	267	19,360	2,595	12,685	8,525	13,361	2,755	8,580	7,927
CJP - TORRINGTON TERMINAL	5000010	565	10	068	30,241	1,188	5,456	4,500	2,000	2,000	1,250	1,750
BRIDGEPORT HARBOR	300BHB1	568	BHB1	160						0	0	
BRIDGEPORT HARBOR	300BHB2	568	BHB2	162	850,765	92,808	410,835	287,674	165,007	31,432	151,611	183,090
BRIDGEPORT HARBOR	300BHB3	568	BHB3	P89	8,555,180	9,668,283	10,571,657	5,997,472	11,726,660	13,101,413	13,390,605	14,058,489
BRIDGEPORT HARBOR	300BHB4	568	BHB4	166	4,264	925	2,085	2,003	8,771	1,108	3,464	1,129
ENGLISH STATION	900EB13	569	EB13	142							0	
ENGLISH STATION	900EB14	569	EB14	144							0	
NEW HAVEN HARBOR	600NHB1	6156	NHB1	P31	9,687,481	8,311,317	7,584,506	7,184,444	2,365,305	1,607,800	3,964,781	1,878,167
SOUTH NORWALK ELECTRIC & WATER	80000U7	6598	U7						19,275			

ALGONQUIN POWER WINDSOR LOCKS	7000GT1	10567	GT1	P29	1,493,002	1,431,046	1,494,058	1,505,664	1,548,596	1,556,616	1,575,224	1,529,913
AES THAMES	50UNITA	10675	UNITA	P10	3,586,701	3,124,310	3,547,783	3,306,692	3,347,572	3,213,647	2,744,394	3,586,958
AES THAMES	50UNITB	10675	UNITB	P11	3,811,899	3,131,107	3,483,920	3,221,479	3,347,572	3,213,647	2,751,946	3,300,745
COASTAL TECHNOLOGY, INC. (CDEC)	30000GT	50498	GT	P64	1,502,356	1,384,671	1,460,709	969,264	80,484	8,927	23,826	141,244
PFIZER	6000005	54236	5	012	10,887	484,336	183,090	396,421	318,659	323,509	543,722	374,936
PFIZER	6000008	54236	8	P01	570,982	160,321	375,519	404,857	191,177	173,986	114,357	135,858
PRATT & WHITNEY COGEN	5000001	54605	001	P49	727,143	820,863	438,278	778,675	579,154	298,230	394,593	770,404
Cascades Boxboard Group-Connecticut LLC	7000001	54657	1	003	787,854	763,504	754,229	827,460	745,222	755,125	721,291	907,868
BRIDGEPORT ENERGY	2000BE1	55042	BE1		2,700,034	3,319,994	4,459,865	5,154,615	4,533,870	4,723,147	4,430,782	4,139,001
BRIDGEPORT ENERGY	2000BE2	55042	BE2		2,777,370	2,985,912	2,761,472	5,460,144	4,515,426	4,763,273	4,438,470	4,055,181
MILFORD POWER PROJECT	500CT01	55126	CT01					60,792	0	4,325,039	4,877,081	4,504,931
MILFORD POWER PROJECT	500CT02	55126	CT02					275,078	0	4,606,221	5,728,150	4,863,892
LAKE ROAD GENERATING COMPANY	00LRG1	55149	LRG1				278,952	4,665,259	1,125,781	5,559,968	265,926	4,700,560
LAKE ROAD GENERATING COMPANY	00LRG2	55149	LRG2					5,230,760	3,376,133	2,486,804	4,494,821	4,262,242
LAKE ROAD GENERATING COMPANY	00LRG3	55149	LRG3					4,800,244	2,903,841	3,522,670	4,448,487	4,151,030
WALLINGFORD ENERGY	700CT01	55517	CT01					245,615	108,295	87,012	212,489	134,215
WALLINGFORD ENERGY	700CT02	55517	CT02				1,617	201,197	80,076	41,090	159,339	282,373
WALLINGFORD ENERGY	700CT03	55517	CT03				13,496	166,560	57,882	53,216	110,726	315,092
WALLINGFORD ENERGY	700CT04	55517	CT04				17,804	133,983	39,209	47,995	73,966	233,495
WALLINGFORD ENERGY	700CT05	55517	CT05				30,371	85,227	30,992	39,704	128,162	241,790
WATERSIDE POWER	9000004	56189	4							10,018	5,991	6,052
WATERSIDE POWER	9000005	56189	5							8,151	6,904	6,879
WATERSIDE POWER	9000006	56189	6							7,224	4,169	
PRATT & WHITNEY WILLGOOS LAB	10000B1	880021	B1	163								
PRATT & WHITNEY WILLGOOS LAB	10000B2	880021	B2	164	78,163	87,897	7,402	9,321				
PRATT & WHITNEY WILLGOOS LAB	10000B4	880021	B4	166	80,666	68,312	82,506	9,265				
PRATT & WHITNEY WILLGOOS LAB	10000B5	880021	B5	167	107,987	52,564	57,984	12,265	0			
PRATT & WHITNEY WILLGOOS LAB	10000B6	880021	B6	168	113,900	36,759	53,021	7,504	0			
NORWICH PUBLIC UTILITIES	2TRBINE	880022	TRBINE	001					5,167	1,868	4,744	11,056
WATERSIDE POWER	9000001	880069	1					7,670	0			
WATERSIDE POWER	9000002	880069	2					6,538	6,365			
WATERSIDE POWER	9000003	880069	3					7,230	6,377			
					71,459,339	**57,985,329**	**56,555,221**	**64,044,059**	**46,706,966**	**59,602,530**	**67,458,058**	**67,699,488**

Growth Method for VOC Emissions for NBP Sources

Since no budget cap, assume growth in heat input 2002-2006 continues through 2012

Growth Factor 2002 to 2006: **1.06**

Growth per Year (2002 to 2006) **1.43%**

Assume Same Annual Growth Rate Through 2012

Growth Factor (2002 to 2008): **1.086**
Growth Factor (2002 to 2009): **1.100**
Growth Factor (2002 to 2012): **1.143**

(green box) = industrial boilers

(orange box) = cogeneration facilities

Determination of Emission Reductions from Solvent Cleaning Operations

As of May 10, 2007, CTDEP is in the final phase of pursuing approval from the State Legislature to modify RCSA 22-174-20(l) to implement the OTC2001 Model Rule for solvent cleaning operations. The rule will require specific workplace standards & limit the vapor pressure of cold cleaning solvents to 1.0 mmHG, with limited exemptions for "special and extreme solvent metal cleaning", as defined in the rule. The rule is expected to be finalized during Summer 2007, with implementation in May 2008.

Reductions resulting from the rule are based on the calculations contained in the OTC report: "Control Measure Development Support Analysis of Ozone Trasnport Commission Model Rules"; prepared for OTC by E.H. Pechan & Associates; March 31, 2001.

Using the same formulas as Pechan, but updating CT population data with more recent Census Bureau estimates, and using more conservative values of rule penetration (80%) and rule effectiveness (80%):

Post-control emission factor = Pre-control emission factor [1-CE(RP)(RE)]

where: CE = control efficiency = 66%, per Pechan estimates
RP = rule penetration = 80% (conservative compared to OTC's 100%)
RE = rule effectiveness = 80% (conservative compared to OTC's 100%)

Post-control emission factor = 3.6 lbs/capita/yr [1-(0.66)(0.80)(0.80)] (applies to 2002)
= 2.1 lbs/capita/yr (applies to 2008, 2009 & 2012)

	2002	2008	2009	2012	
Connecticut Population (Census Bureau):	**3,457,927**	**3,550,416**	**3,564,393**	**3,602,158**	
Metal Solvent Cleaning Emissions (tons/day):	**23.9**	**14.3**	**14.4**	**14.5**	**(assumes 5 day/week operation)**
Statewide VOC Emission Reduction from 2002 (tons/day):		**9.6**	**9.5**	**9.4**	
SW CT Portion (tons/day):		**5.2**	**5.2**	**5.1**	(apportioned based on Fairfield/New Haven/Middlesex 2006
Gr CT Portion (tons/day):		**4.4**	**4.3**	**4.3**	population of 1,909,458 out of CT total population of 3,504,809)

Determination of VOC Emission Reductions from CTDEP's Consumer Products Regulation

Step 1: The following excerpt is from the OTC/MACTEC Control Measures report of Feb 28, 2007.

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
G	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-60-xxx-xxx, 24-65-xxx-xxx

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3.1 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3.1 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental OTB Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental BOTW Control Factor (percent reduction due to OTC 2006 Control Measure)
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

CONSUMER PRODUCTS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incrementa l Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
CT	Fairfield	09001	2465000000	3,759.86	10.3010	10.301	25.0	25.1	3,324.25	9.1075	9.108	1.03	14.20	2.00	3,257.76	8.925	66.48	0.182	All Products/Processes
CT	Hartford	09003	2465000000	2,485.81	6.8104	6.810	25.0	25.1	2,197.81	6.0214	6.021	1.03	14.20	2.00	2,153.85	5.901	43.96	0.120	All Products/Processes
CT	Litchfield	09005	2465000000	465.45	1.2752	1.275	25.0	25.1	411.52	1.1275	1.127	1.03	14.20	2.00	403.29	1.105	8.23	0.023	All Products/Processes
CT	Middlesex	09007	2465000000	564.22	1.5458	1.546	25.0	25.1	498.85	1.3667	1.367	1.03	14.20	2.00	488.87	1.339	9.98	0.027	All Products/Processes
CT	New Haven	09009	2465000000	4,362.35	11.9516	11.952	25.0	25.1	3,856.93	10.5669	10.567	1.03	14.20	2.00	3,779.79	10.356	77.14	0.211	All Products/Processes
CT	New London	09011	2465000000	2,319.84	6.3557	6.356	25.0	25.1	2,051.06	5.6194	5.619	1.03	14.20	2.00	2,010.04	5.507	41.02	0.112	All Products/Processes
CT	Tolland	09013	2465000000	383.36	1.0503	1.050	25.0	25.1	338.94	0.9286	0.929	1.03	14.20	2.00	332.17	0.910	6.78	0.019	All Products/Processes
CT	Windham	09015	2465000000	284.06	0.7783	0.778	25.0	25.1	251.15	0.6881	0.688	1.03	14.20	2.00	246.13	0.674	5.02	0.014	All Products/Processes
State Totals				**14624.95**	**40.07**	**40.07**			**12930.51**	**35.43**	**35.43**				**12671.90**		**258.61**	**0.71**	
SWCT				**8686.43**	**23.80**	**23.80**			**7680.03**	**21.04**	**21.04**				**7526.43**		**153.60**	**0.42**	
GrCT				**5938.52**	**16.27**	**16.27**			**5250.49**	**14.38**	**14.38**				**5145.48**		**105.01**	**0.29**	

Step 2: Since implementation of the 2009 OTB/OTW & 2009 BOTW reductions both occur after 2002 & by 2008 in CT, reductions can be combined.

	2002	Growth Factors vs 2002			Uncontrolled Emissions				Controlled Emissions			Reductions from Uncontrolled			
County	Summer Day from Inventory (tpd)	2008	2009	2012	2008	2009	2012	OTC2001 & OTC2006 Combined Control Factor	2008 (CT not until 2009)	2009	2012	2008	2009	2012	County
Fairfield	10.3010	1.03	1.03	1.05	10.61	10.66	10.77	15.916%	10.61	8.96	9.06	0.00	1.70	1.71	Fairfield
Hartford	6.8104	1.03	1.03	1.05	7.02	7.05	7.12	15.916%	7.02	5.92	5.99	0.00	1.12	1.13	Hartford
Litchfield	1.2752	1.03	1.03	1.05	1.31	1.32	1.33	15.916%	1.31	1.11	1.12	0.00	0.21	0.21	Litchfield
Middlesex	1.5458	1.03	1.03	1.05	1.59	1.60	1.62	15.916%	1.59	1.34	1.36	0.00	0.25	0.26	Middlesex
New Haven	11.9516	1.03	1.03	1.05	12.32	12.36	12.49	15.916%	12.32	10.40	10.51	0.00	1.97	1.99	New Haven
New London	6.3557	1.03	1.03	1.05	6.55	6.57	6.64	15.916%	6.55	5.53	5.59	0.00	1.05	1.06	New London
Tolland	1.0503	1.03	1.03	1.05	1.08	1.09	1.10	15.916%	1.08	0.91	0.92	0.00	0.17	0.17	Tolland
Windham	0.7783	1.03	1.03	1.05	0.80	0.81	0.81	15.916%	0.80	0.68	0.68	0.00	0.13	0.13	Windham
State Totals	**40.07**				**41.29**	**41.45**	**41.89**		**41.29**	**34.85**	**35.22**	**0.00**	**6.60**	**6.67**	**State Totals**
SWCT	**23.80**				**24.52**	**24.62**	**24.88**		**24.52**	**20.70**	**20.92**	**0.00**	**3.92**	**3.96**	**SWCT**
GrCT	**16.27**				**16.76**	**16.83**	**17.01**		**16.76**	**14.15**	**14.30**	**0.00**	**2.68**	**2.71**	**GrCT**

Determination of Emission Reductions from AIM Coatings Regulation

As of May 10, 2007, CTDEP is in the final phase of pursuing approval from the State Legislature to modify RCSA 22-174-41 to implement the OTC2001 Model Rule for Architectural & Industrial Maintenance (AIM) coatings. The rule will limit VOC content limits and is expected to be finalized during Summer 2007, with implementation in May 2008.

Reductions resulting from the rule are based on the calculations contained in the OTC report:
"Control Measure Development Support Analysis of Ozone Trasnport Commission Model Rules";
prepared for OTC by E.H. Pechan & Associates; March 31, 2001.

The Pechan report indicates the 2001 OTC Model Rule will achieve an additional 31 percent reduction in VOC emissions compared to the previous National Rule, which went into effect in the late 1990's &, therefore, is reflected in CTDEP's 2002 PEI.

			Growth Factor from 2002			Projected Emissions		
		2002 PEI	2008	2009	2012	2008	2009	2012
SWCT National Rule Emissions (lbs/day):		22,495.8	1.03	1.03	1.05	23,180.3	23,271.5	23,518.1
GrCT National Rule Emissions (lbs/day):		18,659.5	1.03	1.03	1.05	19,227.2	19,302.9	19,507.4
OTC 2001 Model Rule Control %:	31%							
SWCT Model Rule Emissions (lbs/day):						15,994.4	16,057.3	16,227.5
GrCT Model Rule Emissions (lbs/day):						13,266.8	13,319.0	13,460.1
SWCT Model Rule Reductions (lbs/day):						7,185.9	7,214.2	7,290.6
GrCT Model Rule Reductions (lbs/day):						5,960.4	5,983.9	6,047.3
State Total Model Rule Reductions (lbs/day):						13,146.3	13,198.1	13,337.9

Determination of Emission Reductions from Asphalt Paving Regulation Update

Step 1: The following excerpt is from the OTC/MACTEC Control Measures report of Feb 28, 2007.

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
G	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-61-021-xxx. 24-61-022-xxx

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Annual Control Factor
Q	Summer Control Factor (100% for cutback; 90% for emulsified, except 0 in DE and 96.9% in NJ))
R, S	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
T, U	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

ASPHALT PAVING				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
Cutback																				
CT	Fairfield	09001	2461021000	20.18	0.2302	0.230	74.1	25.1	20.18	0.2302	0.230	1.00	0.00	0.00	100.00	20.18	0.000	0.00	0.230	Cutback Asphalt
CT	Hartford	09003	2461021000	4.80	0.0548	0.055	74.3	25.1	4.80	0.0548	0.055	1.00	0.00	0.00	100.00	4.80	0.000	0.00	0.055	Cutback Asphalt
CT	Litchfield	09005	2461021000	97.67	1.1047	1.105	73.5	25.1	97.67	1.1047	1.105	1.00	0.00	0.00	100.00	97.67	0.000	0.00	1.105	Cutback Asphalt
CT	Middlesex	09007	2461021000	0.00	0.0000	0.000	0.0	25.1	0.00	0.0000	0.000	1.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
CT	New Haven	09009	2461021000	15.93	0.1765	0.176	72.0	25.1	15.93	0.1765	0.176	1.00	0.00	0.00	100.00	15.93	0.000	0.00	0.176	Cutback Asphalt
CT	New London	09011	2461021000	0.00	0.0000	0.000	0.0	25.1	0.00	0.0000	0.000	1.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
CT	Tolland	09013	2461021000	5.17	0.0597	0.060	75.2	25.1	5.17	0.0597	0.060	1.00	0.00	0.00	100.00	5.17	0.000	0.00	0.060	Cutback Asphalt
CT	Windham	09015	2461021000	33.08	0.3324	0.332	65.3	25.1	33.08	0.3324	0.332	1.00	0.00	0.00	100.00	33.08	0.000	0.00	0.332	Cutback Asphalt
			State Total:			**1.958**					**1.958**						**0.000**		**1.958**	
Emulsified																				
CT	Fairfield	09001	2461022000	25.99	0.2861	0.286	71.5	25.1	25.99	0.2861	0.286	1.00	0.00	90.00	90.00	2.60	0.029	23.39	0.257	Emulsified Asphalt
CT	Hartford	09003	2461022000	25.58	0.2874	0.287	73.0	25.1	25.58	0.2874	0.287	1.00	0.00	90.00	90.00	2.56	0.029	23.02	0.259	Emulsified Asphalt
CT	Litchfield	09005	2461022000	57.98	0.6266	0.627	70.2	25.1	57.98	0.6266	0.627	1.00	0.00	90.00	90.00	5.80	0.063	52.18	0.564	Emulsified Asphalt
CT	Middlesex	09007	2461022000	26.60	0.2854	0.285	69.8	25.1	26.60	0.2854	0.285	1.00	0.00	90.00	90.00	2.66	0.029	23.94	0.257	Emulsified Asphalt
CT	New Haven	09009	2461022000	16.00	0.1824	0.182	74.1	25.1	16.00	0.1824	0.182	1.00	0.00	90.00	90.00	1.60	0.018	14.40	0.164	Emulsified Asphalt
CT	New Londor	09011	2461022000	24.06	0.2584	0.258	69.8	25.1	24.06	0.2584	0.258	1.00	0.00	90.00	90.00	2.41	0.026	21.65	0.233	Emulsified Asphalt
CT	Tolland	09013	2461022000	20.29	0.2341	0.234	75.0	25.1	20.29	0.2341	0.234	1.00	0.00	90.00	90.00	2.03	0.023	18.26	0.211	Emulsified Asphalt
CT	Windham	09015	2461022000	37.35	0.4176	0.418	72.7	25.1	37.35	0.4176	0.418	1.00	0.00	90.00	90.00	3.74	0.042	33.62	0.376	Emulsified Asphalt
			State Total:			**2.578**					**2.578**						**0.258**		**2.320**	

Step 2: Adjust for the following:

a) OTC assumes 100% RE. However, since CT's reg change may not take effect until May 2009, will apply 80% RE to conservatively assume some ramp-up time for towns/suppliers. (Note: per KW, he expects most cutback use will shift to non-VOC diluents such as vegetable oil or synthetics.)

b) OTC assumed no growth. CTDEP will assume growth equivalent to VMT growth through 2012.

Cutback

	2002	Growth Factors vs 2002			Uncontrolled Emissions					Controlled Emissions			Reductions from Uncontrolled			
County	Summer Day from Inventory (tpd)	2008	2009	2012	2008	2009	2012	2009+ OTC Control %	CTDEP Rule Eff %	2008	2009	2012	2008	2009	2012	(tons/day) County
Fairfield	0.2302	1.07	1.09	1.12	0.25	0.25	0.26	100.0%	80.0%	0.25	0.05	0.05	0.00	0.20	0.21	Fairfield
Hartford	0.0548	1.07	1.09	1.12	0.06	0.06	0.06	100.0%	80.0%	0.06	0.01	0.01	0.00	0.05	0.05	Hartford
Litchfield	1.1047	1.07	1.09	1.12	1.19	1.20	1.24	100.0%	80.0%	1.19	0.24	0.25	0.00	0.96	0.99	Litchfield
Middlesex	0.0000	1.07	1.09	1.12	0.00	0.00	0.00	100.0%	80.0%	0.00	0.00	0.00	0.00	0.00	0.00	Middlesex
New Haven	0.1765	1.07	1.09	1.12	0.19	0.19	0.20	100.0%	80.0%	0.19	0.04	0.04	0.00	0.15	0.16	New Haven
New London	0.0000	1.07	1.09	1.12	0.00	0.00	0.00	100.0%	80.0%	0.00	0.00	0.00	0.00	0.00	0.00	New London
Tolland	0.0597	1.07	1.09	1.12	0.06	0.06	0.07	100.0%	80.0%	0.06	0.01	0.01	0.00	0.05	0.05	Tolland
Windham	0.3324	1.07	1.09	1.12	0.36	0.36	0.37	100.0%	80.0%	0.36	0.07	0.07	0.00	0.29	0.30	Windham
State Totals	**1.96**				**2.10**	**2.13**	**2.19**			**2.10**	**0.43**	**0.44**	**0.00**	**1.70**	**1.75**	**State Totals**
SWCT	**0.41**				**0.44**	**0.44**	**0.45**			**0.44**	**0.09**	**0.09**	**0.00**	**0.35**	**0.36**	**SWCT**
GrCT	**1.55**				**1.67**	**1.69**	**1.73**			**1.67**	**0.34**	**0.35**	**0.00**	**1.35**	**1.39**	**GrCT**

Emulsified

	2002	Growth Factors vs 2002			Uncontrolled Emissions					Controlled Emissions			Reductions from Uncontrolled			
County	Summer Day from Inventory (tpd)	2008	2009	2012	2008	2009	2012	2009+ OTC Control %	CTDEP Rule Eff %	2008	2009	2012	2008	2009	2012	(tons/day) County
Fairfield	0.2861	1.07	1.09	1.12	0.31	0.31	0.32	100.0%	80.0%	0.31	0.06	0.06	0.00	0.25	0.26	Fairfield
Hartford	0.2874	1.07	1.09	1.12	0.31	0.31	0.32	100.0%	80.0%	0.31	0.06	0.06	0.00	0.25	0.26	Hartford
Litchfield	0.6266	1.07	1.09	1.12	0.67	0.68	0.70	100.0%	80.0%	0.67	0.14	0.14	0.00	0.54	0.56	Litchfield
Middlesex	0.2854	1.07	1.09	1.12	0.31	0.31	0.32	100.0%	80.0%	0.31	0.06	0.06	0.00	0.25	0.26	Middlesex
New Haven	0.1824	1.07	1.09	1.12	0.20	0.20	0.20	100.0%	80.0%	0.20	0.04	0.04	0.00	0.16	0.16	New Haven
New London	0.2584	1.07	1.09	1.12	0.28	0.28	0.29	100.0%	80.0%	0.28	0.06	0.06	0.00	0.22	0.23	New London
Tolland	0.2341	1.07	1.09	1.12	0.25	0.25	0.26	100.0%	80.0%	0.25	0.05	0.05	0.00	0.20	0.21	Tolland
Windham	0.4176	1.07	1.09	1.12	0.45	0.45	0.47	100.0%	80.0%	0.45	0.09	0.09	0.00	0.36	0.37	Windham
State Totals	**2.58**				**2.77**	**2.80**	**2.88**			**2.77**	**0.56**	**0.58**	**0.00**	**2.24**	**2.31**	**State Totals**
SWCT	**0.75**				**0.81**	**0.82**	**0.84**			**0.81**	**0.16**	**0.17**	**0.00**	**0.66**	**0.67**	**SWCT**
GrCT	**1.82**				**1.96**	**1.98**	**2.04**			**1.96**	**0.40**	**0.41**	**0.00**	**1.59**	**1.63**	**GrCT**

Asphalt Totals

	2002	Uncontrolled 2008	Uncontrolled 2009	Uncontrolled 2012	Controlled 2008	Controlled 2009	Controlled 2012	Reductions from Uncontrolled 2008	2009	2012	
State Totals	**4.54**	**4.87**	**4.93**	**5.07**	**4.87**	**0.99**	**1.01**	**0.00**	**3.94**	**4.06**	**State Totals**
SWCT	**1.16**	**1.25**	**1.26**	**1.30**	**1.25**	**0.25**	**0.26**	**0.00**	**1.01**	**1.04**	**SWCT**
GrCT	**3.38**	**3.63**	**3.67**	**3.77**	**3.63**	**0.73**	**0.75**	**0.00**	**2.93**	**3.02**	**GrCT**

Determination of VOC Emission Reductions from CTDEP's Adhesives & Sealants Regulation: Point Sources

Step 1: The following excerpt is from the OTC/MACTEC Control Measures report of Feb 28, 2007.

CTDEP, in consult with stakeholders, has developed a draft regulation to implement the OTC Model Rule for Adhesives & Sealants.
A summer 2007 hearing is anticipated, with regulation adoption by early 2008. The draft regulation calls for implementation in January 2009.

Emission estimates and reductions resulting from the rule are based on the calculations contained in the OTCMACTEC control measures report of February 2007:
"Identification and Evaluation of Candidate Control Measures: Final Technical Support Document"; MACTEC for OTC; February 28, 2007.
The 2002 point source emissions below match those in CTDEP's 2002 PEI.

COLUMN	COLUMN DESCRIPTIONS
A-F	
G	
H	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
I	SCC-Source Classification Code
J	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
K	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
L	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
M	Summer season percentage from NIF Emission Process (EP) file
N	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
	Total capture/control efficiency from NIF 2002 CE file
	Blank

COLUMN	COLUMN DESCRIPTIONS
O	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
P	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
Q	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
R	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
S	Total capture/control efficiency from NIF 2009 CE file
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental Control Factor (64.4% if uncontrolled, 0% if greater than 85% control system requirment)
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW incremental control factor/100)
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

8.02600 0.03380

State							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
CT CT	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
CT	Hartford	09003	6484	R0131	01	40200701	2.3630	0.0099	0.010	25.0	25.5	0.00	2.2660	0.0090	0.009	0.984	0.00	64.40	0.81	0.003	1.46	0.006	WASLEY PRODUCTS INC
CT	Hartford	09003	6484	R0132	01	40200701	2.3630	0.0099	0.010	25.0	25.5	0.00	2.2660	0.0090	0.009	0.984	0.00	64.40	0.81	0.003	1.46	0.006	WASLEY PRODUCTS INC
	New Haven	09009	3371	R0263	01	40200701	3.1100	0.0130	0.013	29.0	25.5	98.00	2.7080	0.0110	0.011	0.984	98.00	0.00	2.71	0.011	0.00	0.000	SAINT-GOBAIN PPL CORP
	Windham	09015	0647	P0085	01	40200701	0.1900	0.0010	0.001	25.0	25.5	0.00	0.1820	0.0010	0.001	0.984	0.00	64.40	0.06	0.000	0.12	0.001	DELTA RUBBER CO SUB OF NN, INC
	State Totals							**0.0338**						**0.0300**						**0.0178**		**0.0122**	

Step 2: CT Rule likely effective in 2009, with above reductions; No further reductions in 2008; Must include growth to determine 2012 reductions

(Use CT growth factors from emission projection spreadsheet)

		2002	Growth Factors vs 2002			Emissions w/o OTC Measure				Emissions w/ OTC Measure			Reductions due to OTC Measure			
	County	Summer Day from Inventory (tpd)	2008	2009	2012	2008	2009	2012	OTC2006 Control Factor	2008	2009	2012	2008	2009	2012	County
	Hartford	0.0099	0.97	0.96	0.95	0.01	0.01	0.01	64.4%	0.01	0.00	0.00	0.000	0.006	0.006	Fairfield
	Hartford	0.0099	0.97	0.96	0.95	0.01	0.01	0.01	64.4%	0.01	0.00	0.00	0.000	0.006	0.006	Hartford
	New Haven	0.0130	0.97	0.96	0.95	0.01	0.01	0.01	0.0%	0.01	0.01	0.01	0.000	0.000	0.000	Litchfield
	Windham	0.0010	0.97	0.96	0.95	0.00	0.00	0.00	64.4%	0.00	0.00	0.00	0.000	0.001	0.001	Middlesex
State Totals		**0.03**				**0.03**	**0.03**	**0.03**		**0.03**	**0.02**	**0.02**	**0.000**	**0.013**	**0.013**	**State Totals**
SWCT		**0.01**				**0.01**	**0.01**	**0.01**		**0.01**	**0.01**	**0.01**	**0.000**	**0.000**	**0.000**	**SWCT**
GrCT		**0.02**				**0.02**	**0.02**	**0.02**		**0.02**	**0.01**	**0.01**	**0.000**	**0.013**	**0.013**	**GrCT**

Determination of VOC Emission Reductions from CTDEP's Adhesives & Sealants Regulation: Area Sources

CTDEP, in consult with stakeholders, has developed a draft regulation to implement the OTC Model Rule for Adhesives & Sealants.
A summer 2007 hearing is anticipated, with regulation adoption by early 2008. The draft regulation calls for implementation in January 2009.

Emission estimates and reductions resulting from the rule are based on the calculations contained in the OTC/MACTEC control measures report of February 2007:
"Identification and Evaluation of Candidate Control Measures: Final Technical Support Document"; MACTEC for OTC; February 28, 2007.

Most States 2002 PEI did not include the area source portion of emissions for this category. Emission estimates for 2002 from the OTC/MACTEC report (as repeated below) have been added to the CT 2002 PEI in the appropriate spreadsheets.

Step 1: The following excerpt is from the OTC/MACTEC Control Measures report of Feb 28, 2007.

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG
G	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy:
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-40-020-000

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy:
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental Control Factor (percent reduction due to OTC 2006 Control Measure)
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

Adhesives and Sealants				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
CT	Fairfield	09001	2440020000	441.56	Missing	1.232	Missing	25.4	606.23	Missing	1.692	1.37	0.00	64.40	215.82	0.602	390.41	1.090	Adhesive (Industrial) Application
CT	Hartford	09003	2440020000	423.67	Missing	1.183	Missing	25.4	581.66	Missing	1.624	1.37	0.00	64.40	207.07	0.578	374.59	1.046	Adhesive (Industrial) Application
CT	Litchfield	09005	2440020000	146.19	Missing	0.408	Missing	25.4	200.71	Missing	0.560	1.37	0.00	64.40	71.45	0.199	129.26	0.361	Adhesive (Industrial) Application
CT	Middlesex	09007	2440020000	117.52	Missing	0.328	Missing	25.4	161.34	Missing	0.450	1.37	0.00	64.40	57.44	0.160	103.90	0.290	Adhesive (Industrial) Application
CT	New Haven	09009	2440020000	287.40	Missing	0.802	Missing	25.4	394.58	Missing	1.101	1.37	0.00	64.40	140.47	0.392	254.11	0.709	Adhesive (Industrial) Application
CT	New London	09011	2440020000	122.62	Missing	0.342	Missing	25.4	168.35	Missing	0.470	1.37	0.00	64.40	59.93	0.167	108.42	0.303	Adhesive (Industrial) Application
CT	Tolland	09013	2440020000	41.49	Missing	0.116	Missing	25.4	56.97	Missing	0.159	1.37	0.00	64.40	20.28	0.057	36.69	0.102	Adhesive (Industrial) Application
CT	Windham	09015	2440020000	133.65	Missing	0.373	Missing	25.4	183.49	Missing	0.512	1.37	0.00	64.40	65.32	0.182	118.17	0.330	Adhesive (Industrial) Application
	State Total					**4.784**					**6.569**					**2.338**		**4.230**	
	SWCT					**2.36**					**3.24**					**1.15**		**2.09**	
	GrCT					**2.42**					**3.32**					**1.18**		**2.14**	

Step 2: CT Rule likely effective in 2009, with above reductions; No further reductions in 2008; Must include growth to determine 2012 reductions

(Must add 2002 area source adhesive & sealant emissions to CT's 2002 PEI. For post-2002 growth, assume MACTEC 2002-2009 37% growth & interpolat/extrpolate for 2008 & 2012.)

		2002	Growth Factors vs 2002			Uncontrolled Emissions				Controlled Emissions			Reductions from Uncontrolled			
	County	Summer Day from Inventory (tpd)	2008	2009	2012	2008	2009	2012	OTC2006 Control Factor	2008	2009	2012	2008	2009	2012	County
	Fairfield	1.2325	1.32	1.37	1.53	1.63	1.69	1.89	64.4%	1.63	0.60	0.67	0.00	1.09	1.22	Fairfield
	Hartford	1.1825	1.32	1.37	1.53	1.56	1.62	1.81	64.4%	1.56	0.58	0.65	0.00	1.05	1.17	Hartford
	Litchfield	0.4080	1.32	1.37	1.53	0.54	0.56	0.63	64.4%	0.54	0.20	0.22	0.00	0.36	0.40	Litchfield
	Middlesex	0.3280	1.32	1.37	1.53	0.43	0.45	0.50	64.4%	0.43	0.16	0.18	0.00	0.29	0.32	Middlesex
	New Haven	0.8022	1.32	1.37	1.53	1.06	1.10	1.23	64.4%	1.06	0.39	0.44	0.00	0.71	0.79	New Haven
	New London	0.3423	1.32	1.37	1.53	0.45	0.47	0.52	64.4%	0.45	0.17	0.19	0.00	0.30	0.34	New London
	Tolland	0.1158	1.32	1.37	1.53	0.15	0.16	0.18	64.4%	0.15	0.06	0.06	0.00	0.10	0.11	Tolland
	Windham	0.3730	1.32	1.37	1.53	0.49	0.51	0.57	64.4%	0.49	0.18	0.20	0.00	0.33	0.37	Windham
State Totals		**4.78**				**6.31**	**6.57**	**7.33**		**6.31**	**2.34**	**2.61**	**0.00**	**4.23**	**4.72**	**State Totals**
SWCT		**2.36**				**3.12**	**3.24**	**3.62**		**3.12**	**1.15**	**1.29**	**0.00**	**2.09**	**2.33**	**SWCT**
GrCT		**2.42**				**3.20**	**3.32**	**3.71**		**3.20**	**1.18**	**1.32**	**0.00**	**2.14**	**2.39**	**GrCT**

Emission Reductions from ICI Boiler Control Strategy

Step 1:

The following table excerpt is from the OTC/MACTEC spreadsheet "OTC TSD Appendix_E NOx_2009.xls", which includes more detailed calculation steps on how state-by-state reductions were determined for the OTC ICI Boiler strategy. Also see the Feb 2007 OTC/MACTEC final TSD "Identification and Evaluation of Candidate Control Measures" (Sec 4.6).

	ICI Boilers (minor/area) NOx Emissions (tpd)				ICI Boilers (major/point) NOx Emissions (tpd)				
State	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2002	2009 OTB/W	2009 BOTW	2009 Benefit	2009 Total Benefit
CT	8.9	9.4	6.5	2.8	5.8	5.6	3.5	2.1	4.9

Step 2:

As of this writing (May 14, 2007), there is much uncertainty about the timing and limits that CTDEP will adopt into the Sec 22a-174-22 NOx regulation revision currently under consideration. The goal is to replicate the OTC recommendations as closely as possible. However, given the uncertainty at this point, CTDEP has elected to apply both an 80% rule penetration (RP) and 80% rule effectiveness (RE) adjustment to the above OTC emission reduction estimates (i.e., 64% of the OTC -estimated reduction will be used for both area source and point source ICI boilers. Reductions will be assumed to occur starting in 2009. Although CTDEP's uncontrolled ICI estimates include activity growth through 2012, the level of emission reductions in 2012 will be assumed to be the same as for 2009. Redcutions will be assigned to each nonattainment area based on the proportion of uncontrolled NOx emissions from the ICI sector from the earlier worksheets for each year.

	OTC-Calculated 2009 Benefit (tpd)	CTDEP Assumed Rule Penetration	CTDEP Assumed Rule Effectiveness	CTDEP Assumed 2009 Benefit (tpd)	CTDEP Assumed 2012 Benefit (tpd)		
Area	2.8	80%	80%	1.8	1.8	Statewide	Area
				0.9	0.9	SWCT	Area
				0.9	0.9	GrCT	Area

	OTC-Calculated 2009 Benefit (tpd)	CTDEP Assumed Rule Penetration	CTDEP Assumed Rule Effectiveness	CTDEP Assumed 2009 Benefit (tpd)	CTDEP Assumed 2012 Benefit (tpd)		
Point	2.1	80%	80%	1.3	1.3	Statewide	Point
				0.8	0.8	SWCT	Point
				0.5	0.5	GrCT	Point

Appendix 5A

Documentation of On-Road Mobile Source Emissions Modeling for Reasonable Further Progress (RFP) Inventories

2002 and 2008 MOBILE6.2 Input Files
for
Greater Connecticut and Southwest Connecticut

1) 2002 MOBILE6.2 Primary Input File ("02no90p.in")

```
MOBILE6 INPUT FILE :
* For VOC and NOx Only
SPREADSHEET       :
DATABASE OUTPUT   :
POLLUTANTS        : HC NOX
DATABASE OPTIONS  : CTdb.opt

RUN DATA
> 2002 input file for 8-hr ozone RFP target calc - 2002 traffic/reg; No post-90 controls (CAA, RFG, 1990 I/M) 4/18/2007 PMB

>********************Fairfield Expressway ******************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP       : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM      : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**********************************************I/M DESC FILE      : CTIM02.D
*********************************************** M6 User's Guide says ATP parameters must be on 2nd line
***********************************************ANTI-TAMP PROG     :
***********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990


> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT         : 02svmt1S.cty
VMT BY FACILITY    : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : Fairfield County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7

* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
```

* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt1S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Fairfield County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.

*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Local ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt1S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Fairfield County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8

FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************Fairfield Ramp ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt1S.cty
VMT BY FACILITY : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Fairfield County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************Hartford Expressway **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt2S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Hartford County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5

```
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>******************Hartford Arterials/Collectors ****************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP       : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***********************************************I/M DESC FILE      : CTIM02.D
************************************************ M6 User's Guide says ATP parameters must be on 2nd line
************************************************ANTI-TAMP PROG     :
************************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt2S.cty
VMT BY FACILITY    : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.5116  0.0777  0.2586  0.0797  0.0367  0.0107  0.0011  0.0008
0.0006  0.0024  0.0028  0.0031  0.0109  0.0005  0.0003  0.0025

SCENARIO RECORD    : Hartford County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP           : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
```

BAROMETRIC PRES : 29.89

END OF RUN

>*****************Hartford Local **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt2S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Hartford County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
***************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

```
END OF RUN

>*******************Hartford Ramp *****************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP        : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
*********************************************I/M DESC FILE      : CTIM02.D
********************************************** M6 User's Guide says ATP parameters must be on 2nd line
**********************************************ANTI-TAMP PROG     :
**********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt2S.cty
VMT BY FACILITY    : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : Hartford County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP           : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN
```

```
>*******************Litchfield Expressway ********************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP        : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**********************************************I/M DESC FILE      : CTIM02.D
*********************************************** M6 User's Guide says ATP parameters must be on 2nd line
***********************************************ANTI-TAMP PROG     :
***********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt3S.cty
VMT BY FACILITY    : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : Litchfield County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
****************************FUEL RVP          : 6.8
FUEL RVP          : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>*****************Litchfield Arterials/Collectors **************************
```

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt3S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Litchfield County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Litchfield Local **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt3S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Litchfield County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Litchfield Ramp ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

```
* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP        : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***********************************************I/M DESC FILE      : CTIM02.D
************************************************ M6 User's Guide says ATP parameters must be on 2nd line
************************************************ANTI-TAMP PROG     :
************************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt3S.cty
VMT BY FACILITY    : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : Litchfield County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*******************************FUEL RVP          : 6.8
FUEL RVP           : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>**********************Middlesex Expressway ***********************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
```

************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt4S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Middlesex County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Middlesex Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

```
* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**********************************************I/M DESC FILE      : CTIM02.D
*********************************************** M6 User's Guide says ATP parameters must be on 2nd line
***********************************************ANTI-TAMP PROG     :
***********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt4S.cty
VMT BY FACILITY    : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.5116  0.0777  0.2586  0.0797  0.0367  0.0107  0.0011  0.0008
0.0006  0.0024  0.0028  0.0031  0.0109  0.0005  0.0003  0.0025

SCENARIO RECORD    : Middlesex County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP           : 6.8
FUEL RVP           : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 66.5 91.6
RELATIVE HUMIDITY  : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
                     56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES    : 29.53

END OF RUN


>******************Middlesex  Local *******************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP        : NLEVNE.D

* Fuel Data
```

***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt4S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Middlesex County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Middlesex Ramp **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt4S.cty
VMT BY FACILITY : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Middlesex County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>********************New Haven Expressway **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
***********************94+ LDG IMP : NLEVNE.D

* Fuel Data
**************** remove RFG since occurs post-1990 **************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI

```
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***********************************************I/M DESC FILE      : CTIM02.D
************************************************ M6 User's Guide says ATP parameters must be on 2nd line
************************************************ANTI-TAMP PROG     :
************************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt5S.cty
VMT BY FACILITY    : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : New Haven County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP          : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 66.5 91.6
RELATIVE HUMIDITY  : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
                     56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES    : 29.53

END OF RUN

>******************New Haven Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP        : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D
```

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt5S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : New Haven County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*****************New Haven Local **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
***********************94+ LDG IMP : NLEVNE.D

* Fuel Data
**************** remove RFG since occurs post-1990 **************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt5S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : New Haven County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************New Haven Ramp ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
***********************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI

**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt5S.cty
VMT BY FACILITY : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : New Haven County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************New London Expressway **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line

***ANTI-TAMP PROG   :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE   : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt6S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD   : New London County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP   : 6.8
FUEL RVP   : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************New London Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP   : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE   : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG   :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE   : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt6S.cty
VMT BY FACILITY   : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD   : New London County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP   : 6.8
FUEL RVP   : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************New London Local ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP   : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE   : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG   :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt6S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : New London County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************New London Ramp ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d

```
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt6S.cty
VMT BY FACILITY    : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : New London County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP           : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>********************Tolland Expressway *******************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP        : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***********************************************I/M DESC FILE      : CTIM02.D
************************************************ M6 User's Guide says ATP parameters must be on 2nd line
************************************************ANTI-TAMP PROG     :
************************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990
```

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt7S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Tolland County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Tolland Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt7S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Tolland County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Tolland Local ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

```
* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT         : 02svmt7S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS     :
0.5161  0.0785  0.2610  0.0805  0.0370  0.0071  0.0007  0.0006
0.0004  0.0016  0.0019  0.0020  0.0072  0.0004  0.0002  0.0048

SCENARIO RECORD   : Tolland County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR     : 2002
EVALUATION MONTH  : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP          : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP      : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                    47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*******************Tolland Ramp *********************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP       : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM      : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**********************************************I/M DESC FILE      : CTIM02.D
*********************************************** M6 User's Guide says ATP parameters must be on 2nd line
***********************************************ANTI-TAMP PROG     :
***********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990
> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
```

```
SPEED VMT         : 02svmt7S.cty
VMT BY FACILITY    : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS     :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : Tolland County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP          : 6.8
FUEL RVP          : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                  47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>********************Windham Expressway ********************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP        : NLEVNE.D

* Fuel Data
****************** remove RFG since occurs post-1990 ****************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***********************************************I/M DESC FILE      : CTIM02.D
************************************************ M6 User's Guide says ATP parameters must be on 2nd line
************************************************ANTI-TAMP PROG     :
************************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT         : 02svmt8S.cty
VMT BY FACILITY    : FCVMTF.cty
```

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Windham County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Windham Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt8S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)

```
VMT FRACTIONS      :
0.5116  0.0777  0.2586  0.0797  0.0367  0.0107  0.0011  0.0008
0.0006  0.0024  0.0028  0.0031  0.0109  0.0005  0.0003  0.0025

SCENARIO RECORD    : Windham County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP          : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN


>******************Windham  Local *******************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP        : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**********************************************I/M DESC FILE      : CTIM02.D
*********************************************** M6 User's Guide says ATP parameters must be on 2nd line
***********************************************ANTI-TAMP PROG     :
***********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt8S.cty
VMT BY FACILITY    : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS      :
```

0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : Windham County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR   : 2002
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP   : 6.8
FUEL RVP   : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>********************Windham Ramp **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP   : NLEVNE.D

* Fuel Data
****************** remove RFG since occurs post-1990 ****************** FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE   : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG   :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE   : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt8S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Windham County 2002 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2002
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

2) 2008 MOBILE6.2 Primary Input File ("028no90p.in")

MOBILE6 INPUT FILE :
* For VOC and NOx Only
SPREADSHEET :
DATABASE OUTPUT :
POLLUTANTS : HC NOX
DATABASE OPTIONS : CTdb.opt

RUN DATA
> 2008 input file for 8-hr ozone RFP target calc - 2002 traffic/reg; No post-90 controls (CAA, RFG, 1990 I/M) 4/18/2007 PMB

>********************Fairfield Expressway ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt1S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Fairfield County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7

* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP

* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
****************** remove RFG since occurs post-1990 ****************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M ***************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt1S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Fairfield County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8

FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Local **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt1S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Fairfield County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Fairfield Ramp ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt1S.cty
VMT BY FACILITY : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Fairfield County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)

MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>********************Hartford Expressway ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt2S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Hartford County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7

47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*****************Hartford Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt2S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Hartford County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

```
END OF RUN


>******************Hartford  Local ******************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
***********************94+ LDG IMP        : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
*********************************************I/M DESC FILE      : CTIM02.D
********************************************* M6 User's Guide says ATP parameters must be on 2nd line
**********************************************ANTI-TAMP PROG     :
**********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt2S.cty
VMT BY FACILITY    : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.5161  0.0785  0.2610  0.0805  0.0370  0.0071  0.0007  0.0006
0.0004  0.0016  0.0019  0.0020  0.0072  0.0004  0.0002  0.0048

SCENARIO RECORD    : Hartford County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP          : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89
```

```
END OF RUN

>*******************Hartford Ramp ******************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP       : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**********************************************I/M DESC FILE      : CTIM02.D
*********************************************** M6 User's Guide says ATP parameters must be on 2nd line
***********************************************ANTI-TAMP PROG     :
***********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT         : 02svmt2S.cty
VMT BY FACILITY    : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : Hartford County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP          : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN
```

```
>*******************Litchfield Expressway *****************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP       : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM      : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**********************************************I/M DESC FILE      : CTIM02.D
*********************************************** M6 User's Guide says ATP parameters must be on 2nd line
***********************************************ANTI-TAMP PROG     :
***********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT         : 02svmt3S.cty
VMT BY FACILITY    : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS     :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : Litchfield County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
****************************FUEL RVP          : 6.8
FUEL RVP          : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>*****************Litchfield Arterials/Collectors **************************
```

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP   : NLEVNE.D

* Fuel Data
****************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE   : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG   :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE   : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt3S.cty
VMT BY FACILITY   : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD   : Litchfield County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP   : 6.8
FUEL RVP   : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>*****************Litchfield Local ***

* Turn off CAAA of 1990 controls

NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP   : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE   : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG   :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE   : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt3S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : Litchfield County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP   : 6.8
FUEL RVP   : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************Litchfield Ramp **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

```
* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP       : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM      : 2 N
NO REFUELING      :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**********************************************I/M DESC FILE      : CTIM02.D
*********************************************** M6 User's Guide says ATP parameters must be on 2nd line
***********************************************ANTI-TAMP PROG     :
***********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR       : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT         : 02svmt3S.cty
VMT BY FACILITY    : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS     :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : Litchfield County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP          : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP      : 67.7 95.5
RELATIVE HUMIDITY  : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES    : 29.89

END OF RUN

>********************Middlesex Expressway ******************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP       : NLEVNE.D
```

* Fuel Data
****************** remove RFG since occurs post-1990 ****************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt4S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Middlesex County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************Middlesex Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data

```
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M ***************** I/M Data; 2002 program same as in 2002 PEI
***********************************************I/M DESC FILE      : CTIM02.D
************************************************ M6 User's Guide says ATP parameters must be on 2nd line
************************************************ANTI-TAMP PROG     :
************************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt4S.cty
VMT BY FACILITY    : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.5116  0.0777  0.2586  0.0797  0.0367  0.0107  0.0011  0.0008
0.0006  0.0024  0.0028  0.0031  0.0109  0.0005  0.0003  0.0025

SCENARIO RECORD    : Middlesex County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP          : 6.8
FUEL RVP           : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 66.5 91.6
RELATIVE HUMIDITY  : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
                     56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES    : 29.53

END OF RUN


>******************Middlesex  Local *********************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP       : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
```

NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt4S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Middlesex County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
********************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*********************Middlesex Ramp ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
**************************94+ LDG IMP : NLEVNE.D

* Fuel Data
******************* remove RFG since occurs post-1990 ******************* FUEL PROGRAM : 2 N
NO REFUELING :

```
> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D

EXPRESS HC AS VOC  :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**********************************************I/M DESC FILE      : CTIM02.D
*********************************************** M6 User's Guide says ATP parameters must be on 2nd line
***********************************************ANTI-TAMP PROG     :
***********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt4S.cty
VMT BY FACILITY    : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.4822  0.0733  0.2439  0.0752  0.0346  0.0291  0.0029  0.0023
0.0017  0.0064  0.0076  0.0083  0.0297  0.0014  0.0007  0.0007

SCENARIO RECORD    : Middlesex County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP           : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 66.5 91.6
RELATIVE HUMIDITY  : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
                     56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES    : 29.53

END OF RUN

>********************New Haven Expressway ******************************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP        : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST          : CTREG02.D
```

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt5S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : New Haven County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************New Haven Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

```
********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**********************************************I/M DESC FILE      : CTIM02.D
*********************************************** M6 User's Guide says ATP parameters must be on 2nd line
***********************************************ANTI-TAMP PROG     :
***********************************************83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE      : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS    : 0.07

* VMT Data
VMT BY HOUR        : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT          : 02svmt5S.cty
VMT BY FACILITY    : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS      :
0.5116  0.0777  0.2586  0.0797  0.0367  0.0107  0.0011  0.0008
0.0006  0.0024  0.0028  0.0031  0.0109  0.0005  0.0003  0.0025

SCENARIO RECORD    : New Haven County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR      : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP          : 6.8
FUEL RVP          : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP       : 66.5 91.6
RELATIVE HUMIDITY  : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
                     56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES    : 29.53

END OF RUN


>******************New Haven  Local *******************************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP        : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM       : 2 N
NO REFUELING       :

> Same Reg Dist files used in 2002 PEI
REG DIST           : CTREG02.D

EXPRESS HC AS VOC  :
```

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt5S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : New Haven County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>******************New Haven Ramp **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D

** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt5S.cty
VMT BY FACILITY : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : New Haven County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for SWCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 66.5 91.6
RELATIVE HUMIDITY : 84.0 74.5 65.2 58.8 53.6 48.0 45.5 42.8 41.4 44.3 45.8 49.9
56.9 66.0 69.7 71.5 76.1 79.1 85.7 86.7 89.8 90.5 90.7 92.1
BAROMETRIC PRES : 29.53

END OF RUN

>*******************New London Expressway **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :

**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt6S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : New London County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************New London Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt6S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : New London County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************New London Local ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990

I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt6S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : New London County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************New London Ramp ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt6S.cty
VMT BY FACILITY : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : New London County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*********************Tolland Expressway ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP : NLEVNE.D

* Fuel Data
****************** remove RFG since occurs post-1990 ****************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M ***************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)

REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt7S.cty
VMT BY FACILITY   : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD   : Tolland County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP   : 6.8
FUEL RVP   : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                     47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************Tolland Arterials/Collectors ***************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP   : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE   : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG   :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE   : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt7S.cty
VMT BY FACILITY : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD : Tolland County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>******************Tolland Local **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP : NLEVNE.D

* Fuel Data
****************** remove RFG since occurs post-1990 ****************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M ***************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data

VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt7S.cty
VMT BY FACILITY : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006
0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD : Tolland County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>*******************Tolland Ramp **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990
> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt7S.cty

VMT BY FACILITY : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Tolland County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

>********************Windham Expressway **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
************************94+ LDG IMP : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM : 2 N
NO REFUELING :

> Same Reg Dist files used in 2002 PEI
REG DIST : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
***I/M DESC FILE : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS : 0.07

* VMT Data
VMT BY HOUR : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT : 02svmt8S.cty
VMT BY FACILITY : FCVMTF.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD   : Windham County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP   : 6.8
FUEL RVP   : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************Windham Arterials/Collectors ****************************

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP   : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M ***************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE   : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG   :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE   : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt8S.cty
VMT BY FACILITY   : FCVMTA.cty

> 2002 art/coll VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", but differs slightly from 2002 PEI)
VMT FRACTIONS   :

0.5116 0.0777 0.2586 0.0797 0.0367 0.0107 0.0011 0.0008
0.0006 0.0024 0.0028 0.0031 0.0109 0.0005 0.0003 0.0025

SCENARIO RECORD   : Windham County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP   : 6.8
FUEL RVP   : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
                    47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************Windham Local **

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP   : NLEVNE.D

* Fuel Data
****************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M ***************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE   : CTIM02.D
*** M6 User's Guide says ATP parameters must be on 2nd line
***ANTI-TAMP PROG   :
***83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE   : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt8S.cty
VMT BY FACILITY   : FCVMTL.cty

> 2002 local VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.5161 0.0785 0.2610 0.0805 0.0370 0.0071 0.0007 0.0006

0.0004 0.0016 0.0019 0.0020 0.0072 0.0004 0.0002 0.0048

SCENARIO RECORD   : Windham County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR   : 2008
EVALUATION MONTH   : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
******************************FUEL RVP   : 6.8
FUEL RVP   : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP   : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES   : 29.89

END OF RUN

>******************Windham Ramp ***

* Turn off CAAA of 1990 controls
NO CLEAN AIR ACT   :

* For no Post90 CAA, get rid of * Northeast NLEV inputs
*************************94+ LDG IMP   : NLEVNE.D

* Fuel Data
***************** remove RFG since occurs post-1990 ***************** FUEL PROGRAM   : 2 N
NO REFUELING   :

> Same Reg Dist files used in 2002 PEI
REG DIST   : CTREG02.D

EXPRESS HC AS VOC :

********* Change to 1990 I/M **************** I/M Data; 2002 program same as in 2002 PEI
**I/M DESC FILE   : CTIM02.D
** M6 User's Guide says ATP parameters must be on 2nd line
**ANTI-TAMP PROG   :
**83 78 50 22222 21111111 1 12 095. 12111112

* I/M Data for 1990
I/M DESC FILE   : CTIM90.d
* No anti-tampering program in 1990

> Use NESCAUM value for lower-than-default implementation of NOx defeat device rebuild program (same as 2002 PEI)
REBUILD EFFECTS   : 0.07

* VMT Data
VMT BY HOUR   : CTHVMT.def
> Speed VMT files consistent with DOT's latest 2002 estimates (Series 28D), more recent than in 2002 PEI
SPEED VMT   : 02svmt8S.cty
VMT BY FACILITY   : FCVMTR.cty

> 2002 expway/ramp VMT fractions (consistent with "M62 Vehicle Fractions_1-23-06.xls", differs slightly from 2002 PEI)
VMT FRACTIONS   :
0.4822 0.0733 0.2439 0.0752 0.0346 0.0291 0.0029 0.0023
0.0017 0.0064 0.0076 0.0083 0.0297 0.0014 0.0007 0.0007

SCENARIO RECORD : Windham County 2008 w/2002 traffic/reg; O3 SEASON w/1990 I/M, no RFG, no CAA
CALENDAR YEAR : 2008
EVALUATION MONTH : 7
* Change to 1990 pre-reg fuel RVP = 9.0 psi
* Fuel RVP value is from M6 User's Guide for northern reformulated gas areas ("2 N").
* Note that the model ignores the user input in favor of the EPA default value, but DEP
* has included it in the input file for documentation purposes.
*****************************FUEL RVP : 6.8
FUEL RVP : 9.0

> 8-hr Weather Data for GrCT NA area (consistent with 2002 PEI)
MIN/MAX TEMP : 67.7 95.5
RELATIVE HUMIDITY : 86.2 76.2 69.5 61.2 53.8 49.0 44.5 41.2 40.4 38.8 40.8 43.7
47.3 56.5 63.5 67.6 72.8 75.3 75.6 81.8 85.3 87.4 89.1 90.6
BAROMETRIC PRES : 29.89

END OF RUN

3) 1990 Vehicle Emission Inspection & Maintenance Program ("CTIM90.in")

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> 1990 CT I/M PROGRAMS
>Annual I/M T/O Idle test for all cars & light trucks
I/M PROGRAM       : 1 1983 2050 1 T/O IDLE
I/M MODEL YEARS   : 1 1968 2050
I/M VEHICLES      : 1 22222 11111111 1
I/M STRINGENCY    : 1 22.0
I/M COMPLIANCE    : 1 85.0
I/M WAIVER RATES  : 1 9.0 9.0
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Appendix 6A

Connecticut Department of Transportation

2007 Statewide Transportation Improvement Program (STIP)
As of March 30, 2007

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
10	112	0063-0628	0063-HXX1	N	FRONT ST & VICINITY	HARTFORD	ROADWAY IMPROVEMENTS IN THE ADRIAEN'S LANDING AREA.	CON	2007	3,860	3,860	0	0
10	112	0139-H020		X2	CT 190	SEFFIELD	WIDEN SIDEWALK ON BR #3295, CT 190 O/CONN RIVER TO CREATE PED/BIKEPATH O/RIVER.	CON	2007	743	743	0	0
									2007 Total	4,603	4,603	0	0
05	115	0006-0117	0006-H008	X2	DEPOT ST	BEACON FALLS	STRUCTURAL REPAIRS AND PAINT DEPOT ST BRIDGE.	CON	2007	1,000	1,000	0	0
71	115	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN-HARTFORD BUSWAY 2004 FHWA EARMARK.	ALL	2007	6,000	6,000	0	0
									2007 Total	7,000	7,000	0	0
06	117	0036-HXXX		N	CT 8	DERBY	CT 8 IMPROVEMENTS.	ALL	2007	1,488	1,488	0	0
10	117	0063-0626	0063-XXX1	X2	HUYSHOPE,SEQUASSIN/VAN DYKE	HARTFORD	STREETSCAPE IMPROVEMTS ON HUYSHORE AVE/SEQUASSEN/VAN DYKE AVE AT COLTSVILLE.	CON	2007	3,000	3,000	0	0
10	117	0063-H149		N	FRONT STREET	HARTFORD	ADRIAEN'S LANDING PARKING GARAGE AT FRONT ST.	CON	2007	8,828	8,828	0	0
14	117	0077-0215	0077-H049	M	UCONN	MANSFIELD	HILLSIDE ROAD EXTENTION.	ROW	2007	150	150	0	0
08	117	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2007	1,984	1,984	0	0
08	117	0148-0191		X2	QUINNIPIAC RIVER TRAIL	WALLINGFORD	QUINNIPIAC RIVER LINEAR TRAIL IN WALLINGFORD.	CON	2007	169	169	0	0
05	117	0151-0271		N	W. MAIN ST	WATERBURY	RECNSTRCTN OF W MAIN ST, FROM ROBBINS ST TO RIVERSIDE DR.	CON	2007	325	325	0	0
									2007 Total	15,944	15,944	0	0
07	117	0015-0288	0015-H077	M	SEAVIEW AVE	BRIDGEPORT	CONSTRUCT SEAVIEW AVE CORRIDOR PROJECT.	ALL	2008	500	500	0	0
14	117	0077-0215	0077-H049	M	UCONN	MANSFIELD	HILLSIDE ROAD EXTENTION.	CON	2008	3,650	3,650	0	0
									2008 Total	4,150	4,150	0	0
08	330	0092-0583	0092-H118	N	LONG WHARF	NEW HAVEN	CITY OF NEW HAVEN PRJT CONSTR OF LONG WHARF REDEVELOPMT IMPRVMTS.	CON	2007	1,987	1,987	0	0
									2007 Total	1,987	1,987	0	0
13	5307C	0000-0000		X2	SEAT	NORWICH	SEAT - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2007	200	160	40	0
70	5307C	0170-T707	0170-TXXX	X2	VARIOUS	STATEWIDE	TRANSIT CAPITAL PLANNING.	OTH	2007	225	180	45	0
77	5307C	0300-T010		X2	NHL-ML	VARIOUS	NEW HAVEN LINE TRACK PROGRAM.	CON	2007	7,527	6,022	1,505	0
77	5307C	0301-0072	0301-T109	X2	NHL-ML	VARIOUS	REPLACEMENT OF 5 NHL SUBSTATIONS IN S. NORWALK, E. NORWALK, BRIDGEPORT & NEW HAVEN.	CON	2007	25,000	20,000	5,000	0
08	5307C	0301-T107		X2	NHL-ML	NEW HAVEN	NEW HAVEN YARD MASTER COMPLEX FACILITY CONSTRUCTION	CON	2007	41,330	33,064	8,266	0
12	5307C	0310-0022		X2	SLE	WESTBROOK	CONSTRUCT IMPROVEMENTS TO WESTBROOK RR STATION	CON	2007	7,000	5,600	1,400	0
79	5307C	0400-T047	0400-T031	X2	CT-HTFD	HARTFORD	CT TRANSIT SYSTEMWIDE ADMIN CAPT/SCV REPLACEMENT.	OTH	2007	1,450	1,160	290	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2007	700	560	140	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - REPLACE PARATRANSIT VEHICLES - PROGRAM.	ACQ	2007	600	480	120	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - SMALL CAPITAL VEHICLE PURCHASE - PROGRAM.	ACQ	2007	100	80	20	0
01	5307C	0412-T073		X2	NRWLK TD	NORWALK	NRWLK TD - ADMIN CAPITAL & SCV REPL - PROGRAM.	OTH	2007	250	200	50	0
01	5307C	0412-T073		X2	NRWLK TD	NORWALK	NRWLK TD - REPLACE PARATRANSIT VEHICLES - PROGRAM.	OTH	2007	500	400	100	0
02	5307C	0416-T051		X2	HART	DANBURY	HART - ADMIN CAPTIAL & SCV REPLACEMENT - PROGRAM.	OTH	2007	100	80	20	0
06	5307C	0420-T036		X2	VLY TD	DERBY	VLY TD - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2007	200	160	40	0
06	5307C	0420-T037		X2	VLY TD	DERBY	VLY TD - REPLACE BUSES.	ACQ	2007	850	680	170	0
08	5307C	0422-T043		X2	MLFD TD	MILFORD	MLFD TD - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2007	102	82	20	0
08	5307C	0422-T043		X2	MLFD TD	MILFORD	MLFD TD - REPLACE PARATRANSIT VEHICLES - PROGRAM.	ACQ	2007	300	240	60	0
11	5307C	0422-T049		X2	MDLTWN TD	MIDDLETOWN	MDLTWN TD - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2007	200	160	40	0
08	5307C	0427-T031		X2	GNH TD	NEW HAVEN	GNHTD - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2007	100	80	20	0
08	5307C	0427-T031		X2	GNH TD	NEW HAVEN	GNHTD - REPLACE PARATRANSIT VEHICLES - PROGRAM.	ACQ	2007	500	400	100	0
08	5307C	0427-T038		X2	GNH TD	NEW HAVEN	GNHTD - REPLACE ENH VEHICLES.	ACQ	2007	600	480	0	120
10	5307C	0GHT-1002		X2	GH TD	HARTFORD	GHTD - PARATRANSIT VEHICLE REPLACEMENT - PROGRAM.	ACQ	2007	1,800	1,440	0	360
08	5307C	0GNH-XXXX		X2	GNH TD	VARIOUS	GNHTD AREAWIDE BUS SHELTER INSTALLATION PROGRAM.	CON	2007	150	120	0	30
									2007 Total	89,784	71,827	17,447	510
02	5307C	0000-0000		X2	HART	DANBURY	HART - BUS GARAGE SGR - (COMPLETED 1998/8.0M/416-0004).	CON	2008	3,000	2,400	600	0
70	5307C	0170-T708	0170-TXXX	X2	VARIOUS	STATEWIDE	TRANSIT CAPITAL PLANNING.	OTH	2008	250	200	50	0
01	5307C	0301-0040		X2	NHL-ML	WESTPORT/STAMFORD	REHABILITATE WALK AND SAGA MOVEABLE BRIDGE	CON	2008	46,107	36,886	9,221	0
10	5307C	0400-T031		X2	CT-HTFD	HARTFORD	CT TRANSIT SYSTEMWIDE ADMIN CAPT/SCV REPLACEMENT.	OTH	2008	700	560	140	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2008	100	80	20	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - SMALL CAPITAL VEHICLE PURCHASE - PROGRAM.	ACQ	2008	100	80	20	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
01	5307C	0412-T073		X2	NRWLK TD	NORWALK	NRWLK TD - ADMIN CAPITAL & SCV REPL - PROGRAM.	OTH	2008	100	80	20	0
02	5307C	0416-T051		X2	HART	DANBURY	HART - ADMIN CAPTIAL & SCV REPLACEMENT - PROGRAM.	OTH	2008	100	80	20	0
08	5307C	0422-T043		X2	MLFD TD	MILFORD	MLFD TD - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2008	100	80	20	0
11	5307C	0422-T049		X2	MDLTWN TD	MIDDLETOWN	MDLTWN TD - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2008	100	80	20	0
08	5307C	0427-T031		X2	GNH TD	NEW HAVEN	GNHTD - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2008	100	80	20	0
08	5307C	0427-T031		X2	GNH TD	NEW HAVEN	GNHTD - REPLACE PARATRANSIT VEHICLES - PROGRAM.	ACQ	2008	500	400	100	0
05	5307C	0431-0006		X2	GWTBY TD	WATERTOWN	WTBY BUS GARAGE - CONSTRUCTION.	CON	2008	16,383	13,106	3,277	0
74	5307C	0472-T076		X2	NW TD	VARIOUS	NWTD - Maintenance Facility FY 08.	CON	2008	5,000	4,000	1,000	0
10	5307C	0CTH-1006		X2	CT-HTFD	HARTFORD	STATEWIDE BUS REPLACEMENTS.	ACQ	2008	8,750	7,000	1,750	0
10	5307C	0GHT-1002		X2	GH TD	HARTFORD	GHTD - PARATRANSIT VEHICLE REPLACEMENT - PROGRAM.	ACQ	2008	1,770	1,416	0	354
08	5307C	0GNH-2108		X2	GNH TD	NEW HAVEN	GNHTD-ELDERLY VEHICLE.	ACQ	2008	500	400	0	100
08	5307C	0GNH-XXXX		X2	GNH TD	VARIOUS	GNHTD AREAWIDE BUS SHELTER INSTALLATION PROGRAM.	CON	2008	150	120	0	30
									2008 Total	83,810	67,048	16,278	484
70	5307C	0170-T709	0170-TXXX	X2	VARIOUS	STATEWIDE	TRANSIT CAPITAL PLANNING.	OTH	2009	350	280	70	0
71	5307C	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - FFY 2009	ALL	2009	15,105	12,084	3,021	0
10	5307C	0400-T031		X2	CT-HTFD	HARTFORD	CT TRANSIT SYSTEMWIDE ADMIN CAPT/SCV REPLACEMENT.	OTH	2009	700	560	140	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2009	100	80	20	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - REPLACE PARATRANSIT VEHICLES - PROGRAM.	ACQ	2009	600	480	120	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - SMALL CAPITAL VEHICLE PURCHASE - PROGRAM.	OTH	2009	100	80	20	0
01	5307C	0412-T073		X2	NRWLK TD	NORWALK	NRWLK TD - ADMIN CAPITAL & SCV REPL - PROGRAM.	OTH	2009	100	80	20	0
02	5307C	0416-T051		X2	HART	DANBURY	HART - ADMIN CAPTIAL & SCV REPLACEMENT - PROGRAM.	OTH	2009	100	80	20	0
06	5307C	0420-T036		X2	VLY TD	DERBY	VLY TD - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2009	100	80	20	0
06	5307C	0420-T036		X2	VLY TD	DERBY	VLY TD - REPLACE PARATRANSIT VEHICLES - PROGRAM.	ACQ	2009	100	80	20	0
08	5307C	0422-T043		X2	MLFD TD	MILFORD	MLFD TD - REPLACE PARATRANSIT VEHICLES - PROGRAM.	ACQ	2009	300	240	60	0
11	5307C	0422-T049		X2	MDLTWN TD	MIDDLETOWN	MDLTWN TD - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2009	100	80	20	0
08	5307C	0424-T059		X2	MLFD TD	MILFORD	MLFD TD - FACILITY SGR (COMPLETED 1999/3.6 M/424-0009).	CON	2009	1,000	800	200	0
08	5307C	0427-T031		X2	GNH TD	NEW HAVEN	GNHTD - ADMINISTRATIVE CAPITAL - PROGRAM.	OTH	2009	100	80	20	0
08	5307C	0427-T031		X2	GNH TD	NEW HAVEN	GNHTD - REPLACE PARATRANSIT VEHICLES - PROGRAM.	ACQ	2009	500	400	100	0
10	5307C	0CTH-1007		X2	CT-HTFD	HARTFORD	CTH - REPL 13 SMALL HEAVY DUTY BUSES (1999/400-0008).	ACQ	2009	4,000	3,200	800	0
10	5307C	0GHT-1002		X2	GH TD	HARTFORD	GHTD - PARATRANSIT VEHICLE REPLACEMENT - PROGRAM.	ACQ	2009	1,800	1,440	0	360
08	5307C	0GNH-2108		X2	GNH TD	NEW HAVEN	GNHTD-ELDERLY VEHICLE.	ACQ	2009	500	400	0	100
08	5307C	0GNH-XXXX		X2	GNH TD	VARIOUS	GNHTD AREAWIDE BUS SHELTER INSTALLATION PROGRAM.	CON	2009	150	120	0	30
									2009 Total	25,805	20,644	4,671	490
70	5307C	0170-TXXX		X2	NHL-ML	STATEWIDE	TRANSIT CAPITAL PLANNING.	OTH	2010	350	280	70	0
01	5307C	0301-0040		X2	NHL-ML	WESTPORT/STAMFORD	REHABILITATE WALK AND SAGA MOVEABLE BRIDGE	CON	2010	79,086	63,269	15,817	0
79	5307C	0400-T031		X2	CT-HTFD	HARTFORD	CT TRANSIT SYSTEMWIDE ADMIN CAPT/SCV REPLACEMENT.	OTH	2010	700	560	140	0
10	5307C	0401-T023		X2	CT-HTFD	HARTFORD	CTH-HRTFD BUS GARAGE .	CON	2010	5,000	4,000	1,000	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - ADMINISTRATIVE CAPITAL PROGRAM.	OTH	2010	100	80	20	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - SMALL CAPITAL VEHICLE PURCHASE PROGRAM.	ACQ	2010	150	120	30	0
01	5307C	0412-T073		X2	NRWLK TD	NORWALK	NRWLK TD - ADMIN CAPITAL & SCV REPL PROGRAM.	OTH	2010	100	80	20	0
13	5307C	0414-T037		X2	SEAT	NORWICH	SEAT - REPLACE PARATRANSIT VEHICLES PROGRAM.	ACQ	2010	300	240	60	0
13	5307C	0414-TXXX		X2	SEAT	NORWICH	SEAT - ADMINISTRATIVE CAPITAL PROGRAM.	OTH	2010	100	80	20	0
02	5307C	0416-T051		X2	HART	DANBURY	HART-ADMIN CAPTIAL & SCV REPLACEMENT PROGRAM.	OTH	2010	100	80	20	0
06	5307C	0420-T036		X2	VLY TD	DERBY	VLY TD - REPLACE PARATRANSIT VEHICLES PROGRAM.	ACQ	2010	100	80	20	0
08	5307C	0422-T043		X2	MLFD TD	MILFORD	MLFD TD - ADMINISTRATIVE CAPITAL PROGRAM.	OTH	2010	100	80	20	0
11	5307C	0422-T049		X2	MDLTWN TD	MIDDLETOWN	MDLTWN TD-ADMINISTRATIVE CAPITAL PROGRAM.	OTH	2010	100	80	20	0
11	5307C	0422-TXXX		X2	MDLTWN TD	MIDDLETOWN	MDLTWN TD-REPLC PARATRANSIT VEHICLS PROGRAM.	ACQ	2010	500	400	100	0
08	5307C	0427-T031		X2	GNH TD	NEW HAVEN	GNHTD - ADMINISTRATIVE CAPITAL PROGRAM.	OTH	2010	100	80	20	0
08	5307C	0427-T031		X2	GNH TD	NEW HAVEN	GNHTD - REPLACE PARATRANSIT VEHICLES PROGRAM.	ACQ	2010	500	400	100	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
10	5307C	0GHT-1002		X2	GH TD	HARTFORD	GHTD - PARATRANSIT VEHICLE REPLACEMENT PROGRAM.	ACQ	2010	1,823	1,458	0	365
02	5307C	0HRT-0402		X2	HART	DANBURY	HART - REPLACE PARATRANSIT VEHICLES PROGRAM.	ACQ	2010	1,500	1,200	300	0
									2010 Total	90,709	72,567	17,777	365
70	5307C	0170-TXXX		X2	NHL-ML	STATEWIDE	TRANSIT CAPITAL PLANNING.	OTH	FYI	350	280	70	0
01	5307C	0301-0040		X2	NHL-ML	WESTPORT/STAMFORD	REHABILITATE WALK AND SAGA MOVEABLE BRIDGE	CON	FYI	21,587	17,270	4,317	0
77	5307C	0301-T111		X2	NHL-ML	VARIOUS	NEW HAVEN LINE TRACK PROGRAM.	CON	FYI	8,000	6,400	1,600	0
01	5307C	0301-T129		X2	NHL-ML	GREENWICH	REHAB BRIDGES- SOUND BEACH AVE/TOMAC AVE- GREENWICH.	CON	FYI	20,000	16,000	4,000	0
07	5307C	0301-TXXX		X2	NHL-ML	STRATFORD	REHAB RR BRIDGE MAIN STREET, STRATFORD MP 59.01.	CON	FYI	11,000	8,800	2,200	0
79	5307C	0400-T031		X2	CT-HTFD	HARTFORD	CT TRANSIT SYSTEMWIDE ADMIN CAPT/SCV REPLACEMENT.	OTH	FYI	600	480	120	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - SMALL CAPITAL VEHICLE PURCHASE PROGRAM.	ACQ	FYI	150	120	30	0
07	5307C	0410-T059		X2	GB TD	BRIDGEPORT	GBTA - ADMINISTRATIVE CAPITAL PROGRAM.	OTH	FYI	100	80	20	0
01	5307C	0412-T073		X2	NRWLK TD	NORWALK	NRWLK TD - ADMIN CAPITAL & SCV REPL PROGRAM.	OTH	FYI	100	80	20	0
01	5307C	0412-T073		X2	NRWLK TD	NORWALK	NRWLK TD-REPLACE PARATRANSIT VEHICLES PROGRAM.	ACQ	FYI	600	480	120	0
13	5307C	0414-T037		X2	SEAT	NORWICH	SEAT - REPLACE PARATRANSIT VEHICLES PROGRAM.	ACQ	FYI	300	240	60	0
13	5307C	0414-TXXX		X2	SEAT	NORWICH	SEAT - ADMINISTRATIVE CAPITAL PROGRAM.	OTH	FYI	100	80	20	0
02	5307C	0416-T051		X2	HART	DANBURY	HART-ADMIN CAPTIAL & SCV REPLACEMENT PROGRAM.	OTH	FYI	100	80	20	0
08	5307C	0422-T043		X2	MLFD TD	MILFORD	MLFD TD-REPLACE PARATRANSIT VEHICLES PROGRAM.	ACQ	FYI	500	400	100	0
08	5307C	0422-T043		X2	MLFD TD	MILFORD	MLFD TD - ADMINISTRATIVE CAPITAL PROGRAM.	OTH	FYI	100	80	20	0
11	5307C	0422-T049		X2	MDLTWN TD	MIDDLETOWN	MDLTWN TD-ADMINISTRATIVE CAPITAL PROGRAM.	OTH	FYI	100	80	20	0
08	5307C	0427-T031		X2	GNH TD	NEW HAVEN	GNHTD - ADMINISTRATIVE CAPITAL PROGRAM.	OTH	FYI	100	80	20	0
08	5307C	0427-T031		X2	GNH TD	NEW HAVEN	GNHTD - REPLACE PARATRANSIT VEHICLES PROGRAM.	ACQ	FYI	500	400	100	0
10	5307C	0CTH-1007		X2	CT-HTFD	HARTFORD	CTH - REPL 13 SMALL HEAVY DUTY BUSES.	CON	FYI	4,000	3,200	800	0
01	5307C	0CTS-0801		X2	CT-STAM	STAMFORD	CTS - STAMFORD REPLACE 26 BUSES.	ACQ	FYI	9,750	7,800	1,950	0
10	5307C	0GHT-1002		X2	GH TD	HARTFORD	GHTD - PARATRANSIT VEHICLE REPLACEMENT PROGRAM.	ACQ	FYI	1,800	1,440	0	360
10	5307C	0GHT-1007		X2	GH TD	HARTFORD	GHTD - MAINT FAC SOR - HRTFD UNION STATION.	CON	FYI	1,000	800	200	0
02	5307C	0HRT-0402		X2	HART	DANBURY	HART - REPLACE PARATRANSIT VEHICLES PROGRAM.	ACQ	FYI	1,500	1,200	300	0
									FYI Total	82,337	65,870	16,107	360
07	5307O	0015-P006		X2	GBTA	BRIDGEPORT	GREATER BRIDGEPORT - E&D OPER. - FFY 2007.	OTH	2007	1,258	0	629	629
09	5307O	0017-0163		X2	BRISTOL	BRISTOL	BRISTOL ELDERLY SHOPPING - FFY 2007.	OTH	2007	20	0	20	0
02	5307O	0034-P004		X2	HART	DANBURY	HART - E&D OPER. - FFY 2007.	OTH	2007	985	492	0	492
10	5307O	0063-P004		X2	GH TD	HARTFORD	GR. HTFD TD - E&D OPERATING - FFY 2007.	OTH	2007	1,482	0	741	741
11	5307O	0082-P004		X2	MDLTWN TD	MIDDLETOWN	MIDDLETOWN TD - E&D OPER. - FFY 2007.	OTH	2007	300	0	150	150
08	5307O	0083-P004		X2	MLFD TD	MILFORD	MILFORD TD - E&D OPER. - FFY 2007.	OTH	2007	300	0	171	129
08	5307O	0092-P005		X2	N HVN TD	NEW HAVEN	GR. NEW HAVEN TD - E&D OPER. - FFY 2007.	OTH	2007	3,200	0	3,200	0
01	5307O	0102-P007		X2	NRWLK TD	NORWALK	NORWALK TD - E&D OPER. - FFY 2007.	OTH	2007	804	402	0	402
08	5307O	0300-0065		X2	N HVN LN	VARIOUS	NEW HAVEN LINE RAIL OPERATING ASSISTANCE - FFY 2007.	OTH	2007	44,505	0	44,505	0
08	5307O	0310-0014		X2	SHR LN EST	NEW HAVEN	SHORELINE EAST - AMTRAK OPERATING - FFY 2007.	OTH	2007	5,040	0	5,040	0
01	5307O	0400-0001		X2	CT TRNST	STAMFORD	CONNECTICUT TRANSIT-STAMFORD - FFY 2007.	OTH	2007	4,500	1,850	2,650	0
08	5307O	0400-0001		X2	CT TRNST	NEW HAVEN	CONNECTICUT TRANSIT-NEW HAVEN - FFY 2007.	OTH	2007	14,794	0	14,794	0
10	5307O	0400-0001		X2	CT TRNST	HARTFORD	CONNECTICUT TRANSIT-HARTFORD - FFY 2007.	OTH	2007	24,102	0	24,102	0
02	5307O	0410-0029		X2	HART	DANBURY	HOUSATONIC AREA-FIXED RTE. - FFY 2007.	OTH	2007	1,361	0	1,361	0
07	5307O	0410-0037		X2	GBTA	BRIDGEPORT	GREATER BRIDGEPORT-FIXED RTE. - FFY 2007.	OTH	2007	6,432	0	6,432	0
01	5307O	0412-0056		X2	NRWLK TD	NORWALK	NORWALK FIXED ROUTE. - FFY 2007.	OTH	2007	3,948	1,150	2,798	0
01	5307O	0412-0057		X2	NRWLK TD	WESTPORT	WESTPORT-FIXED RTE. - FFY 2007.	OTH	2007	503	0	503	0
13	5307O	0414-0026		X2	SEAT	NEW LONDON	SOUTHEAST AREA - FIXED RTE. - FFY 2007.	OTH	2007	1,833	0	1,833	0
06	5307O	0420-0023		X2	DRBY	DERBY	VALLEY TD - DIAL-A-RIDE. - FFY 2007.	OTH	2007	788	0	788	0
11	5307O	0422-0025		X2	MDLTWN TD	MIDDLETOWN	MIDDLETOWN-FIXED RTE - FFY 2007.	OTH	2007	678	0	678	0
08	5307O	0424-0027		X2	MLFD TD	MILFORD	MILFORD-FIXED RTE - FFY 2007.	OTH	2007	580	0	465	115
10	5307O	0426-0020		X2	CT TRNST	HARTFORD	HARTFORD- BRADLEY SHUTTLE - FFY 2007.	OTH	2007	52	0	52	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
05	5307O	0431-0012		X2	WATERBURY	WATERBURY	WATERBURY-N. EAST TRANSP. CO.-FIXED RTE. - FFY 2007.	OTH	2007	2,826	0	2,826	0
08	5307O	0432-0007		X2	MRDN	MERIDEN	DOR-TO-DOOR SERVICE FOR ADA - FFY 2007.	OTH	2007	346	0	346	0
08	5307O	0432-0009		X2	MRDN	MERIDEN	MERIDEN-N. EAST TRANSP. CO.-FIXED RTE - FFY 2007.	OTH	2007	509	0	509	0
08	5307O	0433-0009		X2	WLNGFRD	WALLINGFORD	WALLINGFORD-N. EAST TRANSP.CO.-FIXED RTE. - FFY 2007.	OTH	2007	144	0	84	60
05	5307O	0434-0003		X2	GW TD	WATERBURY	NETCO - WTBY TD - DIAL-A-RIDE - FFY 2007.	OTH	2007	226	0	226	0
09	5307O	0441-0009		X2	N BRTN	NEW BRITAIN	NEW BRITAIN-N. BRITAIN TRANSP. CO.-FIXED RTE. - FFY 2007.	OTH	2007	879	0	879	0
09	5307O	0442-0009		X2	BRISTOL	BRISTOL	BRISTOL-NEW BRITAIN TRANSP. CO.-FIXED RTE. - FFY 2007.	OTH	2007	193	0	193	0
09	5307O	0443-0012		X2	BRISTOL	BRISTOL	BRISTOL DATTCO - COMMUTER - FFY 2007.	OTH	2007	159	0	159	0
05	5307O	0444-0011		X2	NB TD	SOUTHINGTON/CHESHIRE	SOUTHINGTON/CHESHIRE, N.B.T. - COMMUTER. - FFY 2007.	OTH	2007	89	0	89	0
12	5307O	0452-0010		X2	O SYBRK	OLD SAYBROOK	OLD SAYBROOK DATTCO INC - FIXED RTE - FFY 2007.	OTH	2007	608	0	608	0
08	5307O	0452-0012		X2	EAST SHORE US 1	STATEWIDE	FIXED RTE BUS SERVICE - NEW HAVEN TO PLD SAYBROOK & OLD SAYBROOK TO HARTFORD - DATTCO. - FFY 2007.	OTH	2007	608	0	608	0
09	5307O	0453-0009		X2	N BRTN	NEW BRITAIN	NEW BRITAIN-DATTCO INC.-FIXED RTE - FFY 2007.	OTH	2007	381	0	381	0
04	5307O	0460-0010		X2	TORRINGTON	TORRINGTON	KELLEY TRANSP CO - COMMUTER. - FFY 2007.	OTH	2007	234	0	234	0
14	5307O	0461-0010		X2	WLMNTC	WILLIMATIC	WILLIMANTIC- ARROW BUS LINE-COMMUTER - FFY 2007.	OTH	2007	325	0	325	0
10	5307O	0462-0010		X2	VRNN	VERNON	VERNON-COLLINS BUS SERVICE-COMMUTER - FFY 2007.	OTH	2007	196	0	196	0
08	5307O	0463-0010		X2	MER TD	MERIDEN	MERIDEN TD - COMMUTER. - FFY 2007.	OTH	2007	114	0	114	0
									2007 Total	125,301	3,894	118,689	2,718
07	5307O	0015-P006		X2	GBTA	BRIDGEPORT	GREATER BRIDGEPORT - E&D OPER. - FFY 2008.	OTH	2008	1,258	0	629	629
09	5307O	0017-0163		X2	BRISTOL	BRISTOL	BRISTOL ELDERLY SHOPPING - FFY 2008.	OTH	2008	20	0	20	0
02	5307O	0034-P004		X2	HART	DANBURY	HART - E&D OPER. - FFY 2008.	OTH	2008	985	492	0	492
10	5307O	0063-P004		X2	GH TD	HARTFORD	GR. HTFD TD - E&D OPERATING - FFY 2008.	OTH	2008	1,482	0	741	741
11	5307O	0082-P004		X2	MDLTWN TD	MIDDLETOWN	MIDDLETOWN TD - E&D OPER. - FFY 2008.	OTH	2008	300	0	150	150
08	5307O	0083-P004		X2	MLFD TD	MILFORD	MILFORD TD - E&D OPER. - FFY 2008.	OTH	2008	300	0	171	129
08	5307O	0092-P005		X2	N HVN TD	NEW HAVEN	GR. NEW HAVEN TD - E&D OPER. - FFY 2008.	OTH	2008	3,200	0	3,200	0
01	5307O	0102-P007		X2	NRWLK TD	NORWALK	NORWALK TD - E&D OPER. - FFY 2008.	OTH	2008	804	402	0	402
08	5307O	0300-0065		X2	N HVN LN	VARIOUS	NEW HAVEN LINE RAIL OPERATING ASSISTANCE - FFY 2008.	OTH	2008	44,505	0	44,505	0
08	5307O	0310-0014		X2	SHR LN EST	NEW HAVEN	SHORELINE EAST - AMTRAK OPERATING - FFY 2008.	OTH	2008	5,040	0	5,040	0
01	5307O	0400-0001		X2	CT TRNST	STAMFORD	CONNECTICUT TRANSIT-STAMFORD - FFY 2008.	OTH	2008	4,500	1,850	2,650	0
08	5307O	0400-0001		X2	CT TRNST	NEW HAVEN	CONNECTICUT TRANSIT-NEW HAVEN - FFY 2008.	OTH	2008	14,794	0	14,794	0
10	5307O	0400-0001		X2	CT TRNST	HARTFORD	CONNECTICUT TRANSIT-HARTFORD - FFY 2008.	OTH	2008	24,102	0	24,102	0
02	5307O	0410-0029		X2	HART	DANBURY	HOUSATONIC AREA-FIXED RTE. - FFY 2008.	OTH	2008	1,361	0	1,361	0
07	5307O	0410-0037		X2	GBTA	BRIDGEPORT	GREATER BRIDGEPORT-FIXED RTE. - FFY 2008.	OTH	2008	6,432	0	6,432	0
01	5307O	0412-0056		X2	NRWLK TD	NORWALK	NORWALK FIXED ROUTE. - FFY 2008.	OTH	2008	3,948	1,150	2,798	0
01	5307O	0412-0057		X2	NRWLK TD	WESTPORT	WESTPORT-FIXED RTE. - FFY 2008.	OTH	2008	503	0	503	0
13	5307O	0414-0026		X2	SEAT	NEW LONDON	SOUTHEAST AREA - FIXED RTE. - FFY 2008.	OTH	2008	1,833	0	1,833	0
06	5307O	0420-0023		X2	DRBY	DERBY	VALLEY TD - DIAL-A-RIDE. - FFY 2008.	OTH	2008	788	0	788	0
11	5307O	0422-0025		X2	MDLTWN TD	MIDDLETOWN	MIDDLETOWN-FIXED RTE - FFY 2008.	OTH	2008	678	0	678	0
08	5307O	0424-0027		X2	MLFD TD	MILFORD	MILFORD-FIXED RTE - FFY 2008.	OTH	2008	580	0	465	115
10	5307O	0426-0020		X2	CT TRNST	HARTFORD	HARTFORD- BRADLEY SHUTTLE - FFY 2008.	OTH	2008	52	0	52	0
05	5307O	0431-0012		X2	WATERBURY	WATERBURY	WATERBURY-N. EAST TRANSP. CO.-FIXED RTE. - FFY 2008.	OTH	2008	2,826	0	2,826	0
08	5307O	0432-0007		X2	MRDN	MERIDEN	DOR-TO-DOOR SERVICE FOR ADA - FFY 2008.	OTH	2008	346	0	346	0
08	5307O	0432-0009		X2	MRDN	MERIDEN	MERIDEN-N. EAST TRANSP. CO.-FIXED RTE - FFY 2008.	OTH	2008	509	0	509	0
08	5307O	0433-0009		X2	WLNGFRD	WALLINGFORD	WALLINGFORD-N. EAST TRANSP.CO.-FIXED RTE. - FFY 2008.	OTH	2008	144	0	84	60
05	5307O	0434-0003		X2	GW TD	WATERBURY	NETCO - WTBY TD - DIAL-A-RIDE - FFY 2008.	OTH	2008	226	0	226	0
09	5307O	0441-0009		X2	N BRTN	NEW BRITAIN	NEW BRITAIN-N. BRITAIN TRANSP. CO.-FIXED RTE. - FFY 2008.	OTH	2008	879	0	879	0
09	5307O	0442-0009		X2	BRISTOL	BRISTOL	BRISTOL-NEW BRITAIN TRANSP. CO.-FIXED RTE. - FFY 2008.	OTH	2008	193	0	193	0
09	5307O	0443-0012		X2	BRISTOL	BRISTOL	BRISTOL DATTCO - COMMUTER - FFY 2008.	OTH	2008	159	0	159	0
05	5307O	0444-0011		X2	NB TD	SOUTHINGTON/CHESHIRE	SOUTHINGTON/CHESHIRE, N.B.T. - COMMUTER. - FFY 2008.	OTH	2008	89	0	89	0
12	5307O	0452-0010		X2	O SYBRK	OLD SAYBROOK	OLD SAYBROOK DATTCO INC - FIXED RTE - FFY 2008.	OTH	2008	608	0	608	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
08	5307O	0452-0012		X2	EAST SHORE US 1	STATEWIDE	FIXED RTE BUS SERVICE - NEW HAVEN TO PLD SAYBROOK & OLD SAYBROOK TO HARTFORD - DATTCO. - FFY 2008.	OTH	2008	608	0	608	0
09	5307O	0453-0009		X2	N BRTN	NEW BRITAIN	NEW BRITAIN-DATTCO INC.-FIXED RTE - FFY 2008.	OTH	2008	381	0	381	0
04	5307O	0460-0010		X2	TORRINGTON	TORRINGTON	KELLEY TRANSP CO - COMMUTER. - FFY 2008.	OTH	2008	234	0	234	0
14	5307O	0461-0010		X2	WLMNTC	WILLIMATIC	WILLIMANTIC- ARROW BUS LINE-COMMUTER - FFY 2008.	OTH	2008	325	0	325	0
10	5307O	0462-0010		X2	VRNN	VERNON	VERNON-COLLINS BUS SERVICE-COMMUTER - FFY 2008.	OTH	2008	196	0	196	0
08	5307O	0463-0010		X2	MER TD	MERIDEN	MERIDEN TD - COMMUTER. - FFY 2008.	OTH	2008	114	0	114	0
									2008 Total	125,301	3,894	118,689	2,718
07	5307O	0015-P006		X2	GBTA	BRIDGEPORT	GREATER BRIDGEPORT - E&D OPER. - FFY 2009.	OTH	2009	1,258	0	629	629
09	5307O	0017-0163		X2	BRISTOL	BRISTOL	BRISTOL ELDERLY SHOPPING - FFY 2009.	OTH	2009	20	0	20	0
02	5307O	0034-P004		X2	HART	DANBURY	HART - E&D OPER. - FFY 2009.	OTH	2009	985	492	0	492
10	5307O	0063-P004		X2	GH TD	HARTFORD	GR. HTFD TD - E&D OPERATING - FFY 2009.	OTH	2009	1,482	0	741	741
11	5307O	0082-P004		X2	MDLTWN TD	MIDDLETOWN	MIDDLETOWN TD - E&D OPER. - FFY 2009.	OTH	2009	300	0	150	150
08	5307O	0083-P004		X2	MLFD TD	MILFORD	MILFORD TD - E&D OPER. - FFY 2009.	OTH	2009	300	0	171	129
08	5307O	0092-P005		X2	N HVN TD	NEW HAVEN	GR. NEW HAVEN TD - E&D OPER. - FFY 2009.	OTH	2009	3,200	0	3,200	0
01	5307O	0102-P007		X2	NRWLK TD	NORWALK	NORWALK TD - E&D OPER. - FFY 2009.	OTH	2009	804	402	0	402
08	5307O	0300-0065		X2	N HVN LN	VARIOUS	NEW HAVEN LINE RAIL OPERATING ASSISTANCE - FFY 2009.	OTH	2009	44,505	0	44,505	0
08	5307O	0310-0014		X2	SHR LN EST	NEW HAVEN	SHORELINE EAST - AMTRAK OPERATING - FFY 2009.	OTH	2009	5,040	0	5,040	0
01	5307O	0400-0001		X2	CT TRNST	STAMFORD	CONNECTICUT TRANSIT-STAMFORD - FFY 2009.	OTH	2009	4,500	1,850	2,650	0
08	5307O	0400-0001		X2	CT TRNST	NEW HAVEN	CONNECTICUT TRANSIT-NEW HAVEN - FFY 2009.	OTH	2009	14,794	0	14,794	0
10	5307O	0400-0001		X2	CT TRNST	HARTFORD	CONNECTICUT TRANSIT-HARTFORD - FFY 2009.	OTH	2009	24,102	0	24,102	0
02	5307O	0410-0029		X2	HART	DANBURY	HOUSATONIC AREA-FIXED RTE. - FFY 2009.	OTH	2009	1,361	0	1,361	0
07	5307O	0410-0037		X2	GBTA	BRIDGEPORT	GREATER BRIDGEPORT-FIXED RTE. - FFY 2009.	OTH	2009	6,432	0	6,432	0
01	5307O	0412-0056		X2	NRWLK TD	NORWALK	NORWALK FIXED ROUTE. - FFY 2009.	OTH	2009	3,948	1,150	2,798	0
01	5307O	0412-0057		X2	NRWLK TD	WESTPORT	WESTPORT-FIXED RTE. - FFY 2009.	OTH	2009	503	0	503	0
13	5307O	0414-0026		X2	SEAT	NEW LONDON	SOUTHEAST AREA - FIXED RTE. - FFY 2009.	OTH	2009	1,833	0	1,833	0
06	5307O	0420-0023		X2	DRBY	DERBY	VALLEY TD - DIAL-A-RIDE. - FFY 2009.	OTH	2009	788	0	788	0
11	5307O	0422-0025		X2	MDLTWN TD	MIDDLETOWN	MIDDLETOWN-FIXED RTE - FFY 2009.	OTH	2009	678	0	678	0
08	5307O	0424-0027		X2	MLFD TD	MILFORD	MILFORD-FIXED RTE - FFY 2009.	OTH	2009	580	0	465	115
10	5307O	0426-0020		X2	CT TRNST	HARTFORD	HARTFORD- BRADLEY SHUTTLE - FFY 2009.	OTH	2009	52	0	52	0
05	5307O	0431-0012		X2	WATERBURY	WATERBURY	WATERBURY-N. EAST TRANSP. CO.-FIXED RTE. - FFY 2009.	OTH	2009	2,826	0	2,826	0
08	5307O	0432-0007		X2	MRDN	MERIDEN	DOR-TO-DOOR SERVICE FOR ADA - FFY 2009.	OTH	2009	346	0	346	0
08	5307O	0432-0009		X2	MRDN	MERIDEN	MERIDEN-N. EAST TRANSP. CO.-FIXED RTE - FFY 2009.	OTH	2009	509	0	509	0
08	5307O	0433-0009		X2	WLNGFRD	WALLINGFORD	WALLINGFORD-N. EAST TRANSP.CO.-FIXED RTE. - FFY 2009.	OTH	2009	144	0	84	60
05	5307O	0434-0003		X2	GW TD	WATERBURY	NETCO - WTBY TD - DIAL-A-RIDE - FFY 2009.	OTH	2009	226	0	226	0
09	5307O	0441-0009		X2	N BRTN	NEW BRITAIN	NEW BRITAIN-N. BRITAIN TRANSP. CO.-FIXED RTE. - FFY 2009.	OTH	2009	879	0	879	0
09	5307O	0442-0009		X2	BRISTOL	BRISTOL	BRISTOL-NEW BRITAIN TRANSP. CO.-FIXED RTE. - FFY 2009.	OTH	2009	193	0	193	0
09	5307O	0443-0012		X2	BRISTOL	BRISTOL	BRISTOL DATTCO - COMMUTER - FFY 2009.	OTH	2009	159	0	159	0
05	5307O	0444-0011		X2	NB TD	SOUTHINGTON/CHESHIRE	SOUTHINGTON/CHESHIRE, N.B.T. - COMMUTER. - FFY 2009.	OTH	2009	89	0	89	0
12	5307O	0452-0010		X2	O SYBRK	OLD SAYBROOK	OLD SAYBROOK DATTCO INC - FIXED RTE - FFY 2009.	OTH	2009	608	0	608	0
08	5307O	0452-0012		X2	EAST SHORE US 1	STATEWIDE	FIXED RTE BUS SERVICE - NEW HAVEN TO PLD SAYBROOK & OLD SAYBROOK TO HARTFORD - DATTCO. - FFY 2009.	OTH	2009	608	0	608	0
09	5307O	0453-0009		X2	N BRTN	NEW BRITAIN	NEW BRITAIN-DATTCO INC.-FIXED RTE - FFY 2009.	OTH	2009	381	0	381	0
04	5307O	0460-0010		X2	TORRINGTON	TORRINGTON	KELLEY TRANSP CO - COMMUTER. - FFY 2009.	OTH	2009	234	0	234	0
14	5307O	0461-0010		X2	WLMNTC	WILLIMATIC	WILLIMANTIC- ARROW BUS LINE-COMMUTER - FFY 2009.	OTH	2009	325	0	325	0
10	5307O	0462-0010		X2	VRNN	VERNON	VERNON-COLLINS BUS SERVICE-COMMUTER - FFY 2009.	OTH	2009	196	0	196	0
08	5307O	0463-0010		X2	MER TD	MERIDEN	MERIDEN TD - COMMUTER. - FFY 2009.	OTH	2009	114	0	114	0
									2009 Total	125,301	3,894	118,689	2,718
78	5307P	0301-0078		X2	NHL-ML	VARIOUS	NH UNION STATION UPGRADE, VMS AND CODE IMPROVEMENTS	ALL	2007	8,000	6,400	1,600	0
05	5307P	0431-0006		X2	GWTBY TD	WATERTOWN	WTBY BUS GARAGE - CONSTRUCTION.	CON	2007	13,700	10,960	2,740	0
									2007 Total	21,700	17,360	4,340	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
01	5307R	0102-EX10		X2	VARIOUS	NORWALK TD	BUS MOUNTED BICYCLE RACKS.	OTH	2007	31	29	0	2
01	5307R	0102-EX11		X2	VARIOUS	NORWALK TD	ART FOR THE NORWALK TRANSIT DISTRICT PULSEPOINT FACILITY.	OTH	2007	15	12	0	3
01	5307R	0102-EX12		X2	VARIOUS	NORWALK TD	WASHINGTON ST AREA BIKE RACKS.	OTH	2007	30	29	0	2
01	5307R	0102-EX13		X2	VARIOUS	NORWALK TD	BACKLIT MAP DISPLAYS FOR SAUGATUCK RAILROAD STATION.	OTH	2007	6	5	0	1
01	5307R	0102-EX14		X2	VARIOUS	NORWALK TD	WASHINGTON ST BRIDGE UNDERPASS LIGHTING.	OTH	2007	50	40	0	10
01	5307R	0102-EX15		X2	VARIOUS	NORWALK TD	INFORMATION POSTS.	OTH	2007	11	9	0	2
									2007 Total	143	123	0	19
01	5307R	0102-EX16		X2	VARIOUS	NORWALK TD	PULSEPOINT BICYCLE RACKS.	OTH	2008	6	6	0	0
01	5307R	0102-EX17		X2	VARIOUS	NORWALK TD	GREENWICH BUS SHELTER.	OTH	2008	49	39	0	10
									2008 Total	55	45	0	10
01	5307S	0102-T025	0102-TXX1	X2	VARIOUS	NRWLK TD	NRWLK TD - SO NORWALK INTERMODAL FACILITY FEASIBILITY STUDY.	OTH	2007	250	200	0	50
13	5307S	0103-0245		X2	INTERMODAL FACILITY	NORWICH	NORWICH INTERMODAL FACILITY - FFY 2001 EARMARK FUND, TRANSFER FROM FHWA.	CON	2007	3,492	3,492	0	0
01	5307S	0135-H074		X2	VARIOUS	STAMFORD	URBAN TRANSITWAY PHASE I PEDESTRIAN AND BICYCLE ELEMENTS.	CON	2007	2,100	1,680	0	420
71	5307S	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN-HARTFORD BUSWAY.	ALL	2007	6,000	6,000	0	0
07	5307S	0301-0060		M	NHL-ML	FAIRFIELD	CONST FAIRFIELD RR STATION - CONSTRUCTION.	CON	2007	3,400	2,720	680	0
									2007 Total	15,242	14,092	680	470
07	5307S	0138-0226		N	NHL-ML	STRATFORD	PARKING EXPANSION PROJECT STRATFORD RR STATION.	CON	2008	12,000	3,000	9,000	0
01	5307S	0161-0136	0161-T005	N	US 7/CT 33	WILTON	CONSTRUCT A PARKING STRUCTURE AT THE WILTON STATION AT US 7 & CT 33.	CON	2008	2,500	2,000	500	0
									2008 Total	14,500	5,000	9,500	0
07	5309A	0301-0060		M	NHL-ML	FAIRFIELD	FAIRFIELD RR STATION - CONSTRUCTION.	CON	2007	24,000	19,200	4,800	0
08	5309A	0301-0070		X2	NHL-ML	NEW HAVEN	NHL CATENARY REPLACEMENT SECTION C1B INCLUDING BRIDGES	CON	2007	23,500	18,800	4,700	0
08	5309A	0301-T107		X2	NHL-ML	NEW HAVEN	NEW HAVEN YARD MASTER COMPLEX FACILITY CONSTRUCTION	CON	2007	5,000	4,000	1,000	0
									2007 Total	52,500	42,000	10,500	0
01	5309A	0300-T124		X2	NHL-ML	NORWALK	REPLACE EAST AVENUE BRIDGE - NORWALK.	CON	2008	8,000	6,400	1,600	0
77	5309A	0301-T119	0301-T007	X2	NHL-ML	VARIOUS	NH-ML CATENARY REPLCMNT - WALK-CP248, SECTION C1A.	CON	2008	40,000	32,000	8,000	0
									2008 Total	48,000	38,400	9,600	0
77	5309A	0300-0077		X2	NHL-ML	MILFORD	PE DEVON BRIDGE, MILFORD/STRTFRD.	PE	2009	1,800	1,440	360	0
77	5309A	0301-T120	0301-T007	X2	NHL-ML	VARIOUS	NH-ML CATENARY REPLCMNT - PECK TO DEVON, SECTION C2.	CON	2009	33,000	26,400	6,600	0
									2009 Total	34,800	27,840	6,960	0
01	5309A	0301-0040		X2	NHL-ML	WESTPORT/STAMFORD	REHABILITATE WALK AND SAGA MOVEABLE BRIDGE	CON	2010	52,000	41,600	10,400	0
									2010 Total	52,000	41,600	10,400	0
10	5309A	0048-TXXX		X2	INTERMODAL STATION	ENFIELD	INTERMODAL TRANSPORTATION STATION IN THOMPSONVILLE	ALL	FYI	2,414	1,931	0	483
10	5309A	0146-TXXX		X2	UNION ST	VERNON	DESIGN AND CONSTRUCT INTERMODAL TRANSPORTATION CENTER IN ROCKVILLE	ALL	FYI	6,115	4,892	0	1,223
77	5309A	0301-T120		X2	NHL-ML	VARIOUS	NH-ML CATENARY REPLCMNT - PECK TO DEVON, SECTION C2.	CON	FYI	52,000	41,600	10,400	0
									FYI Total	60,529	48,423	10,400	1,706
71	5309C	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - FFY 2007	ALL	2007	2,105	1,684	421	0
									2007 Total	2,105	1,684	421	0
71	5309C	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - FFY 2008	ALL	2008	2,105	1,684	421	0
									2008 Total	2,105	1,684	421	0
71	5309C	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - FFY 2009	ALL	2009	2,105	1,684	421	0
									2009 Total	2,105	1,684	421	0
71	5309C	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - FFY 2010	ALL	2010	2,105	1,684	421	0
									2010 Total	2,105	1,684	421	0
71	5309D	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN-HARTFORD BUSWAY, FFY 2004 FUNDS.	ALL	2007	1,960	1,568	392	0
71	5309D	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN-HARTFORD BUSWAY, FFY 2005 FUNDS.	ALL	2007	1,898	1,518	380	0
71	5309D	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN-HARTFORD BUSWAY, FFY 2006 FUNDS.	ALL	2007	2,105	1,684	421	0
									2007 Total	5,963	4,770	1,193	0
11	5309F	0040-0129		X2	RT 82/149	EAST HADDAM	EAST HADDAM MOBILITY IMPROVEMENTS.	ALL	2007	3,640	2,912	0	728
71	5309F	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN-HARTFORD BUSWAY 2005 EARMARK.	ALL	2007	4,859	3,887	972	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
71	5309F	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN-HARTFORD BUSWAY 2006 EARMARK.	ALL	2007	1,428	1,142	286	0
08	5309F	0402-0002		X2	CT TRANSIT	HAMDEN	NEW HAVEN BUS MAINTENANCE FACILITY CONSTRUCTION	CON	2007	3,226	2,688	538	0
07	5309F	0410-T077		X2	GBTA	BRIDGEPORT	GBTA - MAINTENANCE FACILITIES IMPROVEMT - EARMARK FUNDS FY 07.	CON	2007	125	100	0	25
05	5309F	0431-0006		X2	CDOT-NETCO	WATERTOWN	WTBY BUS MAINTENANCE FACILITY CONSTRUCTION.	CON	2007	5,350	4,280	1,070	0
74	5309F	0472-T076		X2	NW TD	VARIOUS	NWTD - Maintenance Fac. - Earmark Funds FY 07.	CON	2007	502	402	100	0
									2007 Total	19,130	15,411	2,966	753
08	5309F	0402-0002		X2	CT TRANSIT	HAMDEN	NEW HAVEN BUS MAINTENANCE FACILITY CONSTRUCTION	CON	2008	3,750	3,125	625	0
07	5309F	0410-T077		X2	GBTA	BRIDGEPORT	GBTA - MAINTENANCE FACILITIES IMPROVEMT - EARMARK FUNDS FY 08.	CON	2008	136	109	0	27
05	5309F	0431-0006		X2	CDOT-NETCO	WATERTOWN	WTBY BUS MAINTENANCE FACILITY CONSTRUCTION.	CON	2008	3,500	2,800	700	0
74	5309F	0472-T076		X2	NW TD	VARIOUS	NWTD - Maintenance Fac. - Earmark Funds FY 08.	CON	2008	543	434	109	0
									2008 Total	7,929	6,468	1,434	27
08	5309F	0402-0002		X2	CT TRANSIT	HAMDEN	NEW HAVEN BUS MAINTENANCE FACILITY CONSTRUCTION	CON	2009	4,276	3,563	713	0
07	5309F	0410-T077		X2	GBTA	BRIDGEPORT	GBTA - MAINTENANCE FACILITIES IMPROVEMT - EARMARK FUNDS FY 09.	CON	2009	141	113	0	28
05	5309F	0431-0006		X2	CDOT-NETCO	WATERTOWN	WTBY BUS MAINTENANCE FACILITY CONSTRUCTION.	CON	2009	4,250	3,400	850	0
74	5309F	0472-T076		X2	NW TD	VARIOUS	NWTD - Maintenance Fac. - Earmark Funds FY 09.	CON	2009	564	451	113	0
									2009 Total	9,231	7,527	1,676	28
71	5309P	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN-HARTFORD BUSWAY FFY 2006 NEW STARTS.	ALL	2007	7,351	5,881	1,470	0
									2007 Total	7,351	5,881	1,470	0
71	5309P	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - NEW STARTS - FFY 2008	ALL	2008	44,439	35,551	8,888	0
									2008 Total	44,439	35,551	8,888	0
71	5309P	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - NEW STARTS - FFY 2009	ALL	2009	85,852	68,682	17,170	0
71	5309P	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - GOV. INC'T FFY 2009	ALL	2009	19,500	0	19,500	0
									2009 Total	105,352	68,682	36,670	0
71	5309P	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - NEW STARTS - FFY 2010	ALL	2010	43,388	34,710	8,678	0
									2010 Total	43,388	34,710	8,678	0
71	5309P	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - NEW STARTS - FFY 2011	ALL	FYI	28,684	22,947	5,737	0
									FYI Total	28,684	22,947	5,737	0
70	5310C	0170-T711	0SXT-0110	X2	VARIOUS BUS	STATEWIDE	PURCH ACCESSIBLE VANS/BUSES - SEC 16-PRGM FY 07.	ACQ	2007	1,425	1,140	285	0
									2007 Total	1,425	1,140	285	0
70	5310C	0170-T712	0SXT-0110	X2	VARIOUS BUS	STATEWIDE	PURCH ACCESSIBLE VANS/BUSES - SEC 16-PRGM FY 08.	ACQ	2008	1,543	1,234	309	0
									2008 Total	1,543	1,234	309	0
70	5310C	0170-T713	0SXT-0110	X2	VARIOUS BUS	STATEWIDE	PURCH ACCESSIBLE VANS/BUSES - SEC 16-PRGM FY 09.	ACQ	2009	1,619	1,295	324	0
									2009 Total	1,619	1,295	324	0
10	5310C	0SXT-0110		X2	VARIOUS BUS	STATEWIDE	PURCH ACCESSIBLE VANS/BUSES-SEC 16 PROGRAM.	ACQ	2010	1,400	1,120	280	0
									2010 Total	1,400	1,120	280	0
10	5310C	0SXT-0110		X2	VARIOUS BUS	STATEWIDE	PURCH ACCESSIBLE VANS/BUSES-SEC 16 PROGRAM.	OTH	FYI	1,400	1,120	280	0
									FYI Total	1,400	1,120	280	0
12	5311C	0EST-0112		X2	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311C PROGRAM.	OTH	2007	57	46	11	0
15	5311C	0NET-1501	NETD-1501	X2	NE TD	VARIOUS	NE TD - SECTION 5311C PROGRAM.	OTH	2007	114	91	23	0
03	5311C	0NWT-0305		X2	NW TD	VARIOUS	NW TD - SECTION 5311C PROGRAM.	OTH	2007	250	200	50	0
14	5311C	0WHM-1405		X2	WND TD	WINDHAM	WNDHM TD - SECTION 5311C PROGRAM.	OTH	2007	130	104	26	0
									2007 Total	551	441	110	0
12	5311C	0EST-0112		X2	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311C PROGRAM.	OTH	2008	57	46	11	0
03	5311C	0NWT-0305		X2	NW TD	VARIOUS	NW TD - SECTION 5311C PROGRAM.	OTH	2008	590	472	118	0
14	5311C	0WHM-1405		X2	WND TD	WINDHAM	WNDHM TD - SECTION 5311C PROGRAM.	OTH	2008	275	220	55	0
									2008 Total	922	738	184	0
12	5311C	0EST-0112		X2	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311C PROGRAM.	OTH	2009	57	46	11	0
15	5311C	0NET-1501	NETD-1501	X2	NE TD	VARIOUS	NE TD - SECTION 5311C PROGRAM.	OTH	2009	322	258	64	0
03	5311C	0NWT-0305		X2	NW TD	VARIOUS	NW TD - SECTION 5311C PROGRAM.	OTH	2009	212	170	42	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
14	5311C	0WHM-1405		X2	WND TD	WINDHAM	WNDHM TD - SECTION 5311C PROGRAM.	OTH	2009	251	201	50	0
									2009 Total	842	674	168	0
12	5311C	0EST-0112		X2	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 PROGRAM.	OTH	2010	130	104	26	0
15	5311C	0NET-0305		X2	NE TD	VARIOUS	NE TD - SECTION 5311 PROGRAM.	OTH	2010	405	324	81	0
03	5311C	0NWT-0305		X2	NW TD	VARIOUS	NW TD - SECTION 5311 PROGRAM.	OTH	2010	165	132	33	0
14	5311C	0WHM-1405		X2	WND TD	WINDHAM	WNDHM TD - SECTION 5311 PROGRAM.	OTH	2010	360	288	72	0
									2010 Total	1,060	848	212	0
12	5311C	0EST-0112		X2	ESTUARY TD	OLD SAYBROOK	ESTUARY TD - SECTION 5311 PROGRAM.	OTH	FYI	114	91	23	0
15	5311C	0NET-0305		X2	NE TD	VARIOUS	NE TD - SECTION 5311 PROGRAM.	OTH	FYI	405	324	81	0
03	5311C	0NWT-0305		X2	NW TD	VARIOUS	NW TD - SECTION 5311 PROGRAM.	OTH	FYI	83	66	17	0
14	5311C	0WHM-1405		X2	WND TD	WINDHAM	WNDHM TD - SECTION 5311 PROGRAM.	OTH	FYI	276	221	55	0
									FYI Total	878	702	176	0
04	5311O	0472-T056		X2	NW TD	TORRINGTON	NORTHWEST T.D.-RURAL. - FFY 2007.	OTH	2007	539	309	148	82
14	5311O	0474-T070		X2	WNDHM TD	WINDHAM	WINDHAM REGIONAL T.D.-RURAL. - FFY 2007.	OTH	2007	882	481	244	157
15	5311O	0476-T058		X2	NE TD	KILLINGLY	NORTHEASTERN CONN T.D.-RURAL. - FFY 2007.	OTH	2007	386	220	107	59
12	5311O	0478-T040		X2	O SYBRK	OLD SAYBROOK	CONN. RIVER ESTUARY TD SHUTTLE - FFY 2007.	OTH	2007	151	78	73	0
12	5311O	0478-T041		X2	O SYBRK	OLD SAYBROOK	CONN. RIVER ESTUARY TD - RURAL - FFY 2007.	OTH	2007	251	137	74	40
11	5311O	0480-T033		X2	MDLTWN TD	MIDDLETOWN	MIDDLETOWN AREA TD - RURAL - FFY 2007.	OTH	2007	122	66	36	20
									2007 Total	2,331	1,291	682	358
04	5311O	0472-T056		X2	NW TD	TORRINGTON	NORTHWEST T.D.-RURAL. - FFY 2008.	OTH	2008	539	309	148	82
14	5311O	0474-T070		X2	WNDHM TD	WINDHAM	WINDHAM REGIONAL T.D.-RURAL. - FFY 2008.	OTH	2008	882	481	244	157
15	5311O	0476-T058		X2	NE TD	KILLINGLY	NORTHEASTERN CONN T.D.-RURAL. - FFY 2008.	OTH	2008	386	220	107	59
12	5311O	0478-T040		X2	O SYBRK	OLD SAYBROOK	CONN. RIVER ESTUARY TD SHUTTLE - FFY 2008.	OTH	2008	151	78	73	0
12	5311O	0478-T041		X2	O SYBRK	OLD SAYBROOK	CONN. RIVER ESTUARY TD - RURAL - FFY 2008.	OTH	2008	251	137	74	40
11	5311O	0480-T033		X2	MDLTWN TD	MIDDLETOWN	MIDDLETOWN AREA TD - RURAL - FFY 2008.	OTH	2008	122	66	36	20
									2008 Total	2,331	1,291	682	358
04	5311O	0472-T056		X2	NW TD	TORRINGTON	NORTHWEST T.D.-RURAL. - FFY 2009.	OTH	2009	539	309	148	82
14	5311O	0474-T070		X2	WNDHM TD	WINDHAM	WINDHAM REGIONAL T.D.-RURAL. - FFY 2009.	OTH	2009	882	481	244	157
15	5311O	0476-T058		X2	NE TD	KILLINGLY	NORTHEASTERN CONN T.D.-RURAL. - FFY 2009.	OTH	2009	386	220	107	59
12	5311O	0478-T040		X2	O SYBRK	OLD SAYBROOK	CONN. RIVER ESTUARY TD SHUTTLE - FFY 2009.	OTH	2009	151	78	73	0
12	5311O	0478-T041		X2	O SYBRK	OLD SAYBROOK	CONN. RIVER ESTUARY TD - RURAL - FFY 2009.	OTH	2009	251	137	74	40
11	5311O	0480-T033		X2	MDLTWN TD	MIDDLETOWN	MIDDLETOWN AREA TD - RURAL - FFY 2009.	OTH	2009	122	66	36	20
									2009 Total	2,331	1,291	682	358
70	5311R	0170-TXXX		X2	Section 5311	VARIOUS	SECTION 5311 PROGRAM, TRANSFER FROM FY 2006, SECTION 5310 TO FY 2007.	OTH	2007	300	240	60	0
									2007 Total	300	240	60	0
70	5311R	0170-TXXX		X2	Section 5311	VARIOUS	SECTION 5311 PROGRAM, TRANSFER FROM FY 2007, SECTION 5310 TO FY 2008.	OTH	2008	300	240	60	0
									2008 Total	300	240	60	0
70	5311R	0170-TXXX		X2	Section 5311	VARIOUS	SECTION 5311 PROGRAM, TRANSFER FROM FY 2008, SECTION 5310 TO FY 2009.	OTH	2009	300	240	60	0
									2009 Total	300	240	60	0
70	5311T	0170-XXXX		X2	SECTION 5311	VARIOUS	SECTION 5311 PROGRAM ADJUST TO ACTUAL APPR & RTAP PROGRAM - FFY 2007.	OTH	2007	170	170	0	0
									2007 Total	170	170	0	0
70	5311T	0170-XXXX		X2	SECTION 5311	VARIOUS	SECTION 5311 PROGRAM ADJUST TO ACTUAL APPR & RTAP PROGRAM - FFY 2008.	OTH	2008	170	170	0	0
									2008 Total	170	170	0	0
70	5311T	0170-XXXX		X2	SECTION 5311	VARIOUS	SECTION 5311 PROGRAM ADJUST TO ACTUAL APPR & RTAP PROGRAM - FFY 2009.	OTH	2009	170	170	0	0
									2009 Total	170	170	0	0
70	5316G	0170-T798	HTFD-URBN	X2	VARIOUS BUS	HARTFORD URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - HARTFORD	OTH	2007	630	315	0	315
70	5316G	0170-T798	NHVN-URBN	X2	VARIOUS BUS	NEW HAVEN URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - NEW HAVEN	OTH	2007	400	200	0	200
70	5316G	0170-T798	BPSM-URBN	X2	VARIOUS BUS	BRPT/STFD URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - BRIDGEPORT/STAMFORD	OTH	2007	522	261	0	261
70	5316G	0170-T798	OTHR-URBN	X2	VARIOUS BUS	OTHER URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - OTHER URBAN AREA	OTH	2007	558	279	0	279

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
70	5316G	0170-T798	OTHR-RURL	X2	VARIOUS BUS	RURAL	JOB ACCESS AND REVERSE COMMUTE - RURAL	OTH	2007	134	67	0	67
									2007 Total	2,244	1,122	0	1,122
70	5316G	0170-T798	HTFD-URBN	X2	VARIOUS BUS	HARTFORD URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - HARTFORD	OTH	2008	630	315	0	315
70	5316G	0170-T798	NHVN-URBN	X2	VARIOUS BUS	NEW HAVEN URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - NEW HAVEN	OTH	2008	400	200	0	200
70	5316G	0170-T798	BPSM-URBN	X2	VARIOUS BUS	BRPT/STFD URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - BRIDGEPORT/STAMFORD	OTH	2008	522	261	0	261
70	5316G	0170-T798	OTHR-URBN	X2	VARIOUS BUS	OTHER URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - OTHER URBAN AREA	OTH	2008	558	279	0	279
70	5316G	0170-T798	OTHR-RURL	X2	VARIOUS BUS	RURAL	JOB ACCESS AND REVERSE COMMUTE - RURAL	OTH	2008	134	67	0	67
									2008 Total	2,244	1,122	0	1,122
70	5316G	0170-T798	HTFD-URBN	X2	VARIOUS BUS	HARTFORD URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - HARTFORD	OTH	2009	630	315	0	315
70	5316G	0170-T798	NHVN-URBN	X2	VARIOUS BUS	NEW HAVEN URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - NEW HAVEN	OTH	2009	400	200	0	200
70	5316G	0170-T798	BPSM-URBN	X2	VARIOUS BUS	BRPT/STFD URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - BRIDGEPORT/STAMFORD	OTH	2009	522	261	0	261
70	5316G	0170-T798	OTHR-URBN	X2	VARIOUS BUS	OTHER URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - OTHER URBAN AREA	OTH	2009	558	279	0	279
70	5316G	0170-T798	OTHR-RURL	X2	VARIOUS BUS	RURAL	JOB ACCESS AND REVERSE COMMUTE - RURAL	OTH	2009	134	67	0	67
									2009 Total	2,244	1,122	0	1,122
70	5316G	0170-T798	HTFD-URBN	X2	VARIOUS BUS	HARTFORD URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - HARTFORD	OTH	2010	630	315	0	315
70	5316G	0170-T798	NHVN-URBN	X2	VARIOUS BUS	NEW HAVEN URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - NEW HAVEN	OTH	2010	400	200	0	200
70	5316G	0170-T798	BPSM-URBN	X2	VARIOUS BUS	BRPT/STFD URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - BRIDGEPORT/STAMFORD	OTH	2010	522	261	0	261
70	5316G	0170-T798	OTHR-URBN	X2	VARIOUS BUS	OTHER URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - OTHER URBAN AREA	OTH	2010	558	279	0	279
70	5316G	0170-T798	OTHR-RURL	X2	VARIOUS BUS	RURAL	JOB ACCESS AND REVERSE COMMUTE - RURAL	OTH	2010	134	67	0	67
									2010 Total	2,244	1,122	0	1,122
70	5316G	0170-T798	HTFD-URBN	X2	VARIOUS BUS	HARTFORD URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - HARTFORD	OTH	FYI	630	315	0	315
70	5316G	0170-T798	NHVN-URBN	X2	VARIOUS BUS	NEW HAVEN URBANIZED AREA	JOB ACCESS AND REVERSE COMMUTE - NEW HAVEN	OTH	FYI	400	200	0	200
70	5316G	0170-T798	BPSM-URBN	X2	VARIOUS BUS	BRPT/STFD URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - BRIDGEPORT/STAMFORD	OTH	FYI	522	261	0	261
70	5316G	0170-T798	OTHR-URBN	X2	VARIOUS BUS	OTHER URBAN AREA	JOB ACCESS AND REVERSE COMMUTE - OTHER URBAN AREA	OTH	FYI	558	279	0	279
70	5316G	0170-T798	OTHR-RURL	X2	VARIOUS BUS	RURAL	JOB ACCESS AND REVERSE COMMUTE - RURAL	OTH	FYI	134	67	0	67
									FYI Total	2,244	1,122	0	1,122
70	5317J	0170-TNF1	HTFD-URBN	X2	VARIOUS BUS	HARTFORD URBANIZED AREA	NEW FREEDOM - HARTFORD	OTH	2007	508	254	0	254
70	5317J	0170-TNF2	NHVN-URBN	X2	VARIOUS BUS	NEW HAVEN URBANIZED AREA	NEW FREEDOM - NEW HAVEN	OTH	2007	338	169	0	169
70	5317J	0170-TNF3	BPSM-URBN	X2	VARIOUS BUS	BRPT/STFD URBAN AREA	NEW FREEDOM - BRIDGEPORT/STAMFORD	OTH	2007	512	256	0	256
70	5317J	0170-TNF4	OTHR-URBN	X2	VARIOUS BUS	OTHER URBAN AREA	NEW FREEDOM - OTHER URBAN AREA	OTH	2007	536	268	0	268
70	5317J	0170-TNF5	OTHR-RURL	X2	VARIOUS BUS	RURAL	NEW FREEDOM - RURAL	OTH	2007	174	87	0	87
									2007 Total	2,068	1,034	0	1,034
70	5317J	0170-TNF1	HTFD-URBN	X2	VARIOUS BUS	HARTFORD URBANIZED AREA	NEW FREEDOM - HARTFORD	OTH	2008	508	254	0	254
70	5317J	0170-TNF2	NHVN-URBN	X2	VARIOUS BUS	NEW HAVEN URBANIZED AREA	NEW FREEDOM - NEW HAVEN	OTH	2008	338	169	0	169
70	5317J	0170-TNF3	BPSM-URBN	X2	VARIOUS BUS	BRPT/STFD URBAN AREA	NEW FREEDOM - BRIDGEPORT/STAMFORD	OTH	2008	512	256	0	256
70	5317J	0170-TNF4	OTHR-URBN	X2	VARIOUS BUS	OTHER URBAN AREA	NEW FREEDOM - OTHER URBAN AREA	OTH	2008	536	268	0	268
70	5317J	0170-TNF5	OTHR-RURL	X2	VARIOUS BUS	RURAL	NEW FREEDOM - RURAL	OTH	2008	174	87	0	87
									2008 Total	2,068	1,034	0	1,034
70	5317J	0170-TNF1	HTFD-URBN	X2	VARIOUS BUS	HARTFORD URBANIZED AREA	NEW FREEDOM - HARTFORD	OTH	2009	508	254	0	254
70	5317J	0170-TNF2	NHVN-URBN	X2	VARIOUS BUS	NEW HAVEN URBANIZED AREA	NEW FREEDOM - NEW HAVEN	OTH	2009	338	169	0	169
70	5317J	0170-TNF3	BPSM-URBN	X2	VARIOUS BUS	BRPT/STFD URBAN AREA	NEW FREEDOM - BRIDGEPORT/STAMFORD	OTH	2009	512	256	0	256
70	5317J	0170-TNF4	OTHR-URBN	X2	VARIOUS BUS	OTHER URBAN AREA	NEW FREEDOM - OTHER URBAN AREA	OTH	2009	536	268	0	268
70	5317J	0170-TNF5	OTHR-RURL	X2	VARIOUS BUS	RURAL	NEW FREEDOM - RURAL	OTH	2009	174	87	0	87
									2009 Total	2,068	1,034	0	1,034
70	5317J	0170-TNF1	HTFD-URBN	X2	VARIOUS BUS	HARTFORD URBANIZED AREA	NEW FREEDOM - HARTFORD	OTH	2010	508	254	0	254
70	5317J	0170-TNF2	NHVN-URBN	X2	VARIOUS BUS	NEW HAVEN URBANIZED AREA	NEW FREEDOM - NEW HAVEN	OTH	2010	338	169	0	169
70	5317J	0170-TNF3	BPSM-URBN	X2	VARIOUS BUS	BRPT/STFD URBAN AREA	NEW FREEDOM - BRIDGEPORT/STAMFORD	OTH	2010	512	256	0	256
70	5317J	0170-TNF4	OTHR-URBN	X2	VARIOUS BUS	OTHER URBAN AREA	NEW FREEDOM - OTHER URBAN AREA	OTH	2010	536	268	0	268
70	5317J	0170-TNF5	OTHR-RURL	X2	VARIOUS BUS	RURAL	NEW FREEDOM - RURAL	OTH	2010	174	87	0	87

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
									2010 Total	2,068	1,034	0	1,034
70	5317J	0170-TNF1	HTFD-URBN	X2	VARIOUS BUS	HARTFORD URBANIZED AREA	NEW FREEDOM - HARTFORD	OTH	FYI	508	254	0	254
70	5317J	0170-TNF2	NHVN-URBN	X2	VARIOUS BUS	NEW HAVEN URBANIZED AREA	NEW FREEDOM - NEW HAVEN	OTH	FYI	338	169	0	169
70	5317J	0170-TNF3	BPSM-URBN	X2	VARIOUS BUS	BRPT/STFD URBAN AREA	NEW FREEDOM - BRIDGEPORT/STAMFORD	OTH	FYI	512	256	0	256
70	5317J	0170-TNF4	OTHR-URBN	X2	VARIOUS BUS	OTHER URBAN AREA	NEW FREEDOM - OTHER URBAN AREA	OTH	FYI	536	268	0	268
70	5317J	0170-TNF5	OTHR-RURL	X2	VARIOUS BUS	RURAL	NEW FREEDOM - RURAL	OTH	FYI	174	87	0	87
									FYI Total	2,068	1,034	0	1,034
88	BRXD	8888-8888		SU	VARIOUS	VARIOUS	FACode/FFY SETUP RECORD, BRXD.	S/U	2007	0	0	0	0
									2007 Total	0	0	0	0
88	BRXD	8888-8888		SU	VARIOUS	VARIOUS	FACode/FFY SETUP RECORD, BRXD.	S/U	2008	0	0	0	0
									2008 Total	0	0	0	0
88	BRXD	8888-8888		SU	VARIOUS	VARIOUS	FACode/FFY SETUP RECORD, BRXD.	S/U	2009	0	0	0	0
									2009 Total	0	0	0	0
88	BRXD	8888-8888		SU	VARIOUS	VARIOUS	FACode/FFY SETUP RECORD, BRXD.	S/U	2010	0	0	0	0
									2010 Total	0	0	0	0
08	BRXZ	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2007	34,483	30,000	4,483	0
73	BRXZ	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC ENTRY.	CON	2007	0	0	0	0
73	BRXZ	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC CONV.	CON	2007	21,700	17,400	4,300	0
70	BRXZ	0170-0BRX		X2	VARIOUS	STATEWIDE	ON/OFF-SYSTEMS BRIDGE IMPROVEMENTS, BRX & BRZ.	ALL	2007	11,782	5,000	6,782	0
									2007 Total	67,964	52,400	15,564	0
08	BRXZ	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2008	34,483	30,000	4,483	0
01	BRXZ	0102-0303		X2	CT 123	NORWALK	BRIDGE REPLACEMENT CT 123 OVER NORWALK RIVER.	CON	2008	0	0	0	0
73	BRXZ	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC CONV.	CON	2008	21,700	17,400	4,300	0
70	BRXZ	0170-0BRX		X2	VARIOUS	STATEWIDE	ON/OFF-SYSTEMS BRIDGE IMPROVEMENTS, BRX & BRZ.	ALL	2008	11,782	5,000	6,782	0
									2008 Total	67,964	52,400	15,564	0
08	BRXZ	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2009	34,483	30,000	4,483	0
73	BRXZ	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC CONV.	CON	2009	21,700	17,400	4,300	0
70	BRXZ	0170-0BRX		X2	VARIOUS	STATEWIDE	ON/OFF-SYSTEMS BRIDGE IMPROVEMENTS, BRX & BRZ.	ALL	2009	11,782	5,000	6,782	0
									2009 Total	67,964	52,400	15,564	0
08	BRXZ	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2010	34,483	30,000	4,483	0
73	BRXZ	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC CONV.	CON	2010	21,700	17,400	4,300	0
70	BRXZ	0170-0BRX		X2	VARIOUS	STATEWIDE	ON/OFF-SYSTEMS BRIDGE IMPROVEMENTS, BRX & BRZ.	ALL	2010	11,782	5,000	6,782	0
									2010 Total	67,964	52,400	15,564	0
08	BRXZ	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	FYI	77,693	67,593	10,100	0
73	BRXZ	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC CONV.	CON	FYI	43,400	34,800	8,600	0
70	BRXZ	0170-0BRX		X2	VARIOUS	STATEWIDE	ON/OFF-SYSTEMS BRIDGE IMPROVEMENTS, BRX & BRZ.	ALL	FYI	11,782	5,000	6,782	0
									FYI Total	132,875	107,393	25,482	0
07	CMAQ	0015-T041	0015-TX01	X2	VARIOUS	BRIDGEPORT	BRIDGEPORT TDM Office	OTH	2007	124	124	0	0
02	CMAQ	0034-T038	0034-TXX2	X2	DANBURY	DANBURY	DANBURY TDM OFFICE.	OTH	2007	124	124	0	0
01	CMAQ	0056-0261		X4	VARIOUS	GREENWICH	TRAFFIC RESPONSIVE SIGNAL SYSTEM.	CON	2007	184	184	0	0
01	CMAQ	0056-0290		X3	I-95	GREENWICH	INSTALL MAINLINE WEIGH-IN-MOTION DEVICE ON I-95 IN THE VICINITY OF THE EXISTING WEIGH STATION.	CON	2007	832	749	83	0
10	CMAQ	0063-T043	0063-TXX2	X2	GRTR-HARTFORD	GRTR-HARTFORD	GREATER HARTFORD REGIONAL RIDESHARE.	OTH	2007	1,083	1,083	0	0
08	CMAQ	0092-0545	0092-H090	X3	VARIOUS	NEW HAVEN	CONSTRUCTION BRKOUT PROJ 3B FOR P# 92-488, INCLUDES APPROX 19 INTERSECTIONS.	CON	2007	2,242	2,242	0	0
08	CMAQ	0092-T064	0092-TXX6	X2	GRTR-NEW HAVEN	GRTR-NEW HAVEN	GREATER NEW HAVEN REGIONAL RIDESHARE.	OTH	2007	784	784	0	0
13	CMAQ	0094-T014	0094-TXX2	X2	NEW LONDON	NEW LONDON	NEW LONDON TDM INITIATIVE.	OTH	2007	162	162	0	0
01	CMAQ	0102-H066		X3	VARIOUS	NORWALK	PHASE 1 - SO NRWALK CBD SIGNAL CNTROLLER & CLOSED LOOP SYS UPGRADE.	ROW	2007	30	30	0	0
01	CMAQ	0135-H068		X2	VARIOUS	STAMFORD	TRAFFIC SIGNAL SYSTEM UPGRADE - PHASE 6.	CON	2007	2,440	2,440	0	0
75	CMAQ	0135-T059	0135-TX01	X2	VARIOUS	VARIOUS	SOUTHWESTERN CT REGIONAL RIDESHARE.	OTH	2007	1,163	1,163	0	0
05	CMAQ	0151-T016	0151-TXX3	X2	WATERBURY	WATERBURY	WATERBURY TDM OFFICE.	OTH	2007	162	162	0	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
10	CMAQ	0155-0160	0155-H021	X4	VARIOUS	WEST HARTFORD	TOWN-WIDE TRAFFIC SIGNAL HARDWARE UPGRADE - PHASE B	CON	2007	1,460	1,460	0	0
10	CMAQ	0155-0161	0155-H020	X4	VARIOUS	WEST HARTFORD	TOWN-WIDE TRAFFIC SIGNAL HARDWARE UPGRADE - PHASE A.	CON	2007	2,100	2,100	0	0
76	CMAQ	0170-T773	0170-TX14	X2	VARIOUS	STATEWIDE	Commute Incentive(GREATER CT MODERATE)	OTH	2007	245	245	0	0
76	CMAQ	0170-T777	0170-TX18	X2	VARIOUS	STATEWIDE	Statewide Ridesharing Services (GREATER CT MODERATE)	OTH	2007	127	127	0	0
70	CMAQ	0170-TX22		X2	VARIOUS	STATEWIDE	GLOBAL POSITIONING SYSTEMS (GPS).	OTH	2007	1,802	1,442	360	0
76	CMAQ	0170-T781	0170-TX26	X2	VARIOUS	STATEWIDE	Statewide Marketing (GREATER CT MODERATE)	OTH	2007	357	287	70	0
76	CMAQ	0170-T785	0170-TX34	X2	VARIOUS	STATEWIDE	Telecommuting Partnership (GREATER CT MODERATE)	OTH	2007	284	227	57	0
76	CMAQ	0170-T786	0170-TX38	X2	VARIOUS	STATEWIDE	Advanced Tech Buses	OTH	2007	3,277	2,622	655	0
75	CMAQ	0170-T768	0170-TX43	X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (NY-NJ-CT MODERATE)	OTH	2007	913	730	0	183
75	CMAQ	0170-T772	0170-TX55	X2	VARIOUS	STATEWIDE	COMMUTE INCENTIVE (NY-NJ-CT MODERATE).	OTH	2007	245	245	0	0
75	CMAQ	0170-T776	0170-TX63	X2	VARIOUS	STATEWIDE	STATEWIDE RIDESHARING SERVICES (NY-NJ-CT MODERATE).	OTH	2007	299	299	0	0
75	CMAQ	0170-T779	0170-TX72	X2	VARIOUS	STATEWIDE	SOUTHERN CT VANPOOL.	OTH	2007	261	261	0	0
75	CMAQ	0170-T780	0170-TX76	X2	VARIOUS	STATEWIDE	STATEWIDE MARKETING (NY-NJ-CT MODERATE).	OTH	2007	835	668	167	0
75	CMAQ	0170-T784	0170-TX84	X2	VARIOUS	STATEWIDE	Telecommuting Partnership (NY-NJ-CT MODERATE)	OTH	2007	284	227	57	0
76	CMAQ	0170-T769	0170-TXX2	X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (GREATER CT MODERATE)	OTH	2007	913	730	0	183
71	CMAQ	0171-0305		M	BUSWAY	NEW BRIT/HARTFORD	FUNDING FOR THE NEW BRITAIN-HARTFORD BUSWAY - AC CONV.	CON	2007	20,000	20,000	0	0
07	CMAQ	0301-0060		M	MHL-ML	FAIRFIELD	JOINT DEVELOPMT - FAIRFIELD RR STATION, ACCESS RD & HIGH LEVEL PLATFORMS.	CON	2007	8,875	7,100	1,775	0
08	CMAQ	0310-0039		X2	GUILFORD RRS	GUILFORD	GUILFORD RR STATION - CONSTRUCTION OF PARKING LOT AT THE WOODRUFF FARMS SITE.	CON	2007	500	400	100	0
									2007 Total	52,107	48,417	3,324	366
07	CMAQ	0015-TX01		X2	VARIOUS	BRIDGEPORT	BRIDGEPORT TDM Office	OTH	2008	127	127	0	0
02	CMAQ	0034-TXX3		X2	DANBURY	DANBURY	DANBURY TDM OFFICE.	OTH	2008	127	127	0	0
10	CMAQ	0063-TXX3		X2	GRTR-HARTFORD	GRTR-HARTFORD	GREATER HARTFORD REGIONAL RIDESHARE.	OTH	2008	1,115	1,115	0	0
08	CMAQ	0092-0562		X4	VARIOUS	NEW HAVEN	EXTEND NEW HAVEN'S CENTRALLY CONTROLLED TRAFFIC SIG.SYST. PHASE 4B	CON	2008	4,332	4,302	30	0
08	CMAQ	0092-TXX7		X2	GRTR-NEW HAVEN	GRTR-NEW HAVEN	GREATER NEW HAVEN REGIONAL RIDESHARE.	OTH	2008	807	807	0	0
13	CMAQ	0094-TXX3		X2	NEW LONDON	NEW LONDON	NEW LONDON TDM INITIATIVE	OTH	2008	166	166	0	0
01	CMAQ	0102-H066		X3	VARIOUS	NORWALK	PHASE 1 - SO NRWALK CBD SIGNAL CNTROLLER & CLOSED LOOP SYS UPGRADE.	CON	2008	3,038	3,017	21	0
75	CMAQ	0135-TX01		X2	VARIOUS	VARIOUS	SOUTHWESTERN CT REGIONAL RIDESHARE.	OTH	2008	1,197	1,197	0	0
07	CMAQ	0138-0226		N	NHL-ML	STRATFORD	PARKING EXPANSION PROJECT STRATFORD RR STATION.	CON	2008	10,000	3,000	7,000	0
05	CMAQ	0151-TXX3		X2	WATERBURY	WATERBURY	WATERBURY TDM OFFICE.	OTH	2008	166	166	0	0
75	CMAQ	0170-TX02		X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (NY-NJ-CT Moderate)	OTH	2008	968	775	0	193
76	CMAQ	0170-TX15		X2	VARIOUS	STATEWIDE	Commute & Deduct A Ride Incentive(GREATER CT MODERATE)	OTH	2008	252	252	0	0
76	CMAQ	0170-TX19		X2	VARIOUS	STATEWIDE	Statewide Ridesharing Services (GREATER CT MODERATE)	OTH	2008	130	130	0	0
70	CMAQ	0170-TX23		X2	VARIOUS	STATEWIDE	GLOBAL POSITIONING SYSTEMS (GPS).	OTH	2008	1,856	1,485	371	0
76	CMAQ	0170-TX27		X2	VARIOUS	STATEWIDE	Statewide Marketing (GREATER CT MODERATE)	OTH	2008	367	294	73	0
76	CMAQ	0170-TX35		X2	VARIOUS	STATEWIDE	Telecommuting Partnership (GREATER CT MODERATE)	OTH	2008	292	234	58	0
76	CMAQ	0170-TX39		X2	VARIOUS	STATEWIDE	Advanced Tech Buses	OTH	2008	3,375	2,700	675	0
70	CMAQ	0170-TX41		X2	VARIOUS	STATEWIDE	VANPOOL FINANCING PROGRAM.	OTH	2008	7,500	7,500	0	0
75	CMAQ	0170-TX45		X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (NY-NJ-CT MODERATE)	OTH	2008	940	752	0	188
75	CMAQ	0170-TX56		X2	VARIOUS	STATEWIDE	COMMUTE & DEDUCT-A-RIDE INCENTIVE (NY-NJ-CT MODERATE).	OTH	2008	252	252	0	0
75	CMAQ	0170-TX64		X2	VARIOUS	STATEWIDE	STATEWIDE RIDESHARING SERVICES (NY-NJ-CT MODERATE).	OTH	2008	307	307	0	0
75	CMAQ	0170-TX73		X2	VARIOUS	STATEWIDE	SOUTHERN CT VANPOOL.	OTH	2008	268	268	0	0
75	CMAQ	0170-TX77		X2	VARIOUS	STATEWIDE	STATEWIDE MARKETING (NY-NJ-CT MODERATE).	OTH	2008	860	688	172	0
75	CMAQ	0170-TX85		X2	VARIOUS	STATEWIDE	Telecommuting Partnership (NY-NJ-CT MODERATE)	OTH	2008	292	234	58	0
76	CMAQ	0170-TXX3		X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (GREATER CT MODERTE)	OTH	2008	940	752	0	188
									2008 Total	39,674	30,647	8,458	569
07	CMAQ	0015-TX01		X2	VARIOUS	BRIDGEPORT	BRIDGEPORT TDM Office	OTH	2009	127	127	0	0
02	CMAQ	0034-TXX4		X2	DANBURY	DANBURY	DANBURY TDM OFFICE.	OTH	2009	130	130	0	0
10	CMAQ	0063-TXX4		X2	GRTR-HARTFORD	GRTR-HARTFORD	GREATER HARTFORD REGIONAL RIDESHARE.	OTH	2009	1,148	1,148	0	0
08	CMAQ	0092-TXX8		X2	GRTR-NEW HAVEN	GRTR-NEW HAVEN	GREATER NEW HAVEN REGIONAL RIDESHARE.	OTH	2009	831	831	0	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
13	CMAQ	0094-TXX4		X2	NEW LONDON	NEW LONDON	NEW LONDON TDM INITIATIVE	OTH	2009	170	170	0	0
75	CMAQ	0135-TX01		X2	VARIOUS	VARIOUS	SOUTHWESTERN CT REGIONAL RIDESHARE.	OTH	2009	1,232	1,232	0	0
05	CMAQ	0151-TXX4		X2	WATERBURY	WATERBURY	WATERBURY TDM OFFICE.	OTH	2009	170	170	0	0
75	CMAQ	0170-TX02		X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (NY-NJ-CT Moderate)	OTH	2009	968	775	0	193
76	CMAQ	0170-TX16		X2	VARIOUS	STATEWIDE	Commute & Deduct A Ride Incentive(GREATER CT MODERATE)	OTH	2009	259	259	0	0
76	CMAQ	0170-TX20		X2	VARIOUS	STATEWIDE	Statewide Ridesharing Services (GREATER CT MODERATE)	OTH	2009	133	133	0	0
70	CMAQ	0170-TX24		X2	VARIOUS	STATEWIDE	GLOBAL POSITIONING SYSTEMS (GPS).	OTH	2009	1,911	1,529	382	0
76	CMAQ	0170-TX28		X2	VARIOUS	STATEWIDE	Statewide Marketing (GREATER CT MODERATE)	OTH	2009	378	302	76	0
76	CMAQ	0170-TX36		X2	VARIOUS	STATEWIDE	Telecommuting Partnership (GREATER CT MODERATE)	OTH	2009	300	240	60	0
76	CMAQ	0170-TX40		X2	VARIOUS	STATEWIDE	Advanced Tech Buses	OTH	2009	3,476	2,781	695	0
75	CMAQ	0170-TX57		X2	VARIOUS	STATEWIDE	COMMUTE & DEDUCT-A-RIDE INCENTIVE (NY-NJ-CT MODERATE).	OTH	2009	259	259	0	0
75	CMAQ	0170-TX65		X2	VARIOUS	STATEWIDE	STATEWIDE RIDESHARING SERVICES (NY-NJ-CT-MODERATE).	OTH	2009	316	316	0	0
75	CMAQ	0170-TX74		X2	VARIOUS	STATEWIDE	SOUTHERN CT VANPOOL.	OTH	2009	276	276	0	0
75	CMAQ	0170-TX78		X2	VARIOUS	STATEWIDE	STATEWIDE MARKETING (NY-NJ-CT MODERATE).	OTH	2009	885	708	177	0
75	CMAQ	0170-TX86		X2	VARIOUS	STATEWIDE	Telecommuting Partnership (NY-NJ- T MODERATE)	OTH	2009	300	240	60	0
76	CMAQ	0170-TXX4		X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (GREATER CT MODERATE)	OTH	2009	968	774	0	194
									2009 Total	14,237	12,400	1,450	387
07	CMAQ	0015-TX01		X2	VARIOUS	BRIDGEPORT	BRIDGEPORT TDM Office	OTH	2010	133	133	0	0
02	CMAQ	0034-TX01		X2	DANBURY	DANBURY	DANBURY TDM OFFICE.	OTH	2010	133	133	0	0
10	CMAQ	0063-TX01		X2	GRTR-HARTFORD	GRTR-HARTFORD	GREATER HARTFORD REGIONAL RIDESHARE.	OTH	2010	1,182	1,182	0	0
08	CMAQ	0092-0564	0092-H105	X3	VARIOUS	NEW HAVEN	EXTEND NEW HAVEN's CENTRAL CONTROL TRAFFIC SIGNAL SYSTEM, PHS 3C - INCLUDES 18 SIGNALS.	CON	2010	4,126	4,126	0	0
08	CMAQ	0092-TX01		X2	GRTR-NEW HAVEN	GRTR-NEW HAVEN	GREATER NEW HAVEN REGIONAL RIDESHARE.	OTH	2010	855	855	0	0
13	CMAQ	0094-TX01		X2	NEW LONDON	NEW LONDON	NEW LONDON TDM INITIATIVE	OTH	2010	175	175	0	0
75	CMAQ	0135-TX01		X2	VARIOUS	VARIOUS	SOUTHWESTERN CT REGIONAL RIDESHARE.	OTH	2010	1,268	1,268	0	0
05	CMAQ	0151-TX01		X2	WATERBURY	WATERBURY	WATERBURY TDM OFFICE.	OTH	2010	175	175	0	0
01	CMAQ	0161-0136	0161-T005	N	US 7/CT 33	WILTON	CONSTRUCT A PARKING STRUCTURE AT THE WILTON STATION AT US 7 & CT 33.	CON	2010	2,500	2,000	500	0
75	CMAQ	0170-TX03		X2	VARIOUS	STATEWIDE	COMMUTER INCENTIVE (NY-NJ-CT Moderate).	OTH	2010	266	266	0	0
76	CMAQ	0170-TX03		X2	VARIOUS	STATEWIDE	Commuter Incentive (Greater CT Moderate)	OTH	2010	266	266	0	0
75	CMAQ	0170-TX04		X2	VARIOUS	STATEWIDE	STATEWIDE RIDESHARING SERVICES (NY-NJ-CT Moderate).	OTH	2010	325	325	0	0
76	CMAQ	0170-TX04		X2	VARIOUS	STATEWIDE	Statewide Ridesharing Services (Greater CT Moderate)	OTH	2010	136	136	0	0
70	CMAQ	0170-TX05		X2	VARIOUS	STATEWIDE	GLOBAL POSITIONING SYSTEMS (GPS).	OTH	2010	1,968	1,574	394	0
75	CMAQ	0170-TX06		X2	VARIOUS	STATEWIDE	STATEWIDE MARKETING (NY-NJ-CT Moderate).	OTH	2010	911	729	182	0
76	CMAQ	0170-TX06		X2	VARIOUS	STATEWIDE	Statewide Marketing (Greater CT Moderate)	OTH	2010	389	311	78	0
75	CMAQ	0170-TX07		X2	VARIOUS	STATEWIDE	Telecommuting Partnership (NY-NJ-CT Moderate)	OTH	2010	309	247	62	0
76	CMAQ	0170-TX07		X2	VARIOUS	STATEWIDE	Telecommuting Partnership (Greater CT Moderate)	OTH	2010	309	247	62	0
76	CMAQ	0170-TX08		X2	VARIOUS	STATEWIDE	Advanced Tech Buses	OTH	2010	3,580	2,864	716	0
75	CMAQ	0170-TX09		X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (NY-NJ-CT Moderate)	OTH	2010	997	799	0	198
76	CMAQ	0170-TX09		X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (Greater CT Moderate)	OTH	2010	997	797	0	200
75	CMAQ	0170-TX10		X2	VARIOUS	STATEWIDE	SOUTHERN CT VANPOOL	OTH	2010	284	284	0	0
									2010 Total	21,284	18,892	1,994	398
07	CMAQ	0015-TX01		X2	VARIOUS	BRIDGEPORT	BRIDGEPORT TDM Office	OTH	FYI	137	137	0	0
02	CMAQ	0034-TX01		X2	DANBURY	DANBURY	DANBURY TDM OFFICE.	OTH	FYI	137	137	0	0
10	CMAQ	0063-TX01		X2	GRTR-HARTFORD	GRTR-HARTFORD	GREATER HARTFORD REGIONAL RIDESHARE.	OTH	FYI	1,217	1,217	0	0
08	CMAQ	0092-0488	0092-H053	N	TR	NEW HAVEN	PHASE 3D CENTRAL CONTROL SIGNAL SYSTEM, APPROX 18 LOCATIONS.	CON	FYI	4,332	4,332	0	0
08	CMAQ	0092-TX01		X2	GRTR-NEW HAVEN	GRTR-NEW HAVEN	GREATER NEW HAVEN REGIONAL RIDESHARE.	OTH	FYI	880	880	0	0
13	CMAQ	0094-TX01		X2	NEW LONDON	NEW LONDON	NEW LONDON TDM INITIATIVE	OTH	FYI	180	180	0	0
75	CMAQ	0135-TX01		X2	VARIOUS	VARIOUS	SOUTHWESTERN CT REGIONAL RIDESHARE.	OTH	FYI	1,306	1,306	0	0
05	CMAQ	0151-TX01		X2	WATERBURY	WATERBURY	WATERBURY TDM OFFICE.	OTH	FYI	180	180	0	0
75	CMAQ	0170-TX03		X2	VARIOUS	STATEWIDE	COMMUTER INCENTIVE (NY-NJ-CT Moderate).	OTH	FYI	273	273	0	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
76	CMAQ	0170-TX03		X2	VARIOUS	STATEWIDE	Commuter Incentive (Greater CT Moderate)	OTH	FYI	273	273	0	0
75	CMAQ	0170-TX04		X2	VARIOUS	STATEWIDE	STATEWIDE RIDESHARING SERVICES (NY-NJ-CT Moderate).	OTH	FYI	334	334	0	0
76	CMAQ	0170-TX04		X2	VARIOUS	STATEWIDE	Statewide Ridesharing Services (Greater CT Moderate)	OTH	FYI	141	141	0	0
70	CMAQ	0170-TX05		X2	VARIOUS	STATEWIDE	GLOBAL POSITIONING SYSTEMS (GPS).	OTH	FYI	2,027	1,621	406	0
75	CMAQ	0170-TX06		X2	VARIOUS	STATEWIDE	STATEWIDE MARKETING (NY-NJ-CT Moderate).	OTH	FYI	938	750	188	0
76	CMAQ	0170-TX06		X2	VARIOUS	STATEWIDE	Statewide Marketing (Greater CT Moderate)	OTH	FYI	400	320	80	0
75	CMAQ	0170-TX07		X2	VARIOUS	STATEWIDE	Telecommuting Partnership (NY-NJ-CT Moderate)	OTH	FYI	318	254	64	0
76	CMAQ	0170-TX07		X2	VARIOUS	STATEWIDE	Telecommuting Partnership (Greater CT Moderate)	OTH	FYI	318	254	64	0
76	CMAQ	0170-TX08		X2	VARIOUS	STATEWIDE	Advanced Tech Buses	OTH	FYI	3,687	2,949	738	0
75	CMAQ	0170-TX09		X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (NY-NJ-CT Moderate)	OTH	FYI	1,026	820	0	206
76	CMAQ	0170-TX09		X2	VARIOUS	STATEWIDE	Connecticut Clean Fuels (Greater CT Moderate)	OTH	FYI	1,026	820	0	206
75	CMAQ	0170-TX10		X2	VARIOUS	STATEWIDE	SOUTHERN CT VANPOOL	OTH	FYI	292	292	0	0
70	CMAQ	0170-TX41		X2	VARIOUS	STATEWIDE	VANPOOL FINANCING PROGRAM.	OTH	FYI	7,500	7,500	0	0
									FYI Total	26,922	24,970	1,540	412
02	DEMO	0018-0113		M	US 7	BROOKFIELD	US 7 BROOKFIELD BYPASS - AC CONV.	CON	2007	7,095	7,095	0	0
13	DEMO	0103-0245		X2	INTERMODAL FACILITY	NORWICH	NORWICH INTERMODAL FACILITY - FFY 2001 EARMARK FUND, TRANSFER TO FTA.	CON	2007	3,492	3,492	0	0
									2007 Total	10,588	10,588	0	0
13	FBD	0094-H018		X2	WATER STREET	NEW LONDON	PEDESTRIAN SAFETY & AESTHETIC ENHANCEMENTS TO THE NEW LONDON TRANSPORTATION FACILITY.	CON	2007	3,000	2,400	600	0
									2007 Total	3,000	2,400	600	0
06	HPP	0002-HXXX		X2	ANSONIA RIVER TRAIL	ANSONIA	CONTRUCT IMPROVEMENTS AND UPGRADES TO RIVER WALK	CON	2007	1,688	1,350	0	338
07	HPP	0015-0288	0015-H077	M	SEAVIEW AVE	BRIDGEPORT	CONSTRUCT SEAVIEW AVE CORRIDOR PROJECT.	ROW	2007	974	780	0	194
09	HPP	0017-0137		M	CT 72	BRISTOL	RELOCATION OF CT 72 FROM END OF CT 72 EXPRESSWAY TO CT 229 IN BRISTOL - AC CONV.	CON	2007	2,625	2,100	525	0
02	HPP	0018-0113		M	US 7	BROOKFIELD	US 7 BROOKFIELD BYPASS - AC CONV.	CON	2007	3,586	2,869	717	0
06	HPP	0036-HXX1	0036-HXXX	N	CT 34	DERBY	WIDEN CT 34 IN VICINITY OF CT 8.	CON	2007	3,645	2,916	729	0
10	HPP	0042-HXXX		X2	CHARTER OAK GREENWAY	EAST HARTFORD	EAST HARTFORD SECTION OF CHARTER OAK GW, BAL USED FOR PE, ROW & CON PHASES.	ALL	2007	668	534	0	134
10	HPP	0048-0186	0048-H023	X2	POST OFFICE RD	ENFIELD	RECONSTRCTN OF TOWN FARM RD & POST OFFICE RD FRM RAFFIA RD TO ABBE RD.	CON	2007	719	575	116	28
10	HPP	0053-H022	0053-XXXX	X2	WELLES ST	GLASTONBURY	RIVERFRONT PARK.	PE	2007	10	8	0	2
10	HPP	0053-H022	0053-XXXX	X2	WELLS RD	GLASTONBURY	RIVERFRONT PARK - AC ENTRY.	CON	2007	0	0	0	0
10	HPP	0053-H022	0053-XXXX	X2	WELLES ST	GLASTONBURY	RIVERFRONT PARK - AC CONV.	CON	2007	146	117	0	29
10	HPP	0063-H147		X2	MARK TWAIN DR	HARTFORD	EXTENTION OF MARK TWAIN DR TO NEW UofH MAGNET SCHOOL.	CON	2007	3,668	2,934	0	734
08	HPP	0079-0222	0079-H043	X2	COLUMBUS AVE	MERIDEN	COLUMBUS AVE BRIDGE OVER HARBOR BROOK IN MERIDEN (BR #06238).	CON	2007	1,255	1,004	0	251
08	HPP	0079-H045		X2	VARIOUS	MERIDEN	QUINNIPIAC RIVER LINEAR TRAIL PHASE II.	PE	2007	169	135	0	34
11	HPP	0082-H068		X2	VARIOUS	MIDDLETOWN	PARKING AND TRAFFIC STUDY.	PE	2007	220	176	0	44
13	HPP	0085-HXXX		M	MOHEGAN BRDG	MONTVILLE/PRESTON	MAKE IMPROVEMENTS TO MOHEGAN BRIDGE HPP #2281.	ALL	2007	2,000	1,600	400	0
08	HPP	0092-0531	0092-H082	M	I-91/I-95/CT 34	NEW HAVEN	RECONSTRUCTN OF I-95/I-91/CT 34 INTERCHG ASSOCIATED WITH "Q" BRG REPLACEMT.	CON	2007	1,995	1,596	399	0
08	HPP	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2007	7,470	5,976	1,494	0
08	HPP	0092-H131		N*	CT 34	NEW HAVEN	CONVRSION OF CT 34 FROM EXPSWAY TO AT-GRADE BLVD B/TWN I-95 & PARK ST.	PE	2007	5,310	4,248	0	1,062
08	HPP	0092-H131		N*	CT 34	NEW HAVEN	CONVRSION OF CT 34 FROM EXPSWAY TO AT-GRADE BLVD B/TWN I-95 & PARK ST.	ROW	2007	315	252	0	63
02	HPP	0096-H017		X3	US 6	NEWTOWN	INTRS & RDWY IMPVMTS TO US 6, COMMERCE RD & EDMOND RD IN NEWTOWN.	PE	2007	605	484	121	0
03	HPP	0121-H011		X2	US 44	SALISBURY	SFTY IMPRVMENTS AT RTES. U.S. 44 & 41 (W JUNCTION) IN SALISBURY.	PE	2007	106	85	0	21
06	HPP	0126-HXXX		X2	HOUSATONIC RIVER WALK	SHELTON	CONSTRUCT RIVERWALK TRAIL	CON	2007	1,200	960	0	240
09	HPP	0131-H028	0131-XXXX	X2	LINEAR PARK	SOUTHINGTON	RAILS TO TRAILS, PLANTSVILLE TO CHESHIRE.	PE	2007	150	120	0	30
07	HPP	0144-H025		X2	PEQUONNOCK TRAIL	TRUMBULL-BRIDGEPORT	PEQUONNOCK VALLEY TO THE SOUND RAILS TO TRAILS.	PE	2007	500	400	0	100
08	HPP	0148-H050		X2	QRVTrail	WALLINGFORD	QUINNIPIAC RIVER TRAIL PHASE III.	PE	2007	40	32	8	0
08	HPP	0148-H050		X2	QRVTrail	WALLINGFORD	QUINNIPIAC RIVER TRAIL PHASE III.	CON	2007	860	688	172	0
04	HPP	0162-0136		X2	RAIL TRAIL	WINCHESTER	DEVELOP RAIL TRAIL.	CON	2007	1,299	1,039	0	260
									2007 Total	41,224	32,979	4,681	3,563
06	HPP	0002-0114		X2	CT 334	ANSONIA	BRIDGE # 1592, NAUGATUCK RIVER.	CON	2008	361	289	72	0
06	HPP	0002-HXXX		X2	ANSONIA RIVER TRAIL	ANSONIA	CONTRUCT IMPROVEMENTS AND UPGRADES TO RIVER WALK	CON	2008	563	450	0	113

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
09	HPP	0017-0137		M	CT 72	BRISTOL	RELOCATION OF CT 72 FROM END OF CT 72 EXPRESSWAY TO CT 229 IN BRISTOL - AC CONV.	CON	2008	875	700	175	0
06	HPP	0036-HXX1	0036-HXXX	N	CT 34	DERBY	WIDEN CT 34 IN VICINITY OF CT 8.	CON	2008	1,215	972	243	0
10	HPP	0053-H022	0053-XXXX	X2	WELLES ST	GLASTONBURY	RIVERFRONT PARK - AC CONV.	CON	2008	63	50	0	13
13	HPP	0058-0283		X2	MYSTIC	GROTON	MYSTIC STREETSCAPE IMPROVEMENTS.	CON	2008	2,297	1,837	0	459
13	HPP	0058-H041		X2	THOMAS RD	GROTON	CONSTN OF PEDESTRIAN/BICYCLE FACILITY ALONG THOMAS RD.	CON	2008	1,024	819	205	0
14	HPP	0077-0215	0077-H049	M	UCONN	MANSFIELD	HILLSIDE ROAD EXTENTION.	CON	2008	2,363	1,890	473	0
08	HPP	0079-0212		X2	HARBOR BROOK	MERIDEN	REPLACE BRIDGES OVER HARBOR BROOK.	CON	2008	439	177	0	262
08	HPP	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2008	2,465	1,972	493	0
02	HPP	0096-H017		X3	US 6	NEWTOWN	INTRS & RDWY IMPVMTS TO US 6, COMMERCE RD & EDMOND RD IN NEWTOWN.	ROW	2008	520	416	104	0
03	HPP	0121-H011		X2	US 44	SALISBURY	SFTY IMPRVMENTS AT RTES. U.S. 44 & 41 (W JUNCTION) IN SALISBURY.	CON	2008	700	560	0	140
06	HPP	0126-HXXX		X2	HOUSATONIC RIVER WALK	SHELTON	CONSTRUCT RIVERWALK TRAIL	CON	2008	400	320	0	80
09	HPP	0131-H028	0131-XXXX	X2	LINEAR PARK	SOUTHINGTON	RAILS TO TRAILS, PLANTSVILLE TO CHESHIRE.	PE	2008	50	40	0	10
13	HPP	0137-0146		X2	US 1	STONINGTON	PAWCATUCK STREETSCAPE IMPROVEMENTS.	CON	2008	1,640	1,272	0	368
13	HPP	0137-0147		X2	MYSTIC	STONINGTON	GREENMANVILLE AVENUE STREETSCAPE.	CON	2008	592	474	0	118
									2008 Total	15,566	12,238	1,764	1,563
06	HPP	0002-HXXX		X2	ANSONIA RIVER TRAIL	ANSONIA	CONTRUCT IMPROVEMENTS AND UPGRADES TO RIVER WALK	CON	2009	563	450	0	113
09	HPP	0017-0137		M	CT 72	BRISTOL	RELOCATION OF CT 72 FROM END OF CT 72 EXPRESSWAY TO CT 229 IN BRISTOL - AC CONV.	CON	2009	875	700	175	0
06	HPP	0036-HXX1	0036-HXXX	N	CT 34	DERBY	WIDEN CT 34 IN VICINITY OF CT 8.	CON	2009	1,215	972	243	0
10	HPP	0053-H022	0053-XXXX	X2	WELLES ST	GLASTONBURY	RIVERFRONT PARK - AC CONV.	CON	2009	63	50	0	13
10	HPP	0063-0568	0063-H089	X2	HARTFORD RIVERWALK	HARTFORD	CONSTRUCT HARTFORD RIVERWALK SOUTH.	CON	2009	3,300	1,288	0	2,012
08	HPP	0079-H045		X2	VARIOUS	MERIDEN	QUINNIPIAC RIVER LINEAR TRAIL PHASE II.	CON	2009	956	765	0	191
08	HPP	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2009	2,465	1,972	493	0
06	HPP	0126-HXXX		X2	HOUSATONIC RIVER WALK	SHELTON	CONSTRUCT RIVERWALK TRAIL	CON	2009	400	320	0	80
09	HPP	0131-H028	0131-XXXX	X2	LINEAR PARK	SOUTHINGTON	RAILS TO TRAILS, PLANTSVILLE TO CHESHIRE.	PE	2009	50	40	0	10
									2009 Total	9,887	6,557	911	2,418
02	HPP	0096-H017		X3	US 6	NEWTOWN	INTRS & RDWY IMPVMTS TO US 6, COMMERCE RD & EDMOND RD IN NEWTOWN.	CON	2010	2,773	2,218	555	0
									2010 Total	2,773	2,218	555	0
70	HSIP	0170-SFTY		X2	VARIOUS	STATEWIDE	SAFETY PROGRAM, HSIP - RURAL & OTHER.	ALL	2007	9,000	8,100	900	0
									2007 Total	9,000	8,100	900	0
70	HSIP	0170-SFTY		X2	VARIOUS	STATEWIDE	SAFETY PROGRAM, HSIP - RURAL & OTHER.	ALL	2008	9,000	8,100	900	0
									2008 Total	9,000	8,100	900	0
70	HSIP	0170-SFTY		X2	VARIOUS	STATEWIDE	SAFETY PROGRAM, HSIP - RURAL & OTHER.	ALL	2009	9,000	8,100	900	0
									2009 Total	9,000	8,100	900	0
70	HSIP	0170-SFTY		X2	VARIOUS	STATEWIDE	SAFETY PROGRAM, HSIP - RURAL & OTHER.	ALL	2010	9,000	8,100	900	0
									2010 Total	9,000	8,100	900	0
70	HSIP	0170-SFTY		X2	VARIOUS	STATEWIDE	SAFETY PROGRAM, HSIP - RURAL & OTHER.	ALL	FYI	9,000	8,100	900	0
									FYI Total	9,000	8,100	900	0
02	I-M	0034-0308		X3	I-84	DANBURY	I-84 DANBURY TO NEWTOWN, VARIOUS INTERCHG MODIFICATIONS - AC CONV.	ROW	2007	75	68	8	0
02	I-M	0034-0313		N	I-84	DANBURY	NEW WB ON RAMP FROM CT 37 AT INTERCHG 6 & IMPROVEMTS TO CT 37 AT I-84 - AC CONV.	ROW	2007	1,500	1,350	150	0
08	I-M	0043-H020		M	I-95	EAST HAVEN/BRANFORD	SUPPLEMENTAL BREAKOUT WORK FROM CONTRACTS C1 & D ON I-95 IN EAST HAVEN & BRANFORD - AC ENTRY.	CON	2007	0	0	0	0
08	I-M	0043-H020		M	I-95	EAST HAVEN/BRANFORD	SUPPLEMENTAL BREAKOUT WORK FROM CONTRACTS C1 & D ON I-95 IN EAST HAVEN & BRANFORD - AC CONV.	CON	2007	3,930	3,419	511	0
01	I-M	0056-0294	0056-H062	X2	I-684	GREENWICH	PAVEMENT REHAB, SAFETY, DRAINAGE.	CON	2007	3,100	2,790	310	0
13	I-M	0058-H039		X2	I-95	GROTON	SAFETY IMPROVEMTS ON I-95 FROM GOLD STAR BRIDGE IN GROTON TO RI STATE LINE.	PE	2007	2,200	1,980	220	0
13	I-M	0058-H039		X2	I-95	GROTON	SAFETY IMPROVEMTS ON I-95 FROM GOLD STAR BRIDGE IN GROTON TO RI STATE LINE.	ROW	2007	100	90	10	0
10	I-M	0063-0577	0063-H082	X2	I-91	HARTFORD	RESURFACE, SAFETY & BRIDGE IMPRVMTS - PEDESTRIAN BRDG TO CAPEN ST - AC CONV.	CON	2007	7,140	6,400	740	0
10	I-M	0063-0604	0063-H119	X2	I-84	HARTFORD	REPLACEMENT OF ILLUMINATION IN HARTFORD ON I-84 IN TUNNEL UNDER PLATFORM - AC CONV.	CON	2007	5,000	5,000	0	0
08	I-M	0083-H043		X2	I-95	MILFORD	RESURFACING, BRIDGE & SAFETY IMPROVEMTS; PLAIN RD TO MARSH HILL RD.	PE	2007	1,900	1,710	190	0
08	I-M	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2007	14,943	13,000	1,943	0
08	I-M	0092-0569	0092-H110	M	I-95	NEW HAVEN	BREAKOUT CONSTRUCTN PROJ FROM #92-532 FOR THE STYLES ST/WOODWARD AVE INTERCHG.	CON	2007	13,440	11,693	1,747	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
08	I-M	0092-0603	0092-H128	N	I-95/HOWARD AVE	NEW HAVEN	REPLACEMENT OF THE HOWARD AVE BRDG OVER I-95, RETAINING & NOISE WALLS.	CON	2007	11,273	10,146	1,127	0
01	I-M	0102-H079		X2	I-95	NORWALK	I-95 INTERCHG 16 @ EAST AVE TURN LN ON BR & REPLACE BR SUPERSTRUCTURE.	PE	2007	750	675	75	0
01	I-M	0102-H079		X2	I-95	NORWALK	I-95 INTERCHG 16 @ EAST AVE TURN LN ON BR & REPLACE BR SUPERSTRUCTURE.	ROW	2007	350	315	35	0
01	I-M	0135-0292		N	I-95	STAMFORD	REPAIR PIERS, PAINT BR #00032, I-95 OVER METRO NO & LOCAL ST IN STAMFORD - AC ENTRY.	CON	2007	0	0	0	0
01	I-M	0135-0292		N	I-95	STAMFORD	REPAIR PIERS, PAINT BR #00032, I-95 OVER METRO NO & LOCAL ST IN STAMFORD - AC CONV.	CON	2007	2,900	2,320	580	0
73	I-M	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC ENTRY.	CON	2007	0	0	0	0
73	I-M	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC CONV.	CON	2007	21,700	19,500	2,200	0
70	I-M	0170-E224		X2	VARIOUS	STATEWIDE	BR REPAIRS REQUIRING A RAPID RESPONSE. INTERSTATE RDS STATEWIDE.	CON	2007	1,000	900	100	0
71	I-M	0171-H125		X2	I-84	SOUTHINGTON TO HARTFORD	UPDATE SIGNS ON I-84 FROM EXIT 30 IN SOUTHINGTON TO EXIT 52 IN HARTFORD.	PE	2007	196	196	0	0
73	I-M	0173-0350	0173-H158	X2	I-95	VARIOUS	UPDATE SIGNS ON I-95 FROM THE NY STATE LINE TO EXIT 24 IN FAIRFIELD - AC ENTRY.	CON	2007	0	0	0	0
73	I-M	0173-0350	0173-H158	X2	I-95	VARIOUS	UPDATE SIGNS ON I-95 FROM THE NY STATE LINE TO EXIT 24 IN FAIRFIELD - AC CONV.	CON	2007	5,300	5,300	0	0
70	I-M	0173-H160		X2	I-95	BRANFORD TO GROTON	UPDATE ALL SIGNS & SHEET SIGNS ON I-95 FROM MILEPOINT 46.60 TO MILEPOINT 64.64.	PE	2007	147	147	0	0
74	I-M	0174-H141		X2	I-84	DANBURY TO SOUTHBURY	UPDATE SIGNS ON I-84 FROM THE NY STATE LINE TO EXIT 13 IN SOUTHBURY.	PE	2007	195	195	0	0
									2007 Total	97,139	87,193	9,946	0
02	I-M	0034-0308		X3	I-84	DANBURY	I-84 DANBURY TO NEWTOWN, VARIOUS INTERCHANGE MODIFICATIONS - AC ENTRY.	CON	2008	0	0	0	0
02	I-M	0034-0313		N	I-84	DANBURY	NEW WB ON RAMP FROM RTE 37 AT INTERCHANGE 6 & IMPROVEMENTS TO RTE 37 AT I-84. AC ENTRY	CON	2008	0	0	0	0
02	I-M	0034-H052		X2	I-84	DANBURY	NEW REST AREA BUIULDING, SITE IMPROVEMENTS & DEMOLITION OF EXISTING BUILDING ON I-84.	PE	2008	250	225	25	0
08	I-M	0092-0456		N	I-91	NEW HAVEN	RECONSTRUCT I-91 EXIT 8 N.B. OFF RAMP TO PROVIDE DIRECT CONNECTION TO MIDDLETOWN AVE - AC ENTRY.	CON	2008	0	0	0	0
08	I-M	0092-0456		N	I-91	NEW HAVEN	RECONSTRUCT I-91 EXIT 8 N.B. OFF RAMP TO PROVIDE DIRECT CONNECTION TO MIDDLETOWN AVE - AC CONV.	CON	2008	7,222	6,500	722	0
08	I-M	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2008	14,943	13,000	1,943	0
08	I-M	0092-0569	0092-H110	M	I-95	NEW HAVEN	BREAKOUT CONSTRUCTN PROJ FROM #92-532 FOR THE STYLES ST/WOODWARD AVE INTERCHG.	CON	2008	11,900	10,400	1,500	0
01	I-M	0102-0261		N	I-95	NORWALK	I-95 INTERCHANGE 16 @ EAST AVE PROVIDE TURN LANES ON BRIDGE @ APPROACHES AND REVISE SIGNALS	CON	2008	4,110	3,699	411	0
01	I-M	0102-0295	0102-H043	X2	I-95	NORWALK	RECONST THE MEDIAN ON I-95 & INSTALL 45" CONC BARRIER CURB IN NORWALK & WESTPORT - AC ENTRY.	CON	2008	0	0	0	0
01	I-M	0102-0295	0102-H043	X2	I-95	NORWALK	RECONST THE MEDIAN ON I-95 & INSTALL 45" CONC BARRIER CURB IN NORWALK & WESTPORT - AC CONV.	CON	2008	13,334	12,000	1,334	0
01	I-M	0102-H079		X2	I-95	NORWALK	I-95 INTERCHG 16 @ EAST AVE TURN LN ON BR & REPLACE BR SUPERSTRUCTURE.	CON	2008	8,020	7,218	802	0
70	I-M	0104-0164		X2	I-95	OLD LYME/NEW LONDON	RESURFACE, SAFETY & BRIDGE IMPRVMTS, BALDWIN BRDG TO N/O WATERFORD/NEW LONDON TL	CON	2008	6,000	5,400	600	0
73	I-M	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC CONV.	CON	2008	21,700	19,500	2,200	0
05	I-M	0151-0273		M	I-84	WATERBURY	RECONSTRUCT FROM CT 69 TO MARION AVE IN SOUTHINGTON, INCLUDES PROJ #0151-0274 - AC ENTRY.	CON	2008	0	0	0	0
05	I-M	0151-0273		M	I-84	WATERBURY	RECONSTRUCT FROM CT 69 TO MARION AVE IN SOUTHINGTON, INCLUDES PROJ #0151-0274 - AC CONV.	CON	2008	22,222	20,000	2,222	0
10	I-M	0155-0156	0155-H016	N	I-84	WEST HARTFORD	OPERATIONAL LANES @ INTERCHANGES 40 & 42 - AC ENTRY.	CON	2008	0	0	0	0
10	I-M	0155-0156	0155-H016	N	I-84	WEST HARTFORD	OPERATIONAL LANES @ INTERCHANGES 40 & 42 - AC CONV.	CON	2008	12,222	11,000	1,222	0
08	I-M	0156-0171		X2	I-95	WEST HAVEN	RESURFACING, BRIDGE & SAFETY IMPROVEMENTS; GRETTA ST TO WEST RIVER - AC ENTRY.	CON	2008	0	0	0	0
74	I-M	0174-H141		X2	I-84	DANBURY TO SOUTHBURY	UPDATE SIGNS ON I-84 FROM THE NY STATE LINE TO EXIT 13 IN SOUTHBURY.	CON	2008	2,289	2,289	0	0
									2008 Total	124,212	111,231	12,981	0
02	I-M	0034-0308		X3	I-84	DANBURY	I-84 DANBURY TO NEWTOWN, VARIOUS INTERCHG MODIFICATIONS - AC CONV.	CON	2009	6,550	5,900	650	0
02	I-M	0034-0313		N	I-84	DANBURY	NEW WB ON RAMP FROM CT 37 AT INTERCHG 6 & IMPROVEMTS TO CT 37 AT I-84 - AC CONV.	CON	2009	3,500	3,150	350	0
02	I-M	0034-H052		X2	I-84	DANBURY	NEW REST AREA BUIULDING, SITE IMPROVEMENTS & DEMOLITION OF EXISTING BUILDING ON I-84.	CON	2009	2,360	2,124	236	0
10	I-M	0051-0259		M	I-84	FARMINGTON	OPERATIONAL IMPROVEMENTS ON I-84 IN AREA OF EXITS 38 AND 39 - AC ENTRY.	CON	2009	0	0	0	0
10	I-M	0051-0259		M	I-84	FARMINGTON	OPERATIONAL IMPROVEMTS ON I-84 IN AREA OF EXITS 38 & 39 - AC CONV.	CON	2009	15,000	13,500	1,500	0
13	I-M	0058-H039		X2	I-95	GROTON	SAFETY IMPROVEMTS ON I-95 FROM GOLD STAR BRIDGE IN GROTON TO RI STATE LINE - AC ENTRY.	CON	2009	0	0	0	0
13	I-M	0058-H039		X2	I-95	GROTON	SAFETY IMPROVEMTS ON I-95 FROM GOLD STAR BRIDGE IN GROTON TO RI STATE LINE.	CON	2009	8,496	0	8,496	0
10	I-M	0076-0193		M	I-84	MANCHESTER	CONSTRUCT AUXILIARY LANE ON I-84 EB BETWEEN EXITS 63 & 64/65.	CON	2009	4,261	3,835	426	0
08	I-M	0083-H043		X2	I-95	MILFORD	RESURFACING, BRIDGE & SAFETY IMPROVEMTS; PLAIN RD TO MARSH HILL RD - AC ENTRY.	CON	2009	0	0	0	0
08	I-M	0083-H043		X2	I-95	MILFORD	RESURFACING, BRIDGE & SAFETY IMPROVEMTS; PLAIN RD TO MARSH HILL RD.	CON	2009	8,889	8,000	889	0
08	I-M	0092-0456		N	I-91	NEW HAVEN	RECONSTRUCT I-91 EXIT 8 N.B. OFF RAMP TO PROVIDE DIRECT CONNECTION TO MIDDLETOWN AVE - AC CONV.	CON	2009	7,222	6,500	722	0
08	I-M	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2009	14,943	13,000	1,943	0
13	I-M	0101-H010		X2	I-95	NORTH STONINGTON	NEW REST AREA BUILDING, SITE IMPROVEMENTS & DEMOLITION OF EXISTING BUILDING ON I-95.	PE	2009	250	224	26	0
01	I-M	0102-0278	0102-H034	N	I-95	NORWALK	PROVIDE REVISED ACCESS FOR I-95 AT US 1 INTERCHG #14 - AC ENTRY.	CON	2009	0	0	0	0
01	I-M	0102-0278	0102-H034	N	I-95	NORWALK	PROVIDE REVISED ACCESS FOR I-95 AT US 1 INTERCHG #14 - AC CONV.	CON	2009	14,270	12,843	1,427	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
01	I-M	0102-0295	0102-H043	X2	I-95	NORWALK	RECONST THE MEDIAN ON I-95 & INSTALL 45" CONC BARRIER CURB IN NORWALK & WESTPORT - AC CONV.	CON	2009	13,334	12,000	1,334	0
73	I-M	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC CONV.	CON	2009	21,700	19,500	2,200	0
05	I-M	0151-0273		M	I-84	WATERBURY	RECONSTRUCT FROM CT 69 TO MARION AVE IN SOUTHINGTON, INCLUDES PROJ #0151-0274 - AC CONV.	CON	2009	38,889	35,000	3,889	0
10	I-M	0155-0156	0155-H016	N	I-84	WEST HARTFORD	OPERATIONAL LANES @ INTERCHANGES 40 & 42 - AC CONV.	CON	2009	12,222	11,000	1,222	0
08	I-M	0156-0171		X2	I-95	WEST HAVEN	RESURFACING, BRIDGE & SAFETY IMPROVEMENTS; GRETTA ST TO WEST RIVER - AC CONV.	CON	2009	6,667	6,000	667	0
13	I-M	0172-H136		X2	I-95	GROTON TO NORTH STONINGTON	UPDATE SIGNS ON I-95 FROM EXIT 85 IN GROTON TO EXIT 93 IN NO STONINGTON.	PE	2009	166	166	0	0
72	I-M	0172-H137		X2	I-395	DISTRICT 2	UPDATE SIGNS ON I-395 FROM I-95 IN EAST LYME(M.P.0.00) TO PLAINFIELD(M.P. 30.83).	PE	2009	175	175	0	0
									2009 Total	178,893	152,917	25,976	0
02	I-M	0034-0308		X3	I-84	DANBURY	I-84 DANBURY TO NEWTOWN, VARIOUS INTERCHG MODIFICATIONS - AC CONV.	CON	2010	6,550	5,900	650	0
02	I-M	0034-0313		N	I-84	DANBURY	NEW WB ON RAMP FROM CT 37 AT INTERCHG 6 & IMPROVEMTS TO CT 37 AT I-84 - AC CONV.	CON	2010	3,500	3,150	350	0
10	I-M	0051-0259		M	I-84	FARMINGTON	OPERATIONAL IMPROVEMTS ON I-84 IN AREA OF EXITS 38 & 39 - AC CONV.	CON	2010	15,000	13,500	1,500	0
11	I-M	0082-H059		X2	I-91	MIDDLETOWN	NEW REST AREA BUILDING, SITE IMPROVEMENTS & DEMOMLITION OF EXISTING BUILDING ON I-91.	PE	2010	250	225	25	0
08	I-M	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2010	14,943	13,000	1,943	0
13	I-M	0101-H010		X2	I-95	NORTH STONINGTON	NEW REST AREA BUILDING, SITE IMPROVEMENTS & DEMOLITION OF EXISTING BUILDING ON I-95.	CON	2010	2,479	2,231	248	0
01	I-M	0102-0278	0102-H034	N	I-95	NORWALK	PROVIDE REVISED ACCESS FOR I-95 AT US 1 INTERCHG #14 - AC CONV.	CON	2010	12,630	11,367	1,263	0
01	I-M	0102-0295	0102-H043	X2	I-95	NORWALK	RECONST THE MEDIAN ON I-95 & INSTALL 45" CONC BARRIER CURB IN NORWALK & WESTPORT - AC CONV.	CON	2010	12,000	10,800	1,200	0
09	I-M	0131-H021		X2	I-84	SOUTHINGTON	NEW REST AREA BUILDING, IMPRVMENTS & DEMOLTN OF EXISTING BUILDING ON I-84.	PE	2010	300	270	30	0
73	I-M	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC CONV.	CON	2010	21,700	19,500	2,200	0
08	I-M	0148-H047		X2	I-91	WALLINGFORD	NEW REST AREA BUILDING, SITE IMPROVEMENTS & DEMOLITION OF EXISTING BUILDING ON I-91.	PE	2010	270	243	27	0
05	I-M	0151-0273		M	I-84	WATERBURY	RECONSTRUCT FROM CT 69 TO MARION AVE IN SOUTHINGTON, INCLUDES PROJ #0151-0274 - AC CONV.	CON	2010	27,778	25,000	2,778	0
08	I-M	0156-0171		X2	I-95	WEST HAVEN	RESURFACING, BRIDGE & SAFETY IMPROVEMENTS; GRETTA ST TO WEST RIVER - AC CONV.	CON	2010	6,633	5,970	663	0
13	I-M	0172-H136		X2	I-95	GROTON TO NORTH STONINGTON	UPDATE SIGNS ON I-95 FROM EXIT 85 IN GROTON TO EXIT 93 IN NO STONINGTON.	CON	2010	2,300	2,300	0	0
72	I-M	0172-H138		X2	I-395	DISTRICT 2	UPDATE SIGNS ON I-395 FROM M.P. 30.83 IN PLAINFIELD TO MASS STATE LINE (M.P. 54.69).	PE	2010	175	175	0	0
									2010 Total	126,508	113,631	12,877	0
10	I-M	0051-0259		M	I-84	FARMINGTON	OPERATIONAL IMPROVEMTS ON I-84 IN AREA OF EXITS 38 & 39 - AC CONV.	CON	FYI	30,000	27,000	3,000	0
08	I-M	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	FYI	42,493	36,968	5,524	0
73	I-M	0138-0221		X2	I-95	STRATFORD	BR #135, STRTFORD I-95 OVER HOUSATONIC RVR & NAUGATUCK AVE - AC CONV.	CON	FYI	43,400	39,000	4,400	0
05	I-M	0151-0273		M	I-84	WATERBURY	RECONSTRUCT FROM CT 69 TO MARION AVE IN SOUTHINGTON, INCLUDES PROJ #0151-0274 - AC CONV.	CON	FYI	58,556	52,700	5,856	0
72	I-M	0172-H137		X2	I-395	DISTRICT 2	UPDATE SIGNS ON I-395 FROM I-95 IN EAST LYME(M.P.0.00) TO PLAINFIELD(M.P. 30.83).	CON	FYI	1,747	1,747	0	0
72	I-M	0172-H138		X2	I-395	DISTRICT 2	UPDATE SIGNS ON I-395 FROM M.P. 30.83 IN PLAINFIELD TO MASS STATE LINE (M.P. 54.69).	CON	FYI	1,747	1,747	0	0
									FYI Total	177,943	159,162	18,780	0
08	I-MD	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2007	1,250	1,089	161	0
									2007 Total	1,250	1,089	161	0
14	IXE	0123-0063		N	CT 97	SCOTLAND	CT 97 RECONSTRUCTION & DRAINAGE IMPROVEMT FROM CT 14 TO US 6 - AC CONV.	CON	2010	4,970	4,225	745	0
14	IXE	0123-0063		N	CT 97	SCOTLAND	CT 97 RECONSTRUCTION & DRAINAGE IMPROVEMT FROM CT 14 TO US 6 - AN AC ENTRY.	CON	2010	0	0	0	0
									2010 Total	4,970	4,225	745	0
08	NCIIP	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2007	18,997	16,527	2,470	0
									2007 Total	18,997	16,527	2,470	0
08	NCIIP	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2008	8,546	7,438	1,108	0
									2008 Total	8,546	7,438	1,108	0
08	NCIIP	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2009	6,839	5,950	889	0
									2009 Total	6,839	5,950	889	0
09	NHS	0017-0137		M	CT 72	BRISTOL	RELOCATION OF CT 72 FROM END OF CT 72 EXPRESSWAY TO CT 229 IN BRISTOL - AC ENTRY.	CON	2007	0	0	0	0
09	NHS	0017-0137		M	CT 72	BRISTOL	RELOCATION OF CT 72 FROM END OF CT 72 EXPRESSWAY TO CT 229 IN BRISTOL - AC CONV.	CON	2007	12,500	10,000	2,500	0
09	NHS	0017-0148		X2	US 6	BRISTOL	DRAINAGE IMPROVEMENTS ON US 6 FROM UNNAMED STREAM (NEAR N MAIN ST) TO OAKLAND ST - AC ENTRY.	CON	2007	0	0	0	0
09	NHS	0017-0148		X2	US 6	BRISTOL	DRAINAGE IMPROVEMENTS ON US 6 FROM UNNAMED STREAM (NEAR N.MAIN ST) TO OAKLAND ST - AC CONV.	CON	2007	7,750	6,200	1,550	0
02	NHS	0018-0113		M	US 7	BROOKFIELD	US 7 BROOKFIELD BYPASS - AC CONV.	CON	2007	21,000	16,800	4,200	0
02	NHS	0018-0113		M	US 7	BROOKFIELD	US 7 BROOKFIELD BYPASS - AC ENTRY.	CON	2007	0	0	0	0
02	NHS	0018-H014		X2	US 7	BROOKFIELD	UPDATE SIGNS FROM WOOSTER HEIGHTS RD IN DANBURY TO FEDERAL RD IN BROOKFIELD.	PE	2007	47	47	0	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
02	NHS	0034-0260		M	US 7	DANBURY	ADD LANE ON US 7 FROM 0.5 Mile NO OF CT 35 TO 0.4 Mile SO OF WOOSTER HEIGHTS RD - AC ENTRY	CON	2007	0	0	0	0
10	NHS	0042-0287		X2	CT 2	EAST HARTFORD	WIDEN BRIDGE #00374, CURRENT P#42-264 DOES NOT PROVIDE ACCELERATION LANE.	CON	2007	5,625	4,500	1,125	0
10	NHS	0042-0289		X2	CT 2	EST HARTFORD	CT 2; RESURFACING, BRIDGE & SAFETY IMPROVEMENTS; MAPLE ST (E.H) TO PARK RD(MARLBOROUGH) - AC CONV.	CON	2007	15,000	12,000	3,000	0
10	NHS	0063-0561		X2	CT 15	HARTFORD	SUPERSTRUCTURE REPLACEMENT OF BR # 00814; RAMP # 161 (TO BRAINARD RD) OVER CT 15 - AC ENTRY.	CON	2007	0	0	0	0
10	NHS	0063-0561		X2	CT 15	HARTFORD	SUPERSTRUCTURE REPLACEMENT OF BR # 00814; RAMP # 161 (TO BRAINARD RD) OVER CT 15 - AC CONV.	CON	2007	4,500	3,600	900	0
10	NHS	0063-H125		X2	US 44	HARFTORD	SAFETY IMPROVEMENTS ON RTE 44 (ALBANY AVE) FROM HOMESTEAD AVENUE TO GARDEN STREET	ROW	2007	130	104	26	0
70	NHS	0078-0089		X2	CT 2	MARLBOROUGH/COLCHES	RESURFACING, BRIDGE & SAFETY IMPROVEMTS FROM LAKE RD TO CT 149 IN COLCHESTER - AC CONV.	CON	2007	15,000	12,000	3,000	0
08	NHS	0092-0572	0092-H112	N	I-95	NEW HAVEN	I-95 RECONSTRUCTION, LONG WHARF SECTION OF NEW HAVEN.	PE	2007	2,738	2,190	548	0
08	NHS	0092-0572	0092-H112	N	I-95	NEW HAVEN	I-95 RECONSTRUCTION, LONG WHARF SECTION OF NEW HAVEN.	ROW	2007	800	696	104	0
01	NHS	0102-0305	0102-H057	M	US 7	NORWALK/WILTON	RECONSTRUCT & WIDEN US 7 FROM GRISTMILL RD TO CT 33 IN WILTON.	ROW	2007	3,000	2,400	600	0
07	NHS	0144-0179		X2	CT 25	TRUMBULL	RESURF, BR, & SFTY IMPS ON CT 25, VIC OF CT 15 TO VIC, CT 111 - AC ENTRY.	CON	2007	0	0	0	0
07	NHS	0144-0179	0144-H017	X2	CT 25	TRUMBULL	RESURFACING, BRIDGE & SAFETY IMPROVEMENTS ON CT25, VIC OF CT 15 TO VIC OF CT 111 - AC CONV.	CON	2007	5,000	4,000	1,000	0
10	NHS	0170-E064		X2	VARIOUS	STATEWIDE	STAFF HWY OPERATIONS CTR DOT HEADQTRS, 24 HR RESPONSE TO HWY INCIDENTS - AC ENTRY.	CON	2007	0	0	0	0
10	NHS	0170-E064		X2	VARIOUS	STATEWIDE	STAFF HWY OPERATIONS CTR DOT HEADQTRS, 24 HR RESPONSE TO HWY INCIDENTS - AC CONV.	CON	2007	2,250	1,800	450	0
70	NHS	0170-E130		X2	VARIOUS	STATEWIDE	PAVEMENT MANAGEMENT ANALYSIS & DATA COLLECTION FOR NHS ROADWAYS.AC ENTRY	PE	2007	0	0	0	0
70	NHS	0170-E130		X2	VARIOUS	STATEWIDE	PAVEMENT MANAGEMENT ANALYSIS & DATA COLLECTION FOR NHS ROADWAYS. AC CONV.	PE	2007	500	400	100	0
70	NHS	0170-E189		X2	VARIOUS	STATEWIDE	CE INSPECTION OF OVERHEAD SIGN SUPPORTS - AC CONV.	PE	2007	1,900	1,520	380	0
10	NHS	0170-E194		X2	SR 401	WINDSOR LOCKS	UPGRADE APPROACH & TERMINAL SIGNING FOR BRADLEY INT AIRPORT.	CON	2007	1,125	900	225	0
70	NHS	0170-E196		X2	VARIOUS	STATEWIDE	RPLACE & /OR RPAIR OVRHEAD SGN SUPPORT STRTURES AT 20 LOCATNS SW.	CON	2007	3,100	2,480	620	0
70	NHS	0170-E198		X2	VARIOUS	STATEWIDE	REPLACE & /OR REPAIR OVERHEAD SIGN SUPPORT STRUCTURES AT 20 LOCATIONS SW.	PE	2007	110	88	22	0
70	NHS	0170-E205		X2	VARIOUS	STATEWIDE	INSTALL RUMBLE STRIP SHOULDERS OF FREEWAYS.	CON	2007	100	80	20	0
73	NHS	0173-H169	0173-0353	X2	VARIOUS	DISTRICT 3	OPERATE INCIDENT MGMT SYSTEM ON I-95 FROM BRNFD TO NY ST LINE - AC ENTRY.	CON	2007	0	0	0	0
73	NHS	0173-H169	0173-0353	X2	VARIOUS	DISTRICT 3	OPERATE INCIDENT MGMT SYSTEM ON I-95 FROM BRNFD TO NY ST LINE - AC CONV.	CON	2007	2,440	2,200	240	0
74	NHS	0174-H153		X2	VARIOUS	DISTRICT 4	UPGRADE GUIDERAIL ON NHS HIGHWAYS IN DIST 4.	PE	2007	203	162	41	0
									2007 Total	104,817	84,167	20,650	0
10	NHS	0004-0118		X3	CT 10	AVON	MAJOR INTER IMPRVS CT 10 @ OLD FARMS RD (ADV W/ 04 -116 REPLACEMT OF BRIDGE #04470).	CON	2008	782	652	130	0
10	NHS	0004-0123		N	US 44	AVON	MAJOR WIDENING & REALIGNMT OF US 44 FROM CT 10 TO THE WEST HARTFORD TOWN LINE.	CON	2008	6,730	5,400	1,330	0
09	NHS	0017-0137		M	CT 72	BRISTOL	RELOCATION OF CT 72 FROM END OF CT 72 EXPRESSWAY TO CT 229 IN BRISTOL - AC CONV.	CON	2008	12,500	10,000	2,500	0
02	NHS	0018-0113		M	US 7	BROOKFIELD	US 7 BROOKFIELD BYPASS - AC CONV.	CON	2008	21,000	16,800	4,200	0
02	NHS	0018-H014		X2	US 7	DANBURY, BROOKFIELD	UPDATE SIGNS FROM WOOSTER HEIGHTS RD IN DANBURY TO FEDERAL RD IN BROOKFIELD.	CON	2008	655	655	0	0
02	NHS	0034-0260		M	US 7	DANBURY	ADD LANE ON US 7 FROM 0.5 Mile NO OF CT 35 TO 0.4 Mile SO OF WOOSTER HEIGHTS RD - AC CONV.	CON	2008	10,000	8,000	2,000	0
07	NHS	0050-0204		X2	CT 15	FAIRFIELD	CT 15;RESURFACING,BRIDGE,AND SAFETY IMPROVEMENTS;FROM CONGRESS ST TO MOREHOUSE HWY.	CON	2008	7,865	6,292	1,573	0
10	NHS	0063-H125		X2	US 44	HARFTORD	SAFETY IMPROVEMTS ON US 44 (ALBANY AVE) FROM HOMESTEAD AVE TO GARDEN ST - AC ENTRY.	CON	2008	0	0	0	0
70	NHS	0078-0089		X2	CT 2	MARLBOROUGH/COLCHES	RESURFACING, BRIDGE & SAFETY IMPROVEMTS FROM LAKE RD TO CT 149 IN COLCHESTER - AC CONV.	CON	2008	3,750	3,000	750	0
07	NHS	0084-0102	0144-0181	X3	CT 25	MONROE	INTERSECTION IMPROVEMTS ON CT 25, IN MONROE.	CON	2008	3,410	2,728	682	0
02	NHS	0096-0185		X2	CT 25	NEWTOWN	REPLACE BR # 02221 OVER BROOK.	CON	2008	1,000	800	200	0
13	NHS	0120-0079		X3	CT 85	SALEM	IMPROVEMTS TO CT 82 & CT 85 INCLUDING ADDING SHOULDERS & LEFT TURN LANES - AC ENTRY.	CON	2008	0	0	0	0
13	NHS	0120-0082		X3	CT 85	SALEM	SPOT SAFETY IMPROVEMTS ON CT 85 IN THE VICINITY OF CT 82 & ON CT 85 AT SULLIVAN RD - AC ENTRY.	CON	2008	0	0	0	0
10	NHS	0128-0143		X3	US 202/CT 10	SIMSBURY	MAJOR INTERSECTION IMPROVEMENTS ON US 202/CT 10 AT CT 167 & DRAKE HILL RD .	CON	2008	3,175	2,540	635	0
01	NHS	0135-0249		X3	CT 137	STAMFORD	CONSTRUCT RAMP FROM CT 137 SB, PROVIDE TURN LANES, WIDEN CT 15 BRIDGE, REVISE SIGNAL.	ROW	2008	750	600	150	0
04	NHS	0143-H031		N	CT 8	TORRINGTON/HARWINGTON	THE REHABILITATION OF VARIOUS ACCMPS UNDER ROUTE 8 IN TORRINGTON AND HARWINTON	CON	2008	3,416	2,733	683	0
07	NHS	0144-0178		X2	CT 15	TRUMBULL	MEDIAN DECK REPAIRS; BRIDGE NO. 00750; CT 15 OVER RESERVOIR AVE.	CON	2008	205	164	41	0
07	NHS	0144-0179		X2	CT 25	TRUMBULL	RESURF, BR, & SFTY IMPS ON CT 25, VIC OF CT 15 TO VIC, CT 111 - AC CONV.	CON	2008	10,375	8,300	2,075	0
05	NHS	0151-0273		M	I-84	WATERBURY	RECONSTRUCT FROM CT 69 TO MARION AVE IN SOUTHINGTON, INCLUDES PROJ #0151-0274 - AC ENTRY.	CON	2008	0	0	0	0
10	NHS	0170-E064		X2	VARIOUS	STATEWIDE	STAFF HWY OPERATIONS CTR DOT HEADQTRS, 24 HR RESPONSE TO HWY INCIDENTS - AC CONV.	CON	2008	2,250	1,800	450	0
70	NHS	0170-E130		X2	VARIOUS	STATEWIDE	PAVEMENT MANAGEMENT ANALYSIS & DATA COLLECTION FOR NHS ROADWAYS. AC CONV	PE	2008	500	400	100	0
70	NHS	0170-E189		X2	VARIOUS	STATEWIDE	CE INSPECTION OF OVERHEAD SIGN SUPPORTS - AC CONV.	PE	2008	2,000	1,600	400	0
70	NHS	0170-E198		X2	VARIOUS	STATEWIDE	RPLACE & /OR RPAIR OVRHEAD SGN SUPPORT STRTURES AT 20 LOCATNS SW.	CON	2008	2,000	1,600	400	0
73	NHS	0173-H169		X2	VARIOUS	DISTRICT 3	OPERATE INCIDENT MGMT SYSTEM ON I-95 FROM BRNFD TO NY ST LINE - AC CONV.	CON	2008	2,440	2,200	240	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
74	NHS	0174-H153		X2	VARIOUS	DISTRICT 4	UPGRADE GUIDERAIL ON NHS HIGHWAYS IN DIST 4.	CON	2008	1,785	1,428	357	0
									2008 Total	96,588	77,692	18,896	0
09	NHS	0017-0137		M	CT 72	BRISTOL	RELOCATION OF CT 72 FROM END OF CT 72 EXPRESSWAY TO CT 229 IN BRISTOL - AC CONV.	CON	2009	10,828	8,662	2,166	0
02	NHS	0018-0113		M	US 7	BROOKFIELD	US 7 BROOKFIELD BYPASS - AC CONV.	CON	2009	21,000	16,800	4,200	0
02	NHS	0034-0260		M	US 7	DANBURY	ADD LANE ON US 7 FROM 0.5 Mile NO OF CT 35 TO 0.4 Mile SO OF WOOSTER HEIGHTS RD - AC CONV.	CON	2009	10,000	8,000	2,000	0
10	NHS	0063-H125		X2	US 44	HARFTORD	SAFETY IMPROVEMTS ON US 44 (ALBANY AVE) FROM HOMESTEAD AVE TO GARDEN ST - AC CONV.	CON	2009	6,625	5,300	1,325	0
07	NHS	0084-0100		X2	CT 25	MONROE	REPLACEMT OF BR #02219 CT 25 OVER THE WEST BRANCH OF THE PEQUONNOCK RIVER.	CON	2009	1,010	808	202	0
08	NHS	0092-0572	0092-H112	N	I-95	NEW HAVEN	I-95 RECONSTRUCTION, LONG WHARF SECTION OF NEW HAVEN - AC ENTRY.	CON	2009	0	0	0	0
13	NHS	0120-0079		X3	CT 85	SALEM	IMPROVEMTS TO CT 82 & CT 85 INCLUDING ADDING SHOULDERS & LEFT TURN LANES - AC CONV.	CON	2009	6,250	5,000	1,250	0
13	NHS	0120-0082		X3	CT 85	SALEM	SPOT SAFETY IMPROVEMTS ON CT 85 IN THE VICINITY OF CT 82 & ON CT 85 AT SULLIVAN RD - AC CONV.	CON	2009	3,100	2,480	620	0
01	NHS	0135-0249		X3	CT 137	STAMFORD	CONSTRUCT RAMP FROM CT 137 SB, PROVIDE TURN LANES, WIDEN CT 15 BRIDGE, REVISE SIGNAL.	CON	2009	5,995	4,796	1,199	0
04	NHS	0143-0176		X3	US 202/CT 10	TORRINGTON	IMPROVE INTERSECTION AT TORRINGFORD WEST ST.	CON	2009	1,988	1,580	408	0
07	NHS	0144-0180		X2	CT 15	TRUMBULL	CT 15;RESURFACING,BRIDGE,AND SAFETY IMPROVEMENTS;MOREHOUSE HWY.[FLD] TO CT 8 [TRBLL]	CON	2009	20,145	16,116	4,029	0
10	NHS	0170-E064		X2	VARIOUS	STATEWIDE	STAFF HWY OPERATIONS CTR DOT HEADQTRS, 24 HR RESPONSE TO HWY INCIDENTS - AC CONV.	CON	2009	2,000	1,600	400	0
70	NHS	0170-E130		X2	VARIOUS	STATEWIDE	PAVEMENT MANAGEMENT ANALYSIS & DATA COLLECTION FOR NHS ROADWAYS. AC CONV	PE	2009	500	400	100	0
73	NHS	0173-H169		X2	VARIOUS	DISTRICT 3	OPERATE INCIDENT MGMT SYSTEM ON I-95 FROM BRNFD TO NY ST LINE - AC CONV.	CON	2009	2,220	2,000	220	0
									2009 Total	91,661	73,543	18,118	0
09	NHS	0017-0137		M	CT 72	BRISTOL	RELOCATION OF CT 72 FROM END OF CT 72 EXPRESSWAY TO CT 229 IN BRISTOL - AC CONV.	CON	2010	12,500	10,000	2,500	0
02	NHS	0018-0113		M	US 7	BROOKFIELD	US 7 BROOKFIELD BYPASS - AC CONV.	CON	2010	12,500	10,000	2,500	0
02	NHS	0034-0260		M	US 7	DANBURY	ADD LANE ON US 7 FROM 0.5 Mile NO OF CT 35 TO 0.4 Mile SO OF WOOSTER HEIGHTS RD - AC CONV.	CON	2010	10,000	8,000	2,000	0
10	NHS	0063-H125		X2	US 44	HARFTORD	SAFETY IMPROVEMTS ON US 44 (ALBANY AVE) FROM HOMESTEAD AVE TO GARDEN ST - AC CONV.	CON	2010	6,675	5,340	1,335	0
08	NHS	0092-0572	0092-H112	N	I-95	NEW HAVEN	I-95 RECONSTRUCTION, LONG WHARF SECTION OF NEW HAVEN - AC CONV.	CON	2010	13,793	12,000	1,793	0
01	NHS	0102-0310	0102-H047	X2	US 7	NORWALK	RESURFACE, SAFETY & BRIDGE IMPRVMTS - I-95 TO CT 123.	CON	2010	7,200	6,480	720	0
01	NHS	0102-H044		X2	CT 15	NORWALK	RESURFACE, SAFETY & BRIDGE IMPRVMTS - CT 124 TO US 7.	PE	2010	360	288	72	0
01	NHS	0102-H046		X2	CT 15	NORWALK	RESURFACE, SAFETY & BRIDGE IMPRVMTS - US 7 TO RT 33.	PE	2010	370	296	74	0
01	NHS	0102-H046		X2	CT 15	NORWALK	RESURFACE, SAFETY & BRIDGE IMPRVMTS - US 7 TO RT 33.	CON	2010	8,300	6,640	1,660	0
13	NHS	0120-0079		X3	CT 85	SALEM	IMPROVEMTS TO CT 82 & CT 85 INCLUDING ADDING SHOULDERS & LEFT TURN LANES - AC CONV.	CON	2010	6,500	5,200	1,300	0
13	NHS	0120-0082		X3	CT 85	SALEM	SPOT SAFETY IMPROVEMTS ON CT 85 IN THE VICINITY OF CT 82 & ON CT 85 AT SULLIVAN RD - AC CONV.	CON	2010	3,100	2,480	620	0
01	NHS	0135-0270		X2	CT 15	STAMFORD	RESURFACING,BRIDGE,AND SAFETY IMPROVEMENTS;FROM TL TO CT 124 [NEW CANAAN]	CON	2010	16,000	12,800	3,200	0
05	NHS	0151-0273		M	I-84	WATERBURY	RECONSTRUCT FROM CT 69 TO MARION AVE IN SOUTHINGTON, INCLUDES PROJ #0151-0274 - AC CONV.	CON	2010	12,500	10,000	2,500	0
01	NHS	0158-0199		X2	CT 15	WESTPORT	RESURFACING.BRIDGE,AND SAFETY IMPROVEMENTS;FROM CT 33 TO CONGRESS ST	CON	2010	11,600	9,280	2,320	0
									2010 Total	121,398	98,804	22,594	0
08	NHS	0092-0572	0092-H112	N	I-95	NEW HAVEN	I-95 RECONSTRUCTION, LONG WHARF SECTION OF NEW HAVEN - AC CONV.	CON	FYI	79,310	69,000	10,310	0
05	NHS	0151-0273		M	I-84	WATERBURY	RECONSTRUCT FROM CT 69 TO MARION AVE IN SOUTHINGTON, INCLUDES PROJ #0151-0274 - AC CONV.	CON	FYI	55,939	44,751	11,188	0
									FYI Total	135,249	113,751	21,498	0
08	NHTSA	0083-0253		X2	SR 796	MILFORD	UPGRADE SIGNING ON MILFORD CONNECTOR, FROM US 1 TO CT 15.	CON	2009	152	152	0	0
73	NHTSA	0173-0351	0173-H159	X2	I-95	DISTRICT 3	UPGRADE SIGNS - EXIT 24 FAIRFIELD TO EXIT 47 NEW HAVEN.	CON	2009	2,933	2,933	0	0
									2009 Total	3,085	3,085	0	0
70	RT	0170-RT07		X2	VARIOUS	STATEWIDE	RECREATION TRAILS	OTH	2007	750	600	0	150
									2007 Total	750	600	0	150
70	RT	0170-RT08		X2	VARIOUS	STATEWIDE	RECREATION TRAILS	OTH	2008	750	600	0	150
									2008 Total	750	600	0	150
70	RT	0170-RT09		X2	VARIOUS	STATEWIDE	RECREATION TRAILS	OTH	2009	750	600	0	150
									2009 Total	750	600	0	150
70	RT	0170-RT10		X2	VARIOUS	STATEWIDE	RECREATION TRAILS	OTH	2010	750	600	0	150
									2010 Total	750	600	0	150
70	RT	0170-RT11		X2	VARIOUS	STATEWIDE	RECREATION TRAILS	OTH	FYI	750	600	0	150
									FYI Total	750	600	0	150
01	SRSI	0102-H081	0102-HXXX	X2	VARIOUS	NORWALK	SAFE ROUTES PROJECT - NARAMAKE ELEMENTARY & NATHAN HALE MIDDLE SCH.	CON	2007	368	368	0	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
01	SRSI	0135-H076	0135-HXXX	X2	VARIOUS	STAMFORD	SAFE ROUTES PROJECT - K.T. MURPHY ELEMENTARY SCHOOL.	CON	2007	370	370	0	0
									2007 Total	738	738	0	0
70	SRSNI	0170-E209		X2	VARIOUS	STATEWIDE	SAFE RT TO SCHOOL PROGRAM, EDUCATION & TRAINING.	PE	2007	300	300	0	0
									2007 Total	300	300	0	0
02	STPA	0009-H017		X3	CT 302	BETHEL	REVISE SE CORNER OF CT 302 AT CT 58 TO ALLOW WB50 TO TURN RIGHT FROM CT 58 NB TO CT 302.	PE	2007	100	80	20	0
08	STPA	0014-0157		X2	US 1	BRANFORD	RECONSTRUCTION OF BR #00340 (AMTRAK R.R. O/ U.S. 1) IN BRANFORD - AC CONV.	CON	2007	11,875	9,500	2,375	0
07	STPA	0015-0296		N	CT 130	BRIDGEPORT	RECONSTRUCTION OF FAIRFIELD AVE (CT 130) UNDERNEATH THE M-N BRIDGE - AC ENTRY.	CON	2007	0	0	0	0
07	STPA	0015-0296		N	CT 130	BRIDGEPORT	RECONSTRUCTION OF FAIRFIELD AVE (CT 130) UNDERNEATH THE M-N BRIDGE - AC CONV.	CON	2007	3,240	2,592	648	0
07	STPA	0015-0316		X2	I-95	BRDIGEPORT	LANDSCAPING WORK (PHASE 1) IN THE VICINITY OF I-95 IN BPT.	CON	2007	75	60	15	0
07	STPA	0015-0317		X2	I-95	BRIDGEPORT	LANDSCAPING WORK (PHASE 2) IN THE VICINITY OF I-95 IN BPT.	CON	2007	175	140	35	0
02	STPA	0018-0118		X3	US 202	BROOKFIELD	INTERSECTION IMPROVEMENT OF US 202 WITH SILVERMINE RD & ELBOW HILL RD.	CON	2007	4,359	3,488	871	0
02	STPA	0034-0288		M	US 6	DANBURY	WIDEN US 6 (LAKE AVE.) FROM KENOSIA AVE TO I-84 OVERPASS, 2 THROUGH & LEFT TURN AS NEED.	CON	2007	0	0	0	0
02	STPA	0034-0288		M	US 6	DANBURY	WIDEN US 6 (LAKE AVE.) FROM KENOSIA AVE TO I-84 OVERPASS, 2 THROUGH & LEFT TURN AS NEED.	CON	2007	3,750	3,000	750	0
02	STPA	0034-0305		N	CT 37	DANBURY	REALIGN AND ADD SIGNAL AT STACEY ROAD.	ROW	2007	175	140	35	0
02	STPA	0034-0309		X3	SR 806	DANBURY	WIDEN SR 806 TO PROVIDE FOR A WB LEFT TURN LANE AT OLD SHELTER ROCK RD AND SIGNALIZE	ROW	2007	100	80	20	0
10	STPA	0039-0088		M	CT 20	EAST GRANBY	WIDENING OF CT 20, VIC OF HOLCOMB ST/NEWGATE RD TO VIC OF CENTER ST - AC CONV.	CON	2007	6,000	4,800	1,200	0
11	STPA	0041-0112	0041-H004	N	CT 66	EAST HAMPTON	WIDEN TO PROVIDE LEFT TURN LANES ON CT 66 AT NO MAIN ST, UPGRADE TRAFFIC SIGNAL.	CON	2007	1,300	0	1,300	0
11	STPA	0041-0112	0041-H004	N	CT 66	EAST HAMPTON	WIDEN TO PROVIDE LEFT TURN LANES ON CT 66 AT NO MAIN ST, UPGRADE TRAFFIC SIGNAL.	CON	2007	0	0	0	0
11	STPA	0041-0112	0041-H004	N	CT 66	EAST HAMPTON	WIDEN TO PROVIDE LEFT TURN LANES ON CT 66 AT NO MAIN ST, UPGRADE TRAFFIC SIGNAL.	CON	2007	594	534	60	0
10	STPA	0047-H015		X2	CT 74	ELLINGTON	CONSTRUCT A ROUNDABOUT AT THE "5 CORNERS" INTERSECTION IN ELLINGTON.	PE	2007	300	240	60	0
10	STPA	0051-0260	0051-H026	N	CT 4	FARMINGTON	RECONSTRUCTION - TOWN FARM RD TO MOUNTAIN SPRING RD.	ROW	2007	2,050	1,640	410	0
01	STPA	0056-0271		X3	US 1	GREENWICH	INTERSECTION IMPROVEMENTS, US 1, GREENWICH.	ROW	2007	200	160	40	0
08	STPA	0061-0143		X3	CT 10	HAMDEN	INTERSECTION IMPROVEMENTS ON CT 10 AT CT 22 & DICKERMAN ST - AC ENTRY.	CON	2007	0	0	0	0
08	STPA	0061-0143		X3	CT 10	HAMDEN	INTERSECTION IMPROVEMENTS ON CT 10 AT CT 22 & DICKERMAN ST - AC CONV.	CON	2007	2,100	1,680	420	0
08	STPA	0061-0146	0061-H033	X3	CT 10	HAMDEN	ADVANCE UTILITY RELOCATION FOR AT&T LINE BREAK-OUT FROM PROJECT #61-138.	OTH	2007	437	350	87	0
10	STPA	0063-H150	0063-H131	X2	VARIOUS	HARTFORD	FFY 2005 TRANSFER TO THE DEPT OF REVENUE SERVICES FOR MOTOR FUEL TAX ENFORCEMENT - AC ENTRY.	OTH	2007	0	0	0	0
10	STPA	0063-H150	0063-H131	X2	VARIOUS	HARTFORD	FFY 2005 TRANSFER TO THE DEPT OF REVENUE SERVICES FOR MOTOR FUEL TAX ENFORCEMENT - AC CONV.	ALL	2007	35	35	0	0
12	STPA	0069-H010		X2	CT 80	KILLINGWORTH	ROUNDABOUT MODIFICATIONS AT THE INTERS OF CT 80 & CT 81.	CON	2007	1,100	880	220	0
08	STPA	0083-0246		N	US 1	MILFORD	INTERSECTION IMPROVEMENTS BETWEEN I-95 INTERCHANGE 34 & SILVER SAND PKWY, US 1 IN MILFORD.	ROW	2007	650	520	130	0
08	STPA	0092-0531	0092-H082	M	I-91/I-95/CT 34	NEW HAVEN	RECONSTRUCTN OF I-95/I-91/CT 34 INTERCHG ASSOCIATED WITH "Q" BRG REPLACEMT - AC CONV.	CON	2007	11,111	10,000	1,111	0
08	STPA	0092-0533		M	I-95	EAST HAVEN	RECONSTRTN OF I-95, EASTERN APPROACH TO "Q" BRIDGE IN NEW HAVEN & EAST HAVEN - AC CONV.	CON	2007	19,540	17,000	2,540	0
08	STPA	0092-0541		N	WATERFRONT ST.	NEW HAVEN	RECONSTRUCT WATERFRONT ST, INCL REHAB OF RR TRACKS IN RDWAY.	CON	2007	5,748	4,598	1,150	0
08	STPA	0092-0547		M	CT 63	NEW HAVEN	RECONSTRUCTION OF WHALLEY AVE (CT 63), NEW HAVEN.	CON	2007	7,658	6,126	1,532	0
08	STPA	0092-0570	0092-HXX1	X2	BOATHOUSE	NEW HAVEN	CONSTRUCT DOCK STRUCTURE & YALE BOATHOUSE REPLCA ON PARCEL H.	PE	2007	2,625	2,100	525	0
08	STPA	0092-0570	0092-HXX1	X2	BOATHOUSE	NEW HAVEN	CONSTRUCT DOCK STRUCTURE & YALE BOATHOUSE REPLCA ON PARCEL H - AC CONV.	CON	2007	11,500	9,200	2,300	0
08	STPA	0092-0581		M	I-91/I-95/CT 34	NEW HAVEN	ADVANCE SOIL PRELOAD CONTRACT FOR 92-531, I-91/I-95/CT.34 INTERCHG.	CON	2007	5,776	4,620	1,156	0
08	STPA	0092-H130		N	VARIOUS	NEW HAVEN	REUSE OF WATERFRONT PROPERTY FOR AN INTERMODAL FACILITY/FERRY TERMINAL.	PE	2007	100	80	20	0
10	STPA	0093-0153		X3	CT 175	NEWINGTON	WIDEN CT 175 AT CT 173 & AT MILL ST TO PROVIDE LEFT TURN LANES & REVISE SIGNALS.	CON	2007	2,100	1,680	420	0
02	STPA	0095-0219		M	US 7	NEW MILFORD	PROVIDE ADDITIONAL LANES ON US 7, FROM LANESVILLE RD TO OLD STATE RD - AC CONV.	CON	2007	3,750	3,000	750	0
02	STPA	0095-0230		M	US 7	NEW MILFORD	ADDITIONAL LN ON US 7 B/TWN BRKFIELD BYPASS & CROSS RD, NEW MILFORD - AC CONV.	CON	2007	3,112	2,490	622	0
02	STPA	0095-0237		X2	US 7	NEW MILFORD	REPLACEMENT OF BR# 02046, US 7, OVER BROOK, TOWN OF NEW MILFORD.	CON	2007	1,200	960	240	0
02	STPA	0096-0186		X2	CT 302	NEWTOWN	REHABILITATE BRDG #02840, CT 302 OVER BROOK - AC ENTRY.	CON	2007	0	0	0	0
02	STPA	0096-0186		X2	CT 302	NEWTOWN	REHABILITATE BR #02840, CT 302 OVER BROOK.	CON	2007	1,200	960	240	0
13	STPA	0101-0109		X2	CT 216	NORTH STONINGTON	REPLACE BR #05457 OVER SPAULDING BROOK.	CON	2007	438	350	88	0
01	STPA	0102-0269		M	US 7/CT 15	NORWALK	US 7 & CT 15 IN NORWALK, UPGRADE TO FULL INTERCHG WITH MERRITT PKWY, PHASE 2 - AC ENTRY.	CON	2007	0	0	0	0
01	STPA	0102-0269		M	US 7/CT 15	NORWALK	US 7 & CT 15 IN NORWALK, UPGRADE TO FULL INTERCHG WITH MERRITT PKWY, PHASE 2 - AC CONV.	CON	2007	22,200	17,760	4,440	0
13	STPA	0103-0255		N	CT 82	NORWICH	REALIGNMENT & RECONSTRUCTION OF I-395 NB RAMPS TO CT 82 & REALIGN MAPLEWOOD, CT.	CON	2007	6,000	1,360	4,640	0
11	STPA	0112-H011		X2	CT 17A	PORTLAND	CULVERT REPLACEMENT ON CT 17A NORTH OF WILLIAM ST IN PORTLAND.	PE	2007	300	240	60	0
02	STPA	0117-0148		X2	CT 35	RIDGEFIELD	REHABILITATION OF BR# 02275 CT 35 OVER BROOK.	CON	2007	535	428	107	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
02	STPA	0117-0149		X2	CT 35	RIDGEFIELD	REHABILITATION OF BR# 02277 RT 35 OVER RIDGEFIELD BROOKTOWN OF RIDGEFIELD	CON	2007	1,200	960	240	0
70	STPA	0124-0162		X2	CT 188 & CT 80	SEYMOUR/KILLINGWORTH	EVALUATE TRAFFIC CIRCLES IN SEYMOUR & KILLINGWORTH; BRING TO CURRENT DESIGN STANDARDS	CON	2007	916	733	183	0
09	STPA	0131-0187		X2	CT 322	SOUTHINGTON	REHABILITATION OF BR# 03231, CT 322 OVER BROOK TOWN OF SOUTHINGTON.	CON	2007	570	456	114	0
07	STPA	0138-0211		X3	US 1	STRATFORD	INTERSECTION IMPROVEMTS, US 1 AT W BROAD ST & NOBLE ST.	PE	2007	850	680	170	0
07	STPA	0138-0211		X3	US 1	STRATFORD	INTERSECTION IMPROVEMTS US 1 AT W. BROAD ST & NOBLE ST.	ROW	2007	50	40	10	0
05	STPA	0140-HXX1		X3	CT 109	THOMASTON	REPAIRS STEEL CULVERT EAST OF OLD NORTHFIELD RD.	CON	2007	1,000	800	200	0
15	STPA	0141-0148		X2	CT 12	THOMPSON	REPLACEMENT OF BR # 03429 OVER FACTORY TUNNEL.	CON	2007	420	336	84	0
10	STPA	0142-0145		N	CT 195	TOLLAND	WIDEN CT 195 AT WALBRIDGE HILL RD, TO PROVIDE NB BYPASS & REGRADE SIDESLOPE TO INCR SSD.	CON	2007	638	541	97	0
10	STPA	0142-0146	0142-H008	N	CT 195	TOLLAND	WIDEN I-84 EBD TO CT 195 TO PROVIDE TWO RIGHT TURN LANES.	ROW	2007	105	84	21	0
10	STPA	0142-0146	0142-H008	N	CT 195	TOLLAND	WIDEN I-84 EBD TO CT 195 TO PROVIDE TWO RIGHT TURN LANES .	CON	2007	2,007	1,605	401	0
08	STPA	0148-0190		N	US 5	WALLINGFORD	WIDENING OF ROUTE 5 TO PROVIDE OPPOSING LEFT TURN LANES AT SR 702 AND TOELLES ROAD	CON	2007	765	612	153	0
05	STPA	0151-0279		X3	CT 73	WATERBURY	MAJOR INTERSECTION IMPROVMNTS ON CT 73 AT HUNTINGTON & IRVINGTON AVENUES - AC ENTRY.	CON	2007	0	0	0	0
05	STPA	0151-0279		X3	CT 73	WATERBURY	MAJOR INTERSECTION IMPROVMNTS ON CT 73 AT HUNTINGTON & IRVINGTON AVES(Gov'sSpclStateFndg) - AC CONV.	CON	2007	4,450	0	4,450	0
05	STPA	0151-0279		X3	CT 73	WATERBURY	MAJOR INTERSECTION IMPROVMNTS ON CT 73 AT HUNTINGTON & IRVINGTON AVENUES - AC CONV.	CON	2007	1,300	1,040	260	0
10	STPA	0155-0159		N	FARMINGTON AVE	WEST HARTFORD	RECONSTRUCT FRM WHITING LANE TO PROSPECT AVE.	CON	2007	1,250	1,000	250	0
08	STPA	0156-0169	0156-H017	X2	CT 122	WEST HAVEN	REPLACE BRIDGE #02644 ON CT 122 OVER UNNAMED BROOK, IN WEST HAVEN.	CON	2007	1,100	880	220	0
01	STPA	0158-0193		X3	US 1	WESTPORT	INTERSECTION IMPROVEMTS & OPERATIONAL LANE ADDITIONS IN WESTPORT ON US 1 AT GRD UNION DR & TURKEY HILL RD.	ROW	2007	450	360	90	0
01	STPA	0158-0201		X3	CT 136	WESTPORT	INTERSECTION IMPROVEMTS ON CT57/136 @ WESTON RD, & CT57/136 @ CLINTON AVE.	ROW	2007	250	200	50	0
01	STPA	0161-0118		M	US 7	WILTON	MAJOR WIDENING OF US 7 FROM WOLF PIT RD TO THE NORTH JUNCTION OF CT 33 & 106 - AC CONV.	CON	2007	4,750	3,800	950	0
01	STPA	0161-0124		M	US 7	WILTON	RECONSTRUCTION FROM OLD DANBURY ROAD TO VIC. OF OLMSTEAD HILL ROAD IN WILTON - AC CONV.	CON	2007	4,375	3,500	875	0
05	STPA	0166-0099	0166-H009	X3	CT 69	WOLCOTT	NEW TRAFFIC CONTROL SYSTEM & GEOMETRIC IMPR ON CT 69 AT WOODTICK RD.	ROW	2007	25	20	5	0
08	STPA	0167-H016		N	RTE 63	WOODBRIDGE	DRAINAGE IMPRVMTS FROM VICINITY OF BRADLEY RD TO NO HAVEN/WOODBRIDGE TL.	PE	2007	400	320	80	0
70	STPA	0170-E134		X2	VARIOUS	STATEWIDE	PAVEMENT MANAGEMENT ANALYSIS & DATA COLLECTION FOR NON-NHS ROADWAYS - AC CONV.	PE	2007	420	336	84	0
70	STPA	0170-E134		X2	VARIOUS	STATEWIDE	PAVEMENT MANAGEMENT ANALYSIS & DATA COLLECTION FOR NON-NHS ROADWAYS - AC ENTRY.	PE	2007	0	0	0	0
70	STPA	0170-E225		X2	VARIOUS	STATEWIDE	BR REPAIRS REQUIRING A RAPID RESPONSE. NON-INTERSTATE RDS STATEWIDE.	CON	2007	1,000	900	100	0
10	STPA	0170-E234		X2	VARIOUS	STATEWIDE	DPS ENFORCEMENT OF TRUCK SAFETY LAWS & REGULATIONS - PURCHASE PORTABLE SCALES.	CON	2007	160	128	32	0
70	STPA	0170-H887		X3	VARIOUS	STATEWIDE	DESIGN OF STC TRAFFIC SIGNALS AC ENTRY	PE	2007	0	0	0	0
70	STPA	0170-H887		X3	VARIOUS	STATEWIDE	DESIGN OF STC TRAFFIC SIGNALS AC CONV	PE	2007	1,400	1,400	0	0
71	STPA	0171-0280		X2	VARIOUS	VARIOUS	BRIDGE WORK ON BRIDGES #02444, 02672 & 02722 .	CON	2007	1,232	986	246	0
71	STPA	0171-H136		X2	VARIOUS	DISTRICT 1	UPGRADE GUIDERAIL ON NON-NHS HIGHWAYS IN DISTRICT 1.	PE	2007	138	110	28	0
71	STPA	0171-H144		X3	VARIOUS	DISTRICT 1	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DIST 1.	ROW	2007	100	100	0	0
71	STPA	0171-H146		X3	VARIOUS	DISTRICT 1	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 1.	ROW	2007	100	100	0	0
71	STPA	0171-H147		X3	VARIOUS	DISTRICT 1	DISTRICT 1 TRAFFIC SIGNAL REVISIONS.	CON	2007	2,100	2,100	0	0
71	STPA	0171-HXXX		X2	VARIOUS	DISTRICT 1	THIN OVERLAY PREVENTATIVE MAINTENANCE.	CON	2007	1,250	1,000	250	0
72	STPA	0172-0335		X3	VARIOUS	DISTRICT 2	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DIST 2.	CON	2007	1,660	1,660	0	0
72	STPA	0172-0357	0172-H156	X3	VARIOUS	DISTRICT 2	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DIST 2.	ROW	2007	100	100	0	0
13	STPA	0172-H151		X2	VARIOUS	DISTRICT 2	UPGRADE GUIDERAIL ON NON-NHS HIGHWAYS IN DIST 2.	CON	2007	1,172	937	234	0
72	STPA	0172-H158		X3	VARIOUS	DISTRICT 2	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 2.	ROW	2007	100	100	0	0
72	STPA	0172-HXXX		X2	VARIOUS	DISTRICT 2	THIN OVERLAY PREVENTATIVE MAINTENANCE.	CON	2007	1,250	1,000	250	0
73	STPA	0173-0344		X3	VARIOUS	DISTRICT 3	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DIST 3.	CON	2007	1,009	807	202	0
73	STPA	0173-0374	0173-H182	X3	VARIOUS	DISTRICT 3	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DIST 3.	ROW	2007	100	100	0	0
73	STPA	0173-H184		X3	VARIOUS	DISTRICT 3	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 3.	ROW	2007	100	100	0	0
73	STPA	0173-H185		X3	VARIOUS	DISTRICT 3	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 3, 100% FEDERAL.	CON	2007	1,110	1,110	0	0
74	STPA	0174-0287	0174-H120	X2	VARIOUS	DISTRICT 4	UPGRADE GUIDERAIL ON NHS HIGHWAYS - US 44 & US 202 IN DIST 4.	CON	2007	150	120	30	0
74	STPA	0174-0302		X3	VARIOUS	DISTRICT 4	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DIST 4 - AC ENTRY.	CON	2007	0	0	0	0
74	STPA	0174-0302		X3	VARIOUS	DISTRICT 4	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DIST 4 - AC CONV.	CON	2007	1,300	1,300	0	0
74	STPA	0174-H164		X3	VARIOUS	DISTRICT 4	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 4.	ROW	2007	100	100	0	0
									2007 Total	186,430	145,432	40,997	0
10	STPA	0004-0116		X2	TR	AVON	REPL OF BR. #04470-INTER. CT 10 & OLD FARMS RD. (OVER FARMINGTON RIVER) TOWN OF AVON.	CON	2008	7,500	6,000	1,500	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
08	STPA	0014-0157		X2	US 1	BRANFORD	RECONSTRUCTION OF BR #00340 (AMTRAK R.R. O/ U.S. 1) IN BRANFORD - PHASE FIN.	CON	2008	11,875	9,500	2,375	0
08	STPA	0014-0174		N	SR 740	BRANFORD	REALIGNMENT OF A SECTION OF SR 740 (BRUSHY PLAIN RD) FROM BROOKWOOD DR TO WILLIAMS RD	CON	2008	4,107	3,286	821	0
07	STPA	0015-0226	0015-H028	X2	CT 130	BRIDGEPORT	RECONSTRUCTION OF CT 130.	CON	2008	9,487	6,685	2,801	0
07	STPA	0015-0227	0015-H029	X2	SR 700	BRIDGEPORT	RECONSTRUCTION OF SR 700, FAIRFIELD AVE.	CON	2008	5,291	4,233	1,058	0
02	STPA	0016-H003		X2	CT 133	BRIDGEWATER	GUIDERAIL REPLACEMENT IN VICINITY OF WEWAKA BROOK.	CON	2008	1,623	1,298	325	0
09	STPA	0017-0171	0017-H029	X3	CT 72	BRISTOL	INTERSECTION IMPRVMNTS ON CT 72 AT MEMORIAL BLVD & REPLACEMENT OF BR #4105.	CON	2008	925	740	185	0
14	STPA	0032-0130		N	CT 31	COVENTRY	REALIGNMENT OF CT 31; CT 275 TO 60 METERS SOUTH-EAST OF MONUMENT HILL RD.	CON	2008	5,700	4,560	1,140	0
02	STPA	0034-0288		M	US 6	DANBURY	WIDEN US 6 (LAKE AVE.) FROM KENOSIA AVE TO I-84 OVERPASS, 2 THROUGH & LEFT TURN AS NEED.	CON	2008	7,000	5,600	1,400	0
06	STPA	0036-0180		X2	CT 34	DERBY	REHABILITATION OF BR# 06062 CT 34 OVER DERBY CANAL.	CON	2008	480	384	96	0
10	STPA	0039-0088		M	CT 20	EAST GRANBY	WIDENING OF CT 20, VIC OF HOLCOMB ST/NEWGATE RD TO VIC OF CENTER ST - AC CONV.	CON	2008	6,000	4,800	1,200	0
11	STPA	0040-0132		X2	CT 151	EAST HADDAM	BR # 05467 CULVERT REPAIR, CT 151 O/ MOODUS RIVER.	CON	2008	512	410	102	0
10	STPA	0042-0292		N	US 44	EAST HARTFORD	HORIZONTAL REALIGNMT OF US 44, BURNSIDE AVE BETWEEN WESTBROOK ST & ZEBULON ST.	CON	2008	2,050	1,640	410	0
10	STPA	0042-0297		X3	SR 502	EAST HARTFORD	WIDEN SR 502(SILVER LA) FROM 4 TO 5 LANES AT FORBES ST TO PROVIDE EXCLUSIVE E/W LT LANES	CON	2008	984	787	197	0
10	STPA	0051-0258		X2	CT 4	FARMINGTON	REPLACEMENT OF BR# 01951, CT 4 OVER ROARING BROOK.	CON	2008	2,750	2,200	550	0
10	STPA	0051-0262	0051-H030	X4	CT 4	FARMINGTON	INTERSECTION IMPROVEMENT ON CT RTE 4 AT TOWN FARM RD. FARMINGTON	CON	2008	340	272	68	0
01	STPA	0056-0271		X3	US 1	GREENWICH	INTERSECTION IMPROVEMENTS, US 1, GREENWICH - AC ENTRY.	CON	2008	0	0	0	0
13	STPA	0058-0283		X2	MYSTIC	GROTON	MYSTIC STREETSCAPE IMPROVEMENTS.	CON	2008	150	120	0	30
08	STPA	0061-0138		X3	CT 10	HAMDEN	MAJOR INTERSECT IMPROVEMTS ON CT 10 AT WEST WOODS RD & MT CARMEL AVE - AC ENTRY.	CON	2008	0	0	0	0
10	STPA	0063-H150	0063-H131	X2	VARIOUS	HARTFORD	FFY 2005 TRANSFER TO THE DEPT OF REVENUE SERVICES FOR MOTOR FUEL TAX ENFORCEMENT - AC CONV.	ALL	2008	35	35	0	0
10	STPA	0076-0199		X2	CT 30	MANCHESTER	INTERSECTION IMPROVEMENTS AT CT 83	ROW	2008	165	132	33	0
14	STPA	0077-0206		N	CT 195	MANSFIELD	CONSTRUCTION OF SOUTHBOUND BYPASS LANE AT CHAFFEVILLE RD & IMPROVE ISD TO THE LEFT.	CON	2008	856	685	171	0
11	STPA	0082-0287		X3	CT 66	MIDDLETOWN	INTERSECTION IMPROVEMENTS ON CT 66 AT BOSTON RD & OLD MILL RD.	CON	2008	4,415	3,532	883	0
08	STPA	0083-0230		X3	US 1	MILFORD	INTERSECTION IMPROVEMENTS & OPERATIONAL LANE, US 1 IN MILFORD.	CON	2008	6,062	4,850	1,212	0
08	STPA	0083-0241		X2	CT 162	MILFORD	THE REALIG. OF RT 162 OLD GATE LANE AS PART OF THE RR BR. REPLACEMENT-#301-T057	CON	2008	865	692	173	0
08	STPA	0083-0247		X3	US 1	MILFORD	INTERSECTION IMPROVEMENTS AT MEADOW ST & AT HIGH ST, US 1 IN MILFORD.	CON	2008	2,557	2,046	511	0
08	STPA	0092-0531	0092-H082	M	I-91/I-95/CT 34	NEW HAVEN	RECONSTRUCTN OF I-95/I-91/CT 34 INTERCHG ASSOCIATED WITH "Q" BRG REPLACEMT - AC ENTRY.	CON	2008	0	0	0	0
08	STPA	0092-0531	0092-H082	M	I-91/I-95/CT 34	NEW HAVEN	RECONSTRUCTN OF I-95/I-91/CT 34 INTERCHG ASSOCIATED WITH "Q" BRG REPLACEMT - AC CONV.	CON	2008	11,111	10,000	1,111	0
08	STPA	0092-0533		M	I-95	EAST HAVEN	RECONSTRTN OF I-95, EASTERN APPROACH TO "Q" BRIDGE IN NEW HAVEN & EAST HAVEN - AC CONV.	CON	2008	4,579	3,984	595	0
02	STPA	0095-0234		N	CT 67	NEW MILFORD	RECONSTRUCTION & REALIGNMENT OF CT 67.	CON	2008	1,608	1,286	322	0
08	STPA	0098-0093		M	CT 80	NORTH BRANFORD	MAJOR WIDENING TO 4 LANES, JUST EAST OF TILCON RR BRIDGE TO EASTERLY LEG OF CT 22.	CON	2008	3,294	2,635	659	0
01	STPA	0102-0269		M	US 7/CT 15	NORWALK	US 7 & CT 15 IN NORWALK, UPGRADE TO FULL INTERCHG WITH MERRITT PKWY, PHASE 2 - AC CONV.	CON	2008	22,200	17,760	4,440	0
12	STPA	0104-0162		X2	US 1	OLD LYME	CULVERT REPLACEMENT; BRIDGE NO. 00097 U.S. 1 OVER BROOK	CON	2008	670	536	134	0
08	STPA	0106-0108		N	US 1	ORANGE	OPERATIONAL LANE, US 1 ORANGE, MILFORD TL TO CT 114.	CON	2008	7,601	6,081	1,520	0
06	STPA	0124-0158		N	CT 334	SEYMOUR	REALIGNMENT OF 4500 LF OF RT 334, 600 FT NW INT SOUTHWEST RD TO 500 FT SW INT COMMERCE	CON	2008	3,290	2,632	658	0
16	STPA	0134-0141		X3	CT 319	STAFFORD	REALIGN ROUTE 319 BETWEEN GAIL RD AND FURNACE AVE TO REDUCE RUN-OFF ACCIDENTS IN CURVES.	CON	2008	880	704	176	0
01	STPA	0135-H055		X3	US 1/CT 106	STAMFORD	MAJOR INTERSECTION IMPRVMENTS ON COURTLAND AVE (CT 106) AT US 1 & HAMILTON AVE.	ROW	2008	3,000	2,400	600	0
13	STPA	0137-0143		X2	US 1	STONINGTON	REHABILITATION OF BR# 01898 US 1 OVER STONY BROOK TOWN OF STONINGTON	CON	2008	977	782	195	0
13	STPA	0137-0144		X2	US 1	STONINGTON	REHABILITATION OF BR# 01900 US 1 OVER QUANADUCK COVE TOWN OF STONINGTON	CON	2008	921	737	184	0
07	STPA	0138-0211		X3	US 1	STRATFORD	INTERSECTION IMPROVEMTS, US 1 AT W BROAD ST & NOBLE ST.	CON	2008	1,412	1,130	282	0
10	STPA	0142-0146	0142-H008	N	CT 195	TOLLAND	WIDEN I-84 EBD TO CT 195 TO PROVIDE TWO RIGHT TURN LANES .	CON	2008	2,007	1,605	401	0
04	STPA	0143-0170		X2	CT 272	TORRINGTON	REHABILITATION OF BR# 02355 CT 272 OVER BROOK TOWN OF TORRINGTON.	CON	2008	1,700	1,360	340	0
10	STPA	0146-0165		N	CT 74	VERNON	RECONSTRUCT CT 74 FROM MAPLE ST TO HARLOW ST & IMPROVE THE INT OF SR 527 WITH WEST MAIN.	CON	2008	2,047	1,637	409	0
10	STPA	0146-0184	0146-H029	N	CT 74	VERNON	RECONSTRUCTION OF UNION ST (CT 74), FRM ORCHARD ST TO ELM ST.	CON	2008	1,300	1,040	260	0
13	STPA	0147-0058		X3	CT 138	VOLUNTOWN	RECONFIGURE 2 INTERSECTIONS:@ RT 138/165 OVLP@RT49& INSTALL SIGNAL,"T" UP SHETUCKET@RT138	CON	2008	800	640	160	0
05	STPA	0153-0118		N	CT 73	WATERTOWN	REALIGNMENT OF MAIN ST (CT 73) IN THE VICINITY OF ABANDONED RAILROAD OVERPASS.	ROW	2008	250	200	50	0
10	STPA	0155-0162	0155-H026	X3	CT 173	WEST HARTFORD	CT 173 & SR529 (NEW BRITAIN AVE) SAFETY IMPROVEMENTS.	CON	2008	3,020	2,416	604	0
08	STPA	0156-0170		X3	US 1	WEST HAVEN	INTERSECTION IMPRVMTS ON US 1 @ CT 122 IN WEST HAVEN.	CON	2008	7,750	6,200	1,550	0
01	STPA	0158-0193		X3	US 1	WESTPORT	INTERSCTN IMPROVEMTS & OPERATIONAL LANE ADDITIONS IN WESTPORT ON US 1 AT GRD UNION DR & TURKEY HILL RD.	CON	2008	4,464	3,533	931	0
01	STPA	0161-0118		M	US 7	WILTON	MAJOR WIDENING OF US 7 FROM WOLF PIT RD TO THE NORTH JUNCTION OF CT 33 & 106 - AC CONV.	CON	2008	4,750	3,800	950	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
01	STPA	0161-0124		M	US 7	WILTON	RECONSTRUCTION FROM OLD DANBURY ROAD TO VIC. OF OLMSTEAD HILL ROAD IN WILTON - AC CONV.	CON	2008	3,850	3,080	770	0
08	STPA	0167-H016		N	RTE 63	WOODBRIDGE	DRAINAGE IMPRVMTS FROM VICINITY OF BRADLEY RD TO NO HAVEN/WOODBRIDGE TL.	ROW	2008	100	80	20	0
08	STPA	0167-H016		N	RTE 63	WOODBRIDGE	DRAINAGE IMPRVMTS FROM VICINITY OF BRADLEY RD TO NO HAVEN/WOODBRIDGE TL.	CON	2008	4,900	3,820	1,080	0
70	STPA	0170-E134		X2	VARIOUS	STATEWIDE	PAVEMENT MANAGEMENT ANALYSIS & DATA COLLECTION FOR NON-NHS ROADWAYS - AC CONV.	PE	2008	420	336	84	0
70	STPA	0170-E197		X2	VARIOUS	STATEWIDE	REPLACE TRAFFIC SIGNALS W/MAST ARM DEFICIENCIES.	CON	2008	834	667	167	0
70	STPA	0170-H887		X3	VARIOUS	STATEWIDE	DESIGN OF STC TRAFFIC SIGNALS AC CONV	PE	2008	1,400	1,400	0	0
71	STPA	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - FFY 2008	ALL	2008	5,199	4,159	1,040	0
71	STPA	0171-H136		X2	VARIOUS	BERLIN,DURHAM,NEWBRITAIN	UPGRADE GUIDERAIL ON NON-NHS HIGHWAYS IN DISTRICT 1	CON	2008	1,321	1,057	264	0
71	STPA	0171-H144		X3	VARIOUS	DISTRICT 1	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 1.	CON	2008	1,354	1,083	135	135
72	STPA	0172-0357	0172-H156	X3	VARIOUS	DISTRICT 2	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DIST 2.	ROW	2008	100	100	0	0
72	STPA	0172-0357	0172-H156	X3	VARIOUS	DISTRICT 2	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 2.	CON	2008	1,354	1,083	135	135
07	STPA	0173-0291		X3	US 1	BRIDGEPORT/FAIRFIELD	INTERSECTION IMPROVEMTS AT VARIOUS LOCATIONS	CON	2008	4,664	4,664	0	0
73	STPA	0173-0368	0173-H177	X2	CT 110 & 113	VARIOUS	UPGRADE GUIDERAIL ON NON-NHS HIGHWAYS IN DIST 3.	CON	2008	1,715	1,372	343	0
73	STPA	0173-0374	0173-H182	X3	VARIOUS	DISTRICT 3	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 3.	CON	2008	1,354	1,083	135	135
74	STPA	0174-H162		X3	VARIOUS	DISTRICT 2	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 4.	CON	2008	1,354	1,083	135	135
									2008 Total	201,277	162,652	38,054	572
08	STPA	0014-0157		X2	US 1	BRANFORD	RECONSTRUCTION OF BR #00340 (AMTRAK R.R. O/ U.S. 1) IN BRANFORD - AC CONV.	CON	2009	11,750	8,400	3,350	0
02	STPA	0018-0124	0018-H013	X3	US 202	BROOKFIELD	FEDERAL ROAD RECONSTRUCTION.	CON	2009	7,600	6,080	1,520	0
02	STPA	0034-0305		N	CT 37	DANBURY	REALIGN AND ADD SIGNAL AT STACEY ROAD.	CON	2009	1,161	929	232	0
02	STPA	0034-0309		X3	SR 806	DANBURY	WIDEN SR 806 TO PROVIDE FOR A WB LEFT TURN LANE AT OLD SHELTER ROCK RD & SIGNALIZE.	CON	2009	915	732	183	0
10	STPA	0051-0260	0051-H026	N	CT 4	FARMINGTON	RECONSTRUCTION - TOWN FARM RD TO MOUNTAIN SPRING RD.	CON	2009	6,326	5,061	1,265	0
01	STPA	0056-0271		X3	US 1	GREENWICH	INTERSECTION IMPROVEMENTS, US 1, GREENWICH - AC CONV.	CON	2009	4,455	3,564	891	0
08	STPA	0061-0138		X3	CT 10	HAMDEN	MAJOR INTERSECT IMPROVEMTS ON CT 10 AT WEST WOODS RD & MT CARMEL AVE - AC CONV.	CON	2009	4,207	3,366	841	0
10	STPA	0063-H150	0063-H131	X2	VARIOUS	HARTFORD	FFY 2005 TRANSFER TO THE DEPT OF REVENUE SERVICES FOR MOTOR FUEL TAX ENFORCEMENT - AC CONV.	ALL	2009	35	35	0	0
10	STPA	0076-0199		X2	CT 30	MANCHESTER	INTERSECTION IMPROVEMENTS AT CT 83	CON	2009	1,460	1,168	292	0
10	STPA	0076-H048		N	CT 44	MANCHESTER	REALIGN MIDDLE TPKE WEST @ CENTER ST & NEW STATE RD.	CON	2009	3,350	2,680	670	0
08	STPA	0079-0208		N	US 5	MERIDEN	MAJOR DRAINAGE IMPROVEMENTS ROUTE 5 (BROAD STREET)	CON	2009	3,280	2,426	854	0
08	STPA	0083-0246		N	US 1	MILFORD	INTERSECTION IMPROVEMENTS BETWEEN I-95 INTERCHANGE 34 & SILVER SAND PKWY, US 1 IN MILFORD.	CON	2009	4,228	3,383	846	0
08	STPA	0092-0531	0092-H082	M	I-91/I-95/CT 34	NEW HAVEN	RECONSTRUCTN OF I-95/I-91/CT 34 INTERCHG ASSOCIATED WITH "Q" BRG REPLACEMT.-AC CONV	CON	2009	50,000	45,000	5,000	0
01	STPA	0102-0269		M	US 7/CT 15	NORWALK	US 7 & CT 15 IN NORWALK, UPGRADE TO FULL INTERCHG WITH MERRITT PKWY, PHASE 2 - AC CONV.	CON	2009	22,200	17,760	4,440	0
11	STPA	0112-H011		X2	CT 17A	PORTLAND	CULVERT REPLACEMENT ON CT 17A NORTH OF WILLIAM ST IN PORTLAND.	ROW	2009	100	80	20	0
06	STPA	0124-0160		X3	CT 34	SEYMOUR	INTERSECTION IMPROVEMENT AT CT 34 & CT 188.	CON	2009	2,200	1,800	400	0
06	STPA	0126-0158		N	CT 110	SHELTON	RECONSTRUCT & REALIGN THE INTERS OF CT 110, BEARDSLEY RD, SCHOOL ST & BIRDSEYE RD.	CON	2009	614	491	123	0
01	STPA	0135-H055		X3	US 1	STAMFORD	INTERSECTION IMPROVEMENT AT CT 106.	CON	2009	1,530	1,224	306	0
01	STPA	0158-0201		X3	CT 136	WESTPORT	INTERSECTION IMPROVEMENTS ON CT57/136 @ WESTON RD., AND CT57/136 @ CLINTON AVE.	CON	2009	1,510	1,208	302	0
01	STPA	0161-0118		M	US 7	WILTON	MAJOR WIDENING OF US 7 FROM WOLF PIT RD TO THE NORTH JUNCTION OF CT 33 & 106 - AC CONV.	CON	2009	4,715	3,772	943	0
01	STPA	0161-0124		M	US 7	WILTON	RECONSTRUCTION FROM OLD DANBURY RD TO VIC OF OLMSTEAD HILL RD IN WILTON - AC CONV.	CON	2009	2,235	1,790	445	0
05	STPA	0166-0099	0166-H009	X3	CT 69	WOLCOTT	NEW TRAFFIC CONTROL SYSTEM & GEOMETRIC IMPRVMTS ON CT 69 AT WOODTICK RD.	CON	2009	360	288	72	0
70	STPA	0170-E134		X2	VARIOUS	STATEWIDE	PAVEMENT MANAGEMENT ANALYSIS & DATA COLLECTION FOR NON-NHS ROADWAYS - AC CONV.	PE	2009	420	336	84	0
71	STPA	0171-0305		M	BUSWAY	NEW BRITAIN/HARTFORD	FUNDING FOR THE NEW BRITAIN - HARTFORD BUSWAY - FFY 2009	ALL	2009	11,128	8,902	2,226	0
71	STPA	0171-H146		X3	VARIOUS	DISTRICT 1	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 1.	CON	2009	1,354	1,083	135	135
72	STPA	0172-H158		X3	VARIOUS	DISTRICT 2	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 2.	CON	2009	1,354	1,083	135	135
73	STPA	0173-H184		X3	VARIOUS	DISTRICT 3	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 3.	CON	2009	1,354	1,083	135	135
74	STPA	0174-0277		X2	CT 64/CT 67	MIDDLEBURY, ROXBURY	BRIDGE REPLACEMENT; BRIDGES # 02004 & 02429, CT 64/GOATS BK & CT 67/FENN BK.	CON	2009	1,357	1,086	271	0
74	STPA	0174-H164		X3	VARIOUS	DISTRICT 4	INSTALLATION & REVISION OF STC TRAFFIC CONTROL SIGNALS IN DISTRICT 4.	CON	2009	1,354	1,083	135	135
									2009 Total	152,552	125,893	26,118	542
03	STPA	0067-0115		X2	CT 341	KENT	BRIDGE REPLACEMENT; BRs #01593 & 02890 on CT 341 OVER MACEDONIA BROOK.	CON	2010	2,002	1,602	400	0
08	STPA	0092-0531	0092-H082	M	I-91/I-95/CT 34	NEW HAVEN	RECONSTRUCTN OF I-95/I-91/CT 34 INTERCHG ASSOCIATED WITH "Q" BRG REPLACEMT - AC CONV.	CON	2010	50,000	45,000	5,000	0
01	STPA	0102-0269		M	US 7/CT 15	NORWALK	US 7 & CT 15 IN NORWALK, UPGRADE TO FULL INTERCHG WITH MERRITT PKWY, PHASE 2 - AC CONV.	CON	2010	22,200	17,760	4,440	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
11	STPA	0112-H011		X2	CT 17A	PORTLAND	CULVERT REPLACEMENT ON CT 17A NORTH OF WILLIAM ST IN PORTLAND.	CON	2010	750	600	150	0
05	STPA	0153-0118		N	CT 73	WATERTOWN	REALIGNMENT OF MAIN ST (CT 73) IN THE VICINITY OF ABANDONED RAILROAD OVERPASS.	CON	2010	2,680	2,411	269	0
									2010 Total	77,632	67,373	10,259	0
08	STPA	0092-0531	0092-H082	M	I-91/I-95/CT 34	NEW HAVEN	RECONSTRUCTN OF I-95/I-91/CT 34 INTERCHG ASSOCIATED WITH "Q" BRG REPLACEMT - AC CONV.	CON	FYI	142,737	128,464	14,274	0
01	STPA	0102-0269		M	US 7/CT 15	NORWALK	US 7 & CT 15 IN NORWALK, UPGRADE TO FULL INTERCHG WITH MERRITT PKWY, PHASE 2 - AC CONV.	CON	FYI	10,804	8,643	2,161	0
									FYI Total	153,541	137,107	16,435	0
07	STPBS	0015-0310	0015-H087	X4	VARIOUS	BRIDGEPORT	TRAFFIC SIGNAL MODERNIZATION PROGRAM: PHASE B - REPLC 10 & UPGRD 5 (Total 15).	CON	2007	3,985	3,188	797	0
07	STPBS	0015-0311	0015-H089	X4	VARIOUS	BRIDGEPORT	TRAFFIC SIGNAL MODERNIZATION AT VARIOUS LOCATIONS - PHASE A AC CONV	CON	2007	2,625	2,100	525	0
73	STPBS	0015-0318	0015-H092	X2	VARIOUS	VARIOUS	URBAN PROGRAM, DESIGN ACTIVITIES.	PE	2007	500	400	100	0
07	STPBS	0050-H043	0050-HXXX	X2	MILL PLAIN RD	FAIRFIELD	REPLACE BRIDGE OVER MILL RIVER.	CON	2007	2,000	1,600	400	0
01	STPBS	0102-0297		N	EAST AVE	NORWALK	RECONSTRUCTION OF EAST AVE AT METRO-NORTH RAILROAD BRIDGE # 42.14.	ROW	2007	300	240	30	30
01	STPBS	0102-0325		X3	US 1	NORWALK	INTERSECTION IMPROVEMENT AT CT 53 & BELDEN.	ROW	2007	350	280	70	0
01	STPBS	0102-T025	0102-TXX1	X2	VARIOUS	NRWLK TD	NRWLK TD - SO NORWALK INTERMODAL FACILITY FEASIBILITY STUDY.	OTH	2007	250	200	0	50
06	STPBS	0126-0160		N	EAST VILLAGE RD	SHELTON	RECONSTRUCT 3,200 ft OF EAST VILLAGE RD - AC ENTRY.	CON	2007	0	0	0	0
06	STPBS	0126-0160		N	EAST VILLAGE RD	SHELTON	RECONSTRUCT 3,200 ft OF EAST VILLAGE RD - AC CONV.	CON	2007	1,700	1,360	340	0
01	STPBS	0135-H071		X2	STILLWATER DR	STAMFORD	RECON. OF STILLWATER RD FROM NORTH OF SKYVIEW DR. TO SOUTH OF STILLVIEW RD.	CON	2007	1,800	1,440	180	180
07	STPBS	0138-0215	0050-HXXX	X3	HUNTINGTON RD	STRATFORD	MINOR WIDENING OF HUNTINGTON RD DRAINAGE, CURBING & HORIZONTAL REALIGNMT.	CON	2007	3,509	2,807	702	0
									2007 Total	17,019	13,615	3,144	260
01	STPBS	0102-0297	0102-H048	N	EAST AVE	NORWALK	RECONSTRUCTION OF EAST AVE AT METRO-NORTH RAILROAD BR # 42.14.	CON	2008	4,316	3,453	863	0
06	STPBS	0126-0160		N	EAST VILLAGE RD	SHELTON	RECONSTRUCT 3,200 ft OF EAST VILLAGE RD - AC CONV.	CON	2008	875	700	175	0
									2008 Total	5,191	4,153	1,038	0
01	STPBS	0135-H068		X2	VARIOUS	STAMFORD	TRAFFIC SIGNAL SYSTEM UPGRADE - PHASE 6.	CON	2009	203	203	0	0
									2009 Total	203	203	0	0
09	STPH	0017-0161		X3	EAST RD	BRISTOL	REALIGN FROM GREYSTONE RD TO CT 69 INCLUDING CULVERT REPLACEMENT.	CON	2007	2,935	2,348	587	0
09	STPH	0017-H027		X3	CT 72	BRISTOL	MAJOR INTERSECTION IMPROVEMENT AT SOUTH ST UNION ST & CHURCH ST.	PE	2007	310	248	31	31
09	STPH	0017-H029		X3	CT 72	BRISTOL	INTERSECTION IMPRVMNTS ON CT 72 AT MEMORIAL BLVD & REPLACEMENT OF BR #4105.	ROW	2007	25	20	5	0
11	STPH	0033-0123	0033-H017	N	COLES RD	CROMWELL	RECONSTRUCTION OF COLES RD FR CT 372 TO 300' NORTH OF CHRSTIAN HILL RD.	CON	2007	1,914	1,531	383	0
10	STPH	0042-0299	0042-H043	N	GOVERNOR ST	EAST HARTFORD	RECONSTRUCTION OF GOVERNOR STREET.	CON	2007	1,360	1,066	272	22
10	STPH	0047-0111	0047-H009	X2	WINDERMERE AVE	ELLINGTON	REPLACEMENT OF THE WINDERMERE AVE BRIDGE OVER MARSH BROOK.	CON	2007	968	775	194	0
10	STPH	0048-0186	0048-H023	X2	POST OFFICE RD	ENFIELD	RECONSTRCTN OF TOWN FARM RD & POST OFFICE RD FRM RAFFIA RD TO ABBE RD.	CON	2007	2,100	1,680	420	0
10	STPH	0063-0560		N	NEWINGTON AVE	HARTFORD	RECONSTRCTN OF NEWINGTON AVE FROM NWGTN TL TO NEW BRITAIN AVE, WIDEN & INSTALL STORM DRAIN.	CON	2007	1,125	900	225	0
10	STPH	0063-0570		N	C.B.D. STs	HARTFORD	RESRFCNG&WIDENING - ASYLUM ST, FROM MAIN ST TO TRUMBULL ST & CHURCH ST, FROM HIGH ST TO ANN ST.	CON	2007	1,376	1,101	275	0
10	STPH	0063-0618	0063-H116	X3	BROAD ST.	HARTFORD	RECNSTRCTIN/REHAB OF BROAD ST FROM ASYLUM AVE TO PARK ST.	ROW	2007	250	200	25	25
71	STPH	0063-0620	0063-H135	X2	VARIOUS	VARIOUS	URBAN PROGRAM, DESIGN ACTIVITIES - AC CONV.	PE	2007	425	340	85	0
10	STPH	0063-H125		X2	US 44	HARFTORD	SAFETY IMPROVEMENTS ON RTE 44 (ALBANY AVE) FROM HOMESTEAD AVENUE TO GARDEN STREET	ROW	2007	130	104	26	0
10	STPH	0076-0198	0076-H040	X2	BUCKLAND ST	MANCHESTER	PAVEMENT REHAB 3" MILL & OVERLAY FROM TOLLAND TURNPIKE TO BUCKLAND HILLS RD.	CON	2007	1,665	1,332	0	333
10	STPH	0076-0205	0076-H048	N	CT 44	MANCHESTER	REALIGN MIDDLE TPKE WEST @ CENTER ST & NEW STATE RD.	ROW	2007	200	160	40	0
11	STPH	0082-0288		X3	COUNTRY CLUB RD	MIDDLETOWN	RECONSTRUCTION OF COUNTRY CLUB RD.	CON	2007	947	758	189	0
11	STPH	0082-0294	0082-H062	N	SAYBROOK RD	MIDDLETOWN	RECONSTRUCTION OF SAYBROOK RD FRM RANDOLPH RD TO RESERVOIR RD, APPRX 2000 FT.	CON	2007	2,000	1,600	400	0
09	STPH	0110-H019		X3	SOUTH MAIN	PLYMOUTH	REALIGN & RECONSTRUCT SOUTH MAIN ST TO SOFTEN A 90 DEGREE CURVE.	PE	2007	150	120	30	0
10	STPH	0118-H028		X2	WOODFIELD CROSSING	ROCKY HILL	RECLAMATION OF WOODFIELD CROSSING FROM COLD SPRINGS RD TO FRANCE STREET APPROX.3300'	CON	2007	670	536	0	134
10	STPH	0128-0146	0128-H029	X3	CT 10	SIMSBURY	MINOR INTRSEC IMPRVMENTS ON CT 10 AT ELY LN & MINOR WIDENING OF CT 10.	ROW	2007	50	40	10	0
10	STPH	0146-0184		N	CT 74	VERNON	RECONSTRUCTION OF UNION STREET (ROUTE 74) FROM ORCHARD STREET TO ELM STREET	ROW	2007	50	40	10	0
10	STPH	0155-0159		N	FARMINGTON AVE	WEST HARTFORD	RECONSTRUCT FRM WHITING LANE TO PROSPECT AVE.	CON	2007	1,705	1,364	341	0
10	STPH	0155-0162	0155-H026	X3	CT 173	WEST HARTFORD	ROUTE 173 AND SR529 (NEW BRITAIN AVE.) SAFETY IMPROVEMENTS	ROW	2007	700	560	140	0
10	STPH	0155-H023		X2	NEW PARK AVE	WEST HARTFORD	TROUT BROOK MULTI-USE TRAIL FROM NEW PARK AVE TO QUAKER LANE SOUTH.	CON	2007	220	176	0	44
									2007 Total	21,275	16,999	3,688	589
09	STPH	0017-0171	0017-H029	X3	CT 72	BRISTOL	INTERSECTION IMPRVMTS ON CT 72 AT MEMORIAL BLVD & REPLACEMT OF BR #4105.	CON	2008	3,125	2,500	625	0
09	STPH	0017-H027		X3	CT 72	BRISTOL	MAJOR INTERSECTION IMPROVEMENT AT SOUTH ST UNION ST & CHURCH ST.	ROW	2008	300	240	30	30

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
10	STPH	0063-0618	0063-H116	X3	BROAD ST	HARTFORD	RECNSTRCTIN/REHAB OF BROAD ST FROM ASYLUM AVE TO PARK ST.	CON	2008	3,150	2,273	400	477
10	STPH	0063-H116		N	BROAD ST	HARFTORD	RECONSTRCTN&REHABILTN OF BROAD ST FROM ASYLUM AVE TO PARK ST.	CON	2008	3,150	2,391	759	0
09	STPH	0110-H019		X3	SOUTH MAIN	PLYMOUTH	REALIGN & RECONSTRUCT SOUTH MAIN ST TO SOFTEN A 90 DEGREE CURVE.	ROW	2008	250	200	25	25
09	STPH	0110-H019		X3	SOUTH MAIN	PLYMOUTH	REALIGN & RECONSTRUCT SOUTH MAIN ST TO SOFTEN A 90 DEGREE CURVE.	CON	2008	900	720	180	0
11	STPH	0112-0111	0112-H009	X3	CT 66	PORTLAND	INTERSECTION IMPROVEMTS TO CT 66 AT MIDDLE HADDAM RD & PAYNE BLVD.	CON	2008	1,100	880	220	0
10	STPH	0146-0184	0146-H029	N	CT 74	VERNON	RECONSTRUCTION OF UNION ST (CT 74), FRM ORCHARD ST TO ELM ST.	CON	2008	1,600	1,280	320	0
10	STPH	0155-0162	0155-H026	X3	CT 173	WEST HARTFORD	CT 173 & SR 529 (NEW BRITAIN AVE), SAFETY IMPROVEMENTS.	CON	2008	1,300	1,040	260	0
10	STPH	0164-H021	0164-XXXX	X2	DAY HILL ROAD	WINDSOR	PAVEMENT REHAB	CON	2008	773	618	0	155
									2008 Total	15,648	12,142	2,819	687
09	STPH	0017-H027		X3	CT 72	BRISTOL	MAJOR INTERSECTION IMPROVEMENT AT SOUTH ST UNION ST & CHURCH ST.	CON	2009	1,238	990	124	124
10	STPH	0063-H125		X2	US 44	HARFTORD	SAFETY IMPRVMTS ON US 44 (ALBANY AVE), FROM HOMESTEAD AVE TO GARDEN ST.	CON	2009	2,570	2,056	514	0
10	STPH	0076-H048		N	CT 44	MANCHESTER	REALIGN MIDDLE TPKE WEST @ CENTER ST & NEW STATE RD.	CON	2009	1,500	1,200	300	0
10	STPH	0128-0146	0128-H029	X3	CT 10	SIMSBURY	MINOR INTRSEC IMPRVMENTS ON CT 10 AT ELY LN & MINOR WIDENING OF CT 10.	CON	2009	1,385	1,064	321	0
									2009 Total	6,693	5,310	1,259	124
05	STPNH	0025-0138	0025-H017	X2	CT 42	CHESHIRE	CT 42 REALIGNMENT/DRAINAGE IMPROVMTS AT KING RD.	ROW	2007	150	120	30	0
08	STPNH	0043-0124	0043-H019	X3	MAIN ST	EAST HAVEN	SIGNAL REPLACEMENT/UPGRADES ON MAIN ST & MESSINA DR.	ROW	2007	30	24	6	0
08	STPNH	0061-0140		X2	WAITE ST	HAMDEN	REPLACEMENT OF WAITE ST BRIDGE OVER LAKE WHITNEY.	CON	2007	3,291	2,633	658	0
08	STPNH	0061-0145	0061-H031	X4	SR 707	HAMDEN	REPLACE 9 SIGNALS ON SR 707, WHITNEY AVE.	ROW	2007	30	24	6	0
08	STPNH	0092-0561		X2	STATE ST	NEW HAVEN	REPLACE BRIDGE #03748 OVER MILL RIVER.	CON	2007	4,294	3,436	858	0
08	STPNH	0092-0582		X2	FERRY ST	NEW HAVEN	REHABILITATE BRG #3809 O/QUINNIPIAC RIVER.	CON	2007	2,500	2,000	500	0
08	STPNH	0092-0585	0092-H113	N	QUINNIPIAC AVE	NEW HAVEN	RECONSTRCTN OF QUINNIPIAC AVE FROM FULTON ST TO CLIFTON ST.	ROW	2007	430	344	43	43
70	STPNH	0092-0587	0092-H120	X2	VARIOUS	VARIOUS	URBAN PROGRAM, DESIGN ACTIVITIES - AC CONV.	PE	2007	300	240	60	0
08	STPNH	0092-0588	0092-H121	X2	WHITNEY AVE	NEW HAVEN	PAVEMENT REHABILITATION ON WHITNEY,DERBY & CONGRESS AVENUES.	CON	2007	1,180	944	236	0
12	STPNH	0105-H027		N	NO MAIN ST	OLD SAYBROOK	RECONSTRCTN OF NO MAIN ST FROM THE INTERSCTN OF US 1 TO THE SAYBROOK JUNCTION R.R. STA.	PE	2007	100	80	10	10
08	STPNH	0156-0174	0156-H022	N	FARWELL	WEST HAVEN	REALIGNMENT & RECONSTRUCTION OF FARWELL ST & INTERSECTION IMPROVMTS TO US 1 AT FARWELL ST.	CON	2007	3,250	2,600	650	0
									2007 Total	15,555	12,445	3,057	53
08	STPNH	0043-0124	0043-H019	X3	MAIN ST	EAST HAVEN	SIGNAL REPLACEMENT/UPGRADES ON MAIN ST & MESSINA DR.	CON	2008	770	613	157	0
08	STPNH	0061-0145	0061-H031	X4	SR 707	NEW HAVEN	REPLACE 9 SIGNALS ON SR 707, WHITNEY AVE.	CON	2008	1,333	1,054	264	15
08	STPNH	0079-0210		N	GRAVEL ST	MERIDEN	RECONSTRUCTION OF GRAVEL ST & BALDWIN AVE, PHASE 1.	CON	2008	3,050	2,440	610	0
08	STPNH	0092-0585	0092-H113	N	QUINNIPIAC AVE	NEW HAVEN	RECONSTRUCTION OF QUINNIPIAC AVE FROM FULTON ST TO CLIFTON ST.	CON	2008	6,816	5,399	1,350	67
12	STPNH	0105-H027		N	NO MAIN ST	OLD SAYBROOK	RECON OF NO MAIN ST FROM THE INTER OF US 1 TO THE OLD SAYBROOK JUNCTION R.R. STA.	CON	2008	665	532	67	67
									2008 Total	12,634	10,038	2,447	149
05	STPNH	0025-H017		X2	CT 42	CHESHIRE	CT 42 REALIGNMENT&DRAINAGE IMPROVMTS AT KING RD.	CON	2009	1,640	1,312	328	0
08	STPNH	0079-0210		N	GRAVEL ST	MERIDEN	RECONSTRUCTION OF GRAVEL ST & BALDWIN AVE, PHASE 2.	CON	2009	2,250	1,800	450	0
									2009 Total	3,890	3,112	778	0
13	STPO	0094-H018		X2	WATER STREET	NEW LONDON	PEDESTRIAN SAFETY & AESTHETIC ENHANCEMENTS TO THE NEW LONDON TRANSPORTATION FACILITY.	CON	2007	3,500	2,800	700	0
05	STPO	0107-0158	0107-H008	X3	CT 188	OXFORD	REALIGNMENT & RECONSTRUCTION	ROW	2007	60	48	12	0
04	STPO	0143-0177	0143-H030	N	PINEWOODS RD	TORRINGTON	RECONSTRUCTION OF PINESWOOD RD & CULVERT REPLACEMENT.	CON	2007	2,100	1,680	420	0
05	STPO	0153-0112		X2	SYLVAN LAKE RD	WATERTOWN	RECONSTRUCT SYLVAN LAKE RD, WIDEN TO UNIFORM 30', FLATTEN CRESTS, DRAINAGE, CROSS CULV - AC CONV.	PE	2007	300	240	60	0
70	STPO	0170-2612	0170-E114	X2	VARIOUS	VARIOUS	URBAN PROGRAM, DESIGN ACTIVITIES - AC CONV.	PE	2007	350	280	70	0
									2007 Total	6,310	5,048	1,262	0
02	STPO	0009-0088		X2	PLUM TREES RD	BETHEL	INTER IMPROVEMTS ON PLUM TREES RD AT WALNUT HILL RD & WHITTLESLEY AVE, REPLACEMT OF BR #03706.	CON	2008	2,054	1,643	411	0
02	STPO	0009-0091		X2	WALNUT HILL RD	BETHEL	REPLACEMT OF BR #4181 OVER LIMEKILN BROOK & RECONSTRUCT 450 FT OF WALNUT HILL RD, TOWN OF BETHEL.	CON	2008	1,057	845	211	0
02	STPO	0018-0124	0018-H013	X3	US 202	BROOKFIELD	SAFETY IMPROVEMTS FROM WHITE TURKEY RD TO CT 133.	ROW	2008	1,700	1,360	340	0
02	STPO	0034-H056		X3	CT 53	DANBURY	MAJOR INTERSECTION IMPROVEMENT ON ROUTE 53 AT COAL PIT HILL ROAD AND TRIANGLE STREET.	ROW	2008	200	160	40	0
02	STPO	0034-H057		X3	BACKUS AVE	DANBURY	BACKUS AVE. TRAFFIC SIGNAL HARDWARE AND INTERCONNECT UP GRADE FROM KENOSIA TO PARK RD.	ROW	2008	100	100	0	0
02	STPO	0095-0212		N	GROVE ST	NEW MILFORD	RELOCATION OF GROVE ST FROM MILL ST NORTHERLY TO INT OF CT 67 & US 202, NEW MILFORD.	CON	2008	3,785	3,028	757	0
05	STPO	0107-0158	0107-H008	X3	CT 188	OXFORD	REALIGNMENT & RECONSTRUCTION.	CON	2008	200	160	40	0
05	STPO	0114-0080	0114-H007	X2	SCOTT RD	PROSPECT	MINOR WIDENING/REALIGNMT OF SCOTT RD (APRX 1200') INCLUDG EXTENTION OF AUSTIN RD.	CON	2008	823	658	165	0

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
13	STPO	0137-0149		X3	US 1/CT 2	STONINGTON	IMPROVE INTERSECTION AT CT 2 & MECHANICS ST.	CON	2008	350	280	70	0
04	STPO	0143-0176		X3	US 202/CT 10	TORRINGTON	IMPROVE INTERSECTION AT TORRINGFORD WEST ST.	ROW	2008	600	480	120	0
05	STPO	0151-0296	0151-H040	N	HOMER/CHASE AVE	WATERBURY	MAJOR WIDENING - WATERVILLE ST TO NOTINGHAM TERR.	CON	2008	4,716	3,773	943	0
05	STPO	0151-0297		N	CHASE AVE	WATERBURY	MAJOR WIDENING - NOTINGHAM TERR TO MAIN ST.	CON	2008	5,044	4,035	1,009	0
05	STPO	0153-0111		N	GUERNSEY TOWN RD	WATERTOWN	GUERNSEY TOWN RD #2 - RECONSTRUCT FROM CRESTVIEW RD TO SKILTON RD.	CON	2008	2,220	1,776	444	0
05	STPO	0153-0112		X2	SYLVAN LAKE RD	WATERTOWN	RECONSTRUCT SYLVAN LAKE RD, WIDEN TO UNIFORM 30', FLATTEN CRESTS, DRAINAGE, CROSS CULV - AC CONV.	ROW	2008	90	72	9	9
05	STPO	0153-0113		N	SUNNYSIDE AVE	WATERTOWN	REALIGNMT & RECONST OF SUNNYSIDE AVE FROM THE WTBY TOWN LINE, WESTERLY.	CON	2008	2,460	1,970	490	0
04	STPO	0162-0145	0162-H020	N	HOLABIRD AVE	WINCHESTER	RECONST HOLABIRD AVE FROM CT 8 TO COLONY DR (850'), INCLD REPLACE OF BR #004060.	CON	2008	2,269	1,815	454	0
									2008 Total	27,668	22,156	5,503	9
02	STPO	0034-H056		X3	CT 53	DANBURY	MAJOR INTERSECTION IMPROVEMT ON CT 53 AT COAL PIT HILL RD & TRIANGLE ST.	COM	2009	1,550	1,240	310	0
02	STPO	0034-H057		X3	BACKUS AVE	DANBURY	BACKUS AVE. TRAFFIC SIGNAL HARDWARE AND INTERCONNECT UP GRADE FROM KENOSIA TO PARK RD.	CON	2009	824	819	0	5
04	STPO	0143-0176		X3	US 202/CT 10	TORRINGTON	IMPROVE INTERSECTION AT TORRINGFORD WEST ST.	CON	2009	400	320	80	0
05	STPO	0153-0112		X2	SYLVAN LAKE RD	WATERTOWN	RECONSTRUCT SYLVAN LAKE RD, WIDEN TO UNIFORM 30', FLATTEN CRESTS, DRAINAGE, CROSS CULV - AC CONV.	CON	2009	2,431	1,945	486	0
									2009 Total	5,205	4,324	876	5
15	STPR	0019-0105		X3	CT 169	BROOKLYN	REALIGNMT OF CT 169 @ CT 205 A "T" INTERSECTION 110 mi SOUTH & BYPASS SHOULDERS ON CT 205.	CON	2007	471	377	94	0
09	STPR	0020-0102		X3	CT 4	BURLINGTON	REALIGN THE "S" CURVES ON RT 4 BETWEEN SR 489 (BELDEN RD) & MOUNTAIN SPRINGS RD.	CON	2007	1,860	1,488	372	0
15	STPR	0022-0101		X2	SR 668	CANTERBURY	TRUSS REPAIR, PAINTING, & DECK REPLACEMENT ON BRIDGE # 01649; SR 668 OVER QUINEBAUG RIVER.	CON	2007	1,830	1,464	366	0
12	STPR	0026-0118	0026-H006	X2	CT 148	CHESTER	REPLACEMT OF BR # 02695, CT 148 OVER GREAT BROOK, CHESTER.	CON	2008	1,496	1,197	299	0
14	STPR	0032-H019		N	SOUTH ST	COVENTRY	RECONSTRUCT IN THE VICINITY OF HOP RIVER.	CON	2007	415	296	0	119
11	STPR	0037-0097		X2	CT 17	DURHAM	CULVERT REPLACEMENT ON CT 17, NORTHERN INTERSECTION WITH STAGE COACH RD, DURHAM.	CON	2007	180	144	36	0
08	STPR	0059-0152		N	CT 146	GUILFORD	DRAINAGE/ROADWAY MODIFICATIONS CT 146 GUILFORD.	CON	2007	581	465	116	0
04	STPR	0065-H013		X2	HARMONY HILL RD	HARWINGTON	RESURFACING OF HARMONY HILL RD FROM CT 4 TO LEAD MINE RD.	CON	2007	290	232	0	58
04	STPR	0073-H023		X2	MILTON RD	LITCHFIELD	RESURFACING OF MILTON RD FR 1000' E/O HUTCHINSON PKWY.	CON	2007	316	253	63	0
14	STPR	0077-0207		X2	CT 89	MANSFIELD	SPOT SAFETY IMPROVEMENTS ON CT 89 IN THE VICINITY OF MT HOPE RD.	ROW	2007	80	64	16	0
04	STPR	0091-0108		X2	CT 219	NEW HARTFORD	PAVEMENT RESURFACING & SAFETY IMPROVEMTS IN NEW HARTFORD & BARKHAMSTED.	CON	2007	1,742	1,394	348	0
03	STPR	0119-H007		X2	GOLDMINE RD	ROXBURY	RECLAMATION OF GOLDMINE RD FROM PAINTER HILL RD.	CON	2007	331	218	0	113
02	STPR	0127-0089	0127-H008	N	CT 37	SHERMAN	RECONSTRUCTION & REALIGNMENT OF CT 37 (PHASE 1 OF 3), BREAKOUT OF PROJ # 127-0083.	CON	2007	5,500	4,400	1,100	0
15	STPR	0136-H003		X3	CT14/14A	STERLING	INTERSECTION IMPROVEMENTS ON CT 14 AT CT 14A, STERLING.	CON	2007	444	355	89	0
03	STPR	0150-H009		X2	CT 45	WASHINGTON	REPLACEMENT OF A CONCRETE CRIB RETAINING WALL SUPPORTING CT 45.	PE	2007	225	180	45	0
15	STPR	0169-H012		X2	COUNTY RD	WOODSTOCK	RECLAMATION OF COUNTY ROAD.	CON	2007	174	139	0	35
									2007 Total	15,935	12,666	2,944	325
11	STPR	0041-0113		X2	CT 66	EAST HAMPTON	ROADWAY & INTERSECTION IMPROVMT TO CT 66, CT 196, & OLD MARLBOROUGH RD.	CON	2008	2,200	1,760	440	0
04	STPR	0091-0114		X3	CT 219	NEW HARTFORD	RECONSTRUCTION OF CT 219 IN VICINITY OF JOHNNYCAKE LANE.	CON	2008	3,293	2,634	659	0
02	STPR	0095-0244	0095-H037	N	CT 37	NEW MILFORD	RECSTRUCTON & REALGNMT OF CT 37 (PHASE 2 OF 3), BRKOUT OF PRJ # 127-0083.	CON	2008	5,900	4,720	1,180	0
03	STPR	0119-0108		X3	CT 67	ROXBURY	RECONSTRUCTION OF CT 67, THE VICINITY OF BOTSFORD HILL RD & WELLERS BRIDGE RD.	CON	2008	2,030	1,624	406	0
03	STPR	0150-H009		X2	CT 45	WASHINGTON	REPLACEMENT OF A CONCRETE CRIB RETAINING WALL SUPPORTING CT 45.	ROW	2008	15	12	3	0
08	STPR	0167-0100	0167-H011	N	CT 63/CT 67	WOODBRIDGE	ADD CT 63 BYPASS, LOWER VERT CURVE, IMPROVE SSD & RECONSTRUCT 300' OF CT 67.	CON	2008	1,625	1,300	325	0
									2008 Total	15,063	12,050	3,013	0
14	STPR	0077-0207		X2	CT 89	MANSFIELD	SPOT SAFETY IMPROVEMENTS ON CT 89 IN THE VICINITY OF MT HOPE RD.	CON	2009	1,130	904	226	0
15	STPR	0136-0070	0136-H002	X3	CT 14/14A/SR 664	STERLING/PLAINFIELD	INTERSECTION IMPROVEMENTS TO CT 14 AT CT 14A, STERLING & PLAINFIELD.	CON	2009	3,252	2,602	650	0
03	STPR	0150-H009		X2	CT 45	WASHINGTON	REPLACEMENT OF A CONCRETE CRIB RETAINING WALL SUPPORTING CT 45.	CON	2009	1,075	860	215	0
									2009 Total	5,457	4,366	1,091	0
15	STPR	0038-0083		X2	CT 244	EASTFORD	VARIOUS IMPROVEMTS TO CT 244 IN THE TOWNS OF EASTFORD & POMFRET.	ROW	2010	255	204	51	0
02	STPR	0127-0083		X2	CT 37	SHERMAN	RECONSTRUCTION & REALIGNMENT OF CT 37, CT 39 TO CT 7 IN NW MILFD.	CON	2010	2,954	2,363	591	0
									2010 Total	3,209	2,567	642	0
10	STPSP	0155-0159		N	FARMINGTON AVE	WEST HARTFORD	RECONSTRUCT FRM WHITING LANE TO PROSPECT AVE.	CON	2007	1,250	1,000	250	0
									2007 Total	1,250	1,000	250	0
05	STPT	0006-H009		X2		BEACON FALLS	MULTI-USE BICYCLE/PEDESTRIAN FACILITY ALONG NAUGATUCK RIVER.	PE	2007	92	74	18	0
09	STPT	0007-H022		X2	RR STATION	BERLIN	BERLIN RR STATION ENHANCEMENT OF SITE AND FACILITY.	PE	2007	220	176	0	44

Appendix 6B

Ozone Transport Commission

Control Measures
Technical Support Document

Identification and Evaluation of Candidate Control Measures

Final
Technical Support Document

Prepared for:

Seth Barna
Ozone Transport Commission (OTC)
444 North Capitol Street, NW, Suite 638
Washington, DC 20001
(202) 508-3840

Prepared by:

MACTEC Federal Programs, Inc.
560 Herndon Parkway, Suite 200
Herndon, VA 20170
(703) 471-8383

February 28, 2007

Edward Sabo
Principal Scientist

Douglas A. Toothman
Principal Engineer

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Acronyms and Abbreviations

Acronym	Description
BOTW	Beyond-on-the-Way – refers to additional emission controls that are being considered
CAIR	Clean Air Interstate Rule
EGAS 5.0	Economic Growth Analysis System Version 5.0
EGU	Electric Generating Unit
EPA	U.S. Environmental Protection Agency
IPM	Integrated Planning Model
MANE-VU	Mid-Atlantic/Northeast Visibility Union
MARAMA	Mid-Atlantic Regional Air Management Association
MOBILE6	U.S. EPA's emission model for onroad sources
NESCAUM	Northeast States for Coordinated Air Use Management
NH3	Ammonia
NIF3.0	National Emission Inventory Input Format Version 3.0
NONROAD	U.S. EPA's emission model for certain types of nonroad equipment
NOx	Oxides of nitrogen
OTB/W	On-the-Books/On-the-Way – refers to emission control programs already adopted and proposed emission controls that will result in post-2002 emission reductions
OTC	Ozone Transport Commission
OTC 2001 model rules	Model rules developed by the OTC in 2001
OTC 2006 model rules	Model rules developed by the OTC in 2006
PM10-PRI	Particulate matter less than or equal to 10 microns in diameter that includes both the filterable and condensable components of particulate matter
PM25-PRI	Particulate matter less than or equal to 2.5 microns in diameter that includes both the filterable and condensable components of particulate matter
SIC	Standard Industrial Classification code
SIP	State Implementation Plan
SCC	Source Classification Code
SO2	Sulfur dioxide
VOC	Volatile organic compounds

1.0 EXECUTIVE SUMMARY

The States of the Ozone Transport Region (OTR) are faced with the requirement to submit attainment demonstration plans for the 8-hour ozone National Ambient Air Quality Standards (NAAQS). To accomplish this, most of the states will need to implement additional measures to reduce emissions that either directly impact their nonattainment status, or contribute to the nonattainment status in other states. As such, the Ozone Transport Commission (OTC) undertook an exercise to identify a suite of additional control measures that could be used by the OTR states in attaining their goals.

The OTC staff and member states formed several workgroups to identify and evaluate candidate control measures. Initially, the Workgroups compiled and reviewed a list of approximately 1,000 candidate control measures. These control measures were identified through published sources such as the U.S. Environmental Protection Agency's (EPA's) Control Technique Guidelines, STAPPA/ALAPCO "Menu of Options" documents, the AirControlNET database, emission control initiatives in member states as well as other states including California, state/regional consultations, and stakeholder input. The Workgroups developed a preliminary list of 30 candidate control measures to be considered for more detailed analysis. These measures were selected to focus on the pollutants and source categories that are thought to be the most effective in reducing ozone air quality levels in the Northeastern and Mid-Atlantic States.

The Workgroups discussed the candidate control measures during a series of conference calls and workshops held periodically from the spring of 2004 through the autumn of 2006. The Workgroups collected and evaluated information regarding emission benefits, cost-effectiveness, and implementation issues. Each of the candidate control measures were summarized in a series of "Control Measure Summary Sheets". Stakeholders were provided multiple opportunities to review and comment on the Control Measure Summary Sheets.

Based on the analyses by the OTC Workgroups, the OTC Commissioners made several recommendations at the June 2006 Commissioners' meeting in Boston (OTC 2006a-d) and at the November 2006 Commissioners' meeting in Richmond (OTC 2006e-g). The Commissioners recommended that States consider emission reductions from the following source categories:

- Consumer Products
- Portable Fuel Containers
- Adhesives and Sealants Application
- Diesel Engine Chip Reflash
- Cutback and Emulsified Asphalt Paving

- Asphalt Production Plants
- Cement Kilns
- Glass Furnaces
- Industrial, Commercial, and Institutional (ICI) Boilers
- Regional Fuels

Additionally, the Commissioners directed the OTC to evaluate control measures for Electric Generating Units (EGUs) and high electric demand day units (these measures will be addressed in a separate OTC report) Finally, the Commissioners requested that EPA pursue federal regulations and programs designed to ensure national development and implementation of control measures for the following categories: architectural and maintenance coatings, consumer products, ICI boilers over 100 mmBtu/hour heat input, portable fuel containers, municipal waste combustors, regionally consistent and environmentally sound fuels, small offroad engine emission regulation, and gasoline vapor recovery (OTC 2006d).

See Appendix A for a full description of the process used by the OTC to identify and evaluate candidate control measures.

Table 1-1 summarizes information about the control measures identified by the OTC Commissioners at the June 2006 and November OTC meetings. Table 1-1 identifies the sector, the source category, and a brief description of the control measure. Next is a column that identifies the recommended approach for implementing the rule, such as an OTC model rule or updates to existing state-specific rules. The next two columns show the percent reduction from 2009 emission levels. The final column provides the cost effectiveness estimate in units of dollars per ton of pollutant removed.

Table 1-2 summarizes the expected emission reductions by pollutant, control measure and State. The emission reductions listed in Table 1-2 are for 2009, and take into account only the incremental reductions from the control measures listed in Table 1-1. Figures 1-1 and 1-2 show the anticipated emission reductions by state for VOC and NOx, respectively.

Table 1-1 Summary of OTC 2006 Control Measures

Sector	Source Category	Control Measure	Implementation Method	Percent Reduction from 2009 OTB/W Emission Levels		Cost Effectiveness ($/ton)
				NOx	VOC	
Area	Adhesives, Sealants, Adhesive Primers, and Sealant Primers (Industrial)	Enact VOC content limits similar to those contained in the CARB RACT/BARCT document for adhesives and sealants (Dec. 1998)	Model Rule	---	64	VOC: 2,500
Area	Cutback and Emulsified Asphalt Paving	Prohibits the use of cutback asphalt during the ozone season Limits the use of emulsified asphalt during the ozone season to that which contains not more than 0.5 mL of oil distillate from a 200 mL sample as determined using ASTM Method D244	State Rule Update	---	State specific depending on current rules	VOC: minimal
Area	Consumer Products	Adopt the CARB 7/20/05 Amendments which sets new or revises existing VOC limits on 12 consumer product categories (does not include reductions for Tier2 shaving gels and antistatic aerosols since they have a later compliance date).	Model Rule	---	2	VOC: 4,800
Area	Portable Fuel Containers	Adopt the CARB 2006 Amendments broadening the definition of PFCs to include kerosene and diesel containers and utility jugs used for fuel, and other changes to make OTC Model Rule consistent with CARB requirements.	Model Rule	---	State specific	VOC: 800 to 1,400
Area and Point	Asphalt Production Plants	Area/Point Sources Batch Natural Gas 0.02 lb/ton or equivalent ppm Batch Distillate 0.09 lb/ton or equivalent ppm Drum Natural Gas 0.02 lb/ton or equivalent ppm Drum Distillate 0.04 lb/ton or equivalent ppm or Low NOx Burners, Best Management Practices	State Rule Update	10 - 35	---	NOx: <500 to 1,250

Sector	Source Category	Control Measure	Implementation Method	Percent Reduction from 2009 OTB/W Emission Levels		Cost Effectiveness ($/ton)
				NOx	VOC	
Area and Point	Industrial/ Commercial/ Institutional (ICI) Boilers >250 mmBtu/hour	Option 1 – Purchase current year NOx allowances equal to reductions needed to achieve the required emission rates Option 2 – Phase I 2009 emission rate equal to EGUs of similar size; Phase II 2013 emission rate equal to EGUs of similar size	Model Rule	Boiler and State specific	---	NOx: 600 to 18,000
Area and Point	ICI Boilers 100-250 mmBtu/hour	NOx Strategy #1: Nat gas: 0.10 lb/mmBtu #2, #4, #6 Oil: 0.20 lb/mmBtu Coal: 0.08 to 0.22 lb/mmBtu, depending on boiler type NOx Strategy #2: Reductions achievable through LNB/SNCR, LNB/FGR, SCR or some combination of these controls NOx Strategy #3: 60% reduction from uncontrolled NOx Strategy #4: Purchase current year CAIR allowances	State Rule Update	Boiler and State specific	---	NOx: 600 to 18,000
Area and Point	ICI Boilers 25-100 mmBtu/hour	NOx Strategy #1: Nat gas: 0.05 lb/mmBtu #2 Oil: 0.08 lb/mmBtu #4, #6 Oil: 0.20 lb/mmBtu Coal: 0.30 lb/mmBtu NOx Strategy #2: 50% reduction from uncontrolled NOx Strategy #3: Purchase current year CAIR allowances	State Rule Update	Boiler and State specific	---	NOx: 600 to 18,000
Area and Point	ICI Boilers <25 mmBtu/hour	Annual boiler tune-up	State Rule Update	State specific	---	

Sector	Source Category	Control Measure	Implementation Method	Percent Reduction from 2009 OTB/W Emission Levels		Cost Effectiveness ($/ton)
				NOx	VOC	
Point	Glass Furnaces	Require furnace operators to meet the emission limits in the San Joaquin Valley rule by 2009. These limits are achievable through implementation of "oxyfiring" technology for each furnace at furnace rebuild. If the operator does not rebuild the furnace by 2009 or implement measures to meet the limits in the San Joaquin Valley rule, the operator would be required to purchase NOx allowances equal to the difference between actual emissions and the limits in the San Joaquin Valley rule. Compliance with Rule 4354 will allow manufacturers to use a mix of control options to meet the suggested limits. Manufacturers may propose alternative compliance methods to meet the specified limits, including emissions averaging.	State Rule or Permit	Source specific	---	NOx: 1,254 to 2,500
Point	Cement Plants	Require existing kilns to meet a NOx emission rate of 3.88 lbs/ton clinker for wet kiln 3.44 lbs/ton clinker for long dry kiln 2.36 lbs/ton clinker for pre-heater kiln 1.52 lbs/ton clinker for pre-calciner kiln	State Rule Update	Source specific	---	NOx: <2,500
Onroad Mobile	Diesel Truck Chip Reflash	Mandatory program to upgrade the version of software in engine electronic control module (ECM), (also known as "chip reflash) to reduce off-cycle NOx emissions.	Model Rule	10	---	NOx: 20-30
Onroad Mobile	Regional Fuel based on Reformulated Gasoline Options	Extend RFG requirements to counties in OTC that currently do not have RFG.	Memorandum of Understanding - OTC	State specific	State specific	VOC: 5,200 NOx: 3,700

Table 1-2 Estimated Emission Benefits in 2009 by State Resulting from the OTC 2006 Control Measures

	VOC Emission Reduction Benefit (summer tpd)							NOx Emission Reduction Benefit (summer tpd)							
State	**Adhesives & Sealants**	**Cutback\Emulsified Asphalt Paving**	**Consumer Products**	**PFC (Area)[a]**	**PFCs (Nonroad)[a]**	**Regional Fuels**	**Total VOC Reduction**	**Diesel Engine Chip Reflash**	**Regional Fuels**	**Asphalt Production**	**Cement Kilns**	**Glass/Fiberglass[b]**	**ICI Boilers Area Sources**	**ICI Boilers Point Sources**	**Total NOx Reduction**
CT	4.2	4.3	0.7	0.4	0.1	0.0	9.7	3.5	0.0	0.0	0.0	0.0	2.8	2.1	8.4
DE	1.0	0.0	0.1	0.1	<0.1	0.0	1.4	0.6	0.0	0.2	0.0	0.0	1.2	0.1	2.1
DC	0.1	0.0	0.1	0.1	<0.1	0.0	0.4	0.8	0.0	0.0	0.0	0.0	0.4	0.4	1.6
ME	2.5	10.6	0.2	0.1	<0.1	9.1	22.6	1.4	0.2	0.7	0.0	0.0	1.1	2.8	6.2
MD	5.8	0.0	1.0	1.4	0.4	3.2	11.8	5.6	0.0	0.1	13.1	0.3	1.2	2.4	22.7
MA[d]	8.9	8.1	10.2	1.7	0.5	0.0	29.3	6.7	0.0	0.6	0.0	1.5	6.6	6.8	22.2
NH	2.3	4.4	0.3	0.2	0.1	4.3	11.5	2.0	0.2	0.0	0.0	0.0	3.4	1.9	7.5
NJ	9.2	4.7	1.4	1.0	0.3	0.0	16.7	9.7	0.0	1.0	0.0	4.9	0.0	3.4	19.0
NY	21.5	16.4	3.7	2.6	0.8	56.9	101.9	16.1	2.1	0.0	15.3	5.8	33.8	7.0	80.1
PA	21.9	8.4	2.1	1.6	0.5	58.0	92.3	12.4	2.0	0.2	14.0	24.3	12.2	9.8	73.9
RI	1.5	1.1	0.2	0.2	<0.1	0.0	3.0	0.8	0.0	0.0	0.0	0.5	2.1	0.5	3.9
VT	2.2	1.8	0.1	0.1	<0.1	7.9	12.1	0.9	0.3	0.0	0.0	0.0	0.9	0.4	2.5
No. VA[c]	1.0	<0.1	0.5	0.4	0.1	0.0	1.9	2.5	0.0	0.1	0.0	0.0	3.9	0.1	6.6
OTR	**82.3**	**59.8**	**20.5**	**9.9**	**3.0**	**139.4**	**314.8**	**63.0**	**4.8**	**3.0**	**42.5**	**37.3**	**69.5**	**37.7**	**257.8**

a) The table shows the estimated emission reduction that will occur in 2009; additional reductions will occur in later years as new, less-emitting PFCs that comply with the OTC 2006 control measure penetrate the market.

b) The table show the maximum emission reduction from glass/fiberglass furnaces when the OTC 2206 control measure is fully implemented. No all of the reduction shown will be achieved by 2009.

c) The following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

d) MA proposed rule has a January 1, 2009 effective date and includes the VOC limits from the OTC 2001 model rule and those in the OTC 2006 model rule. The 2009 benefit MA shows the benefit from both sets of limits. For all other States, the 2009 benefit shows the change in emissions from the OTC 2006 model rule only.

Figure 1-1 VOC Emission Reduction Benefits from OTC 2006 Control Measures in 2009

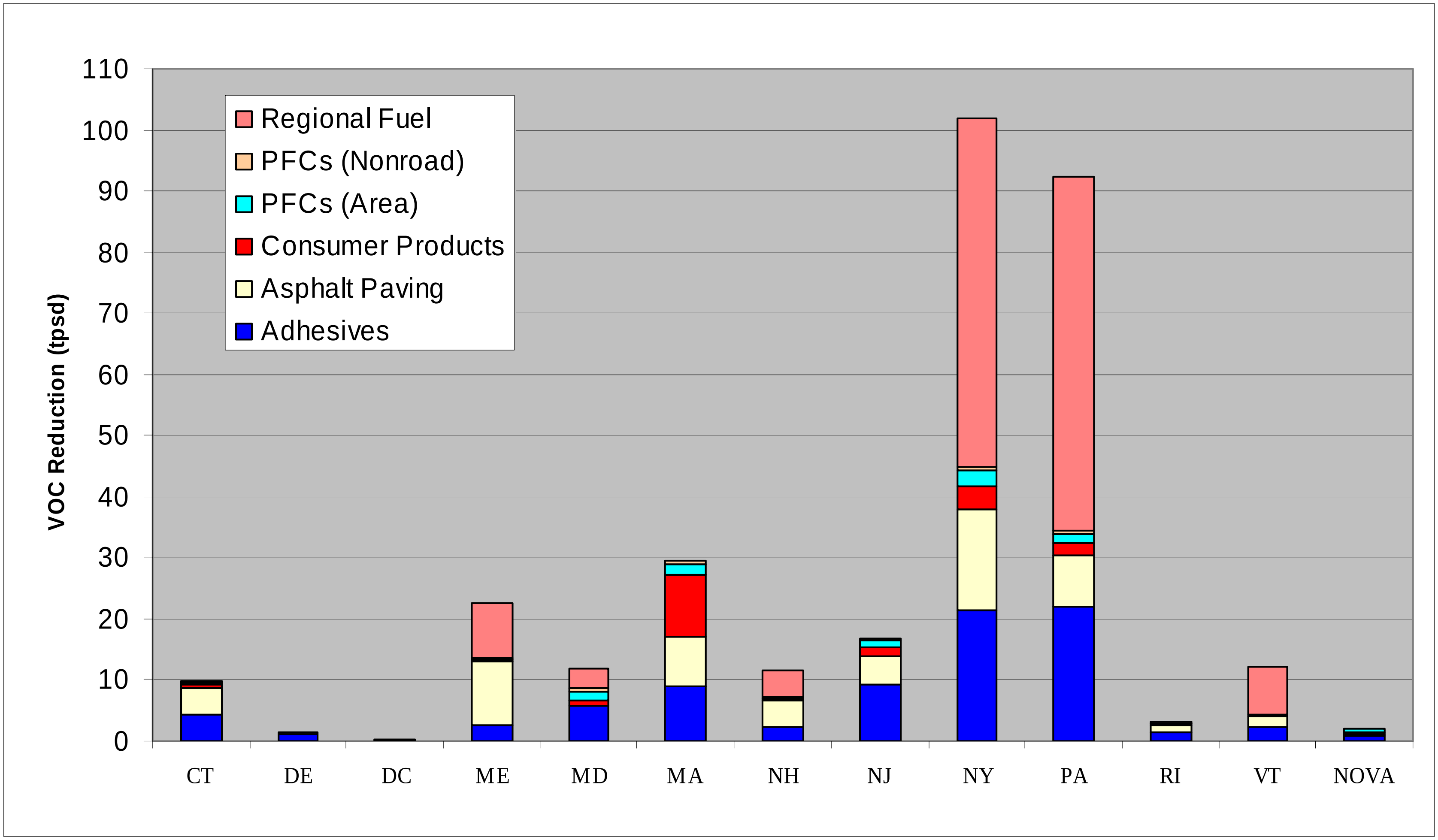
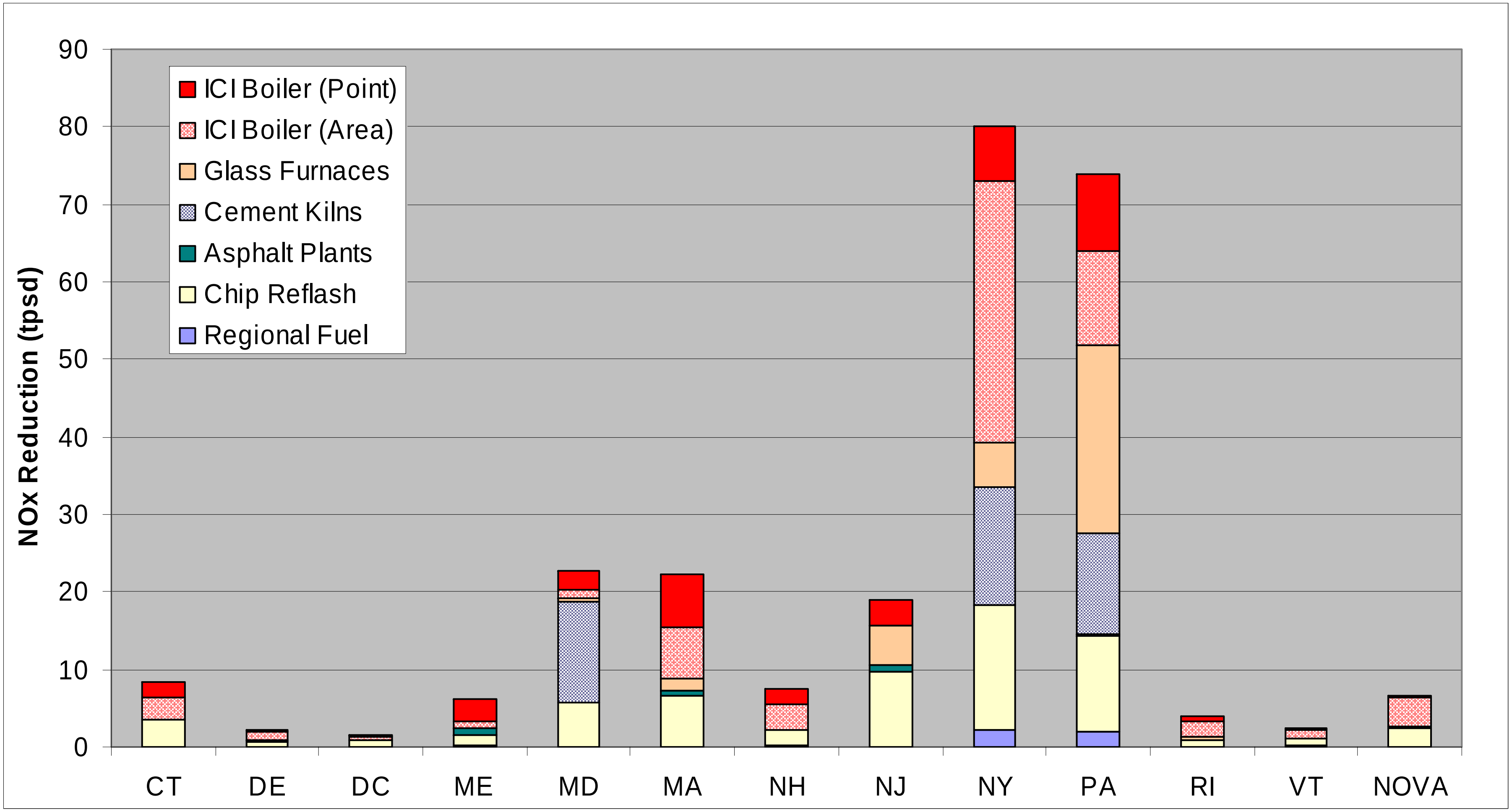


Figure 1-2 NOx Emission Reduction Benefits from OTC 2006 Control Measures in 2009



2.0 INTRODUCTION

The Ozone Transport Commission (OTC) is a multi-state organization created under the Clean Air Act (CAA). The OTC is responsible for advising EPA on transport issues and for developing and implementing regional solutions to the ground-level ozone problem in the Northeast and Mid-Atlantic regions. To supplement local and state-level efforts to reduce ozone precursor emissions, which may not alone be sufficient to attain federal standards, the OTC member states are considering control measures appropriate for adoption by all states in the region as part of their planning to attain and maintain the 8-hour ozone National Ambient Air Quality Standards (NAAQS).

The development of the control measures described in this document parallels a prior effort. The OTC developed a series of model rules in 2001 for the States to consider in adopting control measures to reduce volatile organic compound (VOC) emissions and oxide of nitrogen (NOx), which are ozone precursors, to (1) assist in the attainment of the one-hour ozone health standard, (2) address the VOC and NOx emission reduction shortfalls identified by EPA, and (3) implement the State Implementation Plans (SIP) commitments to EPA. These model rules, which have been adopted in many OTC states, will be referred to as the "OTC 2001 model rules" in this document.

The analysis in this report provides a description of the control measures identified by the OTC to help states attain the 8-hour ozone NAAQS. It also describes the associated incremental emission reductions and costs associated with each measure. The control measures analyzed in this report are those that were identified by the OTC Commissioners at the June 2006 OTC annual meeting in Boston (OTC 2006a, OTC 2006b, OTC 2006c) and at the November 2006 OTC fall meeting in Richmond (OTC 2006d, OTC 2006e, OTC 2006f). These control measures will be referred to as the "OTC 2006 control measures" in this document. For some source categories, the OTC has amended the OTC 2001 model rules or developed new model rules. These model rules will be referred to as the "OTC 2006 model rules" in this document.

The OTC 2006 model rules for volatile organic compounds (VOC) will reduce emissions from adhesives, sealants, adhesive primer, and sealant primer application; cutback and emulsified asphalt paving; consumer products; regional fuels; and portable fuel containers. The OTC 2006 control measures for oxides of nitrogen (NOx) will reduce emissions from asphalt production plants, cement kilns, diesel engine chip reflash, regional fuels, electric generating units (EGUs), glass and fiberglass furnaces, and industrial, commercial, institutional (ICI) boilers.

Section 3 describes the methods used to estimate the emission benefits of the VOC control measures. For each source category, there are subsections that describe the existing Federal and OTC State regulations that affect the VOC emissions, summarize the major elements of the control measures, discuss how the emission benefits were quantified, and present information on anticipated costs and cost-effectiveness. VOC emissions and reductions by State and source category in 2002 and 2009 are presented at the end of Section 3. Section 4 presents similar information for the NOx source categories. Section 5 presents similar information for the SO2 source categories. Section 6 provides a list of references used in developing this report.

Appendix A presents a brief description of the process that the OTC followed in identifying and evaluating candidate control measures. Appendix B lists the approximately 1,000 control measures that were initially analyzed. Appendix C contains the control measure summary sheets that were developed during this analysis. Appendices D, E, and F present the emission benefits by county for VOC, NOx, and SO2 respectively. Each appendix contains a tabulation of the 2002 base emissions, the projected 2009/2012/2018 emissions and expected emission reduction benefit from the additional control measures in 2009/2012/2018). Appendix G contains a listing of State ICI boiler regulations.

3.0 VOC ANALYSIS METHODS

This Section describes the analysis of the 2006 OTC control measures to reduce VOC emissions from five source categories: adhesives, sealants, adhesive primer, and sealant primer application; cutback and emulsified asphalt paving; consumer products; regional fuels; and portable fuel containers. For each of the five categories, there are separate subsections that discuss existing Federal/state rules, summarize the requirements of the 2006 OTC control measure, describe the methods used to quantify the emission benefit, and provide an estimate of the anticipated costs and cost-effectiveness of the control measure. At the end of Section 3, we provide the estimated emissions for 2002 and 2009 by source category and State. Appendix D provides county-by-county summaries of the emission reductions for each of the categories and projection years.

3.1 ADHESIVES, SEALANT, ADHESIVE PRIMER, AND SEALANT PRIMER APPLICATION

Adhesives, sealants, adhesive primer, and sealant primer are used in product manufacturing, packaging, construction, and installation of metal, wood, rubber, plastic, ceramics, or fiberglass materials. In general, an adhesive is any material used to bond two surfaces together. In general, a sealant is a material with adhesive properties that is used primarily to fill, seal, waterproof or weatherproof gaps or joints between two surfaces.

VOC emissions from this category result from evaporation of solvents during transfer, drying, surface preparation and cleanup operations. These solvents are the media used to solubilize the adhesive, sealant, or primer material so that it can be applied. The solvent is also used to completely wet the surface to provide a stronger bond. In plastic pipe bonding, the solvent dissolves the polyvinyl chloride pipe and reacts with the pipe to form a bond. Solvents used to clean the surface before bonding and to clean the application equipment after bonding also contribute to VOC emissions.

VOC emissions in this category are primarily from industrial and commercial operations such as wood product manufacturers, upholstery shops, adhesives retailers and architectural trades, such as building construction, floor covering installation and roof repair.

3.1.1 Existing Federal and State Rules

EPA published the consumer and commercial products rule on September 11, 1998 (40 CFR Part 59 Subpart D) under authority of Section 183(e) of the Clean Air Act. The Federal Part 59

Subpart C requirements for consumer products regulate five types of “household” adhesives (aerosols, contact, construction and panel, general purpose and structural waterproof). The VOC content limits for these products apply only to “household products”, defined as “any consumer product that is primarily designed to be used inside or outside of living quarters or residences, including the immediate surroundings, that are occupied or intended for occupation by individuals.” Thus, the Part 59 rule applies only to adhesives used in household settings and not to adhesives used in industrial or commercial applications.

The OTC developed a model rule for consumer and commercial products in 2001 (referred to as the “OTC 2001 model rule for consumer products” in this document) to regulate additional consumer product categories by requiring more stringent VOC content limits than the Federal rule. The OTC 2001 model rule for consumer products contains VOC limits for adhesives and sealants. However, with the exception of aerosol adhesives, the definitions of these products generally exempt products sold in larger containers. Specifically, the OTC 2001 model rule includes the following definitions (italics added for emphasis):

- Section 2(8) Adhesive. "Adhesive" means any product that is used to bond one surface to another by attachment. “Adhesive” does not include products used on humans and animals, adhesive tape, contact paper, wallpaper, shelf liners, or any other product with an adhesive incorporated onto or in an inert substrate. For “Contact Adhesive,” *adhesive does not include units of product, less packaging, which consist of more than one gallon*. For “Construction, Panel, and Floor Covering Adhesive,” and “General Purpose Adhesive”, *adhesive does not include units of product, less packaging, which weigh more than one pound and consist of more than 16 fluid ounces*. This limitation does not apply to aerosol adhesives.

- Section 2(148) Sealant and Caulking Compound. "Sealant and Caulking Compound" means any product with adhesive properties that is designed to fill, seal, waterproof, or weatherproof gaps or joints between two surfaces. “Sealant and Caulking Compound” does not include roof cements and roof sealants; insulating foams; removable caulking compounds; clear/paintable/water resistant caulking compounds; floor seam sealers; products designed exclusively for automotive uses; or sealers that are applied as continuous coatings. *“Sealant and Caulking Compound” also does not include units of product, less packaging, which weigh more than one pound and consist of more than 16 fluid ounces.* For the purposes of this definition only, “removable caulking compounds” means a compound which temporarily seals windows or doors for three to six month time intervals, and “clear/paintable/water resistant caulking compounds” means a compound which contains no appreciable level of opaque fillers or pigments; transmits most or all visible light through the caulk when cured; is paintable; and is immediately resistant to precipitation upon application.

Thus, the same products sold in containers larger than the above thresholds are not covered by the OTC 2001 model rule for consumer products.

3.1.2 Description of the OTC 2006 Model Rule

The OTC 2006 model rule for adhesives and sealants is based on the reasonably available control technology (RACT) and best available retrofit control technology (BARCT) determination by the California Air Resources Board (CARB) developed in 1998. The OTC 2006 model rule has the following requirements:

A. Regulates the application of adhesives, sealants, adhesive primers and sealant primers by providing options for appliers to either to use a product with a VOC content equal to or less than a specified limit or to use add-on controls;

B. Limits the VOC content of aerosol adhesives to 25 percent by weight;

C. Requirements for cleanup solvents;

D. A VOC limit for surface preparation solvents;

E. An alternative add-on control system requirement of at least 85 percent overall control efficiency (capture and destruction efficiency), by weight;

F. VOC containing materials must be stored or disposed of in closed containers;

G. Prohibits the sale of any adhesive, sealant, adhesive primer or sealant primer which exceeds the VOC content limits listed in the model rule;

H. Manufacturers must label containers with the maximum VOC content as supplied, as well as the maximum VOC content on an as-applied basis when used in accordance with the manufacturer’s recommendations regarding thinning, reducing, or mixing with any other VOC containing material; and

I. Prohibits the specification of any adhesive, primer, or sealant that violates the provisions of the model rule.

Several adhesive and sealant applications and products are exempt from this model rule: tire repair, assembly and manufacturing of undersea-based weapon systems, testing and evaluation associated with research and development, solvent welding operations for medical devices, plaque laminating operations, products or processes subject to other state rules, low-VOC products (less than 20 g/l), and adhesives subject to the state rules based on the OTC 2001 consumer products model rule. Additionally, the model rule provides an exemption for adhesive application operations at stationary sources that use less than 55 gallons per calendar year of noncomplying adhesives and for stationary sources that emit not more than 200 pounds of VOCs per year from adhesives operations.

3.1.3 Emission Benefit Analysis Methods

Emissions from this category are classified as both point sources and area sources. About 96 percent of adhesive and sealant VOC emissions in the OTC states fall into the area source category. The remaining four percent of the VOC emissions are included in the point source inventory.

The emission reduction benefit estimation methodology for area sources is based on information developed and used by CARB for their RACT/BARCT determination in 1998. CARB estimates that the total industrial adhesive and sealant emissions in California to be about 45 tons per day (tpd). Solvent-based emissions are estimated to be about 35 tpd of VOC and water-based adhesive and sealant emissions are about 10 tpd of VOC. CARB indicated that the emission reductions would be achieved mainly due to the switch from high-VOC to low-VOC products rather than from the use of add-on control devices. CARB estimated that emission reductions achieved by statewide compliance with the VOC limits in the RACT/BARCT determination will range from approximately 29 to 35 tpd (CARB 1998, pg. 18). These emission reductions correspond to a 64.4 to 77.8 percent reduction from uncontrolled levels. For OTC modeling purposes, we used the lower end of this range (i.e., 64.4 percent reduction) to estimate the emission benefit for area sources due to the OTC 2006 model rule.

For point sources, we first identified those sources that were applying adhesives and sealants (using the source classification code of 4-02-007-xx, adhesives application). Next, we reviewed the MANEVU inventory to determine whether sources had existing capture and control systems. Several sources reported capture and destruction efficiencies in the 70 to 99 percent range. A few sources reported capture and destruction efficiencies of 99+ percent. Most of the controlled sources reported capture and destruction efficiencies in the 90-98 percent range. Sources with existing control systems that exceed an 85 percent overall capture and destruction efficiency would meet the OTC 2006 model rule provision for add-on air pollution control equipment; no additional reductions were calculated for these sources. For point sources without add-on control equipment, we used the 64.4 percent reduction discussed in the previous paragraph based on the CARB determination.

3.1.4 Cost Estimates

The cost of complying with the new requirements includes the cost of using alternative formulations of low-VOC or water-based adhesives, sealants, adhesive primers, and sealant primers and cleanup products. Based on information provided by the Ventura County Air Pollution Control District, CARB determined that the cost-effectiveness of their adhesives rule ranges from a savings of $1,060 per ton to a cost of $2,320 per ton of VOC reduced (CARB 1998, pg. 17). These costs are likely to be less in the OTR, because some of the one-time research and reformulation costs incurred for products sold in California will not have to be incurred again for products sold in the OTR. CARB also reports a cost-effectiveness of $9,000 to $110,000 per ton of VOC reduced for the use of add-on control equipment to comply with the requirements.

3.2 CUTBACK AND EMULSIFIED ASPHALT PAVING

Asphalt paving is used to pave, seal and repair surfaces such as roads, parking lots, drives, walkways and airport runways. Asphalt paving is grouped into three general categories: hot-mix, cutback, and emulsified. Hot-mix asphalt is the most commonly used paving asphalt. Hot-mix asphalt produces minimal VOC emissions because its organic components have high molecular weights and low vapor pressures. Cutback asphalt is used in tack and seal operations, in priming roadbeds for hot-mix application and for paving operations for pavements up to several inches thick. In preparing cutback asphalt, asphalt cement is blended or “cut back” with a diluent, typically from 25 to 45 percent by volume of petroleum distillates, depending on the desired viscosity. Emulsified asphalt is used in most of the same applications as cutback asphalt but is a lower emitting alternative to cutback asphalt. Instead of blending asphalt cement with petroleum distillates, emulsified asphalts use a blend of asphalt cement, water and an emulsifying agent, such as soap. Some emulsified asphalts contain virtually no VOC diluents; however, some emulsified asphalts may contain up to 12 percent VOC by volume.

3.2.1 Existing Federal and State Rules

The EPA published a Control Technique Guideline (CTG) for the use of cutback asphalt in December 1977. The CTG recommended replacing cutback asphalt binders with emulsified asphalt during the ozone season. In 1979, EPA added a specification for emulsified asphalt to the CTG recommendations to limit the content of oil distillate in emulsified asphalt to no higher than 7 percent oil distillate.

Table 3-1 summarizes the current asphalt paving rules for the 13 OTR states. Most of the states in the OTR have adopted the CTG banning cutback asphalt in the ozone season. Some states have exemptions to this rule, allowing the use of cutback asphalt with up to 5 percent VOC. For emulsified asphalt, the requirements vary greatly. The VOC content of emulsified asphalt is limited to 0-12 percent, depending on the State and the type of emulsified asphalt. Delaware completely bans the use of emulsified asphalt that contains any VOC.

Table 3-1 Summary of OTC State Rules for Cutback and Emulsified Asphalt

State	Cutback Asphalt	Emulsified Asphalt
CT	22a-174-20 (k): VOC content limited to 5% during June, July, August, and September	Nothing specified
DE	Reg. No. 24, Section 34: Ban during ozone season	Reg. No. 24, Section 34: Ban on use of emulsified asphalt that contains any VOC
DC	Chapter 7 Section 8-2:707(k): Ban during the months of April, May, June, July, August, and September	Nothing specified
ME	Chapter 131: Ban during the period May 1 through September 15, with some exceptions	Chapter 131: VOC content limited to 3-12%, depending on the type of use
MD	COMAR 26.11.11.02: Ban during the period April 16 through October 14	COMAR 26.11.11.02: Allowed upon approval of the Department; no VOC content limit specified
MA	310 CMR 7.18(9): Ozone season ban on cutback asphalt with VOC content greater than 5% by weight with exemptions including use as prime coat	Nothing Specified
NH	Env-A 1204.42: Ban during the months of June through September; cutback with up to 5% VOC allowed upon approval of Department	Env-A 1204.42: VOC content limited to 3-12%, depending on the type of use
NJ	7:27-16.19: Ban from April 16 through October 14, with some exemptions	7:27-16.19: VOC content limited to 8% by volume
NY	Part 211: Ban from May 2 through October 15	Part 211: VOC content limited to 2-12%, depending on the type of ASTM grade
PA	25 Pa. Code Section 129.64: Ban from May 1 to October 30	25 Pa. Code Section 129.64: VOC content limited to 0-12%, depending on type
RI	Reg. No. 25: Ban from April 1 to September 30, with some exemptions	Reg No. 25: VOC content limited to 3-12%, depending on application/use
VT	5-253.15: Ban on cutback asphalt with VOC content greater than 5% by weight, with some exemptions	5-253.15: Ban on emulsified asphalt with VOC content greater than 5% by weight
VA	Chapter 40, Article 39: Ban during April through October	Chapter 40, Article 39: VOC content limited to 6% by volume

3.2.2 Description of the OTC 2006 Model Rule

The OTC 2006 model rule for the asphalt paving control measure prohibits the use of cutback asphalt during the ozone season and limits the use of emulsified asphalt to that which contains not more than 0.5 mL of oil distillate from a 200 mL sample (as determined using American Society for Testing and Materials {ASTM} Method D244 - Test Methods for Emulsified Asphalts) regardless of application. This is equivalent to a VOC content of 0.25 percent. Exemptions may be granted under certain circumstances upon the approval of the State commissioner.

3.2.3 Emission Benefit Analysis Methods

The OTC 2006 control measure for asphalt paving calls for a complete ban on the use of cutback asphalt during the ozone season. As shown in Table 3-1, current state regulations generally ban the use of cutback asphalt during the ozone season. However, there are exemptions from the ban and as a result there are VOC emissions from the use of cutback asphalt during the ozone season. The OTC 2006 control measure eliminates any exemptions and totally eliminates any VOC emissions from the use of cutback asphalt during the ozone season.

The emission reductions resulting from OTC 2006 control measure for emulsified asphalt vary by State. The two percent VOC content limit on emulsified asphalt depend on the baseline VOC content of emulsified asphalt. The control measure limits emulsified asphalt to not more than 0.5 mL of oil distillate from a 200 mL sample as determined using ASTM Method D244. This is equivalent to a VOC content of 0.25 percent. The baseline VOC content may range from 0 to 12 percent. New Jersey used a VOC content of 8 percent in their baseline emission calculations (based on the 8 percent limit in their current rule). Reducing the VOC content to 0.25 percent in New Jersey will result in a 96.9 percent reduction. Delaware already bans the use of emulsified asphalt that contains any VOC, so there is no reduction in Delaware. Several other states used an average VOC content of 2.5 percent when developing their emission inventory. Thus, reducing the average VOC content from 2.5 percent to 0.25 percent results in a 90 percent reduction in VOC emissions. For States that did not supply a baseline VOC content for asphalt paving, we used the 90 percent reduction in VOC emissions from emulsified asphalt paving during the ozone season.

3.2.4 Cost Estimates

Low-VOC alternatives are currently available and no additional costs are expected from their use.

3.3 CONSUMER PRODUCTS

Consumer and commercial products are those items sold to retail customers for personal, household, or automotive use, along with the products marketed by wholesale distributors for use in commercial or institutional settings such as beauty shops, schools and hospitals. VOC emissions from these products are the result of the evaporation of propellant and organic solvents during use. Consumer and commercial products include hundreds of individual products, including personal care products, household products, automotive aftermarket products, adhesives and sealants, FIFRA-related insecticides, and other miscellaneous products.

3.3.1 Existing Federal and State Rules

EPA published the Federal consumer and commercial products rule on September 11, 1998 (40 CFR Part 59 Subpart D) under authority of Section 183(e) of the Clean Air Act. This rule limits the VOC content of 24 product categories representing 48 percent of the consumer and commercial products inventory nationwide. According to EPA, VOC emissions from those 24 product categories were reduced by 20 percent. But since over half of the inventory is unaffected by the rule, the Federal rule is estimated to yield VOC reductions of 9.95 percent of the total consumer products inventory (Pechan 2001, pg 7).

Since over half of the inventory is unregulated by the Federal Part 59 rule, the OTC developed a model rule for consumer and commercial products in 2001 (referred to as the “OTC 2001 model rule for consumer products” in this document) to be used by the OTC jurisdictions to develop regulations for additional consumer product categories and to specify more stringent VOC content limits than the Federal rule. The VOC content limits and products covered in the OTC 2001 model rule are similar to the rules developed by CARB in the late 1990s. The OTC 2001 model rule for consumer products provides background for OTC jurisdictions to develop programs to regulate approximately 80 consumer product categories and includes technologically feasible VOC content limits. The emission reductions for state programs based on the OTC 2001 model rule are estimated to be 14.2 percent of the total consumer product inventory beyond the national rule reduction (Pechan 2001, pg. 8).

Most, but not all, states in the OTR have adopted regulatory programs based on the OTC 2001 model rule for consumer products. Table 3-2 summarizes the adoption status for the 13 OTR jurisdictions.

Table 3-2 Status of OTC State's Promulgation of the OTC 2001 Model Rule for Consumer Products.

State	Effective Date of VOC Limits	Regulatory Citation
CT [a]	Initiated process to adopt in 2006	R.C.S.A. section 22a-174-40
DE	Effective January 1, 2005	Regulation Number 41
DC	Effective June 30, 2004	Regulation 719
ME	Effective May 1, 2005	Chapter 152
MD	Effective January 1, 2005	COMAR 26.11.32
MA [b]	In progress – proposed effective date is January, 2009	310 CMR 7.25(12)
NH	Effective January 1, 2007	Chapter Env-A 4100
NJ	Effective Janaury 1, 2005	Chapter 27, Subchapter 24
NY	Effective January 1, 2005	Chapter 3, Part 235
PA	Effective January 1, 2005	25 Pa. Code Chapter 130, Subchapter B
RI	Intend to develop in 2006	n/a
VT	Under Consideration	n/a
VA [c]	Effective July 1, 2005	Chapter 40, Article 50

a) Connecticut's proposed rule includes both the VOC limits from the OTC 2001 model rule and the new and revised VOC emissions limits and related provisions that were adopted by the California Air Resources Board on July 20, 2005. These new and revised VOC limits are identical to those in the OTC 2006 model rule.

b) Massachusett's proposed rule includes the VOC limits from the OTC 2001 model rule and those in the OTC 2006 model rule.

c) Virginia's rule applies only in Northern Virginia VOC Emission Control Area (10 northern Virginia jurisdictions in the OTR)

3.3.2 Description of the OTC 2006 Model Rule

The OTC 2001 model rule for consumer products closely mirrored a series of five CARB consumer products rules. CARB recently amended their consumer products rules in July 2005. As shown in Table 3-3, these amendments to the CARB rule affected 18 categories of consumer products (14 new categories, including subcategories, with new product category definitions and VOC limits; one previously regulated category with a more restrictive VOC limit; and two previously regulated categories with additional requirements).

Table 3-3 Consumer Products Affected by CARB's July 2005 Rule Amendments

New Categories with VOC Limits for Regulation	
Adhesive Remover	Footwear or Leather Care Product
– 4 subcategories	Hair Styling Product[a]
Anti-Static Product	Graffiti Remover
Electrical Cleaner	Shaving Gel
Electronic Cleaner	Toilet/Urinal Care Product
Fabric Refresher	Wood Cleaner
Previously Regulated Category with More Restrictive Limit	
Contact Adhesive[b]	
Previously Regulated Categories with Additional Requirements	
Air Fresheners	General Purpose Degreasers

a) This product category will incorporate Hair Styling Gel and include additional forms of hair styling products (i.e., liquid, semi-solid, and pump spray) but does not include Hair Spray Product or Hair Mousse.

b) This product category has been separated into 2 subcategories: General Purpose and Special Purpose

Most of these new CARB limits become effective in California by December 31, 2006. Two of the limits, anti-static products (aerosol) and shaving gels, have effective dates in either 2008 or 2009. For shaving gels, there is a VOC limit that becomes effective on December 31, 2006, with a more stringent second tier limit that becomes effective on December 31, 2009. The anti-static product (aerosol) limit becomes effective on December 31, 2008.

The OTC 2006 model rule will modify the OTC 2001 model rule based on the CARB July 20, 2005 amendments. The OTC is not including the anti-static aerosol products and the second tier shaving gel limit in its revisions to the OTC 2001 model rule because of industry concerns that meeting these limits may not be feasible. CARB acknowledged these concerns by requiring a technology review of these product categories in 2008 to determine whether the limits are achievable.

3.3.3 Emission Benefit Analysis Methods

The emission reduction benefit estimation methodology is based on information developed by CARB. CARB estimates 6.05 tons per day of VOC reduced in California from their July 2005 amendments (CARB 2004a, pg. 8), excluding the benefits from the two products (anti-static products and shaving gels) with compliance dates in 2008 or 2009. This equates to about 2,208 tons per year in California. The population of California as of July 1, 2005 is 36,132,147

(Census 2006). On a per capita basis, the emission reduction from the CARB July 2005 amendments equals 0.122 lbs/capita.

Since the OTC's 2006 control measure is very similar to the CARB July 2005 amendments (with the exclusion of the anti-static products and shaving gel 2008/2009 limits), the per capita emission reductions are expected to be the same in the OTR. The per capita factor after the implementation of the OTC 2001 model rule is 6.06 lbs/capita (Pechan 2001, pg. 8). The percentage reduction from the OTC's 2006 control measure was computed as shown below:

Current OTC Emission Factor	=	6.06 lbs/capita
Benefit from CARB 2005 amendments	=	0.122 lbs/capita
Percent Reduction	=	100%*(1 - (6.06 – 0.122)/6.06)
	=	2.0%

3.3.4 Cost Estimates

CARB estimates that the cost effectiveness of VOC limits with an effective date of December 31, 2006, to be about $4000 per ton of VOC reduced (CARB 2004, pg. 21). CARB further estimates that the average increase in cost per unit to the manufacturer to be about $0.16 per unit. Assuming CARB's estimates for the OTR provides a conservative estimate, because some of the one-time research and reformulation costs incurred for products sold in California will not have to be incurred again for products sold in the OTR.

3.4 PORTABLE FUEL CONTAINERS

Portable fuel containers (PFCs) are designed for transporting and storing fuel from a retail distribution point to a point of use and the eventual dispensing of the fuel into equipment. Commonly referred to as "gas cans," these products come in a variety of shapes and sizes with nominal capacities ranging in size from less than one gallon to over six gallons. Available in metal or plastic, these products are widely used to refuel residential and commercial equipment and vehicles when the situation or circumstances prohibits direct refueling at a service station. PFCs are used to refuel a broad range of small off-road engines and other equipment (e.g., lawnmowers, chainsaws, personal watercraft, motorcycles, etc.). VOC emissions from PFCs are classified by five different activities:

- **Transport-spillage** emissions from PFCs occur when fuel escapes from PFCs that are in transit.
- **Diurnal** emissions result when stored fuel vapors escape to the air through any possible openings while the container is subjected to the daily cycle of increasing and decreasing

ambient temperatures. Diurnal emissions depend on the closed- or open- storage condition of the PFC.

- **Permeation** emissions are produced after fuel has been stored long enough in a container for fuel molecules to infiltrate and saturate the container material, allowing vapors to escape through the walls of containers made from plastic.
- Equipment refueling **vapor displacement** and **spillage** emissions result when fuel vapor is displaced from nonroad equipment (e.g., lawnmowers, chainsaws, personal watercraft, motorcycles, etc.) and from gasoline spillage during refueling of the equipment with PFCs. These VOC emissions are already taken into account in the nonroad equipment emission inventory by the NONROAD model.

Diurnal evaporative emissions are the largest category.

3.4.1 Existing Federal and State Rules

The OTC developed a model rule for PFCs in 2001. The OTC 2001 model rule was very similar to a rule adopted by CARB in 2000. The OTC 2001 model rule provides background for OTC jurisdictions to develop regulatory programs that require spill-proof containers to meet performance standards that reduce VOC emissions. The performance standards include a requirement that all PFCs to have an automatic shut-off feature preventing overfilling and an automatic closing feature so the can will be sealed when it is not being used. The performance standards also eliminate secondary venting holes and require new plastics to reduce vapor permeation through container walls. There is no requirement for owners of conventional PFCs to modify their PFCs or to scrap them and buy new ones. Compliance will be accomplished primarily through attrition. As containers wear out, are lost, damaged, or destroyed, consumers will purchase new spill-proof containers to replace the conventional containers. CARB determined that the average useful life of a PFC is five years. The OTC chose to assume a more conservative ten-year turnover rate, with 100 percent rule penetration occurring 10 years after adoption of the rule.

CARB estimated that the performance standards would reduce VOC emissions by 75 percent. CARB’s 2004 analysis (CARB 2004b) reevaluated the estimate reductions due to some unforeseen issues with the new cans and new survey information. Based on CARB’s updated data, CARB estimated that VOC emissions would be reduced by 65 percent from the first set of amendments.

CARB has also adopted a second set of amendments in two phases. The first phase was filed on January 13, 2006, effective February 12, 2006. For Phase I, CARM amended their PFC regulation to address the use of utility jugs and kerosene containers that are sometimes used by consumers for gasoline. The second phase of the amendments was filed on September 11, 2006, effective October 11, 2006. These amendments (CARB 2006) will:

- Establish a mandatory certification program and accompanying test procedures;
- Amend the existing performance standards to eliminate the automatic shutoff performance standard effective July 1, 2007;
- Amend the existing performance standards to eliminate the fill height and flow rate performance standards;
- Amend the existing PFC pressure standard;
- Amend the current test methods;
- Change the permeability standard from 0.4 to 0.3 grams/gallon-day;
- Establish a voluntary consumer acceptance-labeling program that allows participating manufacturers to label their PFCs with an ARB "Star Rating" indicating how consumers rate their products' ease of use; and
- Combine the currently separate evaporation requirement and permeation standard and test method into a single diurnal standard and test method.

In February 2007, EPA finalized a national regulation to reduce hazardous air pollutant emissions from mobile sources. Included in the final rule are standards that would reduce PFC emissions from evaporation, permeation, and spillage. EPA included a performance-based standard of 0.3 grams per gallon per day of hydrocarbons, determined based on the emissions from the can over a diurnal test cycle specified in the rule. The standard applies to containers manufactured on or after January 1, 2009. The standards are based on the performance of best available control technologies, such as durable permeation barriers, automatically closing spouts, and cans that are well-sealed.

3.4.2 Description of the OTC 2006 Model Rule

As shown in Table 3-4, most states in the OTR have already adopted PFC regulations based on the OTC 2001 model rule. The OTC 2001 model rule for PFCs closely mirrors the 2000 version of CARB's PFC rule. CARB recently amended their gas can regulation as discussed above in Section 3.4.1. The OTC 2006 model rule closely mirrors these CARB amendments. The 2006 amendments are estimated to reduce VOC emissions by 18.4 tons per day in California at full implementation in the year 2015, in addition to the benefits from the existing regulation. The OTC 2006 model rule will modify the OTC 2001 model rule based on the recent CARB amendments.

Table 3-4 Status of OTC State's Promulgation of the OTC 2001 Model Rule for Portable Fuel Containers

State	Date When New Containers are Required	Regulatory Citation
CT	Effective May 1, 2004	Section 22a-174-43
DE	Effective January 1, 2004	Reg. No. 41, Section 3
DC	Effective November 15, 2003	Rule 720
ME	Effective January 1, 2004	Chapter 155
MD	Effective January 1, 2003	COMAR 26.11.13.07
MA[a]	In progress (effective date will be January 1, 2009)	n/a
NH	Effective March 1, 2006	Env-A 4000
NJ	Effective January 1, 2005	Subchapter 24 (7:27-24.8)
NY	Effective January 1, 2003	Part 239
PA	Effective January 1, 2003	25 Pa. Code Chapter 130, Subchapter A
RI	In progress (late 2006 target date for final rule)	n/a
VT	Under Consideration	n/a
VA[b]	Effective January 1, 2005	Chapter 40, Article 42

a) Massachusetts' proposed rule will be based only on the OTC 2006 model rule; Massachessetts will not adopt the OTC 2001 model rule.

b) Virginia's rule applies only in Northern Virginia VOC Emission Control Area (10 northern Virginia jurisdictions in the OTR)

3.4.3 Emission Benefit Analysis Methods

Emissions from PFCs are accounted for in both the area and nonroad source inventories. The NONROAD model accounts for equipment refueling vapor displacement and spillage emissions result when fuel vapor is displaced from nonroad equipment (e.g., lawnmowers, chainsaws, personal watercraft, motorcycles, etc.) and from gasoline spillage during refueling of the equipment with PFCs. The area source inventory accounts for diurnal and permeation emissions associated with the fuel present in stored PFCs and transport-spillage emissions associated with refueling of a gas can at the gasoline pump. Based on the OTC 2001 model rule (Pechan 2001, pg. 11) roughly 70 percent of the VOC emissions are accounted for in the area source inventory, while the remaining 30 percent is from equipment refueling vapor displacement and spillage that is accounted for in the nonroad inventory.

The emission benefits have been calculated for the emissions accounted for in both the area and nonroad source inventory. Emissions from the nonroad category were estimated to be 30 percent of the PFC emissions accounted for in the area source inventory.

Also note that the OTC baseline emissions (i.e., 2002 emissions) do not include changes to the emission estimation methodology made by CARB in 2004. CARB conducted a new survey of PFCs in 2004, which included kerosene containers and utility jugs. Using this survey data, CARB adjusted their baseline emissions; a similar adjustment to the OTC baseline inventory has not been made.

Estimated emission reductions were based on information compiled by CARB to support their recent amendments. CARB estimated that PFC emissions in 2015 will be 31.9 tpd in California with no additional controls or amendments to the 2000 PFC rules (CARB 2005a, pg. 10). CARB further estimates that the 2006 amendment will reduce emission from PFCs by 18.4 tpd in 2015 in California compared to the 2000 PFC regulations (CARB 2005a, pg. 23). Thus, at full implementation, the expected incremental reduction is approximately 58 percent, after an estimated 65 percent reduction from the original 2000 rule.

The OTC calculations assume that States will adopt the rule by July 2007 (except in Massachusetts) and provide manufacturers one year from the date of the rule to comply. Thus, new compliant PFCs will not be on the market until July 2008. Assuming a 10-year turnover to compliant cans, only 10 percent of the existing inventory of PFCs will comply with the new requirements in the summer of 2009. Therefore, only 10 percent of the full emission benefit estimated by CARB will occur by 2009 – the incremental reduction will be 5.8 percent in 2009.

3.4.4 Cost Estimates

CARB estimates that the cost-effectiveness of the 2005/2006 amendments will range from $0.40 to $0.70 per pound of VOC reduced, or $800 to $1,400 per ton of VOC reduced (CARB 2005a, pg. 27). Assuming CARBs costs for the OTR provides a conservative estimate, because some of the one-time research and reformulation costs incurred for products sold in California will not have to be incurred again for products sold in the OTR.

3.5 REGIONAL FUELS

The Clean Air Act Amendments of 1990 required significant changes to conventional fuels used by motor vehicles. Beginning in 1995, “reformulated” gasoline must be sold in certain non-attainment areas and other states with non-attainment areas are permitted to opt-in.

Reformulated gasoline results in lower VOC emissions than would occur from the use of normal "baseline" gasoline.

3.5.1 Existing Federal and State Rules

All but two states in the OTR are participating, in whole or in part, with the federal reformulated gasoline program. However, nearly one-third of the gasoline sold in the OTR is not reformulated gasoline. NESCAUM has estimated the following fraction of gasoline that is reformulated by State:

State	Current RFG Fraction	State	Current RFG Fraction
CT	100%	NJ	100%
DC	100%	NY	54%
DE	100%	PA	24%
MA	100%	RI	100%
MD	86%	NoVA	100%
ME	0%	VT	0%
NH	64%		

3.5.2 Description of the OTC 2006 Control Measure

The Energy Policy Act of 2005 provides the opportunity for the OTR to achieve a single clean-burning gasoline and is consistent with what OTR states have promoted through the long debate over MTBE/ethanol/RFG. Approximately one-third of the gasoline currently sold in the OTR is not reformulated. The new authority plus the potential for emission reductions from the amount of non-reformulated gasoline sold in the OTR provides an opportunity for additional emission reductions in the region as well as for a reduced number of fuels, and possibly a single fuel, to be utilized throughout the region. The OTC Commissioners recommended that the OTC member states pursue a region fuel program consistent with the Energy Act of 2005 (OTC 2006b).

3.5.3 Emission Benefit Analysis Methods

Emission benefits resulting from extending reformulated gasoline to all areas of the OTR have been calculated for 2006 by NESCAUM (NESCAUM 2006a).

3.5.4 Cost Estimates

According to USEPA's regulatory impact analysis for reformulated gasoline (USEPA 1993), the cost per ton of VOC reduced for Phase I RFG is $5,200 to $5,900. USEPA also estimated the cost of Phase II RFG was $600 per ton of VOC reduced – this reflects the incremental cost over the cost of implementing Phase I of the RFG program.

3.6 VOC EMISSION REDUCTION SUMMARY

The results of the emission benefit calculations for the OTC states are described in this subsection. The starting point for the quantification of the emission reduction benefits is the MANEVU emission inventory, Version 3 (Pechan 2006, MACTEC 2006a) and the VISTAS emission inventory, BaseG (MACTEC 2006b), for the northern Virginia counties that are part of the OTR. The MANEVU and VISTAS inventories include a 2002 base year inventory as well as projection inventories for 2009 and 2018 (MANEVU also has projections for 2012, but VISTAS does not). The projection inventories account for growth in emissions based on growth indicators such as population and economic activity. The projection inventories also account for "on-the-books/on-the-way" (OTB/W) emission control regulations that have (or will) become effective between 2003 and 2008 that will achieve post-2002 emission reductions. For example, many States have already adopted the 2001 OTC model rules for consumer products and portable fuel containers. The emission reduction benefit from the 2001 OTC model rules are already accounted for in the MANEVU and VISTAS projection inventories. Emission reductions from existing regulations are already accounted for to ensure no double counting of emission benefits occurs.

Note that the emission reductions contained in this Section are presented in terms of tons per summer day. The MANEVU base and projection emission inventories do not contain summer day emissions for all States and source categories; the VISTAS inventory only contains annual values. When States provided summer day emissions in the MANEVU inventory, these values were used directly to quantify the emission benefit from the 2006 OTC control measure. When summer day emissions were missing from the MANEVU or VISTAS inventories, the summer day emissions were calculated using the annual emissions and the seasonal throughput data from the NIF Emission Process table. If the seasonal throughput data was missing, the summer day emissions were calculated using the annual emissions and a summer season adjustment factor derived from the monthly activity profiles contained in the SMOKE emissions modeling system.

Tables 3-5 to 3-10 show State summaries of the emission benefits from the OTC 2006 VOC control measures described previously in this Section. For each of the source categories, the Tables show four columns: (1) the actual 2002 summer daily emissions; (2) the summer daily emissions for the 2009 OTB/W scenario that accounts for growth and for the emission control regulations that have (or will) become effective between 2003 and 2008 that will achieve post-2002 emission reductions; (3) the summer daily emissions for 2009 with the implementation of the OTC 2006 control measures identified in this Section, and (4) the emission benefit in 2009 resulting from the OTC 2006 control measure. Table 3-11 shows the same information for the total of all six source categories.

The largest estimated VOC emission reductions are in the most populous States – New York and Pennsylvania. The emission benefits listed for Virginia just include the Virginia counties in the northern Virginia area that are part of the OTR. Benefit estimates for all other States include the entire state. The emission benefits also assume that all OTC members will adopt the rules as described in the previous sections.

The requirement for a regional fuel throughout the OTR provides the largest emission benefit, about 139.4 tons per day across the OTR. The adhesives and sealants application model rule provides the second largest emission benefit in 2009 – 82.3 tons per day across the OTR. The incremental benefits accrued from the amendments to State's existing consumer products and portable fuel container model rules are not as large, since the States already have accrued substantial benefits from the adoption of these rules.

Appendix D provides county-by-county summaries of the VOC emission benefits from the OTC 2006 VOC model rules described previously in this Section. Appendix D also provides additional documentation regarding the data sources and emission benefit calculations that were performed. These tables can be used by the States to create additional summaries, for example, by nonattainment area.

Table 3-5 OTC 2006 VOC Model Rule Benefits by State for 2009 Adhesives and Sealants Application

State	Adhesives/Sealants Application Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	4.8	6.6	2.4	4.2
DE	1.4	1.6	0.6	1.0
DC	0.2	0.2	0.1	0.1
ME	3.1	3.9	1.4	2.5
MD	6.9	9.1	3.3	5.8
MA	10.6	14.7	5.8	8.9
NH	2.5	3.6	1.3	2.3
NJ	14.9	15.2	6.0	9.2
NY	24.7	33.4	11.9	21.5
PA	25.5	34.0	12.2	21.8
RI	1.8	2.4	0.9	1.5
VT	2.4	3.4	1.2	2.2
NOVA	1.2	1.6	0.6	1.0
OTR	**99.8**	**129.8**	**47.5**	**82.3**

2002 Actual emissions based on the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are based on the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Table 3-6 OTC 2006 VOC Model Rule Benefits by State for 2009
Cutback and Emulsified Asphalt Paving

State	Cutback and Emulsified Asphalt Paving Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT*	4.5	4.5	0.3	4.3
DE	0.1	0.1	0.1	0.0
DC	0.0	0.0	0.0	0.0
ME	8.6	10.6	0.0	10.6
MD	0.0	0.0	0.0	0.0
MA*	8.4	8.6	0.5	8.1
NH	3.8	4.8	0.5	4.4
NJ	4.9	4.8	0.1	4.7
NY	15.4	18.3	1.8	16.4
PA	7.7	9.3	0.9	8.4
RI	1.0	1.2	0.1	1.1
VT	1.4	1.8	0.0	1.8
NOVA	<0.1	<0.1	<0.1	<0.1
OTR	**55.9**	**64.0**	**4.3**	**59.8**

2002 Actual emissions based on the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are based on the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

* CT and MA provided revised emission estimates that differ from those in the MANEVU Version 3 inventories.

Table 3-7 OTC 2006 VOC Model Rule Benefits by State for 2009 Consumer Products

State	Consumer Products Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	40.1	35.4	34.7	0.7
DE	7.3	6.7	6.5	0.1
DC	5.7	5.1	5.0	0.1
ME	10.9	9.7	9.5	0.2
MD	52.8	48.4	47.4	1.0
MA*	62.2	64.1	53.9	10.2
NH	13.7	12.6	12.4	0.3
NJ	82.9	71.9	70.5	1.4
NY	209.6	183.3	179.6	3.7
PA	119.6	104.4	102.4	2.1
RI	10.6	9.3	9.1	0.2
VT	6.1	5.6	5.5	0.1
NOVA	21.5	23.0	22.5	0.5
OTR	**642.9**	**579.5**	**559.0**	**20.5**

2002 Actual emissions based on the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are based on the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

* MA proposed rule has a January 1, 2009 effective date and includes the VOC limits from the OTC 2001 model rule and those in the OTC 2006 model rule. The 2009 benefit for MA shows the benefit from both sets of limits. For all other States, the 2009 benefit shows the change in emissions from the OTC 2006 model rule only.

Table 3-8 OTC 2006 VOC Model Rule Benefits by State for 2009
Portable Fuel Containers – Area Sources

State	Portable Fuel Containers Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	9.7	6.5	6.1	0.4
DE	3.0	2.1	1.9	0.1
DC	3.6	2.5	2.4	0.1
ME	3.6	2.4	2.3	0.1
MD	39.6	24.5	23.1	1.4
MA*	18.1	18.6	16.9	1.7
NH	3.6	3.0	2.8	0.2
NJ	24.4	17.7	16.7	1.0
NY	76.6	45.0	42.4	2.6
PA	47.0	27.6	26.0	1.6
RI	3.0	2.7	2.5	0.2
VT	1.7	1.5	1.5	0.1
NOVA	8.6	6.1	5.7	0.4
OTR	**242.5**	**160.1**	**150.3**	**9.9**

2002 Actual emissions based on the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are based on the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Note: The table shows the estimated emission reduction that will occur in 2009; additional reductions will occur in later years as new, less-emitting PFCs that comply with the OTC 2006 control measure penetrate the market.

* MA PFC regulation will be based on only the OTC 2006 model rule (which updates the provisions of the OTC 2001 model rule) and will have an effective date of January 1, 2009. The 2009 base emissions in MA are uncontrolled emissions. The 2009 emission benefits represent the total emission reductions from the MA rule.

Table 3-9 OTC 2006 VOC Model Rule Benefits by State for 2009

Portable Fuel Containers – Nonroad Sources

State	Portable Fuel Containers Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	2.9	1.9	1.8	0.1
DE	0.9	0.6	0.6	0.0
DC	1.1	0.8	0.7	0.0
ME	1.1	0.7	0.7	0.0
MD	11.9	7.4	6.9	0.4
MA*	5.4	5.6	5.1	0.5
NH	1.1	0.9	0.8	0.1
NJ	7.3	5.3	5.0	0.3
NY	23.0	13.5	12.7	0.8
PA	14.1	8.3	7.8	0.5
RI	0.9	0.8	0.8	0.0
VT	0.5	0.5	0.4	0.0
NOVA	2.6	1.8	1.7	0.1
OTR	**72.8**	**48.0**	**45.1**	**3.0**

2002 Actual emissions estimated to be 30 percent of area source emissions (based on Pechan 2001, pg. 11)

2009 Base Inventory emissions estimated to be 30 percent of area source emissions, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Note: The table shows the estimated emission reduction that will occur in 2009; additional reductions will occur in later years as new, less-emitting PFCs that comply with the OTC 2006 control measure penetrate the market.

* MA PFC regulation will be based on only the OTC 2006 model rule (which updates the provisions of the OTC 2001 model rule) and will have an effective date of January 1, 2009. The 2009 base emissions in MA are uncontrolled emissions. The 2009 emission benefits represent the total emission reductions from the MA rule.

Table 3-10 OTC 2006 VOC Model Rule Benefits by State for 2009 Regional Fuels

State	Regional Fuels Summer VOC Emissions (tpd)			
	2006 Actual	**2006 Base**	**2006 Control**	**2006 Benefit**
CT	87.9	87.9	87.9	0.0
DE	26.6	26.6	26.6	0.0
DC	9.1	9.1	9.1	0.0
ME	56.2	56.2	47.1	9.1
MD	158.7	158.7	155.6	3.2
MA	148.6	148.6	148.6	0.0
NH	45.3	45.3	41.0	4.3
NJ	219.6	219.6	219.6	0.0
NY	465.0	465.0	408.1	56.9
PA	363.0	363.0	305.0	58.0
RI	22.2	22.2	22.2	0.0
VT	35.9	35.9	27.9	7.9
NOVA	54.9	54.9	54.9	0.0
OTR	**1693.1**	**1693.1**	**1553.7**	**139.4**

Note: NESCAUM analysis was only completed for 2006. Data for 2002 and 2009 are not currently available

Table 3-11 OTC 2006 VOC Model Rule Benefits by State for 2009
All Six VOC Categories

State	All Six Categories Summer VOC Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	149.9	142.9	133.2	9.7
DE	39.3	37.7	36.3	1.4
DC	19.6	17.6	17.2	0.4
ME	83.5	83.6	60.9	22.6
MD	270.0	248.1	236.3	11.8
MA	253.3	260.1	230.8	29.3
NH	70.0	70.3	58.8	11.5
NJ	354.1	334.6	317.9	16.7
NY	814.2	758.4	656.5	101.9
PA	576.8	546.7	454.3	92.3
RI	39.5	38.6	35.6	3.0
VT	48.0	48.7	36.5	12.1
NOVA	88.8	87.4	85.4	1.9
OTR	**2,807.0**	**2,674.6**	**2,359.8**	**314.8**

2002 Actual emissions based on the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions based on the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section. Assumes that 2009 reductions from RFG are the same as those calculated for 2006.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions). Assumes that 2009 reductions from RFG are the same as those calculated for 2006.

4.0 NOx ANALYSIS METHODS

This Section describes the analysis of the 2006 OTC control measures to reduce NOx emissions from six source categories: diesel engine chip reflash, regional fuels, asphalt production plants, cement kilns, glass/fiberglass furnaces, ICI boilers. For each of the categories, there are separate subsections that discuss existing Federal/state rules, summarize the requirements of the 2006 OTC control measure, describe the methods used to quantify the emission benefit, and provide an estimate of the anticipated costs and cost-effectiveness of the control measure. At the end of Section 4, we provide the estimated emissions for 2002 and 2009 by source category and State. Appendix E provides county-by-county summaries of the emission reductions for each of the categories.

4.1 HEAVY-DUTY TRUCK DIESEL ENGINE CHIP REFLASH

In the mid-1990s, the U.S. Department of Justice (DOJ), EPA, and CARB determined that seven major engine manufacturers had designed their 1993 through 1998 model heavy-duty diesel engines to operate with advanced electronic engine controls that resulted in excessive NOx emissions. when these engines were operated in the vehicle under "real world" conditions, the electronic calibration would change, altering the fuel delivery characteristics and resulting in elevated NOx levels. DOJ, EPA and ARB developed Consent Decrees that required the manufacturers to provide software (the "Low-NOx Rebuild Kit" or "chip reflash") that modifies the injection timing adjustment that caused the excess NOx emissions. The kits are to be installed at the time the vehicle is brought in for a major engine rebuild/overhaul. The rate of rebuild has been considerably lower than what was envisioned under the Consent Decrees; the primary reasons being that engine rebuilds occur at considerably higher elapsed vehicle mileage than what was contemplated when the Consent Decrees were negotiated, and there is no federal oversight program to ensure that individual rebuilds are occurring at the time of rebuild. In response to this low rebuild rate, CARB has adopted a mandatory program, not tied to the time of rebuild, but rather to a prescribed period of time, within which owners must bring their vehicles into the dealer to have the reflash operation performed, with all costs borne by the engine manufacturers. (NESCAUM 2006b).

4.1.1 Existing Federal and State Rules

California entered into Settlement Agreements, separate from the federal Consent Decrees, but with analogous requirements for low-NOx rebuilds. The slow rate of progress in

California mirrored the progress nationally. Accordingly, California embarked upon its own program, by rule, to accelerate and ultimately complete the rebuilds for trucks registered in California and for out-of-state registered trucks traveling on roadways within the state. The ARB rule, effective March 21, 2005, mandates that rebuilds occur over a prescribed time period, with a final rebuild compliance date of December 31, 2006. The CARB mandatory program faced two separate legal challenges, alleging that CARB has breached its settlement agreement and alleging that CARB is illegally establishing different emissions standards on "new engines". The Sacramento County Superior Court ruled that the Low NOx Software Upgrade Regulation is invalid. CARB indicates that it will not appeal that ruling and is suspending further enforcement of this regulation.

4.1.2 Description of the OTC 2006 Control Measure

NESCAUM developed a model rule for consideration by its member states to implement a low-NOx rebuild program, similar California's program. The regulation applies to the engine manufacturers and to owners, lessees, and operators of heavy-duty vehicles powered by the engines that are required to have the low-NOx rebuild. Consistent with the Consent Decrees, the engine manufacturers are required to provide the rebuild kits at no cost to dealers, distributors, repair facilities, rebuild facilities, owners, lessees, and operators, upon their request and to reimburse their authorized dealers, distributors, repair facilities and rebuild facilities for their labor costs.

4.1.3 Emission Benefit Analysis Methods

NESCUAM estimated potential NOx emissions reductions (tons per day) if the Northeast States were to adopt a rebuild program similar to the California program. These estimates are based on the ratio of Northeast to California in-state heavy-duty vehicle registrations, and ARB-estimated California NOx reductions of 35 TPD (NESCAUM 2006b, pg. 5). NESCAUM also estimated potential NOx emissions reductions for the Mid-Atlantic States by scaling the NESCAUM projections based on population. For the Mid-Atlantic States, the NOx benefit was calculated based on the per capita factors of a one ton per day reduction for each one million people (NESCAUM 2005).

4.1.4 Cost Estimates

The cost associated with the reflash has been estimated at \$20-\$30 per vehicle, which is borne by the engine manufacturer. There may be costs associated with potential downtime to the trucking firms, and record-keeping requirements on the dealer performing the reflash and the vehicle owner. The MRPO estimated cost effectiveness to be $1,800 to $2,500 (depending on vehicle size) due to incremental "fuel penalty" of 2 percent increase in fuel consumption (ENVIRON 2006).

4.2 REGIONAL FUELS

The Clean Air Act Amendments of 1990 required significant changes to conventional fuels used by motor vehicles. Beginning in 1995, "reformulated" gasoline (RFG) must be sold in certain non-attainment areas and other states with non-attainment areas are permitted to opt-in. Reformulated gasoline results in lower VOC emissions than would occur from the use of normal "baseline" gasoline. Phase II of the RFG program began in 2000.

4.2.1 Existing Federal and State Rules

All but two states in the OTR are participating, in whole or in part, with the federal RFG program. However, nearly one-third of the gasoline sold in the OTR is not RFG. NESCAUM has estimated the following fraction of gasoline that is reformulated by State:

State	Current RFG Fraction	State	Current RFG Fraction
CT	100%	NJ	100%
DC	100%	NY	54%
DE	100%	PA	24%
MA	100%	RI	100%
MD	86%	NoVA	100%
ME	0%	VT	0%
NH	64%		

4.2.2 Description of the OTC 2006 Control Measure

The Energy Policy Act of 2005 provides the opportunity for the OTR to achieve a single clean-burning gasoline and is consistent with what OTR states have promoted through the long debate over MTBE/ethanol/RFG. Approximately one-third of the gasoline currently sold in the OTR is not reformulated. The new authority plus the potential for emission reductions from the amount of non-reformulated gasoline sold in the OTR provides an opportunity for additional emission reductions in the region as well as for a reduced number of fuels, and possibly a single fuel, to be utilized throughout the region. The OTC Commissioners recommended that the OTC member states pursue a region fuel program consistent with the Energy Act of 2005 (OTC 2006b).

4.2.3 Emission Benefit Analysis Methods

Emission benefits resulting from extending reformulated gasoline to all areas of the OTR have been calculated for 2006 by NESCAUM (NESCAUM 2006a).

4.2.4 Cost Estimates

According to USEPA's regulatory impact analysis for reformulated gasoline (USEPA 1993), the cost per ton of NOx reduced for Phase II RFG is $5,200 to $3,700.

4.3 ASPHALT PAVEMENT PRODUCTION PLANTS

Hot mix asphalt (HMA) is created by mixing and heating size-graded, high quality aggregate (which can include reclaimed asphalt pavement) with liquid asphalt cement. HMA can be manufactured by batch mix, continuous mix, parallel flow drum mix, or counterflow drum mix plants. The dryer operation is the main source of pollution at hot mix asphalt manufacturing plants. Dryer burner capacities are usually less than 100 mmBtu/hr, but may be as large as 200 mmBtu/hr. Natural gas is the preferred source of heat used by the industry, although oil, electricity and combinations of fuel and electricity are used. The reaction of nitrogen and oxygen in the dryer creates nitrogen oxide (NOx) emissions in the combustion zone,

4.3.1 Existing Federal and State Rules

Only two of the OTR states have regulations that specifically address NOx emissions from asphalt pavement manufacturing plants. New Hampshire limits NOx emissions to 0.12 pound per ton of asphalt produced, or 0.429 lb per mmBtu {Chapter Env-A 1211.08 (c)} for units greater than 26 mmBTU/hour in size. New Jersey limits NOx emissions to 200 ppmvd at seven percent oxygen {7:27-19.9(a)}. Asphalt plants in other OTR states are subject to more general fuel combustion requirements or case-by-case RACT determinations.

4.3.2 Description of the OTC 2006 Control Measure

NOx emissions from asphalt plants can be reduced through installation of low-NOx burners and flue gas recirculation (FGR). The OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that are consistent with the guidelines shown in Table 4.1 (OTC 2006b).

Table 4.1 Addendum to OTC Resolution 06-02 Emission Guidelines for Asphalt Plants

Plant Type	**Emission Rate (lbs NOx/ton asphalt produced)**	**% Reduction**
Area/Point Sources		
Batch Mix Plant – Natural Gas	0.02	35
Batch Mix Plant – Distillate/Waste Oil	0.09	35
Drum Mix Plant – Natural Gas	0.02	35
Drum Mix Plant – Distillate/Waste Oil	0.04	35
or Best Management Practices		

Industry leaders have identified a number of Best Management Practices that allow for substantial reduction in plant fuel consumption and the corresponding products of combustion including NOx. Best management practices include:

- **Burner tune-ups**: A burner tune-up may reduce NOx emissions by up to 10 percent and may also help reduce fuel consumption. In other words, there can be a direct pay-back to the business from regular burner tune-ups.
- **Effective stockpile management to reduce aggregate moisture content**: Current information indicates that effective stockpile management can reduce aggregate moisture content by about 25 percent, corresponding to a reduction in fuel consumption by approximately 10 - 15 percent. There are a number of ways to reduce aggregate moisture: covering stockpiles, paving under stockpiles, and sloping stockpiles are all ways that prevent aggregate from retaining moisture. Best Practices are plant- and geographic locale-specific.
- **Lowering mix temperature**: A Technical Working Group of FHWA is currently investigating a number of newer formulation technologies, to understand the practicality and performance of lowering mix temperatures. Substantial reductions in mix temperatures, on the order of 20 percent or more, appear to be plausible. Lowering mix temperatures, by this amount, may reduce fuel consumption, as less heat is needed to produce the mix.
- **Other maintenance and operational best practices**: Additional practices can be employed throughout the plant to help optimize production and operations. For example, regular inspection of drum mixing flites and other measures can be taken – all in the effort to make a plant operate more efficiently, thereby using less fuel.

4.3.3 Emission Benefit Analysis Methods

The emission rates and percent reductions estimates shown above for major sources were developed the state of New York based on the use of low-NOx burners and FGR. For minor sources, the requirement is the use of low-NOx burner technology. NOx emissions can be reduced by 35 to 50 percent with low-NOx burners and FGR, and by 25 to 40 percent with low-NOx burners alone. For modeling purposes, a 35 percent reduction was assumed to apply all types of asphalt plants.

The reductions estimated for this category only include emissions included in the MANEVU point source emission inventory. Only emissions from major point sources are typically included in the MANEVU point source database. Emissions from non-major sources are not explicitly contained in the area source inventory. The emissions from non-major asphalt plants are likely lumped together in the general area source industrial and commercial fuel use category. Reductions from area source emissions at asphalt production plants are included in the ICI boiler source category. Therefore, there is some uncertainty regarding the actual reductions that will occur as no accurate baseline exists for both major and minor facilities.

4.3.4 Cost Estimates

The anticipate costs for control are similar to those of small to midsize boilers or process heaters. Low NOx burners range from $500 to $1,250 per ton and low-NOx burners in combination with FGR range from $1,000 to $2,000 per ton. These cost-effectiveness data were provided by NYSDEC. These control efficiencies and cost-effectiveness estimates for low-NOx burners plus FGR are generally consistent EPA's published data for small natural gas-fired and oil-fired process heaters and boilers (Pechan 2005).

4.4 CEMENT KILNS

Portland cement manufacturing is an energy intensive process in which cement is made by grinding and heating a mixture of raw materials such as limestone, clay, sand and iron ore in a rotary kiln. Nationwide, about 82 percent of the industry's energy requirement is provided by coal. Waste-derived fuels (such as scrap tires, used motor oils, surplus printing inks, etc.) provide about 14 percent of the energy. NOx emissions are generated during fuel combustion by oxidation of chemically-bound nitrogen in the fuel and by thermal fixation of nitrogen in the combustion air.

There are four main types of kilns used to manufacture portlant cement: long wet kilns, long dry kilns, dry kilns with preheaters, dry kilns with precalciners. Wet kilns tend to be older units and are often located where the moisture content of feed materials from quarries tends to be high.

Cement kilns are located in Maine, Maryland, New York, and Pennsylvania. There are no cement kilns in the other OTR states. According to the MANEVU 2002 inventory (Pechan 2006), the number of cement kilns operating in 2002 by size and type was:

State	**Number of Facilities**	**Number of Long Wet Kilns**	**Number of Long Dry Kilns**	**Number of Preheater or Precalciner Kilns**
Maine	1	1	0	0
Maryland	3	2	2	0
New York	3	2	1	0
Pennsylvania	10	5	11	5

4.4.1 Existing Federal and State Rules

The NOx SIP Call required states to submit revisions to their SIPs to reduce the contribution of NOx from cement kilns. All kilns in the OTR, except for the one kiln in Maine, are subject to the NOx SIP Call. Based on its SIP Call analysis, EPA determined 30 percent reduction of baseline uncontrolled emission levels was highly cost-effective for cement kilns emitting greater than 1 ton/day of NOx. Some states elected to include cement kilns in their NOx Budget Trading Programs. For example, requirements in Pennsylvania's regulations in 25 Pa. Code Chapter 145 set a kiln allowable limit of 6 pounds per ton of clinker produced, and require sources to purchase NOx allowances for each ton of NOx actual emissions that exceed the allowable limits. Maryland did not include kilns in the trading program but instead provided two options for reducing NOx emissions:

- Option 1 – for long wet kilns, meet NOx emission limit of 6.0 pounds per ton of clinker produced; for long dry kilns, meet limit of 5.1 pounds per ton of clinker produced; and for pre-heater/pre-calciner or pre-calciner kilns, meet limit of 2.8 pounds per ton of clinker produced;
- Option 2 – install low NOx burners on each kiln or modify each kiln to implement mid-kiln firing.

The one kiln in Maine is a wet process cement kiln and has been licensed to modernize by converting to the more efficient dry cement manufacturing process. The new kiln is subject to BACT requirements.

4.4.2 Description of the OTC 2006 Control Measure

There is a wide variety of proven control technologies for reducing NOx emissions from cement kilns. Automated process control has been shown to lower NOx emissions by moderate amounts. Low-NOx burners have been successfully used, especially in the precalciner kilns. CemStarSM is a process that involves adding steel slag to the kiln, offering moderate levels of NOx reduction by reducing the required burn zone heat input. Mid-kiln firing of tires provides moderate reductions of NOx emissions while reducing fuel costs and providing an additional revenue stream from receipt of tire tipping fees. SNCR technology has the potential to offer significant reductions on some precalciner kilns. SNCR is being used in numerous cement kilns in Europe. A recent study (EC 2001a) indicates that there are 18 full-scale SNCR installations in Europe. Most SNCR installations are designed and/or operated for NOx reduction rates of 10-50% which is sufficient to comply with current legislation in some countries. Two Swedish plants installed SNCR in 1996/97 and have achieved a reduction of 80-85%. A second recent study (ERG 2005) of cement kilns in Texas has identified a variety of NOx controls for both wet and dry cement kilns, with reductions in the 40 to 85% range.

The OTC Commissioners recommended that OTC member states pursue, as necessary and appropriate, state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that are consistent with the guidelines shown in Table 4.2 (OTC 2006b). The guidelines were presented in terms of both an emission rate (lbs/ton of clinker by kiln type) as well as a percent reduction from uncontrolled levels.

Table 4.2 OTC Resolution 06-02 Emission Guidelines for Cement Kilns

Kiln Type	Emission Rate (lbs NOx/ton of clinker produced)	% Reduction from Uncontrolled
Wet Kiln	3.88	60
Long Dry Kiln	3.44	60
Pre-heater Kiln	2.36	60
Pre-calciner Kiln	1.52	60

4.4.3 Emission Benefit Analysis Methods

To calculate the additional reductions from the OTC 2006 Control Measure, MACTEC calculated the 2002 emission rate (lbs NOx per ton of clinker produced) for each kiln. The 2002 emission rate was compared to the OTC 2006 control measure emission rate list above to calculate a kiln-specific percent reduction. The kiln-specific percent reduction was then applied to the 2002 actual emissions to calculate the emissions remaining after implementation of the control measure.

4.4.4 Cost Estimates

The TCEQ study (ERG 2005) estimated a cost-effectiveness of $1,400-1,600 per ton of NOx removed for an SNCR system achieving a 50 percent reduction on modern dry preheat precalcination kilns. The study also estimate a cost-effectiveness of $2,200 per ton of NOx removed for SNCR systems achieving a 35 percent reduction on wet kilns. The most recent EPA report (EC/R 2000) shows data for two SNCR technologies, biosolids injection and NOXOUT®. These technologies showed average emission reductions of 50 and 40 percent, respectively. The cost effectiveness was estimated to be $1,000-2,500/ton depending on the size of the kiln. Costs and the cost effectiveness for a specific unit will vary depending on the kiln type, characteristics of the raw material and fuel, uncontrolled emission rate, and other source-specific factors.

4.5 GLASS/FIBERGLASS FURNACES

The manufacturing process requires raw materials, such as sand, limestone, soda ash, and cullet (scrap and recycled glass), be fed into a furnace where a temperature is maintained in the 2,700°F to 3,100°F range. The raw materials then chemically react creating a molten material, glass. The reaction of nitrogen and oxygen in the furnace creates NOx emissions.

The main product types are flat glass, container glass, pressed and blown glass, and fiberglass. In the OTR, the preponderance of glass manufacturing plants is in Pennsylvania. New York and New Jersey also have several plants. Massachusetts, Maryland, and Rhode Island each have one glass manufacturing plant.

4.5.1 Existing Federal and State Rules

Only Massachusetts and New Jersey have specific regulatory limits for NOx emissions from glass melting furnaces. Massachusetts has a 5.3 pound per ton of glass removed limit for container glass melting furnaces having a maximum production of 15 tons of glass per day or greater. New Jersey has a 5.5 pound per ton of glass limit for commercial container glass manufacturing furnaces and an 11 pound per ton of glass for specialty container glass manufacturing furnaces. New Jersey also required borosilicate recipe glass manufacturing furnaces to achieve at least a 30 percent reduction from 1990 baseline levels by 1994. The regulations for other states with glass furnaces (Maryland, New York, Pennsylvania, and Rhode Island) do not contain specific emission limitation requirements, but rather require RACT emission controls as determined on a case-by-case basis.

4.5.2 Description of the OTC 2006 Control Measure

Several alternative control technologies are available to glass manufacturing facilities to limit NOx emissions (MACTEC 2005). These options include combustion modifications (low NOx burners, oxy-fuel firing, oxygen-enriched air staging), process modifications (fuel switching, batch preheat, electric boost), and post combustion modifications (fuel reburn, SNCR, SCR). Oxyfiring is the most effective NOx emission reduction technique and is best implemented with a complete furnace rebuild. This strategy not only reduces NOx emissions by as much as 85 percent, but reduces energy consumption, increases production rates by 10-15 percent, and improves glass quality by reducing defects. Oxyfiring is demonstrated technology and has penetrated into all segments of the glass industry.

The OTC Commissioners recommended that OTC member states pursue, as necessary and appropriate, state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that are consistent with the guidelines shown in Table 4.3 (OTC 2006g). The guidelines were presented in terms of both an emission rate (lbs/ton of glass produced) as well as a percent reduction from uncontrolled levels for the different types of glass manufactured.

Table 4.3 Addendum to OTC Resolution 06-02 Guidelines for Glass Furnaces

Type of Glass	Emission Rate (lbs NOx/ton of glass pulled) Block 24-hr Ave.	Emission Rate (lbs NOx/ton of glass pulled) Rolling 30-day Ave.
Container Glass	4.0	n/a
Flat Glass	9.2	7.0
Pressed/blown Glass	4.0	n/a
Fiberglass	4.0	n/a

Note: Compliance date is 2009. NOx allowances may be surrendered in lieu of meeting the emission rate based on a percentage of the excess emissions at the facility, at the discretion of the State.

4.5.3 Emission Benefit Analysis Methods

The NOx emission reduction benefit calculation varied by State depending upon the availability of data:

- New Jersey DEP evaluated the existing controls at each facility. NJDEP identified furnaces that have closed, indicated whether the facility requested banking of emissions, and specified whether the emissions from the closed furnace should remain in the projection year inventory. NJDEP also identified furnace-specific projected emission rates based on the use of oxyfuel technology.
- Pennsylvania DEP provided 2002 throughput (tons of glass pulled) and emission rate data (lbs NOx/ton of glass pulled). The 2002 emission rate was compared to the OTC 2006 control measure emission rate list above to calculate a furnace-specific percent reduction. The furnace-specific percent reduction was then applied to the 2002 actual emissions to calculate the emissions remaining after implementation of the control measure. If a furnace had an emission rate below the OTCC 2006 control measure emission rate, then no incremental reduction was calculated. PADEP also identified several furnaces that have shut down – emissions from these furnaces were set to zero in the projection year inventory.
- For all other States with glass furnaces (MA, MD, NY, and RI), furnace specific data were not available. The NOx emission reduction benefit was calculated by applying an 85 percent reduction for oxyfiring technology to the projected 2009 base inventory. This approach does not take into account existing controls at the facilities.

4.5.4 Cost Estimates

A recent study by the European Commission (EC 2001b) reports a 75 to 85 percent reduction in NOx based on oxyfiring technology, resulting in emission rates of 1.25 to 4.1 pounds of NOx per ton of glass produced. The cost effectiveness was determined to be $1,254 to $2,542 depending on the size of the furnace. EPA's Alternative Control Techniques Document (USEPA 1994) estimated an 85 percent reduction in NOx emissions for oxyfiring with a cost-effectiveness of $2,150 to $5,300.

Other technologies may be used to meet the limits in Table 4.3. The costs associated with meeting those limits are source-specific and depend on the existing controls in place and the emission rates being achieved. Site-specific factors greatly influence the actual achievable performance level and control costs at a particular facility.

4.6 ICI BOILERS

Industrial/commercial/institutional (ICI) boilers combust fuel to produce heat and process steam for a variety of applications. Industrial boilers are routinely found in applications the chemical, metals, paper, petroleum, food production and other industries. Commercial and institutional boilers are normally used to produce steam and heat water for space heating in office buildings, hotels, apartment buildings, hospitals, universities, and similar facilities. Industrial boilers are generally smaller than boilers in the electric power industry, and typically have a heat input in the 10-250 mmBtu/hr range; however, industrial boilers can be as large as 1,000 mmBtu/hr or as small as 0.5 mmBtu/hour. Most commercial and institutional boilers generally have a heat input less than 100 mmBtu/hour. It is estimated that 80 percent of the commercial/institutional population is smaller than 15 mmBtu/hour. The ICI boiler population is highly diverse – encompassing a variety of fuel types, boiler designs, capacity utilizations and pollution control systems – that result in variability in emission rates and control options.

For emission inventory purposes, emissions from ICI boilers are included in both the point and area source emission inventories. Generally, the point source emission inventory includes all ICI boilers at major facilities. The point source inventory lists individual boilers, along with their size and associated emissions. The area source inventory generally includes emissions for ICI boilers located at non-major facilities. It does not provide emissions by the size of boiler, as is done in the point source inventory. Area sources emissions are calculated based on the fuel use not accounted for in the point source inventory. This is done by taking the total fuel consumption for the state (by fuel type and category), as published by the U.S. Department of Energy, and subtracting out the fuel usage reported in the point source inventory. Emissions are then calculated on a county-by-county basis using the amount of fuel not accounted for in the point source inventory and average emission factors for each fuel type.

4.6.1 Existing Federal and State Rules

ICI boilers are subject to a variety of Clean Air Act programs. Emission limits for a specific source may have been derived from NSPS, NSR, NOx SIP Call, State RACT rules, case-by-case RACT determinations, or MACT requirements. Thus, the specific emission limits and control requirements for a given ICI boiler vary and depend on fuel type, boiler age, boiler size, boiler design, and geographic location.

The OTC developed a draft model rule in 2001 with the following thresholds and limits:

OTC 2001 Model Rule ICI Boiler Thresholds and Limits		
Applicability Threshhold	**Emission Rate Limit**	**Percent NOx Reduction**
5-50 mmBtu/hr	None	Tune-up Only
50-100 mmBtu/hr	Gas-fired: 0.10 lbs/mmBtu Oil-fired: 0.30 lbs/mmBtu Coal-fired: 0.30 lbs/mmBtu	50%
100-250 mmBtu/hr	Gas-fired: 0.10 lbs/mmBtu Oil-fired: 0.20 lbs/mmBtu Coal-fired: 0.20 lbs/mmBtu	50%
>250 mmBtu/hr*	Gas-fired: 0.17 lbs/mmBtu Oil-fired: 0.17 lbs/mmBtu Coal-fired: 0.17 lbs/mmBtu	50%

* Only for boilers not subject to USEPA's NOx SIP Call

Implementation of the OTC 2001 model rule limits varied by State – some OTC states adopted these limits while others did not. MACTEC researched current State regulations affecting ICI boilers and summarized the rules in Appendix F. The specific requirements for each state were organized into a common format to efficiently include the State-by-State differences by fuel type and boiler size. This organization oversimplifies the source categories and size limitations that differ from State-to-State. This simplification was necessary to match the rules to the organization of the emission data bases (i.e., Source Classification Codes) being used in the analysis.

4.6.2 Description of the OTC 2006 Control Measure

The OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies for ICI boilers (OTC 2006b). These guidelines have undergone revision based on a more refined analyses. Table 4.4 provides the current OTC proposal for ICI boilers.

4.6.3 Emission Benefit Analysis Methods

The emission reduction benefits resulting from the OTC ICI boiler control measure were calculated differently for point and area sources. For point sources, the emission reductions were estimated by comparing the emission limits in the existing (2006) state regulations with the limits contained in the OTC ICI boiler proposal.

Table 4.4 Addendum to OTC Resolution 06-02 Guidelines for ICI Boilers

ICI Boiler Size (mmBtu/hr)	Control Strategy/ Compliance Option	NOx Control Measure
5-25		Annual Boiler Tune-Up
25-100	Option #1	Natural Gas: 0.05 lb NOx/mmBtu #2 Fuel Oil: 0.08 lb NOx/mmBtu #4 or #6 Fuel Oil: 0.20 lb NOx/mmBtu Coal: 0.30 lb NOx/mmBtu**
	Option #2	50% reduction in NOx emissions from uncontrolled baseline
	Option #3	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
100-250	Option #1	Natural Gas: 0.10 lb NOx/mmBtu #2 Fuel Oil: 0.20 lb NOx/mmBtu #4 or #6 Fuel Oil: 0.20 lb NOx/mmBtu Coal: Wall-fired 0.14 lb NOx/mm Btu Tangential 0.12 lb NOx/mm Btu Stoker 0.22 lb NOx/mm Btu Fluidized Bed 0.08 lb NOx/mm Btu
	Option #2	LNB/SNCR, LNB/FGR, SCR, or some combination of these controls in conjunction with Low NOx Burner technology
	Option #3	60% reduction in NOx emissions from uncontrolled baseline
	Option #4	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
>250	Option #1	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
	Option #2	Phase I – 2009 Emission rate equal to EGUs of similar size Phase II – 2012 Emission rate equal to EGUs of similar size

Tables 4-5 through 4-10 shows the current state emission limits by size range and fuel type, and the percentage reduction from the OTC proposed limits to the current state requirement. In cases where a state did not have a specific limit for a given size range, then the more general percent reduction from uncontrolled values in Table 4-4 was used. The fuel types/boiler types shown in Tables 4-5 through 4-10 were matched to SCCs in the point source inventory. MACTEC used the SCC and design capacity (mmBtu/hour) from the MANEVU and VISTAS emission inventories to apply the appropriate state specific reduction factor to estimate the emission reduction benefit.

The emission limits shown in Tables 4-5 through 4-10 generally apply only to ICI boilers located at major sources (i.e. point sources). ICI boilers located at minor sources (i.e., area sources) are generally not subject to the emissions limits. In general, emissions from area source ICI boilers are uncontrolled (except possibly for an annual tune-up requirement). The one exception is New Jersey: beginning on March 7, 2007, N.J.A.C. 27.27-19.2 requires any ICI boiler of at least 5 mmBtu/hr heat input to comply with applicable NOx emission limits whether or not it is located at a major NOx facility.

To calculate the reductions from area source ICI boilers, MACTEC applied the general percent reduction from uncontrolled values in Table 4-4 to the area source inventory (i.e., 10 percent reduction for annual tune-ups for boilers < 25 mmBtu/hr, and a 50 percent reduction for boilers between 25 and 100 mmBtu/hr).

The area source inventory does not provide information on the boiler size. To estimate the boiler size distribution in the area source inventory, we first assumed that there were no boilers > 100 mmBtu/hr in the area source inventory. Next, we used boiler capacity data from the USDOE's Oak Ridge National Laboratory (EEA 2005) to estimate the percentage of boiler capacity in the < 25 mm Btu/hr and 25-100 mm Btu/hr categories. Third, we assumed that emissions were proportional to boiler capacity. Finally, we calculated the weighted average percent reduction for area source ICI boilers based on the capacity in each size range and the percent reduction by size range discussed in the previous paragraph. For industrial boilers, the weighted average reduction was 34.5 percent; for commercial/institutional boilers, the weighted average reduction was 28.1 percent.

Table 4.5 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Natural Gas-Fired Boilers

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input: > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input: > 250*	100 to 250	50 to 100	25 to 50	<25
						OTC Limits (lbs/mmBtu):	**0.12**	**0.10**	**0.05**	**0.05**	**NL**
CT	0.20	0.20	0.20	0.20	0.20		40.0	50.0	75.0	75.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	0.0	0.0
DC	0.20	0.20	NL	NL	NL		40.0	50.0	50.0	50.0	10.0
ME	0.20	NL	NL	NL	NL		40.0	60.0	50.0	50.0	10.0
MD	0.20	0.20	0.20	0.20	0.20		40.0	50.0	75.0	75.0	10.0
MA	0.20	0.20	0.10	NL	NL		40.0	50.0	50.0	50.0	10.0
NH	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
NJ	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
NY	0.20	0.20	0.10	NL	NL		40.0	50.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	50.0	50.0	50.0	10.0
SE PA	0.17	0.10	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
VT	0.20	NL	NL	NL	NL		40.0	60.0	50.0	50.0	10.0
NOVA	0.2	0.2	0.2	0.2	0.2		40.0	50.0	75.0	75.0	10.0

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

SE PA refers to the five southeastern Pennsylvania counties (Bucks, Chester, Delaware, Montgomery, and Philadelphia) affected by Pennsylvania's Addition NOx Requirements (129.201)

NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

Table 4.6 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Distillate Oil-Fired Boilers

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input				
	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
						OTC Limits (lbs/mmBtu):	0.12	0.20	0.08	0.08	NL
CT	0.20	0.20	0.20	0.20	0.20		40.0	0.0	60.0	60.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	0.0	0.0
DC	0.30	0.30	0.30	NL	NL		60.0	33.3	73.3	50.0	10.0
ME	0.20	0.30	0.30	NL	NL		40.0	33.3	73.3	50.0	10.0
MD	0.25	0.25	0.25	0.25	0.25		52.0	20.0	68.0	68.0	10.0
MA	0.25	0.30	0.12	NL	NL		52.0	33.3	33.3	50.0	10.0
NH	0.30	0.30	0.12	NL	NL		60.0	33.3	33.3	50.0	10.0
NJ	0.20	0.20	0.12	NL	NL		40.0	0.0	33.3	50.0	10.0
NY	0.25	0.30	0.12	NL	NL		52.0	33.3	33.3	50.0	10.0
PA	Source Specific NOx RACT						29.4	33.3	33.3	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	33.3	50.0	10.0
RI	0.12	0.12	0.12	NL	NL		0.0	0.0	33.3	50.0	10.0
VT	0.30	NL	NL	NL	NL		60.0	60.0	50.0	50.0	10.0
NOVA	0.25	0.25	0.25	0.25	0.25		52.0	20.0	68.0	68.0	10.0

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

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NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

Table 4.7 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Residual Oil-Fired Boilers

	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						**OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input**				
State	**> 250***	**100 to 250**	**50 to 100**	**25 to 50**	**5 to 25**		**> 250***	**100 to 250**	**50 to 100**	**25 to 50**	**<25**
						OTC Limits (lbs/mmBtu):	**0.12**	**0.20**	**0.20**	**0.20**	**NL**
CT	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	0.0	0.0
DC	0.30	0.30	0.30	NL	NL		60.0	33.3	33.3	50.0	10.0
ME	0.20	0.30	0.30	NL	NL		40.0	33.3	33.3	50.0	10.0
MD	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0
MA	0.25	0.30	0.30	NL	NL		52.0	33.3	33.3	50.0	10.0
NH	0.30	0.30	0.30	NL	NL		60.0	33.3	33.3	50.0	10.0
NJ	0.20	0.20	0.30	NL	NL		40.0	0.0	33.3	50.0	10.0
NY	0.25	0.30	0.30	NL	NL		52.0	33.3	33.3	50.0	10.0
PA	Source Specific NOx RACT						29.4	33.3	33.3	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	LNB/FGR	LNB/FGR	LNB/FGR	NL	NL		0.0	0.0	0.0	50.0	10.0
VT	0.30	NL	NL	NL	NL		60.0	60.0	50.0	50.0	10.0
NOVA	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

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NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

Table 4.8 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Coal Wall-Fired Boilers

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input				
	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
						OTC Limits (lbs/mmBtu):	**0.12**	**0.14**	**0.30**	**0.30**	**NL**
CT	0.38	0.38	0.38	0.38	0.38		68.4	63.2	21.1	21.1	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	67.4	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	78.5	21.1	21.1	10.0
MA	0.45	0.45	NL	NL	NL		73.3	68.9	50.0	50.0	10.0
NH	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.45	0.5	NL	NL	NL		73.3	72.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	72.0	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	30.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.38	0.38	0.38	0.38	0.38		68.4	63.2	21.1	21.1	10.0

n/a indicates that there are no coal-fired ICI boilers in the state.

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

SE PA refers to the five southeastern Pennsylvania counties (Bucks, Chester, Delaware, Montgomery, and Philadelphia) affected by Pennsylvania's Addition NOx Requirements (129.201)

NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

Table 4.9 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Coal Tangential-Fired Boilers

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input				
	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
						OTC Limits (lbs/mmBtu):	**0.12**	**0.12**	**0.30**	**0.30**	**NL**
CT	0.20	0.20	0.20	0.20	0.20		40.0	40.0	0.0	0.0	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	72.1	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	81.5	21.1	21.1	10.0
MA	0.38	0.38	NL	NL	NL		68.4	68.4	50.0	50.0	10.0
NH	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.42	0.5	NL	NL	NL		71.4	76.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	76.0	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	40.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.38	0.38	0.38	0.38	0.38		68.4	68.4	21.1	21.1	10.0

n/a indicates that there are no coal-fired boilers in the state.

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

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NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

Table 4.10 Current State Emission Limits and Percent Reduction Estimated from Adoption of OTC ICI Boiler Proposal

Point Source Coal-Fired Stoker Boilers

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input						OTC 2006 Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input				
	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
						OTC Limits (lbs/mmBtu):	0.12	0.22	0.30	0.30	NL
CT	0.20	0.20	0.20	0.20	0.20		40.0	0.0	0.0	0.0	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	48.8	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	66.2	21.1	21.1	10.0
MA	0.33	0.33	NL	NL	NL		63.6	33.3	50.0	50.0	10.0
NH	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.3	0.3	NL	NL	NL		60.0	26.7	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	26.7	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.4	0.4	0.4	0.4	0.4		70.0	45.0	25.0	25.0	10.0

n/a indicates that there are no coal-fired boilers in the state.

NL indicates no limit specified in a state rule; in those cases, the more general percent reduction from Table 4-4 was used.

Source Specific NOx RACT indicates that there are no specific limits in the States' rule (i.e., limits were determined on a case-by-case basis); in those cases, the more general percent reduction from Table 4-4 was used.

SE PA refers to the five southeastern Pennsylvania counties (Bucks, Chester, Delaware, Montgomery, and Philadelphia) affected by Pennsylvania's Addition NOx Requirements (129.201)

NOVA refers to the following jurisdictions in Virginia are part of the OTR: Arlington County, Alexandria, Fairfax County, Fairfax City, Fall Church, Loudon County, Manassas City, Manassas Park, and Prince William County.

4.6.4 Cost Estimates

The OTC recently completed an analysis of ICI boiler NOx control cost estimates (Bodnarik 2006) using detailed information on direct capital equipment costs, direct installation costs, indirect capital costs, and direct and indirect operating costs. The analysis examined five types of NOx control technologies – low-NOx burners (LNB), ultra low-NOx burners (ULNB), LNB plus flue gas recirculation (LNB+FGR), LNB plus selective non-catalytic reduction (LNB+SNCR), and selective catalytic reduction (SCR). The analysis also considered various fuel types – coal, residual oil, distillate oil, and natural gas. The cost effectiveness varies by fuel type, boiler size, current regulatory requirements, current control technology, and boiler firing type. The annual cost-effectiveness was found as low as $600 per ton and as high as $18,000 per ton. In general, for most scenarios the cost effectiveness was estimated to be less than $5,000 per ton of NOx removed.

4.7 NOx EMISSION REDUCTION SUMMARY

The results of the emission benefit calculations for the OTC states are described in this subsection. The starting point for the quantification of the emission reduction benefits is the MANEVU emission inventory, Version 3 (Pechan 2006, MACTEC 2006a) and the VISTAS emission inventory, BaseG (MACTEC 2006b), for the northern Virginia counties that are part of the OTR. The MANEVU and VISTAS inventories include a 2002 base year inventory as well as projection inventories for 2009 and 2018 (MANEVU also has projections for 2012, but VISTAS does not). The projection inventories account for growth in emissions based on growth indicators such as population and economic activity. The projection inventories also account for “on-the-books/on-the-way” (OTB/W) emission control regulations that have (or will) become effective between 2003 and 2008 that will achieve post-2002 emission reductions. Emission reductions from existing regulations are already accounted for to ensure no double counting of emission benefits occurs.

Note that the emission reductions contained in this Section are presented in terms of tons per summer day. The MANEVU base and projection emission inventories do not contain summer day emissions for all States and source categories; the VISTAS inventory only contains annual values. When States provided summer day emissions in the MANEVU inventory, these values were used directly to quantify the emission benefit from the 2006 OTC control measure. When summer day emissions were missing from the MANEVU or VISTAS inventories, the summer day emissions were calculated using the annual emissions and the seasonal throughput data from the NIF Emission Process table. If the seasonal throughput data was missing, the summer day emissions were calculated using the annual emissions and a summer season adjustment factor derived from the monthly activity profiles contained in the SMOKE emissions modeling system.

Tables 4-11 to 4-17 show State summaries of the emission benefits from the OTC 2006 NOx control measures described previously in this Section. For each of the seven source categories, the Tables show four emission numbers: (1) the actual 2002 summer daily emissions; (2) the summer daily emissions for the 2009 OTB/W scenario that accounts for growth and for the emission control regulations that have (or will) become effective between 2003 and 2008 that will achieve post-2002 emission reductions; (3) the summer daily emissions for 2009 with the implementation of the OTC 2006 control measures identified in this Section, and (4) the emission benefit in 2009 resulting from the OTC 2006 control measure. Table 4-18 shows the same information for the total of all seven source categories.

The largest estimated NOx emission reductions are in the more industrialized States – New York and Pennsylvania – which have most of the cement kilns and glass furnaces in the OTR. These two states also have a large population of ICI boilers. The emission benefits listed for Virginia just include the Virginia counties in the northern Virginia area that are part of the OTR. Benefit estimates for all other States include the entire state. The emission benefits also assume that all OTC members will adopt the rules as described in the previous sections.

Appendix E provides county-by-county summaries of the NOx emission benefits from the OTC 2006 NOx control measures described previously in this Section. Appendix E also provides additional documentation regarding the data sources and emission benefit calculations that were performed. These tables can be used by the States to create additional summaries, for example, by nonattainment area.

Table 4-11 OTC 2006 NOx Model Rule Benefits by State for 2009 Heavy-Duty Truck Diesel Engine Chip Reflash

State	Heavy-Duty Truck Diesel Engine Chip Reflash Summer NOx Emissions (tpd)			
	2002 Actual	**2009 Base**	**2009 Control**	**2009 Benefit**
CT	66.7	n/a	n/a	3.5
DE	21.8	n/a	n/a	0.6
DC	8.1	n/a	n/a	0.8
ME	82.8	n/a	n/a	1.4
MD	105.0	n/a	n/a	5.6
MA	152.7	n/a	n/a	6.7
NH	30.5	n/a	n/a	2.0
NJ	133.5	n/a	n/a	9.7
NY	177.6	n/a	n/a	16.1
PA	437.1	n/a	n/a	12.4
RI	8.3	n/a	n/a	0.8
VT	13.7	n/a	n/a	0.9
NOVA	16.6	n/a	n/a	2.5
OTR	**1254.5**	**0.0**	**0.0**	**63.0**

n/a – not available due to lack of 2009 emissions data for on-road vehicles in NIF format.

Table 4-12 OTC 2006 NOx Model Rule Benefits by State for 2009 Regional Fuels

State	Regional Fuels Summer NOx Emissions (tpd)			
	2006 Actual	2006 Base	2006 Control	2006 Benefit
CT	81.3	81.3	81.3	0.0
DE	24.8	24.8	24.8	0.0
DC	8.4	8.4	8.4	0.0
ME	44.1	44.1	43.8	0.2
MD	144.0	144.0	144.0	0.0
MA	137.4	137.4	137.4	0.0
NH	38.4	38.4	38.2	0.2
NJ	204.2	204.2	204.2	0.0
NY	381.3	381.3	379.1	2.1
PA	284.8	284.8	282.9	2.0
RI	20.5	20.5	20.5	0.0
VT	26.3	26.3	26.0	0.3
NOVA	50.8	50.8	50.8	0.0
OTR	**1446.2**	**1446.2**	**1441.4**	**4.8**

NESCAUM analysis was only completed for 2006. Data for 2002 and 2009 are not currently available

Table 4-13 OTC 2006 NOx Model Rule Benefits by State for 2009 Asphalt Pavement Production Plants

State	Asphalt Pavement Production Plants Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	0.0	0.0	0.0	0.0
DE	0.6	0.6	0.4	0.2
DC	0.0	0.0	0.0	0.0
ME	1.7	2.0	1.3	0.7
MD	0.2	0.2	0.1	0.1
MA	1.1	1.8	1.2	0.6
NH	0.0	0.0	0.0	0.0
NJ	1.3	2.8	1.8	1.0
NY	0.0	0.1	0.0	0.0
PA	0.6	0.7	0.5	0.2
RI	0.1	0.1	0.1	0.0
VT	0.0	0.0	0.0	0.0
NOVA	0.3	0.3	0.2	0.1
OTR	**5.9**	**8.6**	**5.6**	**3.0**

2002 Actual emissions come from the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Table 4-14 OTC 2006 NOx Model Rule Benefits by State for 2009 Cement Kilns

State	Cement Kilns Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	0.0	0.0	0.0	0.0
DE	0.0	0.0	0.0	0.0
DC	0.0	0.0	0.0	0.0
ME	4.7	4.7	4.7	0.0
MD	17.2	17.2	4.1	13.1
MA	0.0	0.0	0.0	0.0
NH	0.0	0.0	0.0	0.0
NJ	0.0	0.0	0.0	0.0
NY	35.1	35.1	19.8	15.3
PA	44.7	44.7	30.7	14.0
RI	0.0	0.0	0.0	0.0
VT	0.0	0.0	0.0	0.0
NOVA	0.0	0.0	0.0	0.0
OTR	**101.9**	**101.9**	**59.4**	**42.5**

2002 Actual emissions come from the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are the emissions forecasted to be the same as in 2002 (i.e., no growth was assumed).

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Table 4-15 OTC 2006 NOx Model Rule Benefits by State for 2009 Glass/Fiberglass Furnaces

State	Glass/Fiberglass Furnace Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	Maximum Control	Maximum Benefit
CT	0.0	0.0	0.0	0.0
DE	0.0	0.0	0.0	0.0
DC	0.0	0.0	0.0	0.0
ME	0.0	0.0	0.0	0.0
MD	0.3	0.3	0.1	0.3
MA	1.4	1.8	0.3	1.5
NH	0.0	0.0	0.0	0.0
NJ	7.7	7.1	2.2	4.9
NY	6.1	6.8	1.0	5.8
PA	36.3	44.3	20.0	24.3
RI	0.7	0.5	0.1	0.5
VT	0.0	0.0	0.0	0.0
NOVA	0.0	0.0	0.0	0.0
OTR	**52.5**	**60.9**	**23.6**	**37.3**

2002 Actual emissions come from the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

Maximum Control Inventory emissions are the emissions remaining after full implementation of the beyond-on-the-way control measures described in this Section. Not all of the anticipated reductions from the glass/fiberglass OTC 2006 control measure will be achieved by 2009. This column shows the emissions remaining after full implementation of the measure, which may not occur until 2012 or 2018.

Maximum Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the base emissions and the maximum control emissions).

Note: The table shows the maximum emission reduction from glass/fiberglass furnaces when the OTC 2006 control measure is fully implemented. Not all of the reduction shown will be achieved by 2009.

Table 4-16 OTC 2006 NOx Model Rule Benefits by State for 2009
ICI Boilers – Area (Minor) Source

State	ICI Boilers – Area (Minor) Sources Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	8.9	9.4	6.5	2.8
DE	3.4	3.5	2.3	1.2
DC	1.3	1.6	1.1	0.4
ME	5.0	5.3	4.2	1.1
MD	3.5	4.0	2.9	1.2
MA	24.4	25.8	19.1	6.6
NH	21.3	24.2	20.8	3.4
NJ	20.5	15.6	15.6	0.0
NY	105.2	112.2	78.4	33.8
PA	38.0	39.8	27.6	12.2
RI	6.6	7.3	5.3	2.1
VT	2.3	2.9	1.9	0.9
NOVA	11.8	11.9	8.1	3.9
OTR	**252.0**	**263.4**	**193.9**	**69.5**

2002 Actual emissions come from the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Table 4-17 OTC 2006 NOx Model Rule Benefits by State for 2009
ICI Boilers – Point (Major) Source

State	ICI Boilers – Point (Major) Sources Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	5.8	5.6	3.5	2.1
DE	7.7	7.3	7.3	0.0
DC	1.0	1.1	0.8	0.4
ME	10.2	12.8	10.1	2.8
MD	14.2	11.2	8.8	2.4
MA	13.8	15.4	8.7	6.8
NH	3.9	4.8	2.9	1.9
NJ	12.9	10.8	7.4	3.4
NY	31.4	30.8	23.8	7.0
PA	33.4	36.5	26.7	9.8
RI	4.2	4.9	4.3	0.5
VT	0.7	0.9	0.5	0.4
NOVA	0.2	0.2	0.0	0.1
OTR	**139.3**	**142.3**	**104.6**	**37.7**

2002 Actual emissions come from the MANEVU 2002 Version 3 inventory and VISTAS 2002 Base G inventory (for the 10 northern Virginia jurisdictions that are part of the OTR).

2009 Base Inventory emissions are the emissions forecasted in the MANEVU 2009 OTB/W Version 3.1 inventory and the VISTAS 2009 Base G inventory, and account for growth and any emission reductions associated with on-the-books/on-the-way controls measures.

2009 Control Inventory emissions are the emissions remaining after implementation of the beyond-on-the-way control measures described in this Section.

2009 Emission Reduction Benefit is the incremental emission reduction from the control measures described in this section (i.e., the difference between the 2009 base emissions and the 2009 control emissions).

Table 4-18 OTC 2006 NOx Model Rule Benefits by State for 2009
All Seven NOx Categories

State	All Seven NOx Categories Summer NOx Emissions (tpd)			
	2002 Actual	2009 Base	2009 Control	2009 Benefit
CT	162.7	n/a	n/a	8.4
DE	58.2	n/a	n/a	2.1
DC	18.8	n/a	n/a	1.6
ME	148.5	n/a	n/a	6.2
MD	284.4	n/a	n/a	22.7
MA	330.8	n/a	n/a	22.2
NH	94.1	n/a	n/a	7.5
NJ	380.0	n/a	n/a	19.0
NY	736.8	n/a	n/a	80.1
PA	874.9	n/a	n/a	74.9
RI	40.5	n/a	n/a	3.9
VT	42.9	n/a	n/a	2.5
NOVA	79.6	n/a	n/a	6.6
OTR	**3252.3**	**n/a**	**n/a**	**257.8**

n/a – not available due to lack of 2009 emissions data for on-road vehicles in NIF format.

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Appendix A – Process for Identifying and Evaluating Control Measures

Background

The States of the Ozone Transport Region (OTR) are faced with the requirement to demonstrate attainment with the 8-hour ozone NAAQS 8-hour ozone National Ambient Air Quality Standards (NAAQS) by June 15, 2008. To accomplish this, most of the states will need to implement additional measures to reduce emissions that either directly impact their nonattainment status, or contribute to the nonattainment status in other states. In addition, the States are conducting attainment planning work to support development of PM2.5 and regional haze State Implementation Plans (SIPs). As such, the Ozone Transport Commission (OTC) undertook an exercise to identify a suite of additional control measures that could be used by the OTR states in attaining their goals.

In March 2005, the Ozone Transport Commission (OTC) established the Control Strategies Committee as an ad-hoc committee to assist with coordination of the attainment planning work. The Control Strategies Committee works with three other OTC committees. The Stationary and Area Source (SAS) Committee evaluates control measures for specific stationary source sectors or issues. The Mobile Source Committee examines control measures for on-road and non-road mobile sources. And the Modeling Committee develops and implements a strategic plan for SIP-quality modeling runs to support attainments demonstrations.

The SAS Committee is comprised of various workgroups that evaluate control measures for specific sectors or issues. These workgroups included:

- Control Measures Workgroup focuses on stationary area sources;
- Reasonably Available Control Technology (RACT) workgroup focuses on major point sources;
- Multi-Pollutant Workgroup focuses on electric generating units (EGUs);
- High Electric Demand Day (HEDD) examines EGU peaking units; and
- Industrial, Commercial, and Institutional (ICI) Boiler Workgroup focuses on control technologies for different fuels and boiler size ranges.

The OTC also issued a contract to MACTEC to help the SAS Committee identify and evaluate candidate control measures as well as to quantify expected emission reductions for each control measure.

Workgroup Activities

Initially, the Workgroups compiled and reviewed a list of approximately 1,000 candidate control measures. These control measures were identified through published sources such as the U.S. Environmental Protection Agency's (EPA's) Control Technique Guidelines, STAPPA/ALAPCO "Menu of Options" documents, the AirControlNET database, emission control initiatives in member states as well as other states including California, state/regional consultations, and stakeholder input. Appendix B provides the initial list of control measures that were evaluated.

Based on the review of the 1,000 candidate control measures, the Workgroups developed a short list of measures to be considered for more detailed analysis. These measures were selected to focus on the pollutants and source categories that are thought to be the most effective in reducing ozone air quality levels in the Northeastern and Mid-Atlantic States. The Workgroups reviewed information on current emission levels, controls already in place, expected emission reductions from the control measures, when the emission reductions would occur, preliminary cost and cost-effectiveness data, and other implementation issues. Each of the candidate control measures on the short list were summarized in a series of "Control Measure Summary Sheets". The Control Measure Summary Sheets are contained in Appendix C. The Workgroups discussed the candidate control measures during a series of conference calls and workshops to further refine the emission reduction estimates, the cost data, and any implementation issues. The Workgroups also discussed comments from stakeholders. The Workgroups prioritized the control measures and made preliminary recommendations regarding which measures to move forward on.

OTC Commissioners' Recommendations

Based on the analyses by the OTC Workgroups, the OTC Commissioners made several recommendations at the Commissioner's meeting in Boston June 2006 and November 2006. The Commissioners recommended that States consider emission reductions from the following source categories:

- Consumer Products
- Portable Fuel Containers
- Adhesives and Sealants Application
- Diesel Engine Chip Reflash
- Cutback and Emulsified Asphalt Paving
- Asphalt Production Plants

- Cement Kilns
- Glass Furnaces
- Industrial, Commercial, and Institutional (ICI) Boilers
- Regional Fuels
- Electric Generating Units (EGUs)

Additionally, the Commissioners requested that EPA pursue federal regulations and programs designed to ensure national development and implementation of control measures for the following categories: architectural and maintenance coatings, consumer products, ICI boilers over 100 mmBtu/hour heat input, portable fuel containers, municipal waste combustors, regionally consistent and environmentally sound fuels, small offroad engine emission regulation, and gasoline vapor recovery. The various recommendations by the OTC Commissioners made from 2004 to 2006 are summarized in Table A-1.

Stakeholder Input

Stakeholders were provided multiple opportunities to review and comment on the Control Measure Summary Sheets. Table A-2 lists the public meetings that were held as an opportunity for stakeholders to review and respond to the Control Measure Summary Sheets and Commissioner's recommendations. Stakeholders provided written comments, as listed in Table A-3. In addition to submitting written comments, the Workgroups conducted teleconferences with specific stakeholder groups to allow stakeholders to vocalize their concerns directly to state staff and to discuss the control options. These stakeholder conference calls and meeting are listed in Table A-4. The OTC staff and state Workgroups carefully considered the verbal and written comments received during this process.

Table A-1: OTC Formal Actions, 2004-2006

Date	Action/Synopsis
Nov. 10, 2004	*Charge to Stationary and Area Sources Committee* Directs SAS Committee to continue to seek out innovative programs to address emissions from all stationary and area sources.
Nov. 10, 2004	*Charge to Stationary and Area Sources Committee Regarding Multi-Pollutant Emission Control for Electrical Generating Units and Large Industrial Sources* Directs the SAS Committee to develop an implementation strategy for to implement the OTC's multi—pollutant position, recommend methods for allocating NOx and SO2 caps, assess methods to advance the OTC's Multi0Pollutant position beyond the OTR, develop a program implementation structure, and present a Memorandum of Understanding for consideration by the Commission.
Nov. 10, 2004	*Charge to the Mobile Source Committee* Directs the Mobile Source Committee to identify selected scenarios to be modeled and evaluate strategies including anti-idling programs, voluntary and regulatory retrofit programs, VMT growth strategies, port and marine engine programs, national mobile source programs, California Low Emission Vehicle programs, and model incentive programs.
Nov. 10, 2004	*Statement on OTC Modeling* Directs the Modeling Committee to coordinate inventories and modeling needed for ozone, regional haze, and PM; seek input for air directors and OTC committees on regional strategies for modeling; continue to use CALGRID as a screening tool; and continue to explore application of emerging tools.
June 8, 2005	*Resolution of the States of the Ozone Transport Commission Regarding Development of a Regional Strategy for the Integrated Control of Ozone Precursors and Other Pollutants of Concern from Electrical Generating Units (EGUs) and Other Large Sources* Resolves that member States: develop a regional Multi-Pollutant program to assist in attaining and maintaining the 8-hour ozone NAAQS; seek to gain support from other states for a broader inter-regional strategy; develop an emissions budget and region-wide trading program; explore all feasible options to utilize the CAIR framework; and develop implementation mechanisms including a Memorandum of Understanding among the states.
Nov. 3, 2005	*Statement of the Ozone Transport Commission With Regard to Advancement of Potential Regional Control Measures for Emission Reduction from Appropriate Sources and State Attain Planning Purposes* Directs the staff of the OTC to continue investigation and modeling work associated with all potential regional control measures.
Feb. 23, 2006	*Action Items* Directs OTC staff to continue efforts on the following issues: Letter to EPA on Small Engines, Consumer Products, Architectural/Industrial Maintenance Coatings (AIM), Chip Reflash, Diesel Emissions Reductions, Modeling Efforts.
June 7, 2006	*Memorandum of Understanding Among the States of the Ozone Transport Commission on a Regional Strategy Concerning the Integrated Control of Ozone Precursors from Various Sources* Commits OTC States to continue to

Date	Action/Synopsis
	work with interested stakeholders and pursue state-specific rulemakings as needed and appropriate regarding the following sectors to reduce emission of ozone precursors: Consumer Products, Portable Fuel Containers, Adhesives and Sealants, and Diesel Engine Chip Reflash.
June 7, 2006	*Statement of the Ozone Transport Commission Concerning Multi-Pollutant Emission Control of Electric Generating Units* Directs OTC staff and its workgroups to continue to formulate a program beyond CAIR to address emissions from this sector and to evaluate and recommend options to address emissions associated with high electrical demand days during the ozone season.
June 7 2006	*Resolution 06-02 of the Ozone Transport Commission Concerning Coordination and Implementation of Regional Ozone Control Strategies for Certain Source Categories* Resolves that OTC States continue to work with interested stakeholders and pursue state-specific rulemakings as needed to establish emission reduction percentages, emission rates or technologies as appropriate for the following source categories: asphalt paving (cutback and emulsified), asphalt plants, cement kilns, regional fuels, glass furnaces, and ICI boilers.
June 7, 2006	*Resolution 06-03 of the Ozone Transport Commission Concerning Federal Guidance and Rulemaking for Nationally-Relevant Ozone Control Measures* Resolves that OTC States request that EPA pursue federal regulations and programs for national implementation of control measures comparable to the levels the OTC has adopted; these areas include AIM Coatings, Consumer Products, ICI Boilers over 100 MMBTU, Portable Fuel Containers, Municipal Waste Combustors, Regional Fuels, Small Engine Emission Regulation, and Gasoline Vapor Recovery.
Nov. 15, 2006	*Modified Charge of the Ozone Transport Commission to the Stationary Area Source Committee Regarding Electric Generating Units* Directs the SAS Committee and workgroups to continue work on EGU emission reduction strategies to incorporate "CAIR Plus" and High Energy Demand Day (HEDD) emission reduction strategies.
Nov. 15, 2006	*Statement of the Ozone Transport Commission Concerning Regional and State Measures to Address Emissions from Mobile Sources* Supports the aggressive implementation of a suite of controls through the OTC Clean Corridor Initiative including: diesel retrofits, the Smartways program, California Low Emission Vehicle programs, anti-idling programs, low-NOx diesel alternatives, transportation demand management to reduce the growth in VMT, and voluntary action and outreach programs.
Nov. 15, 2006	*Addendum to Resolution 06-02 of the Ozone Transport Commission Concerning Coordination and Implementation of Regional Ozone Control Strategies for Various Sources* Resolves that OTC States continue to pursue state-specific rulemakings as needed to establish emission reduction percentages, emission rates or technologies as appropriate for the following source categories: asphalt plants, glass furnaces, and ICI boilers.

OTC formal actions can be found on the OTC website at the following address:

http://www.otcair.org/document.asp?fview=Formal

Table A-2: OTC Control Measures Public Meetings, 2004-2006

Date	**Meeting**	**Location**
June 8-9, 2004	OTC/MANE-VU Annual Meeting	Red Bank, NJ
Nov. 9-10, 2004	OTC Fall Meeting	Annapolis, MD
Apr. 21-22, 2005	OTC Stationary and Area Source/Mobile Source Committee Meeting	Linthicum, MD
June 7-8, 2005	OTC Annual Meeting	Burlington, VT
Oct. 5, 2005	OTC Control Strategy Committee Meeting	Linthicum, MD
Nov. 2-3, 2005	OTC Fall Meeting	Newark, DE
Jan. 24, 2006	OTC Control Strategy Committee Meeting	Linthicum, MD
Feb. 22-23, 2006	OTC Special Meeting	Washington, DC
Apr. 5-6, 2006	OTC Control Strategy Committee Meeting	Linthicum, MD
June 6-7, 2006	OTC Annual Meeting	Boston, MA
July 28, 2006	OTC/RTO/ISO Meeting	Herndon, VA
Sep. 18, 2006	OTC High Energy Demand Day Workgroup Meeting	Herndon, VA
Sep. 19, 2006	OTC Stationary and Area Source Committee Meeting	Herndon, VA
Nov. 2, 2006	OTC Control Strategies and Stationary and Area Source Committee Meeting	Linthicum, MD
Nov. 15, 2006	OTC Fall Meeting	Richmond, VA
Dec. 5-6, 2006	OTC High Energy Demand Day Workgroup Meeting	Hartford, CT

Meeting agendas and presentations can be found on the OTC website at the following address:

http://www.otcair.org/document.asp?fview=meeting

Table A-4: Stakeholder Comments on OTC Control Strategies

Stakeholder	Source Category
Adhesive and Sealant Council	Adhesives and Sealants
National Paint & Coatings Association (NPCA)	Adhesives and Sealants
Ameron International	AIM Coatings
McCormick Paints	AIM Coatings
National Paint and Coatings Association (NPCA)	AIM Coatings
Painting and Decorating Contractors of America (PDCA)	AIM Coatings
PROSOCO, Inc.	AIM Coatings
RUDD Company Inc.	AIM Coatings
TEX COTE	AIM Coatings
The Master Painters Institute (MPI)	AIM Coatings
The Society for Protective Coatings (SSPC)	AIM Coatings
Wank Adams Slavin and Associates, LLC (WASA)	AIM Coatings
NAPA Asphalt Production	Asphalt Production
MATRIX Systems Auto Refinishing	Auto Refinishing
Portland Cement Association (PCA)	Cement Kilns
St Lawrence Cement	Cement Kilns
Consumer Specialty Products Association (CSPA)	Consumer Products
Cosmetic, Toiletry and Fragrance Association (CTFA)	Consumer Products
National Paint & Coatings Association (NPCA)	Consumer Products
Clean Air Task Force	Diesel Retrofits
Center for Energy and Economic Development, Inc. (CEED)	EGUs
Chesapeake Bay Foundation	EGUs
Clean Air Task Force	EGUs
Conectiv Energy	EGUs
Dominion	EGUs
Exelon	EGUs
International Brotherhood of Electrical Workers , United Mine Workers of America, Center for Energy & Economic Development, Inc., Pennsylvania Coal Association	EGUs
NRG	EGUs
PPL Services	EGUs
The Clean Energy Group	EGUs
National Lime Association (NLA)	Lime Kilns
Debra Jacobson, Prof. Lecturer in Energy Law	NOx Sources
Flexible Packaging Association (FPA)s	Printing/Graphic Arts
Graphic Arts Coalition Flexography Air Regulations	Printing – Flexography
Graphic Arts Coalition Printing & Graphic Arts	Printing/Graphic Arts
Graphic Arts Coalition Screen Litho Air Regulations	Printing – Lithography

Stakeholder comments can be found on the OTC website at the following address:
http://www.otcair.org/projects_details.asp?FID=95&fview=stationary

Table A-4: OTC Conference Calls and Meetings with Stakeholders, 2006

Source Category	Date(s)	Industry Lead
Adhesives and Sealants	Aug. 30, 2006	Adhesives Council
Asphalt Paving	Mar. 30, 2006	National Asphalt Paving Association (meeting)
	Sep. 21, 2006	National Asphalt Paving Association
	Sep. 28, 2006	Asphalt Emulation Manufacturers Association
	Oct. 13, 2006	Asphalt Emulation Manufacturers Association
Asphalt Production	Oct. 25, 2006	National Asphalt Paving Association (meeting)
Consumer Products	Mar. 24, 2006	Consumer Specialty Products Association
	June 22, 2006	American Solvents Council (meeting)
	June 22, 2006	Consumer Specialty Products Association
	Aug. 29, 2006	Consumer Specialty Products Association
Glass Manufacturers	July 5, 2006	North American Insulation Manufacturers Assoc.
	Aug. 16, 2006	North American Insulation Manufacturers Assoc.
	Sep. 14, 2006	Glass Association of North America
	Oct. 19, 2006	Glass Association of North America
ICI Boilers	Mar. 14, 2006	Council of Industrial Boiler Owners
	Mar. 24, 2006	Institute of Clean Air Companies
	July 18, 2006	Council of Industrial Boiler Owners (meeting)
	Aug. 1, 2006	Council of Industrial Boiler Owners (conference)

Appendix B – Initial List of Control Measures

The comprehensive list of control measures can be found at:

http://www.otcair.org

Appendix B – Initial List of Control Measures

Measure	Pollutant	Description	Source	Source Code
"CashforClunkers"lawn&gardenprogram		Offer $75 for owners to turn in old, 2 and 4-stroke lawn & garden equipment and purchase electric or push mower	Non-road	DC RACM - 2003
"Southern"reformulatedgasoline(verylowRVP)	VOC	Very Low RVP	On-road	MA Strategies - 2004
1RegenerativeThermalOxidizer	VOC	Process vent gas treatment	Stationary	NEET Database - ongoing
1ThermalOxidizers	VOC	Process vent gas treatment	Stationary	NEET Database - ongoing
3RCleanMultiFuels-CLEANCOAL	VOC	Work practices (general)	Pollution Prevention	NEET Database - ongoing
3RMultiVenturiOffgasScrubber		Emission capture systems	Stationary	NEET Database - ongoing
4DayWorkWeek/FlexibleWorkSchedules		Encourage employers to adopt a shorter work week, with employees working 4 10-hour days	Mobile	DC RACM - 2003
AcceleratedimplementationofEnhancedI/M	VOC			MA Strategies - 2004
AcceleratedVehicleRetirement	NOx/VOC	Implement an accelerated vehicle retirement, or "scrappage" program in conjunction with an I/M program.	Mobile	EPA Measures - 1999
AccesstoJobsProgram		Identifies gaps in transit service between places of residence and places of work for low wage workers	Mobile	DC RACM - 2003
AcetalResinsProduction	VOC		Stationary	EPA Measures - 1999
AcrylicFibers/MonoacrylicFibersProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/gmact/gmactpg.html	Stationary	EPA Measures - 1999
Acrylicplastisols2	VOC	Acrylic plastisols are being investigated as a new type of low-solvent industrial coating. Acrylic polymers offer a number of distinct advantages over polyvinyl chloride such as superior exterior durability and a more favorable environmental image.	Stationary	Regulatory Impact Analysis - 1997
Acrylonitrile-Butadiene-StyreneProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr4/pr4pg.html	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
AdaptiveControlTechniquesforEngineManagement25	NOx/VOC	Non-linear adaptive control techniques control air/fuel ratios more precisely over a wider range of operating conditions and operate catalytic converters over the narrow range in which they are efficient. Adapts to aging or faulty engines and to varying fuel properties such as volatility.		Regulatory Impact Analysis - 1997
AdditionalTransitStores		Establish additional stationary transit stores in the region	Mobile	DC RACM - 2003
Addozonealerttocountywebsite				EACs - 2004
Addselectivecatalyticreduction(SCR)	NOx/PM		Diesel locomotives	Regulatory Impact Analysis - 1997
AdhesiveApplications	VOC	VOC content limits for compliant adhesives + Emission capture and control system for non-compliant adhesives + Transfer efficiency requirements for adhesive applicators + Solvent cleaning, storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
Adhesives-industrial	VOC	SCAQMD Rule 1168	Stationary	EPA Measures - 1999
AdipicAcidManufacturing	NOx	Thermal Reduction	Stationary	EPA Measures - 1999
AdipicAcidManufacturing	NOx	Extended Absorption	Stationary	EPA Measures - 1999
Adoptaschoolbusprogram				EACs - 2004
Adoptlocalcleanairpolicy				EACs - 2004
Adoptmeasurestoreducelawnareaandmowerusagethroughxeriscaping	NOx		Landuse	SAQMD Clean Air Plan - 2003
AdvancedAcetylenicGlycol(AAG)technology9	VOC	To address the need for substrate wetting in waterborne systems, a new-generation surfactant has been developed based on Advanced Acetylenic Glycol (AAG) technology. The AAG technology provides greater flexibility and mobility, as well as other benefits.		Regulatory Impact Analysis - 1997
AdvancedAirfoilRetrofit	NOx/VOC	Rather than using airfoils designed originally for		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		the airline industry, systems using airfoils designed specifically for wind towers offer substantial savings. One estimate is that substitution of such airfoils onto existing towers causes a 20 - 30 percent increase in electricity generation.		
Aerodynamicdevices	NOx		Non-road	Regulatory Impact Analysis - 1997
Acrylonitrile-Butadiene-StyreneProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr4/pr4pg.html	Stationary	EPA Measures - 1999
AdaptiveControlTechniquesforEngineManagement25	NOx/VOC	Non-linear adaptive control techniques control air/fuel ratios more precisely over a wider range of operating conditions and operate catalytic converters over the narrow range in which they are efficient. Adapts to aging or faulty engines and to varying fuel properties such as volatility.		Regulatory Impact Analysis - 1997
AdditionalTransitStores		Establish additional stationary transit stores in the region	Mobile	DC RACM - 2003
Addozonealerttocountywebsite				EACs - 2004
Addselectivecatalyticreduction(SCR)	NOx/PM		Diesel locomotives	Regulatory Impact Analysis - 1997
AdhesiveApplications	VOC	VOC content limits for compliant adhesives + Emission capture and control system for non-compliant adhesives + Transfer efficiency requirements for adhesive applicators + Solvent cleaning, storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
Adhesives-industrial	VOC	SCAQMD Rule 1168	Stationary	EPA Measures - 1999
AdipicAcidManufacturing	NOx	Thermal Reduction	Stationary	EPA Measures - 1999
AdipicAcidManufacturing	NOx	Extended Absorption	Stationary	EPA Measures - 1999
Adoptaschoolbusprogram				EACs - 2004
Adoptlocalcleanairpolicy				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
Adoptmeasurestoreducelawnareaandmowerusagethroughxeriscaping	NOx		Landuse	SAQMD Clean Air Plan - 2003
AdvancedAcetylenicGlycol(AAG)technology9	VOC	To address the need for substrate wetting in waterborne systems, a new-generation surfactant has been developed based on Advanced Acetylenic Glycol (AAG) technology. The AAG technology provides greater flexibility and mobility, as well as other benefits.		Regulatory Impact Analysis - 1997
AdvancedAirfoilRetrofit	NOx/VOC	Rather than using airfoils designed originally for the airline industry, systems using airfoils designed specifically for wind towers offer substantial savings. One estimate is that substitution of such airfoils onto existing towers causes a 20 - 30 percent increase in electricity generation.		Regulatory Impact Analysis - 1997
Aerodynamicdevices	NOx		Non-road	Regulatory Impact Analysis - 1997
AerosolMetalsMonitor		Ambient Monitoring	Monitoring	NEET Database - ongoing
AerosolPaints	VOC	Bay Area Air Quality Management District's (BAAQMD's) rule + additional reductions from standards similar to those of SCAQMD.	Stationary	EPA Measures - 1999
AerospaceAssemblyandComponentManufacturing Operations	VOC	VOC content limits for coatings, adhesives, and maskents + Cleaning operations and solvent storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
AerospaceIndustries	VOC	See Website - http://www.epa.gov/ttn/uatw/aerosp/aeropg.html	Stationary	EPA Measures - 1999
AerospaceManufacturingandRework	VOC	EPA's National Emission Standard for Hazardous Air Pollutant (NESHAP) + area-specific limits for specialty coatings to reflect local plant operations.	Stationary	EPA Measures - 1999
AgriculturalBurning	NOx	Seasonal Ban (Ozone Season)	Stationary	EPA Measures - 1999
Agriculturaldieselengineelectrification	NOx		Offroad	SAQMD Clean Air Plan - 2003
Agriculturaldieselengineelectrification	VOC		Offroad	SAQMD Clean Air Plan - 2003
Agriculturalequipmentretrofits		Require agricultural equipment to be retrofitted	Non-road	DC RACM - 2003

Measure	Pollutant	Description	Source	Source Code
		with emissions controls		
Agriculturalequipmentuserestrictions		Mandatory restrictions on use of agricultural equipment during Code Red Ozone Action Days	Non-road	DC RACM - 2003
Agriculture:Ammoniarestrictionsonconfinedanimalfeedingoperations	PM2.5		Area	CT Memo - 2005
AIMSurfaceCoatings				CT RACM - 2001
Aircraft:ReduceEmissionsbyAlteringOperations(e.g.,Taxiing)	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
AircraftNon-GateIdling		Sign MOUs with airlines to limit idling of aircraft while taxiing	Area	DC RACM - 2003
AircraftNon-GateIdling				EACs - 2004
Aircraftsurfacecoating	VOC	MACT	Stationary	EPA Measures - 1999
Aircurtaindestructor-landclearing				EACs - 2004
AirportCleanAirPlan				EACs - 2004
AirportCongestionPricing		Charge higher aircraft landing fees during busy times of day to reduce airport delays and congestion	Area	DC RACM - 2003
AirQualityOutreachandActionDays				EACs - 2004
AirStripping/SoilDecontamination	VOC		Stationary/Area	SAQMD Clean Air Plan - 2003
Aliphaticisocyanates17	VOC	Urethane technology provides strong linkage for molecules in coatings, and is finding its way into high-solid, powder, and waterborne technologies. For example, isophorone diisocyanate is gathering strength in the powder coatings market, while use of hexamethylene diisocyanate in waterbased coatings is expected to grow. A family of low-temperature unblocking isocyanates as also been developed, and is being marketed to the painting		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		and coating industry.		
AlkalineFuelCells(AFC)6	NOx/VOC	Long used by NASA on space missions, these cells can achieve power generating efficiencies of up to 70 percent. They use alkaline potassium as the electrolyte. Until recently they were too costly for commercial applications, but several companies are examining ways to reduce costs and improve operating flexibility.		Regulatory Impact Analysis - 1997
AllowDistricttoOptintoTest-onlyProgram	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Alternatecommuteinfrastructure				EACs - 2004
Alternateworkschedules				EACs - 2004
Alternativefuelforcountyfleets				EACs - 2004
alternativefuelshuttlebuses	NOx		Landuse	SAQMD Clean Air Plan - 2003
Alternativefuelvehicles				EACs - 2004
AluminumRollingMills	VOC	Add-on controls achieving a 95-percent reduction in VOC emissions and/or VOC-content standards for lubricants	Stationary	EPA Measures - 1999
AmbientEngineeringBiofilters	VOC	Emission capture systems	Stationary	NEET Database - ongoing
AminoResinsProductions	VOC	See Website - http://www.epa.gov/ttn/uatw/amino/aminopg.html	Stationary	EPA Measures - 1999
Ammonia-NaturalGas-FiredReformers	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Ammonia-NaturalGas-FiredReformers	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
Ammonia-NaturalGas-FiredReformers	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Ammonia-NaturalGas-FiredReformers	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
Ammonia-NaturalGas-FiredReformers	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
AmmoniaPlants	NOx	Controls based on those for process heaters and industrial boilers	Stationary	EPA Measures - 1999
AmmoniaProduction;FeedstockDesulfurization	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Amorphoussilicon(a-Si)	NOx/VOC	A solar film on which research efforts is focused because of its potential for increased unit efficiency and ease of manufacturing. Efficiency gains are evident: from less than one percent in 1974 to 10.2 percent in 1994. Researchers are currently seeking laboratory efficiency ratings of 13 percent. Lower efficiency ceiling of a-Si compared to crystalline silicon offset by lower manufacturing costs.		Regulatory Impact Analysis - 1997
Announceozoneactiondaysonradio				EACs - 2004
AnnualGasolineVehiclePollutionFee		Levy an annual fee on petroleum-powered vehicles based on mileage driven and emission rates.	Mobile	DC RACM - 2003
Anti-idlingprovisions-dieselengines-				EACs - 2004
Applicationofagriculturalpesticides	VOC	Water based carriers for pesticides	Stationary	EPA Measures - 1999
AppointOzoneActionCoordinator-				EACs - 2004
Askgaragestolimitidling				EACs - 2004
Asphalt/CoalTarApplications-MetalPipes	VOC	Pending	Stationary	EPA Measures - 1999
AsphalticConcrete;RotaryDryer;ConversionPlant	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
AsphaltProcessing	VOC	Pending	Stationary	EPA Measures - 1999
AsphaltRoofingManufacturing	VOC	Pending	Stationary	EPA Measures - 1999
AugmenttruckandBusInspectionswithCommunity-basedInspections	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
AutoandLightDutyTruck(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
AutobodyRefinishing	VOC	High-volume, low pressure (HVLP) spray systems + gun-cleaning equipment + proper disposal for clean-up solvents + California's Best Available Retrofit Control Technology limits.	Stationary	EPA Measures - 1999
AutobodyRefinishingControls				EACs - 2004
AutomatedElectricVehicleChargingSystem15	NOx/VOC	Development of an automated system that would dock, or couple, an EV to a battery charging system. The project will address inductively and		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		conductively coupled systems. This project is expected to build on previous research into such an automated system, resulting in a prototype test unit of a commercially viable system. This project, if successful, will improve the perceived convenience and, thus, commercial viability of EVs.		
Automatespeedenforcementandlowerthespeedlimit to55mphforheavydutyvehicles	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
AutomaticVehicleLocatorSystem		System would provide bus location information to WMATA dispatchers. This would decrease wait time and improve on-time arrival/departure.	Mobile	DC RACM - 2003
AutomobileandLight-dutytrucksurfacecoatingoperations	VOC	Low solvent coatings	Stationary	EPA Measures - 1999
AutomobileAssembly	VOC	Spray booth abatement at 5.8 lbs/gal solids applied + without spray booth abatement, a 10-lbs/gal level	Stationary	EPA Measures - 1999
AutomobileInsuranceisChargedatthepumporinsura nceismileagebased	NOx			SAQMD Clean Air Plan - 2003
Automobilerefinishing	VOC	Federal Rule	Stationary	EPA Measures - 1999
Automobilerefinishing	VOC	FIP Rule (VOC content & TE)	Stationary	EPA Measures - 1999
Automobilerefinishing	VOC	CARB BARCT limits	Stationary	EPA Measures - 1999
Availability/ExtentofNOxControls	NOx		Stationary	EPA Measures - 1999
BACTandoffsetsfornewormodifiedpointsources				EACs - 2004
Bakeries		Adopt SCAQMD Rule 1153: Commercial Bakery Ovens	Area	DC RACM - 2003
Banactivitiessuchas2-strokeengines	NOx		Offroad	SAQMD Clean Air Plan - 2003
Banactivitiessuchas2-strokeengines	VOC		Offroad	SAQMD Clean Air Plan - 2003
Banopenburningduringozoneaction				EACs - 2004
Banorlimitopenburning				EACs - 2004
Banorrestrictuseofrecreationalvehicles	NOx		Offroad	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
Banorrestrictuseofrecreationalvehicles	VOC		Offroad	SAQMD Clean Air Plan - 2003
BantheuseofVOC-bornepesticidesonspare-the-airdays	VOC		Area	SAQMD Clean Air Plan - 2003
BantransfersystemsinPetroleumDryCleaning	VOC		Stationary/Area	SAQMD Clean Air Plan - 2003
BanVehiclesfromDowntownStreets		Restrict private vehicle use in certain downtown areas during business hours , encouraging pedestrian and bicycle use instead.	Mobile	DC RACM - 2003
BatchProcesses	VOC	Current technologies achieving 98-percent control efficiency with exemptions based on considerations of volatility, annual emissions and flow rate.	Stationary	EPA Measures - 1999
BEPs				EACs - 2004
BestAvailableRetrofitControlTechnology(BARCT)for10tpyVOCsources	VOC			MA Strategies - 2004
Bestmgtpractices-engines				EACs - 2004
Bestpracticesforfueling				EACs - 2004
BeverageCanCoating	VOC	Incineration	Stationary	EPA Measures - 1999
Beveragecansurfacecoatingindustry	VOC	Low solvent inks or Incineration	Stationary	EPA Measures - 1999
Biodiesel(On-Road)		Require regional use of biodiesel fuel for on-road vehicles	Mobile	DC RACM - 2003
Biodieselreadytrucks				EACs - 2004
Bio-dieselsolidwastetrucks				EACs - 2004
BiofiltrationofGaseousEffluents	VOC	Process vent gas treatment	Stationary	NEET Database - ongoing
Biomimeticcoatings1	VOC	Synthetic routes are being developed for new water soluble polymers to enable the formulation of effective and durable waterborne protective coatings. The aim is to develop novel water-soluble polymers which on evaporation of water undergo a phase transformation similar to protein		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		molecules where hydrophobic moieties, present in the polymer, form the matrix of the film. This approach to produce zero-VOC solvent systems avoids the water sensitivity and reductions in performance and durability experienced by the current generation of water-based coatings.		
Blowdowncontrolsatnaturalgaspipelinecompressor stations	NOx/VOC		Stationary	CT Memo - 2005
BoatManufacturing	VOC	Pending	Stationary	EPA Measures - 1999
BoilersandProcessHeatersinPetroleumRefineries	NOx	NOx emission limit + Approved Alternative Emission Control Plan + Continuous NOx stack monitoring	Stationary	EPA Measures - 1999
BoseAnti-AirPollutantandEnergyConservationSystem		Fund trial of Bose system in local vehicle fleets. The Bose system is a mechanical system that uses high-speed centrifugal separation to remove light combustible gases from the exhaust stream. The system can be used with all types of fuel.	Mobile	DC RACM - 2003
Brownfielddevelopment				EACs - 2004
BuildPark&RideLotsatMajorIntersectionsofCommuterHighways		Construct new park & ride commuter lots along HOV facilities	Mobile	DC RACM - 2003
Bulkgasolineterminals	VOC	Vapor collection systems + Vapor tight tank trucks, Water-based cements	Stationary	EPA Measures - 1999
BulkTerminals	VOC	Balanced/Adsorber/Testing	Stationary	EPA Measures - 1999
burningduringtheozoneseason	NOx		Area	SAQMD Clean Air Plan - 2003
burningduringtheozoneseason	VOC		Area	SAQMD Clean Air Plan - 2003
BusTraffic-SignalPre-emption	NOx		Landuse	SAQMD Clean Air Plan - 2003
ButylRubberProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr1/pr1pg.html	Stationary	EPA Measures - 1999
Buyinbulk;lesspackaging				EACs - 2004
By-ProductCokeManufacturing;OvenUnderfiring	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
C.G.S.section29-252			Stationary	CT Memo - 2005
Cadmiumtelluride	NOx/VOC	A solar film on which research effort is focused due to its likely ease of production, likely improved efficiency and ability to compete with crystalline silicon modules. Laboratory efficiency ratings have reached 16 percent with commercial efficiency of 6 percent. Research indicates manufacturing techniques are likely very low cost, including electrodeposition, spraying, and high rate evaporation.		Regulatory Impact Analysis - 1997
CaliforniaLowEmissionVehiclePhase2(CALEV2)	NOx/VOC		Mobile	CT Memo - 2005
CaliforniaLow-EmissionVehicles	NOx/VOC	Adopt the California low-emission vehicle program	Mobile	EPA Measures - 1999
Californiaperiodicheavy-dutydieselvehiclefleetinspectionprogram	PM2.5		Mobile	CT Memo - 2005
CaliforniaSpark-IgnitionEngines(Dec2000)				TX SIP - 2000-2004
CANSOLVRegenerableSO2ControlTechnology	PM	Emission capture systems	Stationary	NEET Database - ongoing
CapandTradeEmissionsReductionProgramsimilartoRECLAIM	NOx		Stationary	SAQMD Clean Air Plan - 2003
CapandTradeEmissionsReductionProgramsimilartoRECLAIM	VOC		Stationary	SAQMD Clean Air Plan - 2003
CARBDieselFuel(On-Road)		Implement CARB diesel fuel standards	Mobile	DC RACM - 2003
CarbonBlackManufacture	VOC	Flare	Stationary	EPA Measures - 1999
CarbonBlackProduction	VOC	Pending	Stationary	EPA Measures - 1999
CarbonylSulfideProduction(Misc.OrganicNESHAP)	VOC	Pending	Stationary	EPA Measures - 1999
CARBsetstighterrequirementsformanufacturerstocertifyemissionsfromnewpassengervehicles	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
CARBsetstighterrequirementsfornewpassengervehicles(LEVIII)	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
Cargohandlingequipmentatshipbuildersandports	PM2.5		Mobile	CT Memo - 2005
CarSharingProgram		Fund incentives for new car sharing customers (I.e. Flexcar or Zipcar services)	Mobile	DC RACM - 2003
CarSharingPrograms	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
CatalyticOxidationwithHeatrecovery	VOC	Emission capture systems	Stationary	NEET Database - ongoing
CelluloseAcetateManufacture	VOC	Carbon Adsorption	Stationary	EPA Measures - 1999
CelluloseFoodCasingManufacturing	VOC	Pending	Stationary	EPA Measures - 1999
Cement	NOx	Production procedures + SCR -2.8lb/ton	Stationary	EPA Measures - 1999
CementKilnEmissionLimits(March2003)				TX SIP - 2000-2004
CementKilns	NOx	Continuous monitoring and recording of NOx emissions + NOx emission limit	Stationary	EPA Measures - 1999
CementKilns	NOx	Require combustion controls and post-combustion controls (SNCR) to achieve reductions of up to 70 percent on certain processes	Stationary	EPA Measures - 1999
CementManufacturing-Dry	NOx	Selective Non-Catalytic Reduction - NH3 Based	Stationary	EPA Measures - 1999
CementManufacturing-Dry	NOx	Mid-Kiln Firing	Stationary	EPA Measures - 1999
CementManufacturing-Dry	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
CementManufacturing-Dry	NOx	Selective Non-Catalytic Reduction - Urea Based	Stationary	EPA Measures - 1999
CementManufacturing-Dry	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
CementManufacturing-Wet	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
CementManufacturing-Wet	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
CementManufacturing-Wet	NOx	Mid-Kiln Firing	Stationary	EPA Measures - 1999
CeramicClayManufacturing;Drying	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
CeramicTechnologyforAdvancedHeatEngines4		Ceramic engine components are desirable for their durability and longevity.		Regulatory Impact Analysis - 1997
Certainfinalrecommendedmeasuresforresidential,commercialandindustrialsector			Stationary	CT Memo - 2005

Measure	Pollutant	Description	Source	Source Code
Cetaneadditivestodieselfuel				EACs - 2004
Changeworkschedule				EACs - 2004
ChangeZoningOrdinancestoEncourageIn-fill	NOx		Landuse	SAQMD Clean Air Plan - 2003
CHANOxRemovalSystem34	NOx	This system removes NOx pollutants from small stationary diesel engines. There are currently no feasible controls for these engines.		Regulatory Impact Analysis - 1997
CharcoalManufacturing	VOC	Incineration	Stationary	EPA Measures - 1999
CleanAirPartnersProgram		This program motivates individuals to take voluntary actions to reduce emissions on Ozone Action Days	Mobile	DC RACM - 2003
CleanFuelsfromMunicipalSolidWaste,Biomass,andOtherWasteFuels22	NOx/VOC	Development and demonstration of technologies and/or production processes to synthesize clean alternative fuels from various energy-rich, renewable sources, such as biomass, municipal solid waste, landfill gas, and other low cost or "free" waste fuels. The project is expected to result in pilot-scale production demonstrations, scale-up process design and cost analysis, overall environmental impact analysis, and projections for ultimate clean fuel costs and availability, for alternative fuels that are determined to offer the most promise		Regulatory Impact Analysis - 1997
Cleaningsolvents	VOC	Disposal practices for waste solvents	Stationary	EPA Measures - 1999
Clearcoatpowder21	VOC	The Low Emission Paint Consortium is researching the development of a powder clearcoat, although this type of coating has many difficulties to overcome in terms of durability and appearance in comparison with current methods. A trade-off with powder coatings is that powder requires higher bake requirements and new equipment and application systems.		Regulatory Impact Analysis - 1997
Clusterdevelopment,SmartGrowth,				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
CNGRefuseHaulers		Purchase new CNG powered trash trucks instead of conventional diesel vehicles	Mobile	DC RACM - 2003
CNGRentalCars		Purchase CNG rental cars for use in the region	Mobile	DC RACM - 2003
CNGTaxicabs		Replace regional taxicabs 7 years or older with CNG or other alternative fuel vehicles	Mobile	DC RACM - 2003
CoalCleaning-ThermalDryer;FluidizedBed	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
CoatingofMetalPartsandProducts	VOC	VOC content limits for coatings + Solvent cleaning and storage comply with Rule 1171 + Emission collection and control system for non-compliant coatings	Stationary	EPA Measures - 1999
Coemployees-restrictmowingduring				EACs - 2004
CokeBy-ProductPlants	VOC	Pending	Stationary	EPA Measures - 1999
CokeOvens:Pushing,QuenchingandBatteryStacks	VOC	Pending	Stationary	EPA Measures - 1999
CokeOvens:TopSideandDoorLeaks	VOC	Established MACT and LAER emission limits for coke batteries	Stationary	EPA Measures - 1999
Coldcleaning	VOC	NESHAP/MACT	Stationary	EPA Measures - 1999
Coldcleaning	VOC	Airtight degreasing system	Stationary	EPA Measures - 1999
Coldcleaning	VOC	SCAQMD 1122 (VOC content limit)	Stationary	EPA Measures - 1999
Coldlensblockingmethods("LoctiteColdBloc")6	VOC	New uv-curing "cold" blocking adhesive enables optical manufacturers to produce lens surfaces that are practically distortion free, and virtually eliminates the environmental concerns (solvents) of the current technique. This technique facilitates easy debonding using a variety of debonding agents and techniques. The adhesive is a significant advance in the lens blocking process, as it eliminates heat-induced blocking strain, which is the most significant problem encountered with current hot pitch blocking methods. Process reduces costly processing time, and is compatible with existing tooling.		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
Combifilter-ActiveDieselParticulateFilter	VOC/PM	Emission capture systems	Stationary	NEET Database - ongoing
CombustionTurbines	VOC	Pending	Stationary	EPA Measures - 1999
Commercial,lnstitutionalIncinerators	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
CommercialEthyleneOxideSterilization	VOC	Control emissions from the main sterilizer vent and vacuum pump drains at 99-percent from ethylene oxide (EtO) sterilizers using greater than 600 pounds of Et0 per year.	Stationary	EPA Measures - 1999
Community-basedshuttlesystem	NOx		Landuse	SAQMD Clean Air Plan - 2003
Commuteemissionreductionprogram				EACs - 2004
CommuterChoiceProgram				EACs - 2004
CommuterChoiceTaxCredit		Employers subsidize employees' monthly transit or vanpool costs and receive a tax credit for incurred expenses.	Mobile	DC RACM - 2003
Commutesolutionsprograms-				EACs - 2004
Compatibleinnovativecoatings27	VOC	Ciba is working on developing compatible powder, high solid and waterborne epoxy systems. Examples of areas of research include: new high flow solid epoxy resin for powder coating applications with smoother appearance; and new waterborne epoxy resins and epoxy hardeners with environmental advantages.		Regulatory Impact Analysis - 1997
comprees;carpool,flexible,etc				EACs - 2004
ComputerizedTrafficSignals	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Congestionmitigation-trafficsignal				EACs - 2004
CongestionPricingonLowOccupancyVehicles		Impose a fee on vehicles containing two or fewer persons that use designated roadways during the peak AM period	Mobile	DC RACM - 2003
Conserveenergyincountyproperty				EACs - 2004
Constructionequipment				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
Constructionequipmentretrofitswithoxidationcatalystsandparticulatefilters	NOx/VOC		Mobile	CT Memo - 2005
Constructionequipmentuserestrictions		Restrict use of construction equipment during expected ozone exceedance days	Non-road	DC RACM - 2003
Constructionretrofits		Require construction equipment operating on state and local contracts to be retrofitted with particulate fitlers and/or oxidation catalysts	Non-road	DC RACM - 2003
Consumer&commercialproducts				CT RACM - 2001
Contractincentivesforlowemissionvehicles				EACs - 2004
ControlandPowerElectronics	NOx/VOC	Manual adjustment of individual controls on individual tower systems is expensive and time consuming. By using computers and electronic components on the systems it becomes possible to manipulate an entire farm in real time. It is expected that systems would also able to adjust to extreme weather conditions independently, thus avoiding catastrophic failures.		Regulatory Impact Analysis - 1997
ControlExtendedIdlingofBusesandTrucks		Step-up enforcement of existing regulations to prevent extended vehicle idling	Mobile	DC RACM - 2003
ControlICengines>500HP				EACs - 2004
ControlofGaseousEmissionsfromActiveLandfills	VOC	Landfill sampling and monitoring requirements + Collection system with treatment and control device for VOC	Stationary	EPA Measures - 1999
ControlParkingatSchools		Restrict high school students from driving to and parking at high schools when bus service is available.	Mobile	DC RACM - 2003
ControlsonPowerPlantsOutsideNonattainmentArea		Require power plants operating in counties adjacent to Washington nonattainment area to install nonattainment area controls	Stationary	DC RACM - 2003
Conv.CoatingofProduct;AcidCleaningBath	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ConvenienceCommercialCentersinResidentialArea		Change zoning ordinances to allow neigborhood-	Mobile	DC RACM - 2003

Measure	Pollutant	Description	Source	Source Code
s		serving retail establishments in residential areas		
ConversiontoAlternativeFueledVehiclesProgram	NOx/VOC	Tax credits or deductions to for conversion to or purchase of alternative fueled vehicles and alternative fuel stations	Mobile	EPA Measures - 1999
Convertoff-roaddieselequipmenttozeroemission,e.g.,electrification,battery,solar,orfuelcell	NOx		Offroad	SAQMD Clean Air Plan - 2003
Convertoff-roaddieselequipmenttozeroemission,e.g.,electrification,battery,solar,orfuelcell	VOC		Offroad	SAQMD Clean Air Plan - 2003
Converttouseoflow-sulfurgasoline				EACs - 2004
Coolcitiesprogram				EACs - 2004
Copperindiumdiselenide(CIS)	NOx/VOC	A solar film on which research effort is focused due to its ability to withstand outdoor exposure without significant deterioration. This film also appears easier to produce and gain efficiencies than alternatives. In 1995, a laboratory efficiency rate of 17.1 percent was recorded with 10.2 percent for a production prototype module.		Regulatory Impact Analysis - 1997
CRT(R)Filter	PM		Mobile	NEET Database - ongoing
CrystallineSilicon	NOx/VOC	Silicon crystals were the first technology explored and applied to market devices. Research continues because it is the only technology with demonstrated long term reliability, competitive cost, and high efficiency. Newer cells have demonstrated a 24% efficiency rating. Commercial production modules are expected with an efficiency of 14%.		Regulatory Impact Analysis - 1997
CTNOx“RACT”Regulation	NOx		Stationary	CT Memo - 2005
CutbackAsphalt	VOC	VOC content limit	Stationary	EPA Measures - 1999
CutbackAsphalt	VOC	Switch to emulsified asphalts	Stationary	EPA Measures - 1999
CutbackAsphalt				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
CutbackAsphalt:IncreasedRuleEffectiveness	VOC		Stationary	CT Memo - 2005
DecliningCapRule	VOC	Cap and Trade program with an allowable emissions cap for major VOC sources set below a baseline. Emission allotments for each cap can be sold and traded for emission reductions below the assigned cap.	Stationary	EPA Measures - 1999
Degreasing	VOC	Alternative cleaners or cleaning processes.	Stationary	EPA Measures - 1999
Delay/reschedulelandscaping				EACs - 2004
DemonstrationoftheUseofFastChargedElectricGroundSupportEquipmentasaMeansofReducingAirportEmissions	NOx/PM	Fugitive emission controls	Stationary	NEET Database - ongoing
Developandfundaprogramforneighborhoodelectric vehicles	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Developastationcar/lowemissionvehicleshareprogram	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
DiaphragmSensors(FiberOptics)26				Regulatory Impact Analysis - 1997
DieselandGasolineTrucksandBusesRetrofitwith3-waycatalystsongasoline-burningheavydutytrucksthatcurrentlyhave2-waycatalystsornocatalysts	NOx		Mobile	SAQMD Clean Air Plan - 2003
DirectInjection(DI)DieselV66	VOC	Targeted for the executive car, minivan, multipurpose, and sport utility market, cost effective features include electronic rotary fuel injection, fixed-geometry inlet prot, conventional wastegated turbocharger, cooled EGR, with advanced control algorithms, and an oxidation catalyst. As with the CIDI engine, the V6 DI engine will benefit from current DI engine research of light weight engines and parts and emission control technologies.		Regulatory Impact Analysis - 1997
DiscountMulti-TripBusFares		Introduce discount programs reducing cost of multiple bus rides through purchase of pass books	Mobile	DC RACM - 2003

Measure	Pollutant	Description	Source	Source Code
		(e.g. 10-trip tickets)		
Distributedgenerators--R.C.S.A.section22a-174-42	NOx/VOC		Stationary	CT Memo - 2005
Downtownshuttles;rapidtransitbus				EACs - 2004
Drive-throughfacilitiesonozone				EACs - 2004
drivingtoschool				EACs - 2004
DryCleaning-Perchloroethylene	VOC	MACT (condensers/adsorbers)	Stationary	EPA Measures - 1999
Drycleaning-petroleum	VOC	MACT	Stationary	EPA Measures - 1999
Dual-curephotocatalysttechnology12	VOC	Low-solvent, low-VOC coatings are being developed that use photocatalysts to react with the coating material and accelerate the curing process. These photocatalysts allow the coatings to cure from liquids to solids quickly under UV or visible light. A family of such photocatalysts is being developed and tested. Major uses include tape adhesives and protective topcoats for aircraft. Development of solventless backing saturants for electrical tape backings has essentially been completed. Optimal dual cure resin formulations have been identified and utilized in preparing complete tape constructions.		Regulatory Impact Analysis - 1997
Dual-curephotocatalysttechnology4	VOC	Dual-cure photocatalyst technology is being researched for a variety of coating and adhesive uses, such as aerospace topcoats, aerospace primers, and solventless manufacture of tape backings. Significant progress has been made in improving the performance of the urethane/acrylate formulation being used for the aerospace topcoat application. Technical challenges have continued with the aerospace primer formulation.		Regulatory Impact Analysis - 1997
Dualfueldiesel/LNGpower	NOx		Diesel locomotives	Regulatory Impact Analysis - 1997
EarlyBusEngineReplacement		Replaces high-polluting diesel engines in	Mobile	DC RACM - 2003

Measure	Pollutant	Description	Source	Source Code
		WMATA buses with new diesel engines		
EastmanAQ1350polymer2	VOC	A new water-dispersible hot-melt adhesive raw material, which can form the basis for use in a variety of applications including nonwoven products such as disposable diapers, packaging, bookbinding and labels. Products containing the water-dispersible adhesive are more easily repulped or recycled.		Regulatory Impact Analysis - 1997
EB-curableepoxyresinsforcomposites9	VOC	Major advancement in the formulation of epoxy resin systems capable of being cured (cross-linked) by ionizing radiation. This development could be the link in making polymer matrix composites and adhesives a cost-effective system for manufacturing a broad range of products in both high-tech and high-volume commercial applications. Further optimization of these resin systems is currently being performed for specific aircraft, aerospace, and defense applications. Substantially reduced manufacturing costs (25-65% less expensive) and curing times; and improvements in part quality and performance.		Regulatory Impact Analysis - 1997
ECMBfundedenergyefficiencyandrenewableenergymeasures	NOx/VOC		Stationary	CT Memo - 2005
EDV®WetScrubbingSystem	NOx/PM	Emission capture systems	Stationary	NEET Database - ongoing
EK35®	PM	Fugitive emission controls	Stationary	NEET Database - ongoing
Electrical/electroniccoating	VOC	SCAQMD Rule	Stationary	EPA Measures - 1999
Electrical/electroniccoating	VOC	MACT	Stationary	EPA Measures - 1999
Electricforklifts-county				EACs - 2004
Electricnewforkliftpurchasesandforkliftrentals	NOx		Offroad	SAQMD Clean Air Plan - 2003
Electricnewforkliftpurchasesandforkliftrentals	VOC		Offroad	SAQMD Clean Air Plan - 2003
Electrificationandsingleenginetaxiing	NOx		Offroad	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
ElectrificationorUseofAlternateFuelsinAirportServiceEquipment	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
ElectronBeam(EB)curing8	VOC	EB curing with existing technology has already been shown to dramatically reduce or eliminate solvent emissions in wood finishing. Currently, new advances in EB equipment and processes are being developed, including a new, lower-energy EB system and a new transport system for the EB treatment of powders. EB processes result in improved product performance and higher productivity, but require different curing equipment, and in some cases, application may be more difficult.		Regulatory Impact Analysis - 1997
ElectronicFuelInjectionforCNG,LNG,LPG,Hydrogen	NOx/VOC		Mobile	NEET Database - ongoing
EliminateTimedParking	NOx		Landuse	SAQMD Clean Air Plan - 2003
Eliminatevehiceemissioncontrol				EACs - 2004
Emission-basedparkingfees	NOx		Landuse	SAQMD Clean Air Plan - 2003
Emission-basedregistrationfees	NOx		Landuse	SAQMD Clean Air Plan - 2003
EmissionsfromDecontaminationofSoil	VOC	Approved VOC mitigation plan + Monitor for VOC contamination	Stationary	EPA Measures - 1999
EmissionsfromPetroleumStorageTanks		Adopt SCAQMD Rule 1178: Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities	Area	DC RACM - 2003
EmployeeCommuteOptions	NOx/VOC	In areas not already required to implement an ECO program, evaluate the potential emission reductions to be achieved by implementing such a program and consider its implementation to achieve additional reductions and stabilize mobile source emissions.	Mobile	EPA Measures - 1999
EmployerMetroShuttleBusServices		Provide incentives for businesses to provide employee shuttle service to the nearest rail or	Mobile	DC RACM - 2003

Measure	Pollutant	Description	Source	Source Code
		transit stop		
EmployerOutreach(PrivateSector)		Provide regional outreach to encourage large private-sector employers to voluntarily implement alternative commute strategies to reduce vehicle trips to work sites	Mobile	DC RACM - 2003
EmployerOutreach(PublicSector)		Provide regional outreach to encourage public-sector employers to voluntarily implement alternative commute strategies to reduce vehicle trips to work sites	Mobile	DC RACM - 2003
EmptytheERCbank	VOC			MA Strategies - 2004
EmulsifiedAsphalt	VOC	VOC content limit	Stationary	EPA Measures - 1999
Encourage55duringpeakozone				EACs - 2004
Energizer-reducevehiclefleet;90%offorklifts-battery				EACs - 2004
Energyconservation-33citybuildings				EACs - 2004
Energyconservationatcobldgs				EACs - 2004
Energyconservationplan				EACs - 2004
Energyefficientbuildings				EACs - 2004
Energyefficientpublicbuildings				EACs - 2004
Energyefficienyprograms				EACs - 2004
Energyreduction-LNB;waterbasedpaints				EACs - 2004
EngineTestFacilities	VOC	Pending	Stationary	EPA Measures - 1999
EnhancedRuleComplianceatExistingStationarySources	NOx	Step up enforcement of and compliance with existing rules for emissions control by stationary sources	Stationary	DC RACM - 2003
EnhancedRuleEffectiveness				CT RACM - 2001
Enhancerealtimetrafficinformationtoallowdriverstomakebetterdecisionsaboutwhenandwheretotravel	NOx		Landuse	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
EnsureemissionreductionsinSEPs,				EACs - 2004
EnviroKleen®	PM	Adhesives and sealants	Pollution Prevention	NEET Database - ongoing
EOLYSSystem33	PM	Combines the use of a particulate trap with the action of the catalytic additive to ensure that particulates are destroyed during combustion.		Regulatory Impact Analysis - 1997
EPANOxSIPcall				CT RACM - 2001
EpichlorohydrinElastomersProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr1/pr1pg.html	Stationary	EPA Measures - 1999
EpoxyResinsProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr2/pr2pg.html	Stationary	EPA Measures - 1999
EquipmentleaksforVOCinthesyntheticorganicchemicalmanufacturingindustry	VOC	Monitoring and repair	Stationary	EPA Measures - 1999
EquipmentleaksofVOCfromon-shorenaturalgasprocessingplants	VOC	Inspection and repair	Stationary	EPA Measures - 1999
EquipmentleaksofVOCinpetroleumrefineries	VOC	Inspection and repair	Stationary	EPA Measures - 1999
EstablishaHeavy-DutySmogCheckProgram	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Establishcleanairlabeling,energyconservationandpubliceducationprograms	NOx		Offroad	SAQMD Clean Air Plan - 2003
EstablishCleanFleetRequirementsforpublicfleets	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Ethanolalternativefuelvehicles				EACs - 2004
EthyleneProcesses	VOC	Pending	Stationary	EPA Measures - 1999
Ethylene-PropyleneRubberProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr1/pr1pg.html	Stationary	EPA Measures - 1999
ExhaustGasRecirculation27	NOx	This specific technology makes EGR more effective by ensuring EGR is applied at the high loads heavy-duty diesel engines (HDDEs) often run at, and providing an acceptable air flow to ensure		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		the fuel is being burnt efficiently. Continuing work includes assessments of EGR on engine durability, particulate emissions improvements, and transient engine performance.		
ExplosivesProduction	VOC	Pending	Stationary	EPA Measures - 1999
Extendenergyefficiencyrequirements				EACs - 2004
ExtendRampMetering		Install signals to control flow of vehicles at selected freeway ramp entrances to maintain level of service	Mobile	DC RACM - 2003
FabricCoating	VOC	Incineration	Stationary	EPA Measures - 1999
FederalMotorVehicleControlprogram				CT RACM - 2001
FederalNon-roadGasolineEngines				CT RACM - 2001
FederalNon-roadHeavyDutydieselengines				CT RACM - 2001
FerroalloysProduction:SilicomanganeseandFerroManganese	VOC	National emission standards for hazardous air pollutants (NESHAP) for production of ferroalloys	Stationary	EPA Measures - 1999
FiberglassManufacturing;Textile-TypeFiber;RecupFurnaces	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Flares	VOC	Fugitive emission controls	Stationary	NEET Database - ongoing
FlexiblePolyurethaneFoamFabricationOperations	VOC	Pending	Stationary	EPA Measures - 1999
FlexiblePolyurethaneFoamProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/foam/foampg.html	Stationary	EPA Measures - 1999
FlexibleVinylandUrethaneCoatingandPrinting	VOC	Low solvent coatings or Incineration	Stationary	EPA Measures - 1999
FluidCatalyticCrackingUnits;CrackingUnit	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Foam-controlagents11	VOC	More sophisticated foam-control agents are being developed and used as formulators move from solvent-based to waterborne coating systems. Foam is a common problem in waterborne systems, and it can adversely affect the coating's appearance and durability. Prudent use of foam control agents can minimize or eliminate the adverse effects of		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		foam without impacting other surface properties.		
Formregionalstakeholdersgroup				EACs - 2004
FuelCellTechnologies7	NOx/VOC	Development and demonstration of fuel cell technologies for on- and off-road mobile sources to improve the commercial viability of fuel cells, including improvements in power density, fuel storage, reformer efficiency, system integration, and cost reduction. This program is expected to result in several projects that would support promising fuel cell technologies for on- and off-road vehicles. Fuel cell technologies that will be considered include proton exchange membrane, solid oxide, direct methanol, phosphoric acid, and molten carbonate. Mobile source applications that will be considered in this category include light-, medium-, and heavy-duty on-road vehicles, locomotives, ships, utility vehicles, neighborhood electric vehicles, and other off-road equipment applications. Peripheral technologies involving fuel infrastructure, on-board fuel storage, and hydrogen reforming shall be included if they have potential to advance the commercial viability of fuel cell applications.		Regulatory Impact Analysis - 1997
FuelCellVehicle8	NOx/VOC	Chrysler is teaming with Delphi Energy and Engine Management Systems to build within two years a "proof of concept" fuel cell vehicle that runs on gasoline. The technology will be a five-step process to refine gasoline on-board a vehicle. This could improve fuel efficiency by 50 percent, provide up to 400 miles range, be at least 90 percent cleaner, and cost no more than a current mid-size car.		Regulatory Impact Analysis - 1997
FuelFiredEquipment;ProcessHeaters,PropaneGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
FugitiveEmissions:Oil&GasProductionFacilities&	VOC	Identify all major & critical equipment + I & M	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ConveyingStations		Program		
Galliumarsenide	NOx/VOC	It is possible to increase any solar cell's efficiency by focusing a more direct source of solar energy on it. In application, cells need to withstand extreme conditions in order to see an efficiency increase. This alloy demonstrated an efficiency of 28 percent under concentrated sunlight.		Regulatory Impact Analysis - 1997
Garbagetruckregulation	PM2.5		Mobile	CT Memo - 2005
GasChromatograph	VOC	Ambient Monitoring	Monitoring	NEET Database - ongoing
Gascollectionsystem-solidwastelandfill				EACs - 2004
Gaseous-andLiquid-FueledInternalCombustionEngines	VOC	VOC and NOx emission limits for stationary and portable engines	Stationary	EPA Measures - 1999
Gas-firedWaterHeaters,SmallBoilers,andProcessHeaters(Dec2002)				TX SIP - 2000-2004
GasolineDistribution(Stage1)	VOC	Improved seals on storage tanks and performing leak detection and repair of vapor and liquid leaks from equipment used to transfer gasoline Vapor processors are to collect and treat or recover vapors displaced during cargo tank loading operations.	Stationary	EPA Measures - 1999
GasolineLoadingRacks:IncreasedRuleEffectiveness	VOC		Stationary	CT Memo - 2005
GasProductionandfromPetroleumProduction	VOC		Industrial Process	SAQMD Clean Air Plan - 2003
GasTaxIncrease		Increase state and local gas taxes to add 10% to purchase price of gasoline. Use proceeds to fund regional transit operations.	Mobile	DC RACM - 2003
GasTurbines	NOx	Detailed equations 40 CFR 60.332	Stationary	EPA Measures - 1999
GasTurbines	NOx	Limits for turbines burning natural gas at 25-42 ppm and as low as 9-15 ppm.+ limits for turbines burning distillate oil at 65 ppm or below, and as	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
		low as 25-42 ppm..		
GasTurbines	NOx	Turbines >25 MW: Wet injection + SCR - 9 ppm (0.04 lb/mm Btu & 8-25 MW: Low NOx combustion - 42 ppm	Stationary	EPA Measures - 1999
GasTurbines-JetFuel	NOx	Selective Catalytic Reduction + Water Injection	Stationary	EPA Measures - 1999
GasTurbines-JetFuel	NOx	Water Injection	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Steam Injection	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Selective Catalytic Reduction + Low NOx Burners	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Selective Catalytic Reduction + Steam Injection	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Selective Catalytic Reduction + Water Injection	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
GasTurbines-NaturalGas	NOx	Water Injection	Stationary	EPA Measures - 1999
GasTurbines-Oil	NOx	Selective Catalytic Reduction + Water Injection	Stationary	EPA Measures - 1999
GasTurbines-Oil	NOx	Water Injection	Stationary	EPA Measures - 1999
Gearbox	NOx/VOC	The turbine blades' rotation causes wear on a system's gearbox. By using improved gearboxes, it is possible to lower total system cost (gearboxes are approximately 20 percent of total system cost). If as projected, infinitely variable speed tower systems become available, then it would no longer be necessary to maintain a gearbox in a tower system. Improved design and use of composite materials will reduce system cost by increasing the system's life span.		Regulatory Impact Analysis - 1997
Glass	NOx	Pressed / blown - LNB 13 lb/ton & Container - LNB 6 lb/ton & Flat - SNCR 9.5 lb.ton	Stationary	EPA Measures - 1999
GlassForming	VOC	Silicon-water emulsions replacement for petroleum-based lubricants	Stationary	EPA Measures - 1999
GlassFurnaces	NOx	Combustion modifications, process changes and post-combustion controls (SNCR) + RACT limits	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
		of 5.3-5.5 lbs NOx/ton of glass removed with limits as low as 4.0 lb NOx/ton of glass removed + coordinate installation of controls with routine furnace rebuilds		
GlassMeltingFurnaces	NOx	NOx emission limit + Continuous NOx monitoring from unit + Alternative Emission Control Plan	Stationary	EPA Measures - 1999
GraphicArts	VOC	VOC content of graphic art materials + VOC content limit for fountain solutions + Emission control system for non-compliant materials + Solvent cleaning and storage and disposal of VOC-containing materials comply with Rule 1171	Stationary	EPA Measures - 1999
GraphicArts-RotogravureandFlexographicPrinting	VOC	Permanent total enclosures, where possible + VOC limits for inks + low-solvent clean-up solutions	Stationary	EPA Measures - 1999
HazardousOrganicNESHAP(CoveringManufactureOfSeveralOrganicCompounds)	VOC	See Website - http://www.epa.gov/ttn/uatw/hon/honpg.html	Stationary	EPA Measures - 1999
Heavy-DutyDieselEngineStandards--R.C.S.A.section22a-174-36a	NOx/VOC		Mobile	CT Memo - 2005
heavydutydieselstrategies				EACs - 2004
Heavy-DutyDieselVehicleControlsandFuels	VOC		Mobile	CT Memo - 2005
Heavy-DutyDieselVehicles:FuelAdditivesToReduceEmissions	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:IntermodalFreightEfficiency	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:PreventiveMaintenance/RebuildRequirementsatSpecificMileage	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:ReduceTruckIdling	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:RequireLowSulfurDieselFuelEarlierThanEPAMayRequire	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Heavy-DutyDieselVehicles:RequireUseOfOxydieselFuel	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:Upgrading/RetrofitEquipment	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyEngineECMRecalibration	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
HeavyTransitRail	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
HighAirFlowBio-airVENT	VOC	Process vent gas treatment	Stationary	NEET Database - ongoing
Highcetanedieselfuelforonroadvehicles		Require onroad diesel vehicles to use high cetane fuel	Mobile	DC RACM - 2003
Highsolidsaliphaticpolyurethanecoatings16	VOC	Three novel approaches to high solids aliphatic polyurethane coatings have been developed: a 100% solids, VOC free, instant setting, aliphatic polyurethane coating system; a high solids mix-and-apply aliphatic polyurethane coating system; and a high solids single component aliphatic polyurethane coating system.		Regulatory Impact Analysis - 1997
HighwayPaints	VOC	VOC content limits	Stationary	EPA Measures - 1999
HighwayVehicles-Gasoline	NOx/VOC	Transportation Control Package	Mobile	EPA Measures - 1999
HighwayVehicles-Gasoline	NOx/VOC	Federal Reformulated Gasoline	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasoline	NOx/VOC	High Enhanced I/M	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasoline	NOx/VOC	Fleet ILEV	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasTrucks	NOx/VOC	Tier 2 Standards	Mobile	EPA Measures - 1999
Homeheatingoilsulfurreductions	PM2.5		Mobile	CT Memo - 2005
Hotmeltspraytool1	VOC	A newly-redesigned, solvent-free, hot melt spray tool is under to development to reduce VOC emissions. Further details not available.		Regulatory Impact Analysis - 1997
HOVlanes-I-24,40				EACs - 2004
HRVOCWebpage(Dec2004)				TX SIP - 2000-2004

Measure	Pollutant	Description	Source	Source Code
Hybridvehicles				EACs - 2004
HydrazineProduction	VOC	Pending	Stationary	EPA Measures - 1999
Hyper-immobilizingAbsorbentDeactivatingPowder	VOC	Manufacturing (general)	Pollution Prevention	NEET Database - ongoing
HazardousOrganicNESHAP(CoveringManufactureOfSeveralOrganicCompounds)	VOC	See Website - http://www.epa.gov/ttn/uatw/hon/honpg.html	Stationary	EPA Measures - 1999
Heavy-DutyDieselEngineStandards--R.C.S.A.section22a-174-36a	NOx/VOC		Mobile	CT Memo - 2005
heavydutydieselstrategies				EACs - 2004
Heavy-DutyDieselVehicleControlsandFuels	VOC		Mobile	CT Memo - 2005
Heavy-DutyDieselVehicles:FuelAdditivesToReduceEmissions	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:IntermodalFreightEfficiency	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:PreventiveMaintenance/RebuildRequirementsatSpecificMileage	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:ReduceTruckIdling	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:RequireLowSulfurDieselFuelEarlierThanEPAMayRequire	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:RequireUseOfOxydieselFuel	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyDieselVehicles:Upgrading/RetrofitEquipment	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Heavy-DutyEngineECMRecalibration	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
HeavyTransitRail	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
HighAirFlowBio-airVENT	VOC	Process vent gas treatment	Stationary	NEET Database - ongoing
Highcetanedieselfuelforonroadvehicles		Require onroad diesel vehicles to use high cetane fuel	Mobile	DC RACM - 2003
Highsolidsaliphaticpolyurethanecoatings16	VOC	Three novel approaches to high solids aliphatic polyurethane coatings have been developed: a 100% solids, VOC free, instant setting, aliphatic polyurethane coating system; a high solids mix-and-apply aliphatic polyurethane coating system; and a high solids single component aliphatic polyurethane coating system.		Regulatory Impact Analysis - 1997
HighwayPaints	VOC	VOC content limits	Stationary	EPA Measures - 1999
HighwayVehicles-Gasoline	NOx/VOC	Transportation Control Package	Mobile	EPA Measures - 1999
HighwayVehicles-Gasoline	NOx/VOC	Federal Reformulated Gasoline	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasoline	NOx/VOC	High Enhanced I/M	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasoline	NOx/VOC	Fleet ILEV	Mobile	EPA Measures - 1999
HighwayVehicles-LDGasTrucks	NOx/VOC	Tier 2 Standards	Mobile	EPA Measures - 1999
Homeheatingoilsulfurreductions	PM2.5		Mobile	CT Memo - 2005
Hotmeltspraytool1	VOC	A newly-redesigned, solvent-free, hot melt spray tool is under to development to reduce VOC emissions. Further details not available.		Regulatory Impact Analysis - 1997
HOVlanes-I-24,40				EACs - 2004
HRVOCWebpage(Dec2004)				TX SIP - 2000-2004
Hybridvehicles				EACs - 2004
HydrazineProduction	VOC	Pending	Stationary	EPA Measures - 1999
Hyper immobilizingAbsorbentDeactivatingPowder	VOC	Manufacturing (general)	Pollution Prevention	NEET Database - ongoing
I/Mforheavy-dutydieselvehicles	PM2.5		Mobile	CT Memo - 2005
ICEngines	NOx	Lean burn - LEC 2 gm/bhp-hr & Rich Burn - SNCR 2 gm/bhp-hr & Diesel -SCR 2 gm/bhp-hr	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ICEngines-Gas,Diesel,LPG	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICEngines-Gas,Diesel,LPG	NOx	Ignition Retard	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Natural Gas Reburn	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Coal Reburn	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/FBC	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Stoker	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ICIBoilers-LPG	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-MSW/Stoker	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Wood/Bark/Stoker	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999
I/Mforheavy-dutydieselvehicles	PM2.5		Mobile	CT Memo - 2005
ICEngines	NOx	Lean burn - LEC 2 gm/bhp-hr & Rich Burn - SNCR 2 gm/bhp-hr & Diesel -SCR 2 gm/bhp-hr	Stationary	EPA Measures - 1999
ICEngines-Gas,Diesel,LPG	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICEngines-Gas,Diesel,LPG	NOx	Ignition Retard	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Natural Gas Reburn	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Coal Reburn	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Cyclone	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/FBC	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ICIBoilers-Coal/Stoker	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coal/Wall	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-Coke	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-DistillateOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LiquidWaste	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-LPG	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-MSW/Stoker	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ICIBoilers-ProcessGas	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-ProcessGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ICIBoilers-ResidualOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ICIBoilers-Wood/Bark/Stoker	NOx	Selective Non-Catalytic Reduction - Urea	Stationary	EPA Measures - 1999
Idlingrestriction-heavy-dutydiesel				EACs - 2004
Idlingrestrictionsforconstructionequipment		Limit idling by construction equipment	Non-road	DC RACM - 2003
Idlingrestrictionsforlawn&gardenequipment		Limit idling by commercial lawn & garden equipment	Non-road	DC RACM - 2003
Implementaprogramtoreplacecatalystsinlightdutyvehiclesandtrucks,includingSUVs	NOx		On-Road Mobile Light Duty Vehicle Technology Control Measures	SAQMD Clean Air Plan - 2003
ImplementNOxRACTBeyondNonattainmentArea		Take credit for reductions due to implementation of NOx RACT rules beyond nonattainment area	Area	DC RACM - 2003
ImplementOTCBeyondNonattainmentArea		Take credit for reductions due to implementation of OTC measures beyond nonattainment area	Area	DC RACM - 2003
Implementregistrationandinspectionprogramforheavy-duty(>50hp)off-roaddieselengines	NOx		Offroad	SAQMD Clean Air Plan - 2003
Implementregistrationandinspectionprogramforheavy-duty(>50hp)off-roaddieselengines	VOC		Offroad	SAQMD Clean Air Plan - 2003
Implementsteps-purchasealternative				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
Implementtollboothsandpay-to-driveroads	NOx		Landuse	SAQMD Clean Air Plan - 2003
Implementtrafficcalmingmeasurestoreducevehiclespeedandencouragebicycleandpedestrianactivity	NOx		Landuse	SAQMD Clean Air Plan - 2003
ImplementVOCRACTBeyondNonattainmentArea		Take credit for reductions due to implementation of VOC RACT rules beyond nonattainment area	Area	DC RACM - 2003
ImprovedAirfoilMaterials	NOx/VOC	Utilization of wind power necessitates a device (airfoil) which will capture wind energy. By using newer materials and changing the number of blades, improved energy generation and lower costs may be achieved. Improved airfoil design using composite materials (fiberglass, wood/epoxy) and fewer blades (2-3) will reduce system cost while increasing energy conversions/efficiencies.		Regulatory Impact Analysis - 1997
Incidentmgt/Intelltrans.System				EACs - 2004
Includefuelefficiency/emission				EACs - 2004
IncludeNOxscreeningintheHeavy-DutyVehicleInspectionProgram	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Increasedcompliancewiththeanti-idlingrestriction;schoolbusandtruckstopsignage;stateandlocalpoliceenforcement	PM2.5		Mobile	CT Memo - 2005
Increasesthepriceofgasolinetopayfordamagesofpollution,costofglobalwarming(greenhousegases),andcostofpetroleumdependency	NOx		Landuse	SAQMD Clean Air Plan - 2003
IncreaseVehicleRegistrationFeeandTrafficandParkingViolationFines	NOx		Landuse	SAQMD Clean Air Plan - 2003
Industrial,InstitutionalandCommercialBoilers,SteamGenerators,andProcessHeaters	NOx	NOx emission limit, methods to meet the limit is not specified	Stationary	EPA Measures - 1999
IndustrialandCommercialBoilers	NOx	Limits for boilers larger than 100 mmBtu/hr at levels of 0.t 5 lb/mmBtu or below for coal and 0.05 lb/mmBtu for oil and gas + limits for mid-size boilers between 50-100 mmBtu/hr at 0.10	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
		lb/mmBtu for gas, 0.12 lb/mmBtu for distillate oil and 0.30 lb/mmBtu for residual oil, 0.38 lb/mmBtu for coal + boilers smaller than 50 mmBtu/hr make annual "tune-ups" to minimize excess air		
IndustrialBoilers	VOC	Pending	Stationary	EPA Measures - 1999
IndustrialCoalCombustion	NOx	RACT to 50 tpy (Low NOx Burners)	Stationary	EPA Measures - 1999
IndustrialCoalCombustion	NOx	RACT to 25 tidy (Low NOx Burners)	Stationary	EPA Measures - 1999
Industrialequipmentretrofits		Require industrial equipment to be retrofitted with emissions controls	Non-road	DC RACM - 2003
IndustrialIncinerators	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
Industrialmaintenancecoating	VOC	AIM Coating Federal Rule	Stationary	EPA Measures - 1999
Industrialmaintenancecoating	VOC	South Coast Phase II	Stationary	EPA Measures - 1999
Industrialmaintenancecoating	VOC	South Coast Phase I	Stationary	EPA Measures - 1999
Industrialmaintenancecoating	VOC	South Coast Phase III	Stationary	EPA Measures - 1999
IndustrialNaturalGasCombustion	NOx	RACT to 25 tpy (Low NOx Burners)	Stationary	EPA Measures - 1999
IndustrialNaturalGasCombustion	NOx	RACT to 50 tpy (Low NOx Burners)	Stationary	EPA Measures - 1999
IndustrialOilCombustion	NOx	RACT to 25 tpy (Low NOx Burners)	Stationary	EPA Measures - 1999
IndustrialOilCombustion	NOx	RACT to 50 tpy (Low NOx Burners)	Stationary	EPA Measures - 1999
IndustrialProcessCoolingTowers	VOC	See Website - http://www.epa.gov/ttn/uatw/mactfnl.html	Stationary	EPA Measures - 1999
Industrialsurfacecoating:Largeappliances	VOC	Low solvent coatings	Stationary	EPA Measures - 1999
Industrialsurfacecoating:surfacecoatingofplasticpartsforbusinessmachines	VOC	Low VOC coatings	Stationary	EPA Measures - 1999
IndustrialWastewaterTreatment	VOC	Wastewater stream enclosed to point of treatment + require 95-percent control of volatiles + regulations on wastewater streams with lower VOC concentration than those identified in EPA's Control Techniques Guideline (CTG)	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
IndustrialWastewaterTreatment/PubliclyOwnedTreatmentWorks	NOx/VOC		Area	CT Memo - 2005
Injector/IntensifierSystem24	NOx	This system is designed to reduce NOx emissions from heavy-duty diesel vehicles through a new natural gas fuel injector system. The natural gas injector system will be fabricated installed and certified.		Regulatory Impact Analysis - 1997
In-Process;BituminousCoal;CementKiln	NOx	Selective Non-Catalytic Reduction - Urea based	Stationary	EPA Measures - 1999
In-Process;BituminousCoal;LimeKiln	NOx	Selective Non-Catalytic Reduction - Urea based	Stationary	EPA Measures - 1999
In-Process;ProcessGas;CokeOven/BlastFurnaces	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
In-Process;ProcessGas;CokeOvenGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
In-ProcessFuelUse;BituminousCoal;General	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
In-ProcessFuelUse;NaturalGas;General	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
In-ProcessFuelUse;ResidualOil;General	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Installpassivegasvents-landfill				EACs - 2004
InstallRemoteSensingtoIdentifyHigh-EmittingVehicles	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Institutional/CommercialBoilers	VOC	Pending	Stationary	EPA Measures - 1999
IntegratedIronandSteelManufacture	VOC	Pending	Stationary	EPA Measures - 1999
IntellidyneFuelEconomizer	NOx/VOC	Other	Stationary	NEET Database - ongoing
InternalCombustionEngines-Gas	NOx	Ignition Retard	Stationary	EPA Measures - 1999
InternalCombustionEngines-Gas	NOx	Air-to-Fuel Ratio	Stationary	EPA Measures - 1999
InternalCombustionEngines-Gas	NOx	Air-to-Fuel Ratio + Ignition Retard	Stationary	EPA Measures - 1999
InternalCombustionEngines-Gas	NOx	L-E (Medium Speed)	Stationary	EPA Measures - 1999
InternalCombustionEngines-Gas	NOx	L-E (Low Speed)	Stationary	EPA Measures - 1999
InternalCombustionEngines-Gas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
InternalCombustionEngines-Oil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
InternalCombustionEngines-Oil	NOx	Ignition Retard	Stationary	EPA Measures - 1999
IntroducelowNOxenginesearly	NOx		M3 On-road heavy duty diesel	Regulatory Impact Analysis - 1997
Iron&SteelMills-Annealing	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
Iron&SteelMills-Annealing	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
Iron&SteelMills-Annealing	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Iron&SteelMills-Annealing	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
Iron&SteelMills-Annealing	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
Iron&SteelMills-Annealing	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Iron&SteelMills-Galvanizing	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Iron&SteelMills-Galvanizing	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Iron&SteelMills-Reheating	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Iron&SteelMills-Reheating	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Iron&SteelMills-Reheating	NOx	LEA	Stationary	EPA Measures - 1999
IronandStealIndustry/SinterPlants	VOC	Deoiling control limit on oil and grease for mill scale.	Stationary	EPA Measures - 1999
IronandSteelFoundries	VOC	SCAQMD's rule for combustion gas limiting the discharge of carbon monoxide	Stationary	EPA Measures - 1999
IronandSteelMills	NOx	Low NOx burners and FGR for reheat furnaces + SCR and low NOx burners for annealing furnaces + low NOx burners and FGR for galvanizing furnaces	Stationary	EPA Measures - 1999
IronFoundries	VOC	Pending	Stationary	EPA Measures - 1999
IronProduction;BlastFurnace;BlastHeatingStoves	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
KraftPulpMills	NOx	Industrial boilers regulated same as Industrial and Commercial Boilers + SNCR for recovery boilers + lime kilns regulated same as Cement Kilns	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
LABSORB(tm)RegenerativeSO2scrubbing	PM	Emission capture systems	Stationary	NEET Database - ongoing
LandDevevelopmentCode/Tree				EACs - 2004
LandfillGases	VOC	New Source Performance Standard + lower size cutoff based on area's major source definition + regulating landfills with more than 500,000 tons in place.	Stationary	EPA Measures - 1999
Landscape/treeordinances				EACs - 2004
Landscapeordinance-noresid				EACs - 2004
LargeAppliance(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
LargeWaterHeatersandSmallBoilers	NOx	NOx emission limit + Compliance Certification Program for equipment manufacturers + Retrofit Compliance Certification Program	Stationary	EPA Measures - 1999
LaserRemoteSensing	NOx	Real-time monitoring/information display	Models and Environmental Software	NEET Database - ongoing
LaserRemoteSensing	NOx	Ambient modeling/simulation	Models and Environmental Software	NEET Database - ongoing
LasIR	NOx	Emissions Monitoring	Monitoring	NEET Database - ongoing
Lawn&gardenequipmen:				EACs - 2004
Lawnandgardenequipmentbuybackandscrappageprograms	NOx/VOC		Mobile	CT Memo - 2005
LawnMowerandGardenReplacementProgram	NOx/VOC	Voluntary program to replace gasoline powered lawn and garden equipment with electric powered equipment	Mobile	EPA Measures - 1999
LeanBurnCatalysts31	NOx	Major challenges in this project are the development of a catalyst with the three following attributes: 1) Sufficient and selective lean NOx activity; 2) Robustness, particularly hydrothermal durability; and 3) economically practical.		Regulatory Impact Analysis - 1997

Measure	**Pollutant**	**Description**	**Source**	**Source Code**
		Development of a lean burn catalyst is critical for the commercialization of the lean burn engine.		
LeatherTanningandFinishingOperations	VOC	Pending	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
LimeKilns	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Non-Catalytic Reduction - Urea Based	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Non-Catalytic Reduction - NH3Based	Stationary	EPA Measures - 1999
LimeKilns	NOx	Mid-Kiln Firing	Stationary	EPA Measures - 1999
Limitingpleasurecraft/vehicleuseabove100F	VOC		Offroad	SAQMD Clean Air Plan - 2003
LNGCombustionTechnologyforLocomotives23	NOx/VOC	Develop and demonstrate, via the GasRail USA program, LNG combustion technology for locomotives capable of reducing NOx emissions by 75% or more compared to conventional diesel technology. In partnership with Southwest Research Institute, the project would optimize a newly developed combustion technology in a multi-cylinder locomotive engine. This will be followed by integration of the combustion system into one or more Metrolink passenger locomotives for operation in the SCAQMD Basin.		Regulatory Impact Analysis - 1997
LongerTermEngineRetrofitorAftertreatment	NOx		Offroad	SAQMD Clean Air Plan - 2003
LoTOx(tm)Technology	NOx	Emission capture systems	Stationary	NEET Database - ongoing
LowEmission,AlternativeFuelTechnologiesforOn-RoadApplications21	NOx/VOC	Development and demonstration of low-emission, alternative fuel technologies for light-, medium-, and heavy-duty mobile sources. Alternative clean fuels that will be considered include, but are not necessarily limited to, natural gas, propane, methanol, ethanol, hydrogen, and Hythane. In addition, reformulated gasoline and diesel fuels have been developed that produce lower emissions. When used in conjunction with advanced emission controls, additives, and new engine technologies,		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		these appear to have promise to meet some CARB LEV standards.		
Low-EmissionAsphalt		Adopt SCAQMD Rules 1108: Cutback Asphalt (less than 0.5% VOC evaporating at 260F) and 1108.1: Emulsified Asphalt (less than 3% VOC evaporating at 260F)	Area	DC RACM - 2003
Lowemissiondieselforfleets				EACs - 2004
Low-EmissionFurnaces		Adopt SCAQMD Rule 1111: NOx Emissions from Natural Gas Fired, Fan-Type Central Furnaces (no more than 40 nanograms of NOx per joule of useful heat)	Area	DC RACM - 2003
Low-emissionsagriculturalequipment		Require sale of low-emissions agricultural equipment in region	Non-road	DC RACM - 2003
Low-emissionsconstructionequipment		Require sale of low-emissions construction equipment in region	Non-road	DC RACM - 2003
Low-EmissionWaterHeaters		Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters	Area	DC RACM - 2003
Loweremissionstandardsforgasolinetrucks	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Lowerspeedlimit-55fortrucksduring				EACs - 2004
Low-NOxDieselFuel(On-Road)		Require regional use of low-NOx fuel for on-road diesel vehicles	Mobile	DC RACM - 2003
lowNOxlimitsforboilers/heatersintheheatinputrangeof75,000to2,000,000Btu/hr	NOx		Stationary	SAQMD Clean Air Plan - 2003
LowReidVaporPressureGas				EACs - 2004
LowSfuels-asap				EACs - 2004
Low-SulfurFuelforElectricGeneratingUnits--R.C.S.A.section22a-174-19a	PM2/5		Stationary	CT Memo - 2005
LowSulfurFuelOil(340ppm);80percentReductioninSOxEmissions	NOx		Marine (commercial)	Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
Low-sulfurTypeIIfuelsinallvehicles				EACs - 2004
LowVOCstripingmaterial				EACs - 2004
LABSORB(tm)RegenerativeSO2scrubbing	PM	Emission capture systems	Stationary	NEET Database - ongoing
LandDevevelopmentCode/Tree				EACs - 2004
LandfillGases	VOC	New Source Performance Standard + lower size cutoff based on area's major source definition + regulating landfills with more than 500,000 tons in place.	Stationary	EPA Measures - 1999
Landscape/treeordinances				EACs - 2004
Landscapeordinance-noresid				EACs - 2004
LargeAppliance(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
LargeWaterHeatersandSmallBoilers	NOx	NOx emission limit + Compliance Certification Program for equipment manufacturers + Retrofit Compliance Certification Program	Stationary	EPA Measures - 1999
LaserRemoteSensing	NOx	Real-time monitoring/information display	Models and Environmenta l Software	NEET Database - ongoing
LaserRemoteSensing	NOx	Ambient modeling/simulation	Models and Environmenta l Software	NEET Database - ongoing
LasIR	NOx	Emissions Monitoring	Monitoring	NEET Database - ongoing
Lawn&gardenequipmen:				EACs - 2004
Lawnandgardenequipmentbuybackandscrappagepr ograms	NOx/VOC		Mobile	CT Memo - 2005
LawnMowerandGardenReplacementProgram	NOx/VOC	Voluntary program to replace gasoline powered lawn and garden equipment with electric powered equipment	Mobile	EPA Measures - 1999
LeanBurnCatalysts31	NOx	Major challenges in this project are the development of a catalyst with the three following attributes: 1) Sufficient and selective lean NOx		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		activity; 2) Robustness, particularly hydrothermal durability; and 3) economically practical. Development of a lean burn catalyst is critical for the commercialization of the lean burn engine.		
LeatherTanningandFinishingOperations	VOC	Pending	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
LimeKilns	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Non-Catalytic Reduction - Urea Based	Stationary	EPA Measures - 1999
LimeKilns	NOx	Selective Non-Catalytic Reduction - NH3Based	Stationary	EPA Measures - 1999
LimeKilns	NOx	Mid-Kiln Firing	Stationary	EPA Measures - 1999
Limitingpleasurecraft/vehicleuseabove100F	VOC		Offroad	SAQMD Clean Air Plan - 2003
LNGCombustionTechnologyforLocomotives23	NOx/VOC	Develop and demonstrate, via the GasRail USA program, LNG combustion technology for locomotives capable of reducing NOx emissions by 75% or more compared to conventional diesel technology. In partnership with Southwest Research Institute, the project would optimize a newly developed combustion technology in a multi-cylinder locomotive engine. This will be followed by integration of the combustion system into one or more Metrolink passenger locomotives for operation in the SCAQMD Basin.		Regulatory Impact Analysis - 1997
LongerTermEngineRetrofitorAftertreatment	NOx		Offroad	SAQMD Clean Air Plan - 2003
LoTOx(tm)Technology	NOx	Emission capture systems	Stationary	NEET Database - ongoing
LowEmission,AlternativeFuelTechnologiesforOn-RoadApplications21	NOx/VOC	Development and demonstration of low-emission, alternative fuel technologies for light-, medium-, and heavy-duty mobile sources. Alternative clean fuels that will be considered include, but are not necessarily limited to, natural gas, propane, methanol, ethanol, hydrogen, and Hythane. In addition, reformulated gasoline and diesel fuels have been developed that produce lower emissions.		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		When used in conjunction with advanced emission controls, additives, and new engine technologies, these appear to have promise to meet some CARB LEV standards.		
Low-EmissionAsphalt		Adopt SCAQMD Rules 1108: Cutback Asphalt (less than 0.5% VOC evaporating at 260F) and 1108.1: Emulsified Asphalt (less than 3% VOC evaporating at 260F)	Area	DC RACM - 2003
Lowemissiondieselforfleets				EACs - 2004
Low-EmissionFurnaces		Adopt SCAQMD Rule 1111: NOx Emissions from Natural Gas Fired, Fan-Type Central Furnaces (no more than 40 nanograms of NOx per joule of useful heat)	Area	DC RACM - 2003
Low-emissionsagriculturalequipment		Require sale of low-emissions agricultural equipment in region	Non-road	DC RACM - 2003
Low-emissionsconstructionequipment		Require sale of low-emissions construction equipment in region	Non-road	DC RACM - 2003
Low-EmissionWaterHeaters		Adopt SCAQMD Rule 1121: Control of NOx from Residential Type Natural Gas Fired Water Heaters	Area	DC RACM - 2003
Loweremissionstandardsforgasolinetrucks	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Lowerspeedlimit-55fortrucksduring				EACs - 2004
Low-NOxDieselFuel(On-Road)		Require regional use of low-NOx fuel for on-road diesel vehicles	Mobile	DC RACM - 2003
lowNOxlimitsforboilers/heatersintheheatinputrangeof75,000to2,000,000Btu/hr	NOx		Stationary	SAQMD Clean Air Plan - 2003
LowReidVaporPressureGas				EACs - 2004
LowSfuels-asap				EACs - 2004
Low-SulfurFuelforElectricGeneratingUnits--R.C.S.A.section22a-174-19a	PM2/5		Stationary	CT Memo - 2005

Measure	Pollutant	Description	Source	Source Code
LowSulfurFuelOil(340ppm);80percentReductionin SOxEmissions	NOx		Marine (commercial)	Regulatory Impact Analysis - 1997
Low-sulfurTypeIIfuelsinallvehicles				EACs - 2004
LowVOCstripingmaterial				EACs - 2004
Magneticallycontrolleddepositionofmetalsusinggas plasma7	VOC	Methods of spraying materials on a substrate in a controlled manner are being researched in an attempt to eliminate the waste inherent in the present process. Thin layers of secondary material are plated on substrates either by plating or spraying processes. Plating operations produce large amounts of hazardous liquid waste. Spraying, while one of the less waste intensive methods, produces `over spray' which is waste that is a result of the uncontrolled nature of the spray stream. In many cases the over spray produces a hazardous waste.		Regulatory Impact Analysis - 1997
MagneticTapes(SurfaceCoating)	VOC	See Website - http://www.epa.gov/ttn/uatw/magtape/magtappg.html	Stationary	EPA Measures - 1999
MagnetWireCoatingOperations	VOC	VOC content limits for compliant coatings + Emission capture and control system for non-compliant coatings + Cleaning operations and solvent storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
Mandatorychipreflashingforheavy-dutydieseltrucks	NOx/VOC		Mobile	CT Memo - 2005
MandatoryFacilityReductiononSpareAirDays	NOx		Stationary	SAQMD Clean Air Plan - 2003
MandatoryFacilityReductiononSpareAirDays	VOC		Stationary	SAQMD Clean Air Plan - 2003
ManufactureOfPaints,Coatings,andAdhesives	VOC	Pending	Stationary	EPA Measures - 1999
ManufactureofPolymericCellularProducts(Foam)	VOC	Discontinue use of VOC blowing agents in non-expandable molding operations + Quantity limitations on blowing agents in expandable	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
		molding operations		
ManufacturingOfNutritionalYeast	VOC	Pending	Stationary	EPA Measures - 1999
ManufacturingTechniques	NOx/VOC	The manufacture of wind tower components is to date a labor intensive process (airfoils are traditionally hand laid). Development and use of computerized mass production techniques promises to reduce lay-up times and increase orders.		Regulatory Impact Analysis - 1997
MarinaGasolineRefueling	VOC	Stage I and II vapor recovery at marinas that dispense more than 10,000 gallons per month.	Stationary	EPA Measures - 1999
MarineCoatingOperations	VOC	VOC content limits for marine coatings + Solvent cleaning and storage comply with Rule 1171 + Emission collection and control system for non-compliant coatings	Stationary	EPA Measures - 1999
MarineEngines:OperatingRestrictions	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
MarineEngines:Refueling/Fuels	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
Marinesurfacecoating	VOC	Add-on control levels	Stationary	EPA Measures - 1999
Marinesurfacecoating	VOC	MACT	Stationary	EPA Measures - 1999
MarineVesselLoadingOperations	VOC	Sets standards and requires RACT for VOC and HAP emissions from new and existing marine tank vessel loading operations Sets NESHAP and requires MACT for existing and new major marine tank vessel loading operations	Stationary	EPA Measures - 1999
Mechanical,electric,railroadcoating	VOC	MACT level of control	Stationary	EPA Measures - 1999
Mechanical,electric,railroadcoating	VOC	SCAQMD Limits	Stationary	EPA Measures - 1999
Media/puiblicrelationsprogram				EACs - 2004
MedicalWasteIncinerators	NOx	250 ppmv	Stationary	EPA Measures - 1999
MedicalWasteIncinerators	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
MedicalWasteIncinerators	NOx	Controls similar to those for municipal waste combustors	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Medium-DutyCNGEngineConversionKit18	NOx/VOC	Support for field demonstration of improved software and hardware for a medium-duty CNG engine conversion kit to support the existing medium-duty vehicle population. The SCAQMD previously supported field demonstration of the first generation kit in a contract with Thermo Power Corporation. This kit has operated well in the field. However, improvements in performance and fuel economy are needed if the kit is to be commercially viable. Hardware and software modifications to achieve improved performance and fuel economy are currently being developed. The proposed project would support field demonstration of the second generation kit.		Regulatory Impact Analysis - 1997
MetalCan(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
Metalcoil&cancoating	VOC	Incineration	Stationary	EPA Measures - 1999
Metalcoil&cancoating	VOC	MACT	Stationary	EPA Measures - 1999
Metalcoil&cancoating	VOC	BAAQMD Rule 11 Amended	Stationary	EPA Measures - 1999
MetalCoil(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
Metalcoilsurfacecoating	VOC	Incineration	Stationary	EPA Measures - 1999
MetalContainer,Closure,andCoilCoatingOperations	VOC	VOC content limits for compliant coatings + Emission capture and control system for non-compliant coatings + Cleaning operations and solvent storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
Metalfurniture,appliances,parts	VOC	SCAQMD Limits	Stationary	EPA Measures - 1999
Metalfurniture,appliances,parts	VOC	MACT	Stationary	EPA Measures - 1999
Micro-emulsiontechnology15	VOC	New microemulsion technology creates an effective way to decrease VOC levels up to 50% or more and still maintain effective paint-stripping performance. This solvent technology allows water to be incorporated into hydrocarbon-based paint strippers		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		while making minimal performance sacrifices.		
MiscellaneousMetalPartsandProducts(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
Mobilezonespraybooth ventilationsystem6	VOC	New process design endeavors to reduce the volume of air to be treated from spray paint booths, thereby increasing efficiency and improving air pollution abatement (in particular, reducing VOC emissions). Most of the ventilation air is recycled through the booth to maintain laminar flow; the machinery is located on the supply side of the booth rather than on the exhaust side. 60 to 95% reduction in spray booth exhaust rate should result.		Regulatory Impact Analysis - 1997
MobotecSystem	NOx/PM	Emission capture systems	Stationary	NEET Database - ongoing
MoleculeQuantumMechanicAirPurification	NOx/VOC	Other	Stationary	NEET Database - ongoing
MoltenCarbonateFuelCell(MCFC)4	NOx/VOC	The molten carbonate fuel cell uses an electrolyte of lithium and potassium carbonates and operates at approximately 650C (1200F). Due to the high temperature involved, noble metal catalysts are not required for the cell electrochemical oxidation and reduction process.		Regulatory Impact Analysis - 1997
Moreefficienttraffickingsystems				EACs - 2004
MotorVehicleandMobileEquipmentNon-AssemblyLineCoatingOperations	VOC	VOC content limits for compliant coatings + Emission capture and control system for non-compliant coatings + Cleaning operations and solvent storage and disposal comply with Rule 1171	Stationary	EPA Measures - 1999
MotorVehicleAssemblyLineCoatingOperations	VOC	VOC content limit for compliant coatings + Solvent cleaning and storage comply with Rule 1171 + Emission capture and control system for non-compliant coatings	Stationary	EPA Measures - 1999
Motorvehiclecoating	VOC	MACT	Stationary	EPA Measures - 1999
Motorvehiclecoating	VOC	Incineration	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Multi-junctioncells(galliumarsenideandIII-Valloys)	NOx/VOC	It is possible to increase any solar cell's efficiency by focusing a more direct source of solar energy on it. In application, cells need to withstand extreme conditions in order to see an efficiency increase. This alloy demonstrated an efficiency in excess of 30 percent under concentrated sunlight. The expectation is to exceed 32 percent efficiency.		Regulatory Impact Analysis - 1997
Municipalsolidwastelandfill	VOC	RCRA standards	Stationary	EPA Measures - 1999
MunicipalWasteCombustorControls	NOx		Stationary	CT Memo - 2005
MunicipalWasteCombustors	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
MunicipalWasteCombustors	NOx	EPA's regulation for large, existing MWCs emitting more than 250 tons/day + more stringent limits (e.g., 30-50 ppmv) or shorter averaging periods (e.g., 8-hr average).	Stationary	EPA Measures - 1999
MunicipalWasteCombustors(Beganoperationbetween12/20/89and9/20/94)	NOx	180 ppm at 7% oxygen	Stationary	EPA Measures - 1999
Natural-Gas-Fired,Fan-TypeCentralFurnaces	NOx	NOx emission limit	Stationary	EPA Measures - 1999
NaturalGasFuelSpecifications	NOx		Area	SAQMD Clean Air Plan - 2003
Naturalgasprocessingplant-reduceNoxandVOCemissionsby90%				EACs - 2004
NaturalGasProduction;Compressors	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
NaturalGasTransmissionandStorage	VOC	Pending	Stationary	EPA Measures - 1999
NeopreneProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr1/pr1pg.html	Stationary	EPA Measures - 1999
Newinfrastructure-rideshareprogram				EACs - 2004
Newlatexpolymerapplicationmethod5	VOC	New latex polymer application method eliminates the acetate rinse-out and the resultant solvent-contaminated water waste stream and distillation air emissions.		Regulatory Impact Analysis - 1997
Newphotoinitiatorsystems25	VOC	Ciba is working on advanced photoinitiator systems		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		that enable paints and coatings to dry rapidly without the need for heating or the release of solvents into the atmosphere. Key future research is targeting extending the range of photoinitiators for paints and coatings.		
NewUV-curetechnologyapplications7	VOC	New UV-cure applications are being developed for use in the automotive industry. These applications include coatings for metal and plastics, interior and exterior applications, adhesives, and gasketing.		Regulatory Impact Analysis - 1997
Newvehiclespowered	NOx		M4 On-road heavy duty diesel	Regulatory Impact Analysis - 1997
Nitric/adipicacids	NOx	Nitric acid - 2.3 lb/ton extended adsorption; Adipic acid - 7.4 lb/ton extended adsorption	Stationary	EPA Measures - 1999
NitricAcidManufacturing	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
NitricAcidManufacturing	NOx	Extended Absorption	Stationary	EPA Measures - 1999
NitricAcidManufacturing	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
NitricAcidPlants	NOx	3.0 lb/ton of acid produced	Stationary	EPA Measures - 1999
NitricandAdipicAcidPlants	NOx	Consider a standard of 2.0 lbs NOx/ton of nitric acid produced, representing approximately 95-percent control. Even lower standards are achievable using SCR. The nation's four adipic acid plants are already regulated at over 80-per-cent efficiency.	Stationary	EPA Measures - 1999
NitrileButadieneRubberProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr1/pr1pg.html	Stationary	EPA Measures - 1999
NitrogenOxides(NOx)EmissionControl	NOx	Process vent gas treatment	Stationary	NEET Database - ongoing
Non-acrylateSystems10	VOC	In the research development of UV and EB curable alternatives to acrylates, a number of "new" systems have been developed that reduce emissions, such as cationic systems, alternating free radical induced copolymerization of donor/acceptor		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		type monomers, various hybrid systems, and photoinduced addition reactions for the formation of polymeric networks.		
Non-majorVOCsourcebakeries	NOx/VOC		Stationary	CT Memo - 2005
Non-NylonPolyamidsProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr2/pr2pg.html	Stationary	EPA Measures - 1999
Non-ozonedepletingsealantsforammunitionapplications 22	VOC	Research program aimed at investigating solvent-free or solvent-safe case mouth sealants for military ammunition by evaluating state-of-the-art, commercially-available non-ozone depleting sealants. Economic benefits include reduced costs (elimination of toxic ozone-depleting chemicals environmental protection activities), increased production rates, and reduced lot rejection rate (which currently averages 6% per year).		Regulatory Impact Analysis - 1997
Non-RoadEngineStandards8	VOC		Mobile	CT Memo - 2005
NonroadGasolineEngines	NOx/VOC	Federal Reformulated Gasoline	Mobile	EPA Measures - 1999
Non-RoadVehiclesandEngines	NOx/VOC	Achieve reductions from lawn and garden equipment and recreational vessels	Mobile	EPA Measures - 1999
Non-ThermalPlasmaReactor30	NOx/VOC	"Packed-bed reactor" transforms exhaust gas pollutants into less harmful constituents. Simultaneous particulate and NOx removal in diesel engine exhaust		Regulatory Impact Analysis - 1997
NonutilityBoilers	NOx	Natural Gas and Distillate Oil- Low heat release rate - 0.10 lb/mmBtu; High heat -0.20 lb/mmBtu Residual Oil- Low heat release rate - 0.3 lb/mmBtu; High heat release rate - 0.4 lb/mmBtu Coal- Mass Feed Stoker - 0.5 lb/mmBtu; Spreader Stoker and FBC - 0.6 lb/mmBtu; Pulverized Coal - 0.7 lb/mmBtu; Lignite - 0.6 lb/mmBtu	Stationary	EPA Measures - 1999
NOxAnalyzers	NOx	Emissions Monitoring	Monitoring	NEET Database - ongoing
NOxBudgetProgram(EPANOxSIPCall)	NOx		Stationary	CT Memo - 2005

Measure	Pollutant	Description	Source	Source Code
NOxControlsonCommercialPowerGeneratingEquipment		Adopt OTC Additional NOx Controls Rule throughout nonattainment area (applies to industrial boilers, stationary combustion turbines and reciprocating engines, emergency generators, load shavers and cement kilns)	Stationary	DC RACM - 2003
NOxemissionlimitsonasphalticconcreteproductionfacilities	NOx		Stationary	SAQMD Clean Air Plan - 2003
NOxemissionlimitsonasphalticconcreteproductionfacilities	VOC		Stationary	SAQMD Clean Air Plan - 2003
NOxLimitForPowerPlants		Cap the emission rate from each utility boiler and turbine below NOx SIP Call limits	Stationary	DC RACM - 2003
NOxRACTRules	NOx	States' NOx RACT rules	Stationary	EPA Measures - 1999
off-roadvehiclereplacements				EACs - 2004
Offsetlithography	VOC	Low solvent inks and fountain solutions	Stationary	EPA Measures - 1999
Off-SiteWasteandRecoveryOperations	VOC	Pending	Stationary	EPA Measures - 1999
Oilandnaturalgasproduction	VOC	Equipment and maintenance	Stationary	EPA Measures - 1999
OilandNaturalGasProduction	VOC	For major oil and natural gas production facilities, the rule requires controls at the following emission points: (1) process vents at certain size glycol dehydration units; (2)tanks with flashing emission potential; and (3) certain fugitive emission sources at natural gas processing plants. For natural gas transmission and storage facilities that are major sources of hazardous air pollutants, the rule requires emission controls at process vents at certain size glycol dehydration units.	Stationary	EPA Measures - 1999
On-boardRefuelingVaporRecovery	VOC		Mobile	CT Memo - 2005
On-boardRefuelingVaporRecovery				CT RACM - 2001
On-roadvehiclereplacement				EACs - 2004
OpenBurning	NOx	Episodic Ban (Daily Only)	Stationary	EPA Measures - 1999

Measure	**Pollutant**	**Description**	**Source**	**Source Code**
Openburning	VOC	Episodic ban	Stationary	EPA Measures - 1999
OpenBurning		Eliminate open burning in counties adjacent to nonattainment area	Area	DC RACM - 2003
OpenBurning				EACs - 2004
Openburningban-expanded				EACs - 2004
Opentopdegreasing	VOC	SCAQMD 1122 (VOC content limit)	Stationary	EPA Measures - 1999
Opentopdegreasing	VOC	Airtight degreasing system	Stationary	EPA Measures - 1999
Opentopdegreasing	VOC	MACT	Stationary	EPA Measures - 1999
Optimizedautomobilecatalyst35	NOx/VOC	Airflow Catalysts is attempting to reengineer the traditional automobile catalyst. The redesign is an effort to minimize costs by reducing the amounts of costly rare metals in the catalyst. The new design will seek to react all contaminants (NOx, HC, CO) in the same area of the converter, rather than in three separate areas. The company is also seeking to minimize the need for air injection for NOx control.		Regulatory Impact Analysis - 1997
OrganicAcidsManufacture	VOC	RACT Extended to Other Areas	Stationary	EPA Measures - 1999
OrganicChemicalPlants	NOx	Controls on industrial boilers and process heaters for these sources	Stationary	EPA Measures - 1999
OrganicLiquidsDistribution(Non-Gasoline)	VOC	Pending	Stationary	EPA Measures - 1999
Organicprotectivecoatingsandapplicationtechnology3	VOC	High performance, non-toxic, low VOC content coatings for Navy use are being developed, including investigation of low VOC polymer technology to produce low VOC binder systems. Reactive monomers and diluents and low molecular weight resins have been used to develop low viscosity binder systems for future near-zero VOC aircraft coatings. In addition, recent advances in water-borne resin technology has allowed for the development of a high performance water-borne		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		topcoat which goes beyond mere compliance with environmental regulations. Non-toxic inhibitor systems have been developed and formulated into non-toxic aircraft corrosion inhibiting primers. Coating corrosion resistance, physical performance properties and VOC content were evaluated in the development of the best materials. The non-toxic inhibited primers have been optimized, and service evaluation at Navy maintenance facilities is in progress.		
OTC-architecturalandindmain				EACs - 2004
OTC-consumerproducts				EACs - 2004
OTC-lowemissionspaint				EACs - 2004
OTCPhaseIINOxMOU		Require reductions in emissions from regional power plants through the OTC Phase II NOx MOU	Stationary	DC RACM - 2003
OTC-portablefuelcontainers				EACs - 2004
OxygenEnrichmentMembrane32	NOx/VOC	Membrane system uses DuPont Teflon AF fiber as the oxygen exchange mechanism for a underhood module to feed oxygen-enriched air directly to the engine chamber. The membrane separates ambient air into oxygen-rich and nitrogen-rich streams. The oxygen rich stream is directed to the manifold to improve combustion, while the nitrogen rich stream can be fed into the exhaust as a plasma to reduce NOx emissions.		Regulatory Impact Analysis - 1997
PahlmanProcess	NOx/PM	Emission capture systems	Stationary	NEET Database - ongoing
PaintStrippingOperations	VOC	Pending	Stationary	EPA Measures - 1999
Paper,Fabric,andFilmCoatingOperations	VOC	VOC content limits for compliant coatings + Coating applicator transfer efficiency + Emission capture and control system for non-compliant coatings	Stationary	EPA Measures - 1999
PaperandOtherWebs(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Papersurfacecoating	VOC	Incineration	Stationary	EPA Measures - 1999
ParkingLotTreePlantingToReduceVehicleTemperaturesAnd,Thereby,EvaporativeEmissions	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
PartnershipforNewGenerationVehicle1	NOx/VOC	Multi-agency Federal partnership with US automakers and suppliers, and universities to develop advanced manufacturing technologies, near-term vehicle improvements, and prototypes with up to triple efficiency. The partnership is evaluating many of the individual technologies listed below such as lean NOx catalysts, CIDI engine, reformulated or alternative fuels for CIDI, CIDI fuel injection, EGR in addition to improved manufacturing processes that would allow higher temperatures or reduced weight. Other goals include reducing the vehicle weight, aerodynamics, rolling resistance, accessory energy use, and regenerative braking that increase vehicle efficiency and reduce emissions.		Regulatory Impact Analysis - 1997
PesticideActiveIngredientProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pest/pestpg.html	Stationary	EPA Measures - 1999
PesticideApplication	VOC	Reformulation - FIP rule	Stationary	EPA Measures - 1999
PesticideApplication	VOC	Ozone season limits on pesticide application and prohibition of solvent-containing fumigants + emissions regulations for fumigation chambers + lowest VOC-emitting alternative	Stationary	EPA Measures - 1999
PetroGuard	VOC	Petroleum, oils, and lubricants	Pollution Prevention	NEET Database - ongoing
Petroleumdrycleaners	VOC	Carbon adsorption	Stationary	EPA Measures - 1999
PetroleumDryCleaning				EACs - 2004
PetroleumRefineries	NOx	Regulate refinery boilers and process heaters like other industries + regulate fluid catalytic cracking units by controlling CO boilers + SNCR or low	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
		NOx burners on tail gas incinerators		
PetroleumRefineries-CatalyticCracking(FluidandOther)Units,CatalyticReformingUnits,andSulfurPlantUnits	VOC	Controls for emissions of air toxics from storage tanks,equipment leaks, process vents, and wastewater collection and treatment systems. Provides emissions averaging across operations and across refineries.	Stationary	EPA Measures - 1999
PetroleumRefineries-OtherSourcesNotDistinctlyListed	VOC	Controls for emissions of air toxics from other nonspecific refinery sources, processes, and systems. Provides emissions averaging across operations and across refineries.	Stationary	EPA Measures - 1999
Petroleumrefineryfugitives	VOC	Equipment and maintenance	Stationary	EPA Measures - 1999
Petroleumrefinerywastewatersystems	VOC	Covers, Floating roofs, Combustion devices or Carbon adsorption	Stationary	EPA Measures - 1999
PetroleumSolventDryCleaners	VOC	Operating practices + Leak controls + Tight storage containers + Waste stream filtration system + Emission control devices	Stationary	EPA Measures - 1999
PharmaceuticalsandCosmeticsManufacturingOperations	VOC	Surface condensers on equipment vents + Control devices on VOC transfer to storage operations + Control devices on drying operations	Stationary	EPA Measures - 1999
PharmaceuticalsProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pharma/pharmpg.html	Stationary	EPA Measures - 1999
PhaseIIMARAMA/NESCAUMUtilityBoiler	NOx		Stationary	EPA Measures - 1999
PhosphoricAcidFuelCell(PAFC)3	NOx/VOC	This is the most commercially developed type of fuel cell. It is already being used in such diverse applications as hospitals, nursing homes, hotels, office buildings, schools, utility power plants, and an airport terminal. Phosphoric acid fuel cells generate electricity at more than 40% efficiency, and nearly 85% if steamthat the fuel cell produces is used for cogeneration, compared to 30% for the most efficient internal combustion engine. Operating temperatures are in the range of 400		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		degrees F. These fuel cells also can be used in larger vehicles, such as buses and locomotives.		
PhotographicChemicalProduction	VOC	Pending	Stationary	EPA Measures - 1999
PhotovoltaicsforMilitaryApplications		This technology involves demonstrating the use of photovoltaic technology, reducing the amount of pollutants from fossil-fueled electrical gensets within DOD, and enhancing energy security. The focus will be to develop a modular, standardized power processing center (PPC) that will service multiple source photovoltaic/engine hybrid and demand reduction applications.		Regulatory Impact Analysis - 1997
PhthalatePlasticizersProduction	VOC	Pending	Stationary	EPA Measures - 1999
Planningforfuturegreenspaces				EACs - 2004
PlasmaEnhancedESP		Emission capture systems	Stationary	NEET Database - ongoing
PlasmaTreatmentofAutomotiveExhaust28	NOx/VOC	Plasma (ionized gas) treatment of lean-burn exhaust emissions in both gasoline and diesel lean-burn engines. Current plasma systems (gas-phase plasma discharges) appear to have low NOx conversion and/or high energy consumption. An alternative approach is being pursued to improve emission reduction and energy consumption.		Regulatory Impact Analysis - 1997
Plastic,Rubber,andGlassCoatings	VOC	VOC content limits for compliant coatings + Coating applicator transfer efficiency + Emission capture and control system for non-compliant coatings	Stationary	EPA Measures - 1999
PlasticPartsandProducts(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
PlasticsProducts;Specific;(ABS)Resin	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
PleasureCraftCoatingOperations	VOC	VOC content limits for applicable coatings + Solvent cleaning and storage comply with Rule 1171	Stationary	EPA Measures - 1999
PlywoodandCompositeWoodProducts	VOC	Pending	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
PM10AmbientAirSampling		Ambient Monitoring	Monitoring	NEET Database - ongoing
PolyesterResinOperations	VOC	Polyester residual monomer content limit + Process requirements to limit VOC loss + Spray applicator requirements + Solvent cleaning operations comply with Rule 1171 + Emission control system for non-compliant polyester materials	Stationary	EPA Measures - 1999
PolyetherPolyolsProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/polyol/polyolpg.html	Stationary	EPA Measures - 1999
PolyethyleneTerephtalateProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr4/pr4pg.html	Stationary	EPA Measures - 1999
Polymericcoatingofsupportingsubstratesfacilities	VOC	Carbon adsorption or Incineration	Stationary	EPA Measures - 1999
Polyolresins,crosslinkersandreactivediluents14	VOC	Recent developments with polyol resins, crosslinkers and reactive diluents will enable the future formulation of higher-solids, ultralow-VOC coatings and, ultimately, of solventless liquid coatings. In spite of the increasing popularity of waterborne and powder coatings, many companies see a future for higher-solids coatings and are investing in new technology, particularly for industrial (original equipment manufacturer) and special-purpose applications.		Regulatory Impact Analysis - 1997
PolystyreneProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr4/pr4pg.html	Stationary	EPA Measures - 1999
Polyurethanereactive(PUR)technology3	VOC	New, accelerated-cure versions of hot-melt adhesives technology for recreational vehicle and building components customers has been developed. Also applicable to the profile wrapping segment of the woodworking industry, which can use the adhesives to make window and door components that withstand hot and cold temperatures, rain and snow. Users can increase process speeds, while at the same time produce		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		stronger products in a solvent-free environment.		
pooling;flexschedules;alternatefuel				EACs - 2004
Port/harborelectrification	NOx/VOC		Mobile	CT Memo - 2005
Portablefuelcontainerbuybackpromotions	NOx/VOC		Stationary	CT Memo - 2005
PortableToxicChemicalDetector		Fugitive emission controls	Stationary	NEET Database - ongoing
Powder-basedprimers20	VOC	GM is working on a prototype powder primer to try on one of its vehicle lines; such a primer would contain no VOCs. New chemistry research is being conducted on both epoxy and polyester powder primers.		Regulatory Impact Analysis - 1997
PP3-FFuelOilTreatment,		Fuels and fuel additives	Pollution Prevention	NEET Database - ongoing
PP-CCylinderoiladditive		Petroleum, oils, and lubricants	Pollution Prevention	NEET Database - ongoing
Preconditioningofdieselengines	NOx		Offroad	SAQMD Clean Air Plan - 2003
Prepolymersandultralow-viscosityreactivediluentstechnologies10	VOC	Two technologies have been developed to help solve formulation problems with decreased levels of VOCs in two-part, solventborne polyurethane coatings. One technology is a process to make narrow-molecular-weight-distribution, isocyanate-terminated polyurethane prepolymers. The other technology is the creation of ultralow-viscosity oxazolidine and aldimine/oxazolidine reactive diluents. Use of these materials achieves low-VOC formulations, controlled reactivity of low-VOC systems and enhanced coating performance, as well as formulation flexibility and ease of use.		Regulatory Impact Analysis - 1997
PrimaryCopperSmelters;ReverbSmeltingFurnace	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Printing,Coating,andDyeingOfFabrics	VOC	Pending	Stationary	EPA Measures - 1999
Printing/Publishing(SurfaceCoating)	VOC	See Website - http://www.epa.gov/ttn/uatw/print/printpg.html	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Printing-Letterpress	VOC	Carbon Adsorption	Stationary	EPA Measures - 1999
Printing-Lithographic	VOC	New CTG to Other Areas	Stationary	EPA Measures - 1999
ProcessHeaters	NOx	Limits of 0.036 lb/mmBtu for gas and 0.05 lb/mmBtu for other liquid fuels+ limits same as mid-sized industrial boilers for gas, distillate oil and residual oil-fired units	Stationary	EPA Measures - 1999
ProcessHeaters	VOC	Pending	Stationary	EPA Measures - 1999
Processheaters(revised)	NOx	NG - ULNB 0.05 lb/mm Btu / Oil - ULNB 0.14 lb/mm Btu	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-DistillateOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-LPG	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ProcessHeaters-NaturalGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-NaturalGas	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-OtherFuel	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ProcessGas	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Low NOx Burners + Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Ultra Low NOx Burners	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
ProcessHeaters-ResidualOil	NOx	Low NOx Burners + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
ProcessHeaters-ResidualOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
ProheatGen4			Mobile	NEET Database - ongoing
Propane/ButaneFuelBlends19	NOx/VOC	Emissions testing on multiple light-duty vehicles using propane/butane blends, which may be cost-effective low-emission alternative fuels for light-, medium-, and heavy-duty vehicles. It is expected that the proposed project will result in emission benefits and help AQMD, ARB, the petroleum industry, and automobile manufacturers identify a potentially clean, cost-effective alternative fuel with capability for wide-scale application to all types of internal combustion engines. Generate data on emissions, lubricant compatibility, combustion chamber and intake valve deposits, component durability, and catalyst durability. Operate and evaluate three or more new vehicles for a minimum of 50,000 miles using selected butane/propane blends. Conduct periodic emission tests during mileage accumulation to determine the effects of operation on regulated emissions, speciated hydrocarbons, and the specific reactivity (ozone-forming potential) of exhaust emissions. At test completion dismantle engines and quantify and rate deposits.		Regulatory Impact Analysis - 1997
Protectnaturalareas;minimizeuseof				EACs - 2004
ProteinExchangeMembraneFuelCell(PEMFC)9	NOx/VOC	These cells operate at relatively low temperatures (about 200 F), have high power density, can very their output quickly to meet shifts in power demand, and are suited for applications, such as in automobiles, where quick startup is required. According to the U.S. DOE, "they are the primary candidates for light-duty vehicles, for buildings,		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		and potentially for much smaller applications such as replacements for rechargeable batteries in video cameras." Fueling stations are a large obstacle in introducing hydrogen powered vehicles to the public on a large scale. From the best calculations available, fueling stations are cost effective, and they are starting to be built across the country. A fueling station will cost $4.5 million to build, but will produce as well as dispense the fuel. Hydrogen fuel costs 3.8 cents per mile, while gas costs 4.5 cents per mile. 11 pounds of hydrogen would provide a 400 mile driving range for a mid-sized car. The tank for this fuel is 3 times the size of a gas tank, and fueling would take about ten minutes.		
ProtonExchangeMembraneFuelCells(PEMFC)5	NOx/VOC	These cells operate at relatively low temperatures (about 200 degrees F), have high power density, can vary their output quickly to meet shifts in power demand, and are suited for applications, such as automobiles, where quick startup is required. According to DOE, "they are the primary candidates for light-duty vehicles, for buildings, and potentially for much smaller applications such as replacements for rechargeable batteries in video cameras."		Regulatory Impact Analysis - 1997
Providefreepublictransit	NOx		Landuse	SAQMD Clean Air Plan - 2003
Providefreepublictransitduringepisodes	NOx		Landuse	SAQMD Clean Air Plan - 2003
Providefreereplacementgascapstolight-andmedium-dutyvehicleowners	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
Provideincentivesformicroturbineenginesinsmallpowergenerationapplications	VOC		Offroad	SAQMD Clean Air Plan - 2003
ProvideTruckstopElectrificationForIn-TruckServices	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
Publicawarenessprogram				EACs - 2004
PublicEducationonNOxandROGsourcesinSchoolsandSmallBusinesses	NOx		Landuse	SAQMD Clean Air Plan - 2003
PubliclyOwnedTreatmentWorks	VOC	Source reduction approaches requiring industrial pretreatment controlling VOCs where they are most concentrated	Stationary	EPA Measures - 1999
PubliclyOwnedTreatmentWorks(POTW)Emissions	VOC	See Website - http://www.epa.gov/ttn/uatw/potw/potwpg.html	Stationary	EPA Measures - 1999
PulpandPaper	VOC	Maximum Achievable Control Technology standards for the integrated pulp and paper industry	Stationary	EPA Measures - 1999
PulpandPaperProduction	VOC	Pending	Stationary	EPA Measures - 1999
Purchase15CNGvehicles				EACs - 2004
Purchase1hybridelectricbus				EACs - 2004
Purchase2alternativefuelvehicles				EACs - 2004
PVManufac-turing(PVMat)	NOx/VOC	One of the primary hindrances to PV market acceptance is the difficulty in taking laboratory results and replicating them under real world conditions. A public-private partnership, funded for 5 years at $118 million, sought to address this problem by improving PV manufacturing processes, module development, and balance of system (BOS) components. For example, BOS components account for 50% of the system cost but 99% of repair issues. The goal was to increase PV module supply [currently demand outstrips supply (as of May, firms are taking no further orders for 1997)] and ensure that the U.S. production remains internationally competitive.		Regulatory Impact Analysis - 1997
QC-TILDAS		Other	Stationary	NEET Database - ongoing
QuaternaryAmmoniumCompoundsProduction	VOC	Pending	Stationary	EPA Measures - 1999
RACTatmajorsources				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
RayonProduction	VOC	Pending	Stationary	EPA Measures - 1999
RCL®CatalyticCombustion		Combustion	Pollution Prevention	NEET Database - ongoing
ReasonablyAvailableControlTechnology(RACT)for25tpyVOCsources	VOC			MA Strategies - 2004
ReciprocatingInternalCombustionEngines	NOx	Limits for rich-burn gas-fired engines between 0.4-0.8 g/bhp-hr, for lean-burn engines as low as 0.5-0.6 g/bhp-hr and for diesel engines at 0.5-1.1 g/bhp-hr.	Stationary	EPA Measures - 1999
ReciprocatingInternalCombustionEngines	VOC	Pending	Stationary	EPA Measures - 1999
Reducedenginetaxi,aircrafttowing,congestionreduction	NOx		M15 Airports	Regulatory Impact Analysis - 1997
Reducedidlingscenario	NOx		Airports	Regulatory Impact Analysis - 1997
Reducelocomotiveidling				EACs - 2004
ReduceParkingFeesatFacilitiesOutsidetheBeltway AdjacenttoMetro		Reduce parking fees at Metro parking facilities or county/city managed facilities outside of the Beltway that are located near Metro stations.	Mobile	DC RACM - 2003
ReducethenumberofpublicparkingspacesintheCityofSacramentoby25%	NOx		Landuse	SAQMD Clean Air Plan - 2003
ReductionsonNOxRACTfornon-NOxBudgetunits	NOx/VOC		Stationary	CT Memo - 2005
RefineryFlares	NOx	Adoption of a Flare Monitoring and Recording Plan	Stationary	EPA Measures - 1999
ReformulatedGasoline	NOx/VOC	Opt into the federal reformulated gasoline program	Mobile	EPA Measures - 1999
ReformulatedGasoline				CT RACM - 2001
ReformulatedGasoline-PhaseI3	VOC		Mobile	CT Memo - 2005
Reformulationsofaerosolproducts(suchasspraypaint,rustproofing,andWD-40)	VOC			MA Strategies - 2004
RegenerativeThermalOxidizer		Emission capture systems	Stationary	NEET Database - ongoing
RegulatesmallICengines				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
Regulationofadditionalprintingoperations	NOx/VOC		Stationary	CT Memo - 2005
Removalofexemptiononcutbackasphaltuse	NOx/VOC		Area	CT Memo - 2005
RenewablePortfolioStandards(DPUC)--C.G.S.section16-245a	NOx/VOC		Stationary	CT Memo - 2005
Replace/retrofitconstructionequip				EACs - 2004
Repowerheavy-dutydieselvehicleswithnewer,loweremittingengines	NOx		On-Road	SAQMD Clean Air Plan - 2003
Repoweroldunitswith2004standardcertifiedengines	NOx/VOC		M6 On-road heavy duty diesel	Regulatory Impact Analysis - 1997
Repowerwithnaturalgasengines	NOx		M5 On-road heavy duty diesel	Regulatory Impact Analysis - 1997
Requireasurchargetobepaidbydriversduringthesummerseasonbasedonthenumberofdrivingmiles	NOx		Landuse	SAQMD Clean Air Plan - 2003
Requirecaptureefficiencytestingatallmajorsourcesof VOC,andmorestringentreportingrequirements,includingon-lineCEMs.	VOC			MA Strategies - 2004
Requirelow-NOxfuelforagriculturalequipment		Require agricultural equipment to use low-NOx fuel during ozone season	Non-road	DC RACM - 2003
RequireOn-BoardDiagnosticsonNewDieselandGasolineTrucksandBuses	NOx		Mobile	SAQMD Clean Air Plan - 2003
Requirepassengervehiclesnotmeetingthestandardsofpassengercarstopayanannualfeeand/orafeeuponpurchase	NOx		Landuse	SAQMD Clean Air Plan - 2003
RequireSNCRatallmajorNOxsources(50tpy+)	NOx			MA Strategies - 2004
RequirethatCongestionMitigationAirQuality(CMAQ)fundsbeusedonlyforprojectsthatsignificantlyimproveairquality	NOx			SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
RescindRestrictedEmissionStatuspermitsandrequireemissionrateswithRACTorBARCT	VOC			MA Strategies - 2004
ResidentialFuelCells7	NOx/VOC	Fuel cell that is small enough to fit into a closet and capable of generating 2-10 kW of power.		Regulatory Impact Analysis - 1997
ResidentialLNBwaterheater				EACs - 2004
ResidentialSpaceandWaterHeaters	NOx	Set limit on new sources of 0.09 lbs//mmBtu of heat output + incentives to replace older space and water heaters	Stationary	EPA Measures - 1999
Restrictionsonoutdoorwoodburningfurnaces	NOx/VOC		Stationary	CT Memo - 2005
RestrictionsonwoodstovesnotsubjecttoNSPS;noburndays	NOx/VOC		Stationary	CT Memo - 2005
Restrictorbancertainoff-roadengineuse--e.g.,target2-strokeenginesunder5horsepower(limitsorbansonlawnmowers,jetskis,ORVs,chainsaws,weedwackers,andleafblowers)	VOC			MA Strategies - 2004
RetrofitenginesforNOx:	NOx		M9 Non-road diesel	Regulatory Impact Analysis - 1997
RetrofitenginesforNOx:waterinjection/emulsion	NOx		M9 Non-road diesel	Regulatory Impact Analysis - 1997
ReviseallexistingAirPermitsfor25tpyorhigherVOCsourcestorequirestrictermonitoring,recordkeepingandcontrollevels(wouldhitthelargestdozenorsoemitterse.g.,Rexam,Globe)	VOC			MA Strategies - 2004
RocketTestingFacilities	VOC	Pending	Stationary	EPA Measures - 1999
RotaryRegenerativeOxidizerwithElectricDriveandFulFlowOn-LineBake-out		Emission capture systems	Stationary	NEET Database - ongoing
RotaryValveRTO(RL)		Process vent gas treatment	Stationary	NEET Database - ongoing
RTIDryRegenerableAlkaliCarbonateProcess		Emission capture systems	Stationary	NEET Database - ongoing
Rubberandplasticsmanufacturing	VOC	SCAQMD o low VOC	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
RubberTireManufacturing	VOC	Pending	Stationary	EPA Measures - 1999
Rubbertiremanufacturingindustry	VOC	VOC capture systems + Control devices	Stationary	EPA Measures - 1999
SafeYellowIC8	VOC	A product has been developed for enhancing powder coatings by increasing the flow of the resins, eliminating orange peel and allowing the replacement of more expensive organic pigment on a one for one basis. The manufacturers of this product say it is an improved coating with lower costs.		Regulatory Impact Analysis - 1997
Sand/Gravel;Dryer	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
Schoolbusengineretrofit				EACs - 2004
Schoolbusretrofits,newlow-emissionschoolbusesanduseofultralowsulfurdieselfuel	NOx/VOC		Mobile	CT Memo - 2005
ScreenPrintingOperations	VOC	VOC content of screen printing materials + Solvent cleaning and storage and disposal of VOC-containing materials comply with Rule 1171	Stationary	EPA Measures - 1999
season-EACareas				EACs - 2004
SecondaryAluminumProduction;SmeltingFurnaces/Reverb	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Selectivecatalyticreduction(SCR)	NOx		M11 Diesel locomotives	Regulatory Impact Analysis - 1997
SemiconductorManufacturing	VOC	Solvent cleaning station requirements + Emission control system on photoresist operations +C content limits for cleanup solvents	Stationary	EPA Measures - 1999
SemiconductorManufacturing	VOC	Pending	Stationary	EPA Measures - 1999
ServiceStations-StageI	VOC	Vapor Balance	Stationary	EPA Measures - 1999
Setloweremissionsstandardsfornewhandheldandnon-handheldlawnandgardenequipment/State/Federal	NOx		Offroad	SAQMD Clean Air Plan - 2003
Setloweremissionstandardsfornewoff-roadspark-	NOx		Offroad	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
ignitedengines(<25hp)				
Setmorestringentemissionstandardsfornewmarinevesselsandpursueapproachestoreduceland-basedportemissions	VOC		Offroad	SAQMD Clean Air Plan - 2003
SetNewConsumerProductsLimitsfor2006	VOC		Area	SAQMD Clean Air Plan - 2003
SetNewConsumerProductsLimitsfor2008–2010	VOC		Area	SAQMD Clean Air Plan - 2003
Setuserestrictionsforeachonroadvehicletypeduringepisodes	NOx		Landuse	SAQMD Clean Air Plan - 2003
SetVOC/ROG/NOxstandardfordieselfueledrefrigerationunitsontrucks	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
ShellGlobalSolutionsThirdStageSeparator(TSS)		Emission capture systems	Stationary	NEET Database - ongoing
Shiftelectricloadprofile				EACs - 2004
ShipbuildingandShipRepair	VOC	Enhanced application techniques achieving a minimum 65-percent transfer efficiency + California's general limit of 340 grams per liter for marine coatings.	Stationary	EPA Measures - 1999
ShipbuildingandShipRepair(SurfaceCoating)	VOC	See Website - http://www.epa.gov/ttn/uatw/shipb/shipbpg.html	Stationary	EPA Measures - 1999
SidelSRUfluegascondensers		Emission capture systems	Stationary	NEET Database - ongoing
SmallCompressionIgnitionDirectInjection(CIDI)DieselEngines5	VOC	Research is being conducted into lightweight engine materials, alternative fuels, and catalytic converters in an effort to apply the advantages of CIDI engines (high thermal efficiency, operating flexibility, low start-up emissions) to passenger cars, while controlling negative characteristics (heavy engine components and production of sub-optimal levels of NOx and particulate emissions).		Regulatory Impact Analysis - 1997
SmallIndustrial,Institutional,andCommercialBoilers,SteamGenerators,andProcessHeaters	NOx	NOx emission limit, methods to meet the limit is not specified	Stationary	EPA Measures - 1999
SmallSourceBACT			Stationary	CT Memo - 2005

Measure	Pollutant	Description	Source	Source Code
Smokingvehicleban				EACs - 2004
SOCMIbatchprocesses	VOC	Vapor collection system + incineration	Stationary	EPA Measures - 1999
SOCMIbatchreactorprocesses	VOC	New CTG	Stationary	EPA Measures - 1999
SOCMI-Distillation	VOC	New CTG level control	Stationary	EPA Measures - 1999
SOCMIfugitives	VOC	Equipment and maintenance	Stationary	EPA Measures - 1999
SOCMI-ReactorProcesses	VOC	New CTG level control	Stationary	EPA Measures - 1999
sodiumbicarbonateinjection		Emission capture systems	Stationary	NEET Database - ongoing
Solae-switchtoalternativefuel				EACs - 2004
SolidOxideFuelCell(SOFC)2	NOx/VOC	The solid oxide fuel cell generates power electrochemically, avoiding the air pollutants and efficiency losses associated with combustion processes. Fuels cells operate continuosly, generating power as long as natural gas, coal-derived gas, or other hydrocarbon fuels are supplied. The solid electrolyte allows for the simplest of fuel cell plant designs, and requires no external fuel reforming. Capable of using either natural gas or cleaned coal gas, it emits no sulfur pollutants and as much as 60 to 65 percent less carbon dioxide than a conventional coal-burning plant.		Regulatory Impact Analysis - 1997
SolidWasteDisposal;Government;OtherIncinerator;Sludge	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
SolventCleaningOperations	VOC	Compliant solvent requirement by cleaning application + Cleaning devices and methods requirement + Storage and disposal requirements + Emission control system for non-compliant solvents and cleaning procedures	Stationary	EPA Measures - 1999
SolventCleaningOperations–Cleaningofcoatings/adhesivesapplicationequipment	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
SolventCleaningOperations–Cleaningofinkapplicationequipment	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999
SolventCleaningOperations–Cleaningofpolyesterresinapplicationequipment	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999
SolventCleaningOperations–Repair&maintenancecleaning	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999
SolventCleaningOperations–Surfacecleaningformfg,&surfaceprepforcoating,adhesive,orinkapplication	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999
SolventCleaningOperations–Ultravioletinkremovalfromgraphicarts	VOC	VOC-content specifications for solvents based on vapor pressure or emission capture and control systems	Stationary	EPA Measures - 1999
SolventDegreasers	VOC	Operating practice requirements + VOC content limits of solvents + Clean Air Solvent Certificates	Stationary	EPA Measures - 1999
SpaceHeaters-DistillateOil	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
SpaceHeaters-DistillateOil	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
SpaceHeaters-DistillateOil	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
SpaceHeaters-DistillateOil	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
SpaceHeaters-NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
SpaceHeaters-NaturalGas	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
SpaceHeaters-NaturalGas	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
SpaceHeaters-NaturalGas	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
SpaceHeaters-NaturalGas	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
SpandexProduction	VOC	Pending	Stationary	EPA Measures - 1999
Stage1vaporrecovery				EACs - 2004
Stage1vaporrecovery				EACs - 2004

Measure	Pollutant	Description	Source	Source Code
Stage1VaporRecovery>25,000				EACs - 2004
Stage1vaporrecovery-EACareas				EACs - 2004
StageIIVaporRecovery	VOC	Rules to achieve a 95-percent level of control efficiency + require California certification of equipment + limit exemptions to facilities with throughputs below 10,000 gallons per month + semi-annual inspections.+ Stage II program in Moderate nonattainment areas	Stationary	EPA Measures - 1999
StageIIVaporRecovery				CT RACM - 2001
StageIIVaporRecovery:Pressure-VentValves	VOC		Stationary	CT Memo - 2005
StageI-truckunloading	VOC	Vapor balance	Stationary	EPA Measures - 1999
StageI-truckunloading	VOC	Vapor balance + PN valves	Stationary	EPA Measures - 1999
StageIVaporRecovery				EACs - 2004
StageIVaporRecoveryatGasolineServiceStations	VOC		Stationary	CT Memo - 2005
Stakeholderdevelopment				EACs - 2004
StarchManufacturing;CombinedOperations	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
State&LocalFleetReplacement		Replace public sector gasoline-fueled automobile fleet with hybrid vehicles (i.e. Toyota Prius)	Mobile	DC RACM - 2003
StationaryGasTurbines	NOx	Continuous in-stack NOx and oxygen monitoring system + Selective Catalytic Reduction	Stationary	EPA Measures - 1999
StationaryInternalCombustionEngines	NOx	NOx emission limit	Stationary	EPA Measures - 1999
StationCarsToPromoteUserFriendlinessOfMassTransportation	NOx/VOC	Voluntary measures	Mobile	EPA Measures - 1999
SteelFoundries	VOC	Pending	Stationary	EPA Measures - 1999
SteelFoundries;HeatTreatingFurnaces	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
SteelProduction;SoakingPits	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
StorageTankDegassing	VOC	Degassing procedures required + Control device to capture VOCs displaced from tanks	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
StorageVesselsforPetroleumLiquids	VOC	Floating roofs	Stationary	EPA Measures - 1999
Strictercontrolsonillegalburning				EACs - 2004
Styrene-AcrylonitrileProduction	VOC	See Website - http://www.epa.gov/ttn/uatw/pr4/pr4pg.html	Stationary	EPA Measures - 1999
SubsidizePurchaseofBikeAccessories	NOx		Landuse	SAQMD Clean Air Plan - 2003
SulfatePulping-RecoveryFurnaces	NOx	Low NOx Burners + Flue Gas Recirculation	Stationary	EPA Measures - 1999
SulfatePulping-RecoveryFurnaces	NOx	Selective Non-Catalytic Reduction	Stationary	EPA Measures - 1999
SulfatePulping-RecoveryFurnaces	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
SulfatePulping-RecoveryFurnaces	NOx	Oxygen Trim + Water Injection	Stationary	EPA Measures - 1999
SulfatePulping-RecoveryFurnaces	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
SupercriticalCO2asapaintsolvent30	VOC	Supercritical CO2 is being investigated as a replacement for traditional paint solvents, eliminating VOC emissions.		Regulatory Impact Analysis - 1997
SuperplasticAdvancedManifolds3	VOC	Double-wall +manifold offers the potential for substantial reductions in cold-start emissions by allowing the inner tube to heat quickly, resulting in a quicker "light-off" of the catalytic converter, thereby reducing hydrocarbon emissions.		Regulatory Impact Analysis - 1997
Supportcetanedieselfueladditive				EACs - 2004
Surfacecoatingofmetalfurniture	VOC	Low solvent coatings	Stationary	EPA Measures - 1999
SurfaceCoatingofPlasticParts	VOC	HVLP spray or other techniques achieving a minimum transfer efficiency of 65 percent + VOC-content limits	Stationary	EPA Measures - 1999
SurfaceCoatingOperation;CoatingOvenHeater;NaturalGas	NOx	Low NOx Burners	Stationary	EPA Measures - 1999
Switchvehiclestobio-diesel				EACs - 2004
Syntheticfibermanufacture	VOC	Carbon Adsorber	Stationary	EPA Measures - 1999
SyntheticFiberProduction	VOC	Solvent recovery systems including carbon adsorption	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
SyntheticOrganicChemicalManufacturing	VOC	See Website - http://www.epa.gov/ttn/uatw/hon/honpg.html	Stationary	EPA Measures - 1999
SyntheticOrganicChemicalManufacturingIndustry(SOCMI)ReactorandDistillationProcesses	VOC	98-percent reduction in emissions from SOCMI sources + exemptions based on EPA's CTG with a more stringent total resource effectiveness (TRE) cutoff for exemptions	Stationary	EPA Measures - 1999
TD-4100On-LineHydrocarbonMonitor		Emissions Monitoring	Monitoring	NEET Database - ongoing
TerephthalicAcidManufacture	VOC	Incineration	Stationary	EPA Measures - 1999
Testo350		Emissions Monitoring	Monitoring	NEET Database - ongoing
TextileFinishing	VOC	Add-on controls of 95 percent or better control efficiency + capture efficiency based on best engineering practices + possible exemption of low-solvent inks	Stationary	EPA Measures - 1999
thecaptureandcontrolofVOCemissionsfromlivestockwaste	VOC		Stationary	SAQMD Clean Air Plan - 2003
TheExpertFurnaceSystemOptimizationProcess(EFSOP)forEAFs		Combustion	Pollution Prevention	NEET Database - ongoing
Thegraphicartsindustry;Publicationrotogravureprinting	VOC	Carbon adsorption	Stationary	EPA Measures - 1999
ThermalOxidizers		Emission capture systems	Stationary	NEET Database - ongoing
ThermalOxidizerwithEnergyRecovery		Process vent gas treatment	Stationary	NEET Database - ongoing
ThermoPV(TPV)	NOx/VOC	Using superconducting materials to turn solar energy into heat to creates steam to then generate electricity.		Regulatory Impact Analysis - 1997
Thin-layercrystallinesilicon	NOx/VOC	A solar film on which research effort is focused because it is likely to blend the production ease of other film technologies with the efficiency of silicon crystals.		Regulatory Impact Analysis - 1997
Tightenstandardsforbulkterminalgasolinestorageandtransferin7.24(2)--	VOC			MA Strategies - 2004

Measure	Pollutant	Description	Source	Source Code
suchthatthevaporrecoveryunitsarerequiredtooperateatloweremissionrates.				
Tighteremissionstandardsforpleasurecraft/State/Federal	VOC		Offroad	SAQMD Clean Air Plan - 2003
TORBEDTM-ProcessReactorTechnologies		Other	Stationary	NEET Database - ongoing
Trafficmarkings	VOC	South Coast Phase III	Stationary	EPA Measures - 1999
Trafficmarkings	VOC	South Coast Phase I	Stationary	EPA Measures - 1999
Trafficmarkings	VOC	South Coast Phase II	Stationary	EPA Measures - 1999
Trafficmarkings	VOC	AIM Coating Federal Rule	Stationary	EPA Measures - 1999
TransitPrioritization--QueueJumps		Provide queue jumps for buses at over-capacity signalized intersections throughout the region. Queue jumps allow buses to use a shoulder or other designated lane to bypass intersection queues and move forward towards the stop line.	Mobile	DC RACM - 2003
Transitprograms				EACs - 2004
TransportRefrigerationUnits(TRUs)	PM2.5		Mobile	CT Memo - 2005
TreatmentStorageandDisposalFacilities	VOC	Expedited process for upgrading permits + air pollution control regulations for TSDFs modeled after EPA's hazardous waste rules	Stationary	EPA Measures - 1999
Treeplantingprogram				EACs - 2004
Truckstopelectrification	PM2.5		Mobile	CT Memo - 2005
Truckstopelectrification				EACs - 2004
TSDFs	VOC	Phase I & II rules	Stationary	EPA Measures - 1999
UltraFiltration24	VOC	Decorative Coatings' technology center at Montataire, France is developing new technologies to improve waterborne paint waste reuse, thereby reducing new paint production and associated emissions. One of its initiatives is wastewater treatment by Ultra Filtration (UF). This is a major project, because up to 12 European sites may be		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		involved. UF is a nonchemical membrane separation process, which separates the effluent into two streams: permeate (the treated water) and concentrate (UF sludge). The pollution level of the permeate is equivalent to that obtained after conventional treatment, but it is completely free of paint solids, which are held in the concentrate. So far, UF has proved to be an efficient solution for treating effluent from waterborne paint production. Industrial application of UF is economical provided that the concentrate is reused in making paint.		
UndergroundStorageTankVents	VOC	Pressure-vacuum valves on open vent pipes of storage tanks equipped with Stage I vapor recovery	Stationary	EPA Measures - 1999
Updatedevelopmentregulations				EACs - 2004
UpgradeVOCRACT	NOx/VOC		Stationary	CT Memo - 2005
UreaResins-General	VOC	RACT Extended to Other Areas	Stationary	EPA Measures - 1999
usage;restrictvehicleidletimes				EACs - 2004
Uselandfillgas;supportNCGreenPower				EACs - 2004
Useremotesensorsandlicenseplatephotostoidentifysmokingvehicles	NOx		On-Road Mobile	SAQMD Clean Air Plan - 2003
UtilityBoilers	NOx	Selective Catalytic Reduction	Stationary	EPA Measures - 1999
UtilityBoilers	NOx	T-fired and wall-fired coal units emissions of 0.15 lb/mmBtu or below + oil and gas units emissions of 0.05 lb/mmBtu + emission rates based on energy output	Stationary	EPA Measures - 1999
Utilityboilers	NOx	Gas / oil - SCR 0.08 lb/mmBtu	Stationary	EPA Measures - 1999
UtilityBoilers	NOx	Natural Gas- 0.2lb/mmBtu; Liquid Fossil Fuel - 0.3 lb/mmBtu; Subituminous Coal - 0.5 lb/mmBtu; Lignite- 0.8 lb/mmBtu; Bituminous Coal- 0.6 lb/mmBtu	Stationary	EPA Measures - 1999
UV/ozoneoxidationtechnique23	VOC	Technology development and demonstration		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		activity targeted for Department of Defense painting operations to validate the recirculation/partitioning concept used with a novel UV/ozone oxidation technique to eliminate HAP and VOC discharges from paint spray booths and other booth designs. Preliminary results suggest that booth discharge flow reductions of up to 75% can be achieved.		
VacuumInsulatedCatalyticConverter29	NOx/VOC	Using a form of vacuum insulation and phase-change heat storage technology, the converter remains at operating temperatures for more than 24 hours after the engine has been turned off. Potential exists to reduce automotive emissions to ultra-low emission vehicle (ULEV) levels, or even to equivalent zero emission vehicle (EZEV) standards in some cases.		Regulatory Impact Analysis - 1997
VariousMiscellaneousPolymerChemicalsProduction	VOC	Pending	Stationary	EPA Measures - 1999
VegetableOilProduction	VOC	Pending	Stationary	EPA Measures - 1999
VehicleI/Mprogram				EACs - 2004
Vehicleinspectionincludingdiesel				EACs - 2004
VinylChlorideEmissions	VOC	Emission control system with continuous stack monitor	Stationary	EPA Measures - 1999
VOCemissionlimitsformarinecoatings	VOC		Stationary/Area	SAQMD Clean Air Plan - 2003
VOCemissionlmitsforCommercialCookingsuchascharbroilersanddeepfatfryers	VOC		Area	SAQMD Clean Air Plan - 2003
VOCemissionsformthepolymermanufacturingindustry	VOC	Incineration of emissions in boiler or flare	Stationary	EPA Measures - 1999
VOClimitsforMetalPartsandProductsinDistrictswhererulesarenotadopted	VOC		Stationary/Are	SAQMD Clean Air Plan - 2003

Measure	Pollutant	Description	Source	Source Code
			a	
VOClimitsforunregulatedcoatings	VOC		Stationary/Are a	SAQMD Clean Air Plan - 2003
VOCRACTpursuanttosections182(a)(2)(A)and182 (b)(2)(B)ofCleanAirAct				CT RACM - 2001
VolatileOrganicLiquidsStorage	VOC	Volatile organic liquid storage CTG + enhanced test methods, monitoring specifications and equipment specifications based on HON rule + lower vapor pressure limits for exemptions in current rules	Stationary	EPA Measures - 1999
Volatileorganicliquidstorage	VOC	Floating roof tops for tanks	Stationary	EPA Measures - 1999
Volatileorganicliquidstorage	VOC	Floating roofs	Stationary	EPA Measures - 1999
VoluntaryMobileEmissionsReductionProgram(V MEP)				TX SIP - 2000-2004
W15-590DieselFuelAdditive		Fund trial of the fuel additive W15-590 to reduce NOX emissions. The additive can be mixed with the fuel before or after delivery from the distribution center.	Mobile	DC RACM - 2003
WasteBurning--AgriculturalorOpenBurning(defined:p804ofCAFIP)	VOC	Agricultural and open burning are prohibited on a “no-burn day” which is a day declared by EPA, CARB, or local air district if an ozone exceedance (0.09 ppm) is predicted	Stationary	EPA Measures - 1999
Water-based,solvent-freeandultrahigh-solidscoatings12	VOC	Water-based, solvent free and ultrahigh-solids coatings are being considered for development for the metal office furniture industry.		Regulatory Impact Analysis - 1997
Water-basedaerosoladhesive11	VOC	Based on new technology, a water-based low VOC spray adhesive has been developed that offers bonding strength and heat resistance comparable to many typical solvent-based aerosol products. This adhesive can be used to bonds a range of substrates, including paper, fabrics, plastics, wood, and		Regulatory Impact Analysis - 1997

Measure	Pollutant	Description	Source	Source Code
		aluminum.		
Water-basedcoatings13	VOC	Morton's Water-Based Polymers Technology Group is involved in developing new and improving on existing Morton waterborne products such as: a new water-based, lead-free highway paint; a zero-VOC, waterborne color dispersion paint component; and water-based automotive plastic coatings.		Regulatory Impact Analysis - 1997
Water-basedsoldermasks26	VOC	Probimer7 water-based solder masks can help cut down on the use of solvents; these water-based coatings are used on printed wiring boards in the computer industry. In addition, the division's powder coating systems are applied to buildings and cars using electrostatic charge - avoiding the need for a solvent.		Regulatory Impact Analysis - 1997
Waterborneclearcoats19	VOC	Water-based clearcoats are under investigation at Ford.		Regulatory Impact Analysis - 1997
Waterborneprimers18	VOC	Waterborne primers will be studied at three Ford truck plants and a BMW plant.		Regulatory Impact Analysis - 1997
WebOffsetLithography	VOC	New CTG	Stationary	EPA Measures - 1999
WetESP		Emission capture systems	Stationary	NEET Database - ongoing
WMATABusInformationDisplayswithMaps		Install additional information boxes with maps and schedule information. Would include schedules in languages other than English in neighborhoods where most residents speak another language	Mobile	DC RACM - 2003
WoodFlatStockCoatingOperations	VOC	VOC content limits for coatings, inks, and adhesives + Applicator requirements + Emission collection and control system for non-compliant coatings	Stationary	EPA Measures - 1999
WoodFurniture(SurfaceCoating)	VOC	See Website - http://www.epa.gov/ttn/uatw/wood/riwood.html	Stationary	EPA Measures - 1999
WoodFurnitureCoating	VOC	Incineration	Stationary	EPA Measures - 1999

Measure	Pollutant	Description	Source	Source Code
WoodFurnitureCoating	VOC	Negotiated regulatory rules	Stationary	EPA Measures - 1999
WoodFurnitureProducts(SurfaceCoating)	VOC	Pending	Stationary	EPA Measures - 1999
Woodfurnituresurfacecoating	VOC	New CTG	Stationary	EPA Measures - 1999
Woodfurnituresurfacecoating	VOC	MACT	Stationary	EPA Measures - 1999
Woodfurnituresurfacecoating	VOC	Add-On Controls	Stationary	EPA Measures - 1999
WoodProductsCoatings	VOC	VOC content limits of coatings and strippers + Coating applicator transfer efficiency + Approved emission control system for non-compliant coatings	Stationary	EPA Measures - 1999
Woodproductsurfacecoating	VOC	MACT	Stationary	EPA Measures - 1999
Woodproductsurfacecoating	VOC	SCAQMD Rule 1104	Stationary	EPA Measures - 1999
Woodproductsurfacecoating	VOC	Incineration	Stationary	EPA Measures - 1999
WorkwithSEQLproject				EACs - 2004
XactMulti-MetalsCEM		Emissions Monitoring	Monitoring	NEET Database - ongoing
XononCoolCombustion®		Combustion	Pollution Prevention	NEET Database - ongoing
ZeroI/Mwaiversandexemptions		Eliminate all waivers and exemptions in the I/M program	Mobile	DC RACM - 2003
Zero-VOCIndustrialMaintenanceMetalCoating31	VOC	This zero-VOC coating technology is intended for use as a topcoat on metal furniture. The resin formulation for the coating will be adjusted to provide acceptable drying times, flexibility and hardness, and ultraviolet, chemical and salt spray resistance.		Regulatory Impact Analysis - 1997
ZEVbusdemonstrationandpurchase	NOx		TCM	SAQMD Clean Air Plan - 2003
ZEVprogram		Adopt California ZEV program	Mobile	DC RACM - 2003
Zoningordinance-landscapebuffers				EACs - 2004

Appendix C – Control Measure Worksheets

This Appendix contains the Control Measure Summary Worksheets for the following source categories:

Manufacture and Use of Adhesives and Sealants
Architectural and Industrial Maintenance Coatings
Asphalt Paving (Emulsified and Cutback)
Asphalt Production Plants
Automotive Refinish Coatings
Cement Kilns
Chip Reflash (Heavy Duty Diesel Engines)
Consumer Products
Glass and Fiberglass Furnaces
Industrial, Commercial, Institutional Boilers
Industrial Surface Coatings – Fabric Printing, Coating, and Dyeing
Industrial Surface Coatings – Large Appliances
Industrial Surface Coatings – Metal Cans
Industrial Surface Coatings – Metal Coils
Industrial Surface Coatings – Metal Furniture
Industrial Surface Coatings – Miscellaneous Metal Parts
Industrial Surface Coatings – Paper and Web Coating
Industrial Surface Coatings – Plastics Parts
Industrial Surface Coatings – Wood Building Products
Industrial Surface Coatings – All Categories
Lime Kilns
Municipal Waste Combustors
Printing and Graphic Arts
Portable Fuel Containers
Reformulated Gasoline

CONTROL MEASURE SUMMARY
Manufacture and Use of Adhesives and Sealants
(SCC- 2440020000)

Control Measure Summary

The provisions of this model rule limit emissions of volatile organic compounds (VOCs) from adhesives, sealants and primers. The model rule achieves VOC reductions through two basic components: sale and manufacture restrictions that limit the VOC content of specified adhesives, sealants and primers sold in the state; and use restrictions that apply primarily to commercial/industrial applications. By reducing the availability of higher VOC content adhesives and sealants within the state, the sales prohibition is also intended to address adhesive and sealant usage at area sources. Emissions from residential use of regulated products are addressed through the sales restrictions and simple use provisions.

A reasonably available control technology determination prepared by the California Air Resources Board (CARB) in 1998 forms the basis of this model rule. In the years 1998-2001, the provisions of the CARB determination were adopted in regulatory form in various air pollution control districts in California including the Bay Area, South Coast, Ventura County, Sacramento Metropolitan and San Joaquin Valley.

Costs and Emissions Reductions

2002 existing measure: No existing limitations for this category

Candidate measure: Approximately 75% of VOC emissions originate from solvent-based adhesives and sealants, the remaining 25% of VOC in this category are due to water-based materials. VOC content limits have been enacted by various APCD in California from 1998 to 2001.

Emissions reductions**:** VOC content limits for the solvent-based materials can result in 64.4% reduction in total emissions from this category. (CARB RACT/BARCT for Adhesives/ Sealants, Dec 1998)

Control costs**:** Costs for control by reformulation are estimated by the CARB at less than $2500 / ton (1999$). Many manufacturers have either reformulated solvent-based products to reduce the VOC content or have developed low-VOC water-based latex and acrylic products, or polyurethane or silicone products in response to the adoption of similar regulations in California. Thus, the actual costs in the OTC region are anticipated to be lower.

Estimated costs for add-on controls carbon and thermal oxidizers ranged from $10,000 to $100,000 per ton.

Timing of implementation**:** 01/01/09

Implementation area**:** Region-wide

Annual VOC

2002 Emissions: 35,489 tpy
2009 Emissions: 46,241 tpy
2009 Reduction: 29,438 tpy
2009 Remaining: 16,803 tpy

Summer VOC

2002 Emissions: 99.8 tpd
2009 Emissions: 129.8 tpd
2009 Reduction: 82.3 tpd
2009 Remaining: 47.5 tpd

Interaction with other OTC Model Rules
The products regulated in this model rule do not overlap with the products regulated by either the architectural and industrial maintenance (AIM) or consumer product rules. A "coating," as contemplated in the AIM rule, is a "material applied onto or impregnated into a substrate for protective, decorative or functional purposes." Because the coating is applied only to one substrate, it is clearly distinguished from adhesives and sealants, which are defined in both the consumer product and adhesive rules by application to two surfaces; in the case of adhesives, the two surfaces are directly bonded while in the case of sealants, a gap between two surfaces is filled.

The overlap between the consumer product and adhesive rules is addressed mainly by an exemption in the adhesive rule for adhesives and sealers subject to the state's consumer products regulation.

Reference:

California Air Resources Board. *Determination of Reasonably Available Control Technology and Best Available Retrofit Technology for Adhesives and Sealants*. December 1998. Page 18 provides the emission reduction estimates for California: the ARB emission inventory estimates 45 tons per day pre-rule; reductions will range from approximately 29 to 35 tons per day. We used the low end of this range to calculate the percent reduction of 64.4% (i.e. 29 tpd/45 tpd). Page 17 provides the cost-effectiveness information: the cost of complying with the determination reflects the cost of using alternative formulations of low-VOC or water-based adhesives, sealants, and cleanup products. Ventura County APCD staff determined that the cost-effectiveness of their adhesives rule ranges from a savings of $0.53 per pound to a cost of $1.16 per pound of VOC reduced ($1,060 to 2,320). The use of add-on control equipment to comply was $4.50 to $55.00 per pound ($9,000 to $110,000).

CONTROL MEASURE SUMMARY FOR
AIM Coatings

<table>
<tr><td>Control Measure Summary: VOC emission reductions can be obtained through modifying the current formulation of the coating to obtain a lower VOC content. The regulatory approach for reducing emissions is to establish VOC content limits for specific coatings that manufacturers are required to meet either through reformulating products or substituting products with compliant coatings.</td><td>Emissions (tons/year)</td></tr>
<tr><td>2001 existing measure: Federal AIM rules 40CFR Part 59
Emission Reductions: 20% reduction from uncontrolled levels
Control Cost: $228 per ton
Timing of Implementation: Compliance required by September 1999
Implementation Area: Nationwide</td><td>VOC (with Part 59 limits)
2002 OTR total: 124,173</td></tr>
<tr><td>2009 On-the-Way Measure: OTC Model Rule based on a model rule adopted by the California Air Resources Board (CARB) in June, 2000 for 33 air control districts.
Emission Reductions: 31% beyond Federal AIM rule
Control Cost: $6,400 per ton</td><td>VOC (After OTC Model Rule)
2009 Reduction: <u>-25,150</u>
2009 Remaining: 99,023</td></tr>
<tr><td>Candidate measure: Follow CARB 2007 Rulemaking. Modify rule as appropriate when complete (in time for 2009) Participate actively in CARB process. Conduct survey in 2006 for 2005 sales data.
Emission Reductions : 6% emissions reduction
For modeling purposes we split the difference between SCAQMD and OTC model rule. But we go 75% of the way toward SCAQMD on the top four sales products, and set a 250 g/l VOC limit for Industrial Maintenance coatings. The reductions are calculated using the “reg neg” spreadsheet.
Control Cost: Cost of OTC Survey (revise with cost data from the future CARB SCM when available in 2007) SCAQMD estimated the overall cost-effectiveness for their 1999 Amendments to $13,317 per ton. For Dec. 5 2003 amendments to Rule 1113, SCAQMD estimated the cost-effectiveness to be in the range of $4,229 to $11,405 per ton
Timing of Implementation: 01/01/09
Implementation Area: Throughout OTR and MRPO</td><td>VOC (After CARB 2007 Rule)
2009 Reduction: <u>-5,941</u>
2009 Remaining: 93,082</td></tr>
</table>

REFERENCES:

2002 Existing Measure (Federal Part 59 Rules):

E.H. Pechan & Associates, Inc., *AirControlNET Version 4.1: Documentation Report*, September 2005. Pages III-1347 and III-1348 shows the 20% reduction for the Federal Part 59 rule at a cost of $228 per ton (1990$).

2009 On-the-Books Measure (OTC Model Rule):

E.H. Pechan & Associates, Inc., *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules*, March 31, 2001. Table II-6 shows 31% reduction (OTC Model Rule beyond Federal rule). Page 15 presents cost of $6,400 per ton based on CARB's 2000 Staff Report for the Suggested Control Measure for Architectural Coatings.

Candidate Measure (CARB 2007 Suggested Control Measure):

CARB is in the process of updating the 2000 Suggested Control Measure (SCM) for Architectural Coatings this year. They will be using 2004 survey data as an important resource to update the SCM, but will not begin the formal SCM update process until the survey is completed. They anticipate bringing the SCM update to our Board in mid to late 2007.

CARB is developing an analysis of costs for implementing an updated it's Suggested Control Measure. Results of the analysis will not be available until 2007.

Cost information for the South Coast Phase rules were obtained from:

South Coast Air Quality Management District. *Final Staff Report for Proposed Amended Rule 1113 – Architectural Coatings*. December 5, 2003. "estimated the cost-effectiveness to be in the range of $4,229 to $11,405 per ton of VOC reduced. The low end of the range was determined based on the retail cost of compliant coatings reported by coating manufacturers surveyed by staff. The upper end of the range was derived by estimating the increased cost at the retail level due to the increase in cost of raw materials, reformulation, testing and packaging a new product prior to commercialization." The Dec. 2003 amendments lowered the VOC limit for the following specialty coating categories: clear wood finishes including varnishes and sanding sealers, roof coatings, stains, and waterproofing sealers including concrete and masonry sealers.

South Coast Air Quality Management District. *Appendix F Addendum to Staff Report, Final Socioeconomic Impact Assessment, Proposed Amendments to Rule 1113*. May 1999. The May 1999 amendments to Rule 1113 lower VOC limits for the coating categories of industrial maintenance; non-flats; primers, sealers, and undercoaters; quick-dry enamels; quick-dry primers, sealers, and undercoaters; roof coatings; floor coatings, rust preventative coatings, stains, and waterproofing wood sealers. The overall cost-effectiveness of the proposed amendments, (total costs/total emission reductions) over the years 2002-2015, is estimated to be $13,317 per ton.

CONTROL MEASURE SUMMARY FOR EMULSIFIED AND CUTBACK ASPHALT PAVING

Control Measure Summary: OTC Regional Ban on Cutback Asphalt in Ozone Season, with lower VOC/Solvent Contents for Emulsified Asphalt.	**VOC Emissions in Ozone Transport Region**
2002 existing measures: *1. Cutback asphalt: The OTC states typically ban the use of cutback asphalt during the ozone season. States do provide various exemptions to the ban, most notably allowances may be made for cutbacks which contain less than 5% VOC.* *2. Emulsified asphalt: Ten of the OTC states regulate emulsified asphalt by providing allowable VOC content limits for the various applications. Three of the states do not address emulsified asphalts in their regulation.* *Control Cost*: According to the 1977 CTG (EPA-450/2-77-037), which formed the basis for the existing regulations, the use of emulsified asphalts (no VOC) presented a cost savings. *Timing of Implementation*: All regulations implemented in 1990s or earlier under the 1-hour ozone standard. *Implementation Area*: OTC 1-hour ozone non-attainment areas.	**Annual VOC** 2002 cutback: 9,154 tpy 2002 emulsified: 10,379 tpy 2002 total: 19,533 tpy **Summer VOC** 2002 cutback: 17.5 tpd 2002 emulsified: 38.5 tpd 2002 total: 56.0 tpd
Candidate measure: For cutback asphalt paving *Measure ID:* **BOTW09-AP-Cutback** Place a complete prohibition on the use of cutback asphalt during the ozone season. *Emission Reductions*: to be achieved from using lower VOC content emulsified asphalt products or working outside the ozone season. ***Control Cost*:** Negligible. ***Timing of Implementation*:** 01/01/09 ***Implementation Area*:** All OTC 8-hour ozone non-attainment counties or individual state-wide.	**Summer VOC** 2009 OTB: 19.9 tpd 2009 Reduction: 19.9 tpd 2009 Remaining: 0.0 tpd
Candidate measure: For emulsified asphalt paving *Measure ID:* **BOTW09-AP-Emulsified** Proposes to limit ozone season use of emulsified asphalt to that which contains not more than 0.5 ml of oil distillate from the 200 mL sample using the ASTM D244 test method regardless of application (which is 0.25% VOC by volume) *Emission Reductions*: to be achieved from using lower VOC content emulsified asphalt products or working outside the ozone season. *Control Cost*: Negligible ***Timing of Implementation***: 01/01/09 ***Implementation Area*:** All OTC 8-hour ozone non-attainment counties or individual state-wide.	**Summer VOC** 2009 OTB: 44.2 tpd 2009 Reduction: 39.9 tpd 2009 Remaining: 4.3 tpd

Control Measure Recommendation:
States implement most stringent measure possible to achieve VOC reductions by 2009 from OTB projections in OTC states, with out disrupting state and county paving operations.

Brief Rationale for Recommended Strategy:
(1) Delaware already implements and complies with the most stringent proposed control strategy.
(2) The control strategy is supported by the 1977 Control Techniques Document EPA-450/2-77-037.

CONTROL MEASURE SUMMARY FOR
Asphalt Production Plants

Control Measure Summary: NOx emission reductions can be obtained through installation of low NOx burners and flue gas recirculation. SO2 can be reduced by reducing the sulfur in fuel limits for distillate oil to 500 ppm.	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measure: No existing limitations for this specific category have been identified.	2002 NOx Base: 2002 SO2 Base:	827 847
Candidate Measure: ***Emission Reductions*:** NOx can be reduced between 35% to 50% with low NOx burners and flue gas recirculation (FGR). SO2 can be reduced 25% to 75% by reducing the sulfur in fuel limits for distillate oil to 500 ppm. The MANEVU data for this category is incomplete. Only major point sources are typically included in the point source database. Non-major source emissions are likely lumped into the area source inventory with other industrial/commercial boilers/heaters. The point source data projects only 800+ tons per year (TPY) of both NOx and SO2 actual emissions in 2002 for the entire region. New York actual emissions are over 600 TPY of NOx and 400 TPY of SO2. Therefore, it is unknown what the actual reductions will produce as no accurate baseline exists for both major and minor facilities. ***Control Cost*:** Costs for control are similar to those of small to midsize boilers or process heaters. Low NOx burners range from \$500 to \$1250 per ton. While Low NOx burners in combination with FGR range from \$1000 to \$2000 per ton. Projected cost increase from lowing sulfur in distillate oil is approximately 2 to 3 cents per gallon. ***Timing of Implementation*:** Similar to the NOx RACT procedures of 1994. Require a NOx compliance plan by the spring of 2008 with full implementation and compliance within one year (01/01/09). Unknown for sulfur-in-fuel reductions. ***Implementation Area*:** Region-wide	**NOx** 2009 Base: 2009 Reduction: 2009 Remaining: **SO2** 2009 Base: 2009 Reduction: 2009 Remaining:	 1,276 -549 727 1,266 -950 316
Recommended Strategy: States should support rules that encourage a combination of Best Management Practices, Low NOx Burners and FGR in asphalt production plants to achieve a 20-35% reduction in NOx emissions form a 2002 base, and encourage the use of low-sulfur oil. Area source emissions from asphalt plants are not included in this summary.		

REFERENCES:

Note: The reductions estimated for this category only include emissions from point sources. Area source emissions from fuel combustion at asphalt production plants are not explicitly contained in the area source emissions. These emissions are likely lumped together in the general area source industrial and commercial fuel use category. Reductions from area source emissions at asphalt production plants are included in the ICI boiler source category.

Candidate Measure (Low NOx Burners plus FGR; low sulfur fuel oil):

The emission reduction estimates and cost-effectiveness data were provided by NYSDEC. These control efficiencies and cost-effectiveness estimates for Low NOx Burners plus FGR are generally consisten with the data presented in E.H. Pechan & Associates, Inc., *AirControlNET Version 4.1: Documentation Report*, September 2005. Information in this report for small oil-fired process heaters and ICI boilers provide similar levels of control and cost-effectiveness.

Candidate Measure (Best Management Practices)

Best Practices to Reduce Fuel Consumption and/or Lower Air Emissions: HMA industry leaders have identified a number of Best Practices that, if implemented, allow for substantial reduction in plant fuel consumption and the corresponding products of combustion including NOx. In today's business environment, there is significant incentive to reduce fuel usage. For this reason, implementing best practices to reduce fuel consumption and NOx emissions, forms the basis of a sustainable strategy.

Effective stockpile management to reduce aggregate moisture content: Current information indicates that effective stockpile management can reduce aggregate moisture content by about 25 percent, corresponding to a reduction in fuel consumption by approximately 10 - 15 percent. There are a number of ways to reduce aggregate moisture: covering stockpiles, paving under stockpiles, and sloping stockpiles are all ways that prevent aggregate from retaining moisture. Best Practices are plant- and geographic locale-specific.

Burner tune-ups: As identified in OTC Resolution 06-02 and companion control measures summaries, a burner tune-up may reduce NOx emissions by up to 10 percent. From a contractor's perspective, this also is helpful in reducing fuel consumption. In other words, there can be a direct pay-back to the business from regular burner tune-ups.

Lowering mix temperature: A Technical Working Group of FHWA is currently investigating a number of newer formulation technologies, to understand the practicality and performance of lowering mix temperatures. Substantial reductions in mix temperatures, on the order of 20 percent or more, appear to be plausible. Lowering mix temperatures, by this amount, may reduce fuel consumption, as less heat is needed to produce the mix.

Other maintenance and operational best practices: Additional practices can be employed throughout the plant to help optimize production and operations. For example, regular inspection of drum mixing flites and other measures can be taken – all in the effort to make a plant operate more efficiently, thereby using less fuel.

Plant Type	**Emission Rate (lbs NOx/ton asphalt produced)**	**% Reduction**
Area/Point Sources (State emissions option)		
Batch Mix Plant – Natural Gas	0.02	35
Batch Mix Plant – Distillate/Waste Oil	0.09	35
Drum Mix Plant – Natural Gas	0.02	35
Drum Mix Plant – Distillate/Waste Oil	0.04	35
Area/Point Sources (State technology option)		
Batch/Drum Mix Plant – Natural Gas	Low-NOx Burner Technology and/or Best Management Practices	
Batch/Drum Mix Plant – Distillate/Waste Oil	Low-NOx Burner Technology and/or Best Management Practices	

CONTROL MEASURE SUMMARY FOR
Auto Refinish Coatings – Area Source

Control Measure Summary: Limiting the concentration of solvents in Auto Refinishing Coatings in order to reduce VOC emissions. Encourage the use of high transfer-efficiency painting methods (e.g., high volume low pressure spray guns), and controls on emissions from equipment (e.g., spray gun) cleaning, housekeeping activities (e.g., use of sealed containers for clean-up rags), and operator training.	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measure: Federal Auto Body Refinishing rules 40CFR Part 59 Subpart B *Emission Reductions*: 37% reduction from Part 59 (from Pechan OTC Model Rule Report) due to Part 59 VOC content limits *Control Cost*: $118 per ton for Part 59 rules *Timing of Implementation*: Part 59 compliance required by January 1999 *Implementation Area*: Part 59 – Nationwide;	**VOC** Uncontrolled: 2002 Reduction: 2002 Base:	 50,759 -18,781 31,978
OTB Control Measure: OTC Model Rule for Mobile Equipment Repair and Refinishing *Emission Reductions*: 38% reduction from 2002 Levels in those States that adopted OTC model Rule (per Pechan March 31, 2001 OTC Model Rule Report) *Control Cost*: $1,534 per ton of VOC *Timing of Implementation*: Assuming 2007 effective date of rule, emission reductions are achieved 01/01/09. *Implementation Area*: All counties in the OTR.	**VOC:** 2009 Reduction: 2009 Remaining:	 -10,468 21,510
Candidate measure: CARB October 20, 2005 SCM Staff Report – Lowers VOC limits, combines coatings categories, simplifies recording. *Emission Reductions*: CARB estimates a 65% reduction in VOC emissions from a 2002 baseline; the OTC model rule is very similar to the CARB 2002 baseline, so a similar reduction would be expected in the OTR. *Control Cost*: $2,860 per ton *Timing of Implementation*: Assuming 2007 effective date of rule, emission reductions are achieved in beginning 01/01/09. *Implementation Area*: All counties in the OTR.	**VOC:** 2009 Reduction: 2009 Remaining:	 -13,981 7,529

REFERENCES:

2002 Existing Measure (Federal Part 59 Rules):

E.H. Pechan & Associates, Inc., *AirControlNET Version 4.1: Documentation Report*, September 2005. Pages III-1364 shows the Federal Part 59 rule at a cost of $118 per ton (1990$) and a reduction of 37 percent from uncontrolled levels.

2009 On-the-Books Measure (OTC Model Rule):

E.H. Pechan & Associates, Inc., *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules*, March 31, 2001. Table II-6 shows 37% reduction for Federal Part 59 rule and 38% (OTC Model Rule beyond Federal rule). Page 17 presents cost of $1,534 per ton based on estimates used for PA Rule 129.75.

Candidate Measure (CARB 2005 Suggested Control Measure):

California Air Resources Board. *Staff Report for the Proposed Suggested Control Measure for Automotive Coatings.* October 2005. Table V-3 shows the estimated 65% reduction from 2002 baseline emissions for new automotive coatings limits. A similar reduction is expected for the OTR. Page VII-6 indicates that the cost-effectiveness of the SCM is estimated to be $1.43 per pound of VOC reduced ($2,860 per ton). The CARB SCM coating categories and VOC limits are:

Table ES-1 - Proposed Coating Categories and VOC Limits

Coating Category	VOC regulatory limit as applied Effective January 1, 2009	
	grams/liter	(pounds per gallon*)
Adhesion Promoter	540	4.5
Clear Coating	250	2.1
Color Coating	420	3.5
Multi-Color Coating	680	5.7
Pretreatment Coating	660	5.5
Primer	250	2.1
Single-Stage Coating	340	2.8
Temporary Protective Coating	60	0.5
Truck Bed Liner Coating	310	2.6
Underbody Coating	430	(3.6
Uniform Finish Coating	540	4.5
Any other coating type	250	2.1

The OTC Model Rule coating categories and VOC limits are:

OTC Model Rule *Coating Type*	*Grams per Liter*	*Limit Pounds per gallon*
Automotive pretreatment primer	780	6.5
Automotive primer-surfacer	575	4.8
Automotive primer-sealer	550	4.6
Automotive topcoat:		
single stage-topcoat	600	5.0
2 stage basecoat/clearcoat	600	5.0
3 or 4-stage basecoat/clearcoat	625	5.2
Automotive Multi-colored Topcoat	680	5.7
Automotive specialty	840	7.0

CONTROL MEASURE SUMMARY FOR
Cement Kilns

Control Measure Summary:	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measure: NSR; PSD; State RACT.	**NOx** 2002 Base:	 31,960
On the Books: NOx SIP Call *Measure ID:* NOx SIP Call *Emission Reductions*: The SIP Call requirements were estimated by EPA to result in NOx reductions of approximately 25 percent from the cement industry. *Control Cost*: $2,000 per ton *Timing of Implementation*: 2004 *Implementation Area*: OTR	**NOx** 2009 Base: 2009 Reduction: 2009 Remaining:	 31,960 -7,990 23,970
Candidate measure: Use of proven control technologies (such as SNCR) or other methods to meet recommended emission limits. *Emission Reductions*: source specific, varies from 0-63% based upon 2002 base rates. *Control Cost*: less than 2,500 per ton *Timing of Implementation*: 01/01/09 *Implementation Area:* OTR	**NOx** 2009 Base: Candidate Reduction: 2009 Remaining:	 31,960 -13,231 18,279

Policy Recommendation: It is recommended that a program be developed reduces NOx emissions from existing cement kilns by requiring existing kilns to meet a NOx emission rate of

3.88 lbs/ton clinker for wet kiln

3.44 lbs/ton clinker for long dry kiln

2.36 lbs/ton clinker for pre-heater kiln

1.52 lbs/ton clinker for pre-calciner kiln.

Trading between facilities would not be permitted, but averaging at a facility would be permissible.

Brief Rationale for Recommended Strategy: This limit is consistent with the emission reduction capabilities of SNCR. There are 18 full-scale SNCR installations in Europe.

REFERENCES

EC/R Incorporated. *NOx Control Technologies for the Cement Industry* – Final Report. September 19, 2000. This report for EPA shows data for two SNCR technologies, biosolids injection and NOXOUT®. These technologies showed average emission reductions of 50 and 40 percent, respectively. For biosolids injection, "Cost effectiveness for this kiln is based on the annualized costs of ($320,000/year), the emission reduction achieved at that facility (emissions decreased from 2.4 lb/ton of clinker to 1.2 lb/ton of clinker), a kiln capacity of 215 tons/hr, and an annual operation of 8,000 hr/yr. Cost effectiveness is a credit of ($310/ton) for installing biosolids injection on this kiln" due to tipping fee for using biosolids (dewatered sewage sludge) For NOXOUT®, "40 percent NOX reduction based on the available test data. Cost effectiveness for the two kilns, using urea as the reagent, is based on an uncontrolled emission rate of 3.8 lb NOX/ton of clinker, kiln capacities of 92 and 130 tons/hr respectively, annual operation of 8,000 hr/yr, and a NOX control efficiency of 40%. Cost effectiveness is $1,000/ton for the smaller kiln and $2,500/ton for the larger kiln."

European Commission. *Integrated Pollution Prevention and Control (IPPC) Reference Document on Best Available Techniques in the Cement and Lime Manufacturing Industries*. December 2001. These report indicates that there are 18 full-scale SNCR installation in Europe. Most SNCR installations are designed and/or operated for NOx reduction rates of 10-50% which is sufficient to comply with current legislation in some countries. Two Swedish plants installed SNCR in 1996/97 and have achieved a reduction of 80-85% at both kilns.

Emission Rates:

Table 4-5 of the EPA's *NOx Control Technologies for the Cement Industry, September 19, 2000* provides the following uncontrolled emission rates for the four types of cement kilns:

Kiln Type	Heat Input Requirement (mmBtu/ton of clinker)	Average NOx Uncontrolled Emission Rate (lb/ton of clinker)	Range of NOx Uncontrolled Emission Rate (lb/ton of clinker)
Wet	6.0	9.7	3.6 to 19.5
Long Dry	4.5	8.6	6.1 to 10.5
Preheater	3.8	5.9	2.5 to 11.7
Precalciner	3.8	3.8	0.9 to 7.0

The OTC Control Measure Summary Sheet calls for a 60% reduction from uncontrolled emissions. Using this percent reduction figure and the uncontrolled emission rates above, the following controlled emission rates were calculated:

Kiln Type	Percent Reduction from Uncontrolled	Low-End NOx Controlled Emission Rate (lb/ton of clinker)	Average NOx Controlled Emission Rate (lb/ton of clinker)	High-End NOx Controlled Emission Rate (lb/ton of clinker)
Wet	60	1.44	3.88	7.80
Long Dry	60	2.44	3.44	4.20
Preheater	60	1.00	2.36	4.68
Precalciner	60	0.36	1.52	2.80

The State/workgroup lead recommended the use of the the average NOx Controlled emission rates in the above table (expressed as lb/ton of clinker).

CONTROL MEASURE SUMMARY FOR
Chip Reflash

Control Measure Summary: Upgrade the version of software in engine electronic control module (ECM) aka "Chip Reflash". Software reprograms the vehicle's computer and reduces off-cycle NOx emissions. The installation process typically takes between one-half to one hour.	**Emissions Reductions (tons/day)**	
2002 existing measure: No existing measure in the OTR other than the EPA program resulting from the consent decrees on 7 heavy duty engine manufacturers. The results of the EPA program thus far are significantly lower than the level originally projected by the Agency (less than 10% implementation). CARB implemented a voluntary program that did not achieve its expected results, so the Board's backstop mandatory program was triggered. The CARB mandatory program is facing two separate legal challenges, alleging that CARB has breached its settlement agreement and alleging that CARB is illegally establishing different emissions standards on "new engines".		
Candidate measure: *Measure ID:* Model rule for Mandatory Chip Reflash Program in the OTR *Emission Reductions*: NOx reduction (TPD) from in-state registered vehicles *Control Cost*: Moderate – manufacturers must provide the rebuild kits free to any truck operator who requests it. The cost associated with the reflash has been estimated at $20-$30 per vehicle, which is borne by the engine manufacturer. There may be costs associated with potential downtime to the trucking firms, and record-keeping requirements on the dealer performing the reflash and the vehicle owner. For the MRPO, ENVIRON estimated cost effectiveness to be "$1,800 to $2,500 (depending on vehicle size) due to incremental "fuel penalty" of 2% increase in fuel consumption). However, in reality, no fuel penalty has been documented on vehicles that have already been reflashed. *Timing of Implementation*: The kits are currently available, so once the states adopt the rule, retrofits can begin according to the schedule. *Implementation Area*: All OTR and MRPO states (NOx reductions 109 TPD)	LADCO Northeast states Mid-Atlantic States Total OTR	46 TPD 41 TPD 22 TPD 63 TPD
Policy Recommendation of State/Workgroup Lead: Expand scope of the model rule for the Northeast states to the entire OTR and MWRPO		
Brief Rationale for Recommended Strategy: While the EPA program provides a good platform for chip reflash retrofits, the federal program is not even achieving 10% of its estimated emission reductions. The kits are available and must be given to the truckers for free; yet without additional motivation, it is unlikely that the implementation rate will improve due to fuel consumption and/or performance perceptions and the ability to extend the time to next major rebuild/overhaul. The states in the OTR do not face the prospect of breach-of-settlement allegations that CARB did in adopting a mandatory program, since they did not participate in the negotiation of the CD settlements. And there are significant emission reductions that can be achieved through a mandatory program, even though installing the kits will not result in the engines operating at the same emission levels required for the EPA engine certification test. Nevertheless, this is a relatively simple fix for a problem that our states will face if they rely on the federal program alone to produce emission reductions from these sources.		

CONTROL MEASURE SUMMARY FOR
Consumer Products

Control Measure Summary: Consumer Products This control measure establishes limits on the VOC content of consumer products. It is based on the California Air Resources Board (CARB) consumer products rules, with some region specific modifications. It regulates categories such as hairspray, air fresheners, glass and general purpose cleaners, adhesives, anti-perspirants and deodorants, insecticides and automotive aftermarket products.	**VOC Emissions in Ozone Transport Region**	
2002 Existing Measure: The Federal Consumer Products Rule Part 59 *Emission Reductions*: 20 % reduction of the categories being regulated or 9.95 % reduction of the entire consumer products inventory (about 40 % of products were included in rule). *Control Cost*: $237 per ton of VOC reduced *Timing of Implementation*: 12/98 *Implementation Area*: Nationwide	**2002 Annual** Uncontrolled: Reduction: Remaining: **2002 Summer** Uncontrolled: Reduction: Remaining:	 258,537 tpy 25,724 tpy 232,813 tpy 713.9 tpd 71.0 tpd 642.9 tpd
2009 On-the-Books Measure: Adopt the 2001 OTC Model Rule for Consumer Products in all OTC states (this model rule was based on a series of five CARB consumer products rules). *Emission Reductions*: 14.2 % beyond federal rule or a total of 21 % from the uncontrolled state. *Control Cost*: $800 per ton VOC reduced *Timing of Implementation*: 1/1/05 effective date of VOC limits (though some states were later and some have yet to adopt) *Implementation Area*: OTR	**2009 Annual** Reduction: Remaining: **2009 Summer** Reduction: Remaining:	 22,916 tpy 209,897 tpy 63.4 tpd 579.5 tpd
Candidate Measure #1: Adopt the CARB amendments to their consumer products rule, adopted 7/20/05, with the exception of the 12/31/09 shaving gel, and 12/31/08 anti-static aerosol VOC limits. This rule sets new VOC limits for 11 categories, revises the existing VOC limit for 1 category and includes some additional requirements. See more detailed limits below. *Emission Reductions*: CARB estimates their rule will achieve a 6.3 ton/day reduction of VOC in California, which is equivalent to about 11.3 tons per day in the OTR or a 2% reduction beyond the on-the-books measure. *Control Cost*: $4,800 per ton of VOC reduced *Timing of Implementation*: 01/01/09 *Implementation Area* OTR	**2009 Annual** Reduction: Remaining: **2009 Summer** Reduction: Remaining:	 7,453 tpy 202,444 tpy 20.6 tpd 558.9 tpd
Candidate Measure #2: Follow and adopt as appropriate CARB 's next round of amendments to their consumer products rule, to be developed and proposed by approximately late 2006/early 2007 with limits effective in 2010. *Emission Reductions*: The CONS-2 amendments are estimated by CARB to achieve VOC reductions of about 20-35 tpd in California by 2010 which is equivalent to about 36-63 tpd in the OTR (The mid-point of this range was used in the calculations, 49.5 tpd). *Control Cost*: Unknown at present; *Timing of Implementation*: 01/01/10 *Implementation Area OTR*	***VOC not modeled:*** **2009 Annual** Reduction: Remaining: **2009 Summer** Reduction: Remaining:	Not Available

Summary of Candidate Measure #1: The proposed VOC limits based on CARB's 7/20/05 amendments are as follows:

Summary of Candidate Measure #1: The proposed VOC limits based on CARB's 7/20/05 amendments are as follows:

PRODUCT CATEGORY	CARB VOC CONTENT LIMIT %	OTC PROPOSED CONTENT LIMIT%	CARB EFFECTIVE DATE	OTC PROPOSED EFFECTIVE DATE
Adhesive, Contact – General purpose *	55	55	12/31/2006	1/1/2009
Special Purpose*	80	80	12/31/2006	1/1/2009
Adhesive Remover - Floor or Wall covering	5	5	12/31/2006	1/1/2009
Gasket or Thread Locking	50	50	12/31/2006	1/1/2009
General Purpose	20	20	12/31/2006	1/1/2009
Specialty	70	70	12/31/2006	1/1/2009
Anti-static - non-aerosol	11	11	12/31/2006	1/1/2009
Electrical Cleaner	45	45	12/31/2006	1/1/2009
Electronic Cleaner	75	75	12/31/2006	1/1/2009
Fabric refresher – aerosol	15	15	12/31/2006	1/1/2009
non-aerosol	6	6	12/31/2006	1/1/2009
Footware or Leather Care - aerosol	75	75	12/31/2006	1/1/2009
Solid	55	55	12/31/2006	1/1/2009
all other forms	15	15	12/31/2006	1/1/2009
Graffiti Remover –aerosol	50	50	12/31/2006	1/1/2009
non-aerosol	30	30	12/31/2006	1/1/2009
Hair Styling Products – aerosol & pump sprays	6	6	12/31/2006	1/1/2009
all other forms	2	2	12/31/2006	1/1/2009
Shaving Gel	7	7	12/31/2006	1/1/2009
Toilet/Urinal Care – aerosol	10	10	12/31/2006	1/1/2009
non-aerosol	3	3	12/31/2006	1/1/2009
Wood Cleaner – aerosol	17	17	12/31/2006	1/1/2009
non-aerosol	4	4	12/31/2006	1/1/2009
* Change to an existing category				

References:

2002 Existing Measure (Federal Part 59 Rules):

E.H. Pechan & Associates, Inc., *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules*, March 31, 2001.

E.H. Pechan & Associates, Inc., *AirControlNET Version 4.1: Documentation Report*, September 2005. Pages III-1377 shows the Federal Part 59 rule at a cost of $237 per ton (1990$).

2009 On-the-Books Measure (OTC Model Rule):

E.H. Pechan & Associates, Inc., *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules*, March 31, 2001. Table II-6 shows 14.2% reduction (OTC Model Rule beyond Federal rule). Page 8 presents cost of $800 per ton based on CARB's Sept. 1999 Initial Statement of Reasons for Proposed Amendments to the California Consumer Products Regulation.

Candidate Measure #1 (CARB 2005 and 2006/2007 Amendments):

California Air Resources Board. *Initial Statement of Reasons for Proposed Amendments, Volume 1: Executive Summary*. June 24, 2004. Table 2 of the Executive Summary shows that the CONS-1 amendments will achieve reductions of about 6.8 tons per day state wide (6.3 tons per day without the 12/31/09 Shaving gel, and 12/31/08 anti-static aerosol regs.. Page 21 states the cost of CONS-1 will be $2.40 per pound ($4,800 per ton). Since OTC's model rule is very similar to the CARB's rule, and emissions are proportional to population, CARB's 6.3 ton per day reduction was prorated to the OTC region based on the ratio of OTR 2002 population (63 million) to CA 2002 population (35 million) yielding approximately 11.3 tons per day in the OTR (4,139 tons per year).

Page 4 states that the estimated reductions from CONS-2 (not yet proposed) will achieve 20-35 tons per day statewide by 2010. Since OTC's model rule is very similar to the CARB's rule, and emissions are proportional to population, the mid-point of CARB's 20-35 ton per day reduction (i.e., 27.5 tons per day) was prorated to the OTC region based on the ratio of OTR 2002 population (63 million) to CA 2002 population (35 million) yielding approximately 49.5 tons per day in the OTR (18,068 tons per year).

CONTROL MEASURE SUMMARY FOR
Glass/Fiberglass Furnaces

Control Measure Summary:	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measure: NSR; PSD; State RACT.	**NOx** 2002 Base:	 18,840
Candidate measure: Use of oxyfiring or other methods to meet recommended emission limits. *Emission Reductions*: source specific, varies from 0-85% depending upon 2002 base rates. *Control Cost*: $ 924 to 2,232 per ton *Timing of Implementation*: 01/01/09 *Implementation Area*: OTR	**NOx** 2009 projected: Reduction at full implementation: Remaining after full implementation:	 21,893 -13,474 8,419

Control Measure Recommendation: Develop a control strategy that requires implementation of an "oxyfiring" program for each furnace at the next furnace rebuild. Alternatively, states may allow manufacturers to propose compliance methods based on California's San Joaquin Valley Rule 4354 which allows a mix of control options to meet specified emission limits. Prior to furnace rebuild, owners/operators may be allowed, by the state, to meet emissions limits by purchasing a state specified number of NOx allowances. Continuous emission monitoring systems would be used to determine emissions. This Measure should be modeled at 85% reduction.

Brief Rationale for Recommended Strategy: Oxyfiring is best implemented, and provides the most effective NOx emission reductions, with a complete furnace rebuild. This strategy not only reduces NOx emissions by as much as 85 percent, but reduces energy consumption, increases production rates by 10-15%, and improves glass quality by reducing defects. Oxyfiring is demonstrated technology and has penetrated into all segments of the glass industry.

REFERENCES

European Commission, Integrated Pollution Prevention and Control (IPPC) Bureau. *Reference Document on Best Available Techniques in the Glass Manufacturing Industry*. December 2001. This document reports 75 to 85% reduction in NOx and emission rates of 1.25 to 4.1 lbs NOx/ton. The cost effectiveness was determined to be $1,254 to $2,542 depending on the size of the furnace.

U.S. EPA *Alternative Control Techniques Document – NOx Emissions from Glass Manufacturing*, EPA-453/R-94-037, June 1994. Oxyfiring reduction of 85%, cost-effectiveness of $2,150 to $5,300.

Emission rates based on San Joaquin Valley Rule 4354

Type of Furnace	Block 24-hour Average	Rolling 30-day average
Container Glass	4.0 pounds of NOx per ton of glass pulled	4.0 pounds of NOx per ton of glass pulled
Fiberglass	4.0 pounds of NOx per ton of glass pulled	4.0 pounds of NOx per ton of glass pulled
Flat Glass	9.2 pounds of NOx per ton of glass pulled	7.0 pounds of NOx per ton of glass pulled

CONTROL MEASURE SUMMARY FOR

Industrial, Commercial, Institutional (ICI) Boilers – Jointly processed with MANE-VU

Addendum to OTC Resolution 06-02 Guidelines for ICI Boilers

ICI Boiler Size (mmBtu/hr)	Control Strategy/ Compliance Option	NOx Control Measure
5-25		Annual Boiler Tune-Up
25-100	Option #1	Natural Gas: 0.05 lb NOx/mmBtu #2 Fuel Oil: 0.08 lb NOx/mmBtu #4 or #6 Fuel Oil: 0.20 lb NOx/mmBtu Coal: 0.30 lb NOx/mmBtu**
	Option #2	50% reduction in NOx emissions from uncontrolled baseline
	Option #3	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
100-250	Option #1	Natural Gas: 0.10 lb NOx/mmBtu #2 Fuel Oil: 0.20 lb NOx/mmBtu #4 or #6 Fuel Oil: 0.20 lb NOx/mmBtu Coal: Wall-fired 0.14 lb NOx/mm Btu Tangential 0.12 lb NOx/mm Btu Stoker 0.22 lb NOx/mm Btu Fluidized Bed 0.08 lb NOx/mm Btu
	Option #2	LNB/SNCR, LNB/FGR, SCR, or some combination of these controls in conjunction with Low NOx Burner technology
	Option #3	60% reduction in NOx emissions from uncontrolled baseline
	Option #4	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
>250	Option #1	Purchase current year CAIR NOx allowances equal to reducted needed to acheiv the required emission rates
	Option #2	Phase I – 2009 Emission rate equal to EGUs of similar size Phase II – 2012 Emission rate equal to EGUs of similar size

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Fabric Printing

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Fabric Printing, Coating and Dyeing - 2002 existing measures: NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties EPA CTG RACT limit: 2.9 lbs VOC/gal coating [0.35 kg/liter] (minus H_2O & exempt solvents) Applicability: Sources 3 lbs/hour, 15 lb/day or 10 tons/year uncontrolled emissions OTC state RACT limits: MD, NJ, NH = 2.9 lbs/gal coating MA = 4.8 lbs VOC/gal of solids applied (equivalent to 2.9 lbs/gal coating)	**VOC** Actual 2002:	(not available)
Fabric Printing, Coating and Dyeing - 2009 On-the-Books measures: MACT Std. - Subpart OOOO (68 FR 32172, 5/29/03) EPA MACT limits <u>existing sources</u>: Coating and printing operations - 0.12 kg HAP/liter solids Dyeing and finishing operations - 0.016 kg HAP/liter solids Dyeing operations only - 0.016 kg HAP/liter solids Finishing operations only - 0.0003 kg HAP/liter solids *Emission Reductions*: *Nationwide – 60% HAP reduction from 1997 baseline* *MACT Organic HAP control efficiency option: 97% for existing sources* *MACT Estimated VOC reduction 60% (Pechan Table)* *Control Cost*: *Nationwide –$14.5 million/yr for 4,100 tons/yr = $3,537/ton* *Timing of Implementation*: Compliance Date (existing) May 29, 2006 *Implementation Area*: Nationwide	**VOC** Actual 2002: OTB 2009: Reduction from OTB:	(not available)
Fabric Printing, Coating and Dyeing Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID: Permanent Total Enclosure* *Emission Reductions*: *Estimated VOC reduction 95-97% (Air Control Net 3.0 Table)* *Control Cost*: *$1,459-$1,565/ton* *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*: (1) 8-hr ozone nonattainment areas, (2) 8-hr ozone nonattainment areas plus adjacent counties, or (3) all counties	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Large Appliances

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Large Appliances - 2002 existing measures: NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties; EPA CTG RACT limit: 2.8 lbs VOC/gal coating [0.34 kg/liter] (minus H_2O & exempt solvents)	**VOC** Actual 2002:	(not available)
Large Appliances - 2009 On-the-Books measures: MACT Std. – Subpart NNNN (67 FR 48254, 7/23/02) EPA MACT limits <u>existing sources</u>: 0.13 kg HAP/liter solids *Emission Reductions*: *Nationwide – 45% HAP reduction from 1995 baseline* *MACT Organic HAP control efficiency option: xx% for existing sources* *Estimated VOC reduction: 0% (Pechan Table) - 60%??* *Control Cost*: *Nationwide – $1.63 million/yr for 1,190 tons/yr = $1,370/ton* *Timing of Implementation*: Compliance Date (existing) July 23, 2005 *Implementation Area*: Nationwide	**VOC** Actual 2002: OTB 2009: Reduction from OTB:	(not available)
Large Appliances Candidate measure 1: Adopt More Stringent RACT regulations (e.g., ICAC letter 2/16/2001); lower applicability thresholds, extend geographic coverage *Measure ID:* *ICAC Option 1 - Nationwide – 80% HAP reduction from 1995 baseline (Additional 250 tons/per HAP)* *ICAC Option 2 - Nationwide – 98% HAP reduction from 1995 baseline (Additional 1,190 tons/per HAP)* *Emission Reductions*: *Control Cost*: *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*: (1) 8-hr ozone nonattainment areas, (2) 8-hr ozone nonattainment areas plus adjacent counties, or (3) all counties	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation of: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Metal Cans

<table>
<tr><th>Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating</th><th colspan="2">Emissions (tons/year) in Ozone Transport Region</th></tr>
<tr><td>Metal Can - 2002 existing measures:
NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties;
EPA CTG RACT limit: <u>lbs VOC/gal coating (minus H_2O&exempt solvents)</u>
Sheet basecoat & over varnish 2.8 [0.34 kg/l]
2 and 3-piece can interior & 2-piece can 4.2 [0.50 kg/l]
3-piece can side-seam spray 5.5 [0.66 kg/l]
End sealing compound 3.7 [0.44 kg/l]
Applicability: 10 tons/year uncontrolled emissions
OTC state RACT limits: MD, NJ, NH same limits as CTG;
MA (4.5, 9.8, 21.8, 7.7 lbs/gallon of solids applied)</td><td>VOC
Actual 2002:</td><td>(not available)</td></tr>
<tr><td>Metal Can - 2009 On-the-Books measures:
MACT Std. – Subpart KKKK (68 FR 64432 , 11/13/03)
EPA MACT limits <u>existing sources</u>:
Sheet coating 0.03 kg HAP/l solids
Body Coating
2-piece beverage cans 0.07 kg HAP/l solids
2-piece food cans 0.06 kg HAP/l solids
1-piece aerosol cans 0.12 kg HAP/l solids
3-piece can assembly
Inside Spray 0.29 kg HAP/l solids
Aseptic side seam strips on food cans 1.94 kg HAP/l solids
Nonaseptic side seam strips on food cans 0.79 kg HAP/l solids
Side seam strips on non-food cans 1.18 kg HAP/l solids
Side seam strips on aerosol cans 1.46 kg HAP/l solids
End sealing compound
Aseptic end seal compounds 1.94 kg HAP/l solids
Nonaseptic end seal compounds 0.00 kg HAP/l solids
Repair spray coatings 2.06 kg HAP/l solids
Emission Reductions:
Nationwide – 70% HAP reduction from 1997 baseline
MACT Organic HAP control efficiency option: xx% for existing sources
Estimated VOC reduction 70% (Pechan Table)
Control Cost:
Nationwide – $58.7 million/yr for 6,800 tons/yr = $8,632/ton
Timing of Implementation: Compliance Date (existing) Nov. 13, 2006

Implementation Area: Nationwide</td><td>VOC
Actual 2002:
OTB 2009:
Reduction from OTB:</td><td>(not available)</td></tr>
</table>

Metal Can (Continued) Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID: Permanent Total Enclosure* *Emission Reductions*: *Estimated VOC reduction 95% (Air Control Net 3.0 Table)* *Control Cost*: *$7,947/ton* *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*: (1) 8-hr ozone nonattainment areas, (2) 8-hr ozone nonattainment areas plus adjacent counties, or (3) all counties.	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Metal Coils

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Metal Coil - 2002 existing measures: NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties; EPA CTG RACT limit: 2.6 lbs VOC/gal coating [0.31 kg/liter] (minus H_2O & exempt solvents) Applicability: Sources 10 tons/year uncontrolled emissions OTC state RACT limits: NH - same limits as CTG	**VOC** Actual 2002:	(not available)
Metal Coil – 2009 On-the-Books measures: MACT Std. – Subpart SSSS (67 FR 39794 , 6/10/02) EPA MACT limits <u>existing sources</u>: 0.046 kg HAP/liter solids *Emission Reductions*: *Nationwide – 53% HAP reduction from current levels?* *MACT Organic HAP control efficiency option: xx% for existing sources* *Estimated VOC reduction 53% (Pechan Table)* *Control Cost*: *Nationwide – $7.6 million/yr for 1,316 tons/yr = $5,775/ton* *Timing of Implementation*: Compliance Date (existing) June 10, 2005 *Implementation Area*: Nationwide	**VOC** Actual 2002: OTB 2009: Reduction from OTB:	(not available)
Metal Coil Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID:* *Emission Reductions*: *Control Cost*: *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*: (1) 8-hr ozone nonattainment areas, (2) 8-hr ozone nonattainment areas plus adjacent counties, or (3) all counties.	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Metal Furniture

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Metal Furniture - 2002 existing measures: NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties EPA CTG RACT limit: 3.0 lbs VOC/gal coating [0.36 kg/liter] (minus H_2O & exempt solvents) Applicability: Sources 10 tons/year uncontrolled emissions OTC state RACT limits: NH - same limits as CTG	**VOC** Actual 2002:	(not available)
Metal Furniture – 2009 On-the-Books measures: MACT Std. – Subpart RRRR (67 FR 28606 , 5/23/03) EPA MACT limits <u>existing sources</u>: 0.10 kg HAP/liter solids *Emission Reductions*: *Nationwide – 73% HAP reduction from 1997/1998 baseline* *MACT Organic HAP control efficiency option: xx% for existing sources* *Estimated VOC reduction 0% (Pechan Table)* *Control Cost*: *Nationwide – $14.8 million/yr for 16,300 tons/yr = $908/ton* *Timing of Implementation*: Compliance Date (existing) May 23, 2006 *Implementation Area*: Nationwide	**VOC** Actual 2002: OTB 2009: Reduction from OTB:	(not available)
Metal Furniture Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID: Permanent Total Enclosure* *Emission Reductions*: *Estimated VOC reduction 95%* *(Air Control Net 3.0 Table)* *Control Cost*: *$20,115/ton* *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*: (1) 8-hr ozone nonattainment areas, (2) 8-hr ozone nonattainment areas plus adjacent counties, or (3) all counties.	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Miscellaneous Metal Parts

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Miscellaneous Metal Parts - 2002 existing measures: NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties EPA CTG RACT limit: lbs VOC/gal coating (minus H_2O&exempt solvents) Clear or transparent top coat 4.3 [0.52 kg/l] Air dries Coatings 3.5 [0.42 kg/l] Coating used in extreme environmental conditions 3.5 [0.42 kg/l] All other coatings 3.0 [0.35 kg/l] Applicability: 10 tons/year uncontrolled emissions OTC state RACT limits: NH same limits as CTG	**VOC** Actual 2002:	(not available)
Miscellaneous Metal Parts – 2009 On-the Books measures: MACT Std. – Subpart MMMM (69 FR 130 , 1/2/04) EPA MACT limits existing sources: General use Coating 0.31 kg HAP/l solids High Performance Coating 3.30 kg HAP/l solids Rubber-to-Metal Coating 4.50 kg HAP/l solids Extreme Performance Fluoropolymer 1.5 kg HAP/l solids *Emission Reductions*: *Nationwide – 48% HAP reduction from 1997 baseline* *MACT Organic HAP control efficiency option: xx% for existing sources* *Estimated VOC reduction 0% (Pechan Table)* *Control Cost*: *Nationwide – $57.3 million/yr for 26,000 tons/yr = $2204/ton* *Timing of Implementation*: Compliance Date (existing) Jan. 2, 2007 *Implementation Area*: Nationwide	**VOC** Actual 2002: OTB 2009: Reduction from OTB:	(not available)
Miscellaneous Metal Parts Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID:* *Emission Reductions*: *Control Cost*: *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*:	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Paper and Other Web

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Paper & Other Web - 2002 existing measures: NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties EPA CTG RACT limit: 2.9 lbs VOC/gal coating [0.35 kg/liter] (minus H_2O & exempt solvents) Applicability: Sources 3 lbs/hour, 15 lb/day or 10 tons/year uncontrolled emissions OTC state RACT limits: MD, NJ, NH = 2.9 lbs/gal coating MA = 4.8 lbs VOC/gal of solids (equivalent to 2.9 lbs/gal coating)	**VOC** Actual 2002:	
Paper & Other Web – 2009 On-the-Books measures: MACT Std. – Subpart JJJJ (67 FR 72330 , 12/4/02) EPA MACT limits <u>existing sources</u>: 0.2 kg organic HAP/kg coating solids *Emission Reductions*: *Nationwide – 80% HAP reduction from current levels??* *MACT Organic HAP control efficiency option: 95% for existing sources* *Estimated VOC reduction 80% (Pechan Table)* *Control Cost*: *Nationwide – $64 million/yr for 34,500 tons/yr = $1,855/ton* *Timing of Implementation*: Compliance Date (existing) Dec. 5, 2005 *Implementation Area*: Nationwide	**VOC** Actual 2002: OTB 2009: Reduction from OTB:	(not available)
Paper & Other Web Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID:* *Emission Reductions*: *Control Cost*: *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*:	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Plastic Parts

<table>
<tr><td>Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating</td><td colspan="2">Emissions (tons/year) in Ozone Transport Region</td></tr>
<tr><td>Plastic Parts - 2002 existing measures:
NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties
EPA CTG RACT limit: <u>lbs VOC/gal coating (minus H_2O&exempt solvents)</u>
<table>
<tr><td></td><td><u>Auto Interior</u></td><td><u>Auto Exterior</u></td></tr>
<tr><td>High Bake Prime</td><td>3.8 [0.46 kg/l]</td><td>--</td></tr>
<tr><td>High Bake Prime - Flexible</td><td>--</td><td>5.0 [0.60 kg/l]</td></tr>
<tr><td>High Bake Prime – Nonflexible</td><td>--</td><td>4.5 [0.54 kg/l]</td></tr>
<tr><td>High Bake Color</td><td>4.1 [0.49 kg/l]</td><td>4.6 [0.55 kg/l]</td></tr>
<tr><td>Low Bake Prime</td><td>3.5 [0.42 kg/l]</td><td>5.5 [0.66 kg/l]</td></tr>
<tr><td>Low Bake Color</td><td>3.5 [0.42 kg/l]</td><td>5.6 red or black</td></tr>
<tr><td>Low Bake Color</td><td>--</td><td>4.5 all others</td></tr>
</table>
Applicability: NH - 50 tons/year uncontrolled emissions
OTC state RACT limits: NH - same limits as CTG</td><td>VOC
Actual 2002:</td><td>(not available)</td></tr>
<tr><td>Plastic Parts - 2009 On-the Books measures:
MACT Std. – Subpart PPPP (69 FR 20968 , 4/19/04)
EPA MACT limits <u>existing sources</u>:
General Use Coating - 0.16 kg HAP/kg <u>coating solids</u>
Automotive Lamp Coating - 0.45 kg HAP/kg <u>coating solids</u>
Thermoplastic Olefins - 0.26 kg HAP/kg <u>coating solids</u>
New Assembled On-Road Vehicles - 1.34 kg HAP/kg <u>coating solids</u>
Emission Reductions:
Nationwide – 80% HAP reduction from 1997 baseline
Estimated VOC reduction 0% (Pechan Table)
Control Cost:
Nationwide – $10.9 million/yr for 7,560 tons/yr = $1,442/ton
Timing of Implementation: Compliance Date (existing) April 19, 2007
Implementation Area: Nationwide</td><td>VOC
Actual 2002:
OTB 2009:
Reduction from OTB:</td><td>(not available)</td></tr>
<tr><td>Plastic Parts
Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage
Measure ID:
Emission Reductions:
Control Cost:
Timing of Implementation: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010
Implementation Area:</td><td>VOC
OTB 2009:
BOTW 2009:
Reduction from BOTW:</td><td>(not available)</td></tr>
<tr><td colspan="3">Policy Recommendation: Final recommendation not made as of June, 2006.</td></tr>
<tr><td colspan="3">Brief Rationale for Recommended Strategy: See additional discussion in briefing paper</td></tr>
</table>

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings Wood Building Products

<table>
<tr><td>Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating</td><td colspan="2">Emissions (tons/year) in Ozone Transport Region</td></tr>
<tr><td>Wood Building Products - 2002 existing measures:
NSPS; PSD/NSR; State RACT rules in 1-hour non-attainment counties
EPA CTG RACT limit: <u>lbs VOC/gal coating (minus H_2O&exempt solvents)</u></td><td>VOC
Actual 2002:</td><td>(not available)</td></tr>
<tr><td>Wood Building Products - 2009 On-the-Books measures:
MACT Std. – Subpart QQQQ (68 FR 31746 , 5/28/03)
EPA MACT limits <u>existing sources</u>:
- <u>kg HAP/liter of solids (lb HAP/gal solids)</u>
Doors, Windows & Misc. 0.231 (1.93)
Flooring 0.093 (0.78)
Interior Wall Paneling & Tileboard 0.183 (1.53)
Other Interior Panels 0.020 (0.17)
Exterior Siding & Primed Door Skins 0.007 (0.06)
Emission Reductions:
Nationwide – 63% HAP reduction from 1997 baseline
MACT Organic HAP control efficiency option: xx% for existing sources
Estimated VOC reduction 63% (Pechan Table)
Control Cost:
Nationwide –$22.5 million/yr for 4,900 tons/yr = $4,592/ton
Timing of Implementation: Compliance Date (existing) May 28, 2006

Implementation Area: Nationwide</td><td>VOC
Actual 2002:
OTB 2009:
Reduction from OTB:</td><td>(not available)</td></tr>
<tr><td>Wood Building Products
Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage
Measure ID:
Emission Reductions:
Control Cost:
Timing of Implementation: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010
Implementation Area:</td><td>VOC
OTB 2009:
BOTW 2009:
Reduction from BOTW:</td><td>(not available)</td></tr>
<tr><td colspan="3">Policy Recommendation of State/Workgroup Lead: Final recommendation not made as of June, 2006.</td></tr>
<tr><td colspan="3">Brief Rationale for Recommended Strategy: See additional discussion in briefing paper</td></tr>
</table>

CONTROL MEASURE SUMMARY FOR
Industrial Surface Coatings All Categories

Control Measure Summary: This category includes several source types: Fabric, Printing, Coating and Dyeing; Large Appliances; Metal Can coating, Metal Coil coating; Metal Furniture coating; Misc. Metal Parts coating; Paper and Other Web coating; Plastic Parts coating; & Wood Building Products coating	**Emissions (tons/year) in Ozone Transport Region**	
Industrial Surface Coatings Category Total - 2002 existing measures: NSPS: PSD/NSR; State RACT rules in 1-hour non-attainment counties	**Total VOC Point &Area** Actual 2002:	164,445
Industrial Surface Coatings Category Total - 2009 On-the-Books measures: MACT Stds. – Subpart OOOO (68 FR 32172, 5/29/03) Subpart NNNN (67 FR 48254, 7/23/02) Subpart KKKK (68 FR 64432 , 11/13/03) Subpart SSSS (67 FR 39794 , 6/10/02) Subpart RRRR (67 FR 28606 , 5/23/03) Subpart MMMM (69 FR 130 , 1/2/04) Subpart JJJJ (67 FR 72330 , 12/4/02) Subpart PPPP (69 FR 20968 , 4/19/04) Subpart QQQQ (68 FR 31746 , 5/28/03) *Emission Reductions*: *OTC Regional – x,xxx from 2002 baseline* *Control Cost*: *OTC Regional –$ xx.x million/yr for x,xxx tons/yr = $4,592/ton* *Timing of Implementation*: Compliance Dates (existing) 5/29/06; (existing) 7/23/05; (existing) 11/13/06; (existing) 6/10/05; (existing) 5/23/06; (existing) 1/2/07; (existing) 12/5/05; (existing) 4/19/07; (existing) 5/28/06 *Implementation Area*: Ozone Transport Region	**Total VOC** **Point & Area** Actual 2002: OTB 2009: Reduction from OTB: **MANE-VU 2002 Point*** **MANE-VU 2002 Area* (Ed Sabo's e-mail 01/06/06)**	164,445 <u>-175,983</u> **-11,448** **24,931** **139,512** **From 10/04/05 draft emission inventory**
Industrial Surface Coatings Category Total Candidate measure 1: Adopt More Stringent RACT regulations; lower applicability thresholds, extend geographic coverage *Measure ID:* *Emission Reductions*: *Control Cost*: *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*:	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	(not available)
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy: See additional discussion in briefing paper		

Background Information

Industrial surface coatings are used during the manufacture of a wide variety of products including: fabrics, paper, large appliances, metal cans, metal coils, metal furniture, metal parts, plastic parts, and wood building materials. Surface coating is the process by which paints, inks, varnishes, adhesives or other decorative or functional coatings are applied to a substrate (e.g., fabric, metal, wood, or plastic) to protect or decorate the substrate. Industrial surface coatings can be applied by brushing, rolling, spraying, dipping, flow coating, electro-coating, or combinations and variations of these methods. The process used to coat a particular product is dependent on the composition of the coating, the substrate to which the coating is applied and the intended end use of the final product. After a coating is applied, it is dried or cured either by conventional curing through the use of thermal drying ovens, or through the use of radiation. During conventional curing, heat from thermal ovens is used to evaporate the solvents and/or water trapped in the coating and release them into the atmosphere. Two types of radiation curing processes currently in use are ultraviolet (UV) curing and electron beam (EB) curing.

Emissions are released by the evaporation of the solvents used in the coatings and the evaporation of any additional solvents used to dilute (thin) the coating prior to application and for cleaning the coating equipment after use. Emissions from surface preparation and coating applications are a function of the VOC content of product used. Emissions are also a function of the type of coating process used (rolling, dipping, spraying, etc.) and the transfer efficiency of the process. Transfer efficiency is the percentage of the coating solids that are applied (e.g., sprayed) which actually adhere to the surface being coated. Emissions from cleaning vary with the type of cleanup and the housekeeping practices used.

Industrial surface coating is estimated to account for approximately 164,000 tons per year of VOC emissions in the Mid-Atlantic/Northeast Visibility Union (MANE-VU) region in 2002 from both point and area sources. It is important to consider two aspects regarding the accuracy of this emissions estimate when assessing this category for additional controls:

1) The MANE-VU VOC emissions inventory for the industrial surface coating category includes emissions from both point and area sources. While the 2002 VOC emissions inventory for the MANE-VU region indicates that VOC emission from area sources in this category are substantial, the area source part of the emissions inventory is highly uncertain and may be substantially overestimated. The method used to estimate area source VOC emissions relies heavily on employee emission factors and employment data. These emission factors are based on data collected by EPA in the 1980s and may not accurately portray the types of coatings, the type of coating equipment, or the type of control technology currently in use.

2) At least nine types of industrial surface coating point sources are already controlled due to state specific VOC RACT regulations or will soon be controlled prior to 2009 as a result of the recently promulgated Maximum Achievable Control Technology (MACT) standards. Since the MACT standards were designed to control air toxic emissions and not necessarily VOC emissions the effectiveness of the MACT standards for controlling VOC emissions will vary with the industrial surface coating subcategory (e.g., metal cans, wood building products, etc.) and the type of coating equipment and the type of solvents used in that subcategory.

Regulatory History

Industrial surface coating processes are currently subject to multiple state and federal regulations pursuant to Titles I and III of the Clean Air Act. Title I imposes Standards of Performance for New Stationary Sources (NSPS) on new and modified large stationary sources. In the early 1990s, EPA promulgated NSPSs for various types of industrial surface coating operations. These regulations applied to surface coating operations that were constructed or modified after effective dates specified in each NSPS. In general, surface coating operations constructed or modified after 1980 are subject to NSPS requirements. The NSPS generally established VOC emission rate limits that could be complied with using either compliant coatings or add-on capture and control equipment. For certain source categories the NSPS also set transfer efficiency requirements.

New and modified large stationary sources that increase their emissions can also be subject to the New Source Review (NSR) requirements of Title I. NSR requires a control technology review for large new plants and for modifications at existing plants that result in a significant increase in emissions, subjecting these sources to Best Available Control Technology (BACT) in attainment areas and Lowest Achievable Emission Rate (LAER) in nonattainment areas. BACT and LAER control requirements are updated over time to reflect improvements in control equipment and are reviewed on a case-by-case basis during state permitting process.

Criteria pollutants, which include VOCs, nitrogen oxides (NOx), sulfur dioxide (SO_2), fine particulate matter (PM_{fine}), carbon monoxide (CO) and lead (Pb), are also regulated by the State Implementation Plans (SIPs) required by Title I. SIPs set forth the states' strategies for achieving reductions of criteria pollutants for which the state is currently out of attainment. SIPs must include requirements that all major stationary sources located in nonattainment areas must install reasonably available control technology (RACT). RACT levels must be basedon the level of emissions reduction that can be reasonably achieved at a reasonable cost. The U.S. EPA has issued a series of Control Technology Guidelines (CTGs) and Alternative Control Technologies (ACT) documents to assist states in defining RACT for a number of industrial surface coating categories. For categories not covered by a CTG or ACT document, state regulations require that a case-by-case RACT determination be made. Most of the EPA's CTGs and ACT documents for the industrial surface coating category were developed prior to 1990. While specific RACT requirements will vary from state to state, some OTC states have already adopted RACT regulations that are more stringent than the CTG/ACT requirements.

Policy Recommendation

As can be noted from the background information, the regulatory history, and the information contained in summary tables, the industrial surface coatings category includes at least nine different major source types and multiple processes for each source type with regulations and emissions limits that vary not only by major source type, but also by individual process and individual product. In addition, the industrial surface coatings category is already subject to a variety of regulations (NSPS; PSD/NSR, state RACT, MACT, state specific rules on hazardous air pollutants) that were adopted to achieve different goals. Some regulations (e.g., RACT) were designed to reduce VOC emissions. Other regulations (e.g., MACT) were designed to reduce emissions of hazardous air pollutants but have the side benefit of reducing VOC emissions as well.

Analysis of the potential benefits and costs of adopting additional VOC control measures, Beyond On-The-Way (BOTW) measures) is further complicated by the following:

1) Uncertainty as to the accuracy of the current (2002) MANE-VU VOC emissions inventory for the industrial surface coatings category;
2) Difference in current VOC RACT limits among the OTC states;
3) Difference in the estimates of the potential VOC reductions from MACT standards; and
4) Difference in the source size and geographic area covered by a specific regulation.

The most recent version of the (2002) MANE-VU VOC emissions inventory for the MANE-VU region estimates total VOC emissions from the industrial surface coatings category to be 164, 445 tons (24,931 tons of VOC from point sources and 139,512 tons from area sources). Further investigation into the amount of VOC emissions from area sources will most likely reveal that these VOC emissions are substantially overestimated due in part to the emission factors and employment data used and in part to the cutpoints used by various states for distinguishing a point source from an area source.

A quick sampling of the current VOC RACT limits in the OTC states reveals differences not only in the limits for existing sources (lbs. VOC per gallon of coating minus water and exempt solvents), but also in the size of source to which these limits apply.

Several complications arise when trying to calculate the potential VOC reductions from a particular MACT standard including the following:

1) Not all toxics regulated under the MACT are VOCs;
2) MACT standards are expressed as kg HAP/liter of solids or lbs. HAP/gallon of solids not lbs. VOC/gallon of coating minus water and exempt solvent so the MACT limit applies to all HAPs not just VOCs; and
3) The specific types of processes and coatings regulated under the MACT standards are different than the types of processes and coatings regulated under the RACT standards.

These complications have lead to widely varying estimates of the potential additional VOC reductions from the application of a particular MACT requirement (from 0% to as much as 80% VOC reduction nationwide).

RACT standards and MACT standards apply to sources located in different geographic areas throughout the Ozone Transport Region. For some OTC states RACT standards apply only to sources located in 1-hour ozone nonattainment counties while in other OTC states RACT standards apply statewide. MACT standards are applicable nationwide and only to major HAP sources (10 tons/year of individual HAP or 25 tons/year of combined HAPs).

Given all of these uncertainties the following options are available:

1) OTC states that currently have higher VOC RACT limits than the EPA CTG/ACT VOC RACT limits can adopt more stringent RACT regulations;
2) OTC states can extend the geographic coverage for RACT limits to statewide;
3) OTC states can lower the RACT applicability thresholds
4) OTC states can adopt more stringent control requirements for specific industrial surface coating categories (e.g., permanent total enclosures for metal can coating processes).

Policy recommendations:

1) Due to uncertainty in current MANE-VU VOC emissions inventory for this category, develop an improved, state specific VOC emissions inventory for point and area sources for each subcategory of industrial surface coatings before requiring additional controls beyond MACT.

CONTROL MEASURE SUMMARY FOR
Lime Kilns

Control Measure Summary: Good combustion practices and kiln operation for Lime Kilns. These kilns are used for the calcination of limestone. Lime kilns are also often associated with paper mills.	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measure: NSR; PSD; State RACT. *Emission Reductions*: *Control Cost*: *Timing of Implementation*: *Implementation Area*: OTR	**NOx** Uncontrolled: 2002 Reduction: 2002 Base:	 4,649 <u>0</u> 4,649
Candidate measure: Good combustion practices and kiln operation *Emission Reductions*: Under Evaluation *Control Cost*: less than $2,000 per ton *Timing of Implementation*: 01/01/09 *Implementation Area:* OTR	**NOx** 2009 Base including growth: 2009 Reduction: 2009 Remaining:	 5,228 <u>TBD</u>
Policy Recommendation: Final recommendation not made as of June, 2006.		
Recommended Strategy: See additional discussion in briefing paper		
REFERENCES: European Commission, Integrated Pollution Prevention and Control (IPPC) Bureau. *Reference Document on Best Available Techniques in the Cement and Lime Manufacturing Industries*. December 2001. "The direct transfer of low-NOx burner technology from cement kilns to lime kilns is not straightforward. In cement kilns, flame temperatures are higher and low-NOx burners have been developed for reducing high initial levels of 'thermal NOx'. In most lime kilns the levels of NOx are lower and the 'thermal NOx' is probably less important." Northeast States for Coordinated Air Use Management. *Assessment of Control Technology Options for BART-Eligible Sources: Steam Electric Boilers, Industrial Boilers, Cement Plants, and Paper and Pulp Facilities*. March 2005. "Due to the design of the lime kiln, SNCRs and SCRs are not viable NOx reduction techniques. Installing low-NOx burners is also not a practical NOx reduction technique according to a BACT analysis conducted on a new lime kiln in 1997…combustion modification such as decreasing excess air is the best way to reduce NOx emissions".		

CONTROL MEASURE SUMMARY FOR
Municipal Waste Combustiors
(Only NOx reductions are evaluated under this strategy)

Control Measure Summary	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measure: Federal performance standards and emissions guidelines for large MWCs (40 CFR 60 Subparts Cb and Eb). No control technology is mandated to meet the emissions limitations. EPA approved state trading programs for NOx compliance are allowed as is facility-wide averaging for NOx compliance. *Emission Reductions*: 19,000 Mg NOx/yr nationally (increment over 1991 40 CFR 60 Subpart Ca standards). *Control Cost*: $7.2 per Mg municipal solid waste combusted. *Timing of Implementation*: Compliance required December 19, 2000. *Implementation Area*: Nationwide.	**NOx** 2002 Base:	26,139
	SO2: **2002 Base**	3,865
	VOC: **2002 Base**	473
Implement Federal Rules: *Measure ID:* *Emission Reductions*: Varies per state depending on the number of MWC units, incinerator technology and chosen emissions limitations. In Connecticut, this measure resulted in NOx emissions reductions of 1.6 tons/summer day and 592 tons/year. *Control Cost*: $0 to approximately $1,500/MMBtu/hr depending on whether SNCR was installed in response to the federal emissions guidelines and whether SNCR is feasible. *Timing of Implementation*: Assuming timely adoption of state rule amendments, compliance with emissions limitations could be required by May 1, 2009. *Implementation Area*: Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York and Pennsylvania report operating MWC units (assuming state NOx emissions limitations are at the level of the federal emissions guidelines).	**NOx** 2009 Reduction: 2009 Remaining:	 -3,610 22,529
	SO2	***
	VOC	***

Policy Recommendation of State/Workgroup Lead:
Individual states with operating MWCs should evaluate the possible reduction of state NOx emissions limitations to produce creditable emissions reductions. At the regional level, this strategy should not be emphasized as it is state-specific in nature (depending on the MWC population, current control level and current state standards); does not require regional implementation to maximize its effectiveness; emissions from MWCs are a minor portion of the regional inventory given MACT-based standards required under Section 129 of the Clean Air Act; and EPA has proposed more stringent NOx emission limits for MWCs that states will be required to adopt and implement as of April 2009.

Recommended Strategy:
MWCs are subject to stringent MACT emissions standards, including standards for NOx, under Section 129 of the Clean Air Act. To comply with these MACT standards, many MWC owners and operators installed control technologies, including SNCR, to comply with the federal deadline of December 19, 2000. Many MWCs may be operated to reduce emissions to a level below the current federal standards. For example, Connecticut includes a state NOx emission reduction credit (ERC) trading program in its MWC rule. Recognizing that the "excess emissions" produced in Connecticut's MWC NOx ERC trading program could yield creditable emissions reductions if the required NOx emissions limits were reduced, in October 2000, the Department amended the state MWC rule to require the MWC owners and operators to meet more stringent NOx emissions limits as of May 1, 2003. The resulting emissions reductions of 1.62 tons of NOx per summer day (248 tons per ozone season) were used for compliance with the "shortfall" emission reduction obligation

needed for EPA approval of the attainment demonstration for the 1-hour ozone national ambient air quality standard.

Other states in the OTC region have operating MWC units that now comply with MACT-based state emissions limitations. Many MWC units now operate with SNCR to control NOx emissions. For MWC units that do not now have SNCR, SNCR is likely a feasible RACT measure capable of reducing NOx emissions below the state limits. Thus, the reduction of the state MWC NOx limits may produce creditable NOx emissions reductions. Furthermore, since MWCs are not subject to the Clean Air Interstate Rule (CAIR) and may not participate in a CAIR NOx trading program, reduction of state MWC NOx emissions limitations could be considered an equity measure that places MWC owners in a position similar to the owners of large electric generating units subject to CAIR. However, the amount of creditable emissions reductions a state may obtain from this strategy is limited given EPA's December 19, 2005 proposal of reduced emissions limitations for MWCs.

BACKGROUND INFORMATION

In December 1995, EPA adopted new source performance standards (NSPS) (40 CFR 60 subpart Eb) and emission guidelines (subpart Cb) for MWC units with a combustion capacity greater than 250 tons per day. Both the NSPS and emission guidelines require compliance with emission limitations for nine pollutants including NOx that reflect the performance of maximum achievable control technology (MACT). The emission guidelines required compliance by December 2000 for all existing MWCs, while the NSPS apply to new MWCs. On December 19, 2005, EPA proposed revisions to the emissions guidelines to reflect the levels of performance achieved due to the installation of control equipment (70 FR 75348). This proposal includes reduced NOx emissions limitations that states will be required to adopt and implement by April 2009, if the proposal is finalized. Selective non-catalytic reduction (SNCR) is considered MACT for NOx under both the 1995 guidelines and the 2005 proposal.

Connecticut's MWC regulation, section 22a-174-38 of the Regulations of Connecticut State Agencies (R.C.S.A.) (Attachment A), was adopted in June 1999 with NOx emissions limits equivalent to the federal emissions guidelines (Phase I NOx limits). Owners and operators of the state's 15 MWC units were required to comply with the emissions limits no later than December 19, 2000. R.C.S.A. section 22a-174-38 was amended in October 2000 to include more stringent NOx emissions limits (Phase II NOx limits), for which compliance was required no later than May 1, 2003. The following NOx emissions reductions, relative to emissions levels under the Phase I NOx limits, are attributed to the Phase II NOx limits in Connecticut:

- 592 tons per year;
- 248 tons per ozone season; and
- 1.62 tons per day during the ozone season.[1]

EPA's December 19, 2005 proposal to update the 1995 emissions standards will substantially reduce the ability of other states to achieve the same level of emissions reductions that Connecticut achieved by implementing this measure in 2003.

Add-on NOx Control

The number of NOx-reduction technologies for MWCs are limited as these units use a heterogeneous, wet fuel; are less thermally efficient than fossil fuel-fired boilers of comparable heat input; and require larger amounts of excess air and less densely-packed heat recovery systems. Low-NOx burners, fuel switching and load curtailment are not possible control options.

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1 Assumes 100% rule effectiveness, which is reasonable given that the MWCs are operated with continuous emissions monitoring.

The only generally applicable and feasible add-on control technology for reducing NOx emissions from MWCs is SNCR.[2] SNCR is a chemical process for removing NOx from flue gas. In the SNCR process, a reagent, typically liquid urea or anhydrous gaseous ammonia is injected within a boiler or in ducts in a region where the temperature is between 900 and 1100 degrees Celsius. The reaction converts NOx to nitrogen gas and water vapor. SNCR performance depends on factors specific to each type of combustion equipment, including flue gas temperature, residence time for the reagent and flue gas, amount of reagent injected, reagent distribution, uncontrolled NOx level and carbon monoxide and oxygen concentrations.

Some disadvantages arise from the use of SNCR including: the high operating temperatures required; ineffectiveness at high temperatures with low concentrations of NOx; the need to accommodate enough residence time to complete the chemical reaction at high temperatures; and undesirable excess ammonia and urea emissions ("ammonia slip") that arise from an incomplete chemical reaction (Thermal Energy International, 2000).

All of Connecticut's large MWC units are equipped with SNCR, including nine mass burn/waterwall units and three refuse-derived fuel units. Two tire-fired units subject to the state MWC rule also operate with SNCR.[3] Similarly, all of New Jersey's large MWC units are equipped with SCR to meet NOx emissions limitations based on the federal emissions guidelines.

<u>Cost</u>

The capital cost of installing SNCR on a MWC unit is approximately $1,500 MMBtu/hr (see, e.g., Institute of Clean Air Companies, 2000).[4] Most of the cost of using SNCR is in operating expenses (Institute of Clean Air Companies, 2000), which EPA estimates as falling between 680 and 1,200 $/MMBtu (1993 dollars). Thus, SNCR is well suited for seasonal control in that it may provide significant reductions in NOx emissions but incurs little cost when the system is not in use. EPA has assigned an ozone season cost effectiveness to SNCR operated on MWC units of $2,140 per ton of NOx reduced (1990 dollars)(EPA, 1999, Table 16).

<u>Emissions reductions</u>

In Connecticut, MWC facility owners report emissions reductions of 25 to 50% from the operation of SNCR; a typical reduction of 35-40% could be assumed from the installation and operation of SNCR/ammonia injection to MWC units of similar size and type. Other combustors of varying technologies and capacities but with similar baseline NOx emissions have reported reductions ranging from 35 - 75% from the operation of urea-based SNCR (Appendix 1, Institute of Clean Air Companies, 2000). EPA assigns a typical 45% emission reduction to the effectiveness of SNCR at MWCs (EPA, 1999, Table 16).

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2 The use of SCR to control NOx emissions from MWCs in North American is limited to very few units (see, e.g., http://www.region.peel.on.ca/pw/waste/facilities/algonquin-power.htm) because the nature of municipal solid waste requires huge SCR reactor sizes and significant actions to prevent catalyst poisoning. These factors, combined with the relatively small size of most MWCs, makes the use of SCR prohibitively expensive (EPA 2005, comment by IWSA).

3 Connecticut also has three mass burn refractory units that are classified as small MWCs and do not use SNCR.

4 For comparison, EPA places the capital cost of SNCR between 1,600 and 3,300 $/MMBtu (1993 dollars). In 2002, the 3-unit facility (140 MMBTU/hr per unit) owned by the Connecticut Resources Recovery Authority in Bridgeport, Connecticut installed SNCR on all three units at a capital cost of $2.1 million.

REFERENCES

Institute of Clean Air Companies. May 2000. *Selective Non-Catalytic Reduction (SNCR) for Controlling NOx Emissions*. http://www.fueltechnv.com/pdf/TPP-534.pdf

Thermal Energy International Inc. 2000. *Thermal THERMALONOx Competitive Advantages.* http://www.thermalenergy.com/solutions/solutions.html

U.S. Environmental Protection Agency. November 1999. Nitrogen Oxides (NOx), *Why and How They are Controlled*. Clean Air Technology Center: EPA 456/F-99-006R.

U.S. Environmental Protection Agency. April 2005. *Corrected Response to Significant Public Comments on the Proposed Clean Air Interstate Rule*. Comment of IWSA.

U.S. Environmental Protection Agency. December 19, 2005. *Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Large Municipal Waste Combustors; Proposed Rule*. 70 FR 75348.

CONTROL MEASURE SUMMARY FOR
Printing and Graphic Arts

Control Measure Summary: This category includes categories of both heat set and non-heat set operations. It includes lithographic, gravure, flexographic and screen printing. It includes both point sources and area sources.	**Emissions (tons/year) in Ozone Transport Region**	
2002 existing measures: RACT, BACT, NSPS	**VOC Point** Actual 2002 **VOC Area** Actual 2002:	 5,501 31,738
2009 On-the-Books measures: MACT Std. - Subpart KK Publication rotogravure – limit organic HAP emissions to no more than 8% of volatile matter used each month. Either reformulation or 92% capture and control efficiency. Product and packaging rotogravure and wide-web flexo – limit organic HAP emissions to no more than 5% of volatile matter used each month. Either reformulation or 95% capture and control efficiency. *Emission Reductions*: *Control Cost*: *Timing of Implementation*: Compliance Date (existing) December 5, 2005 *Implementation Area*: Nationwide	**VOC Point** Actual 2002: 2009 Reduction: 2009 Remaining: **VOC Point** Actual 2002: 2009 Reduction: 2009 Remaining:	 5,501 -121 5,380 31,738 -0 31,738
Candidate measure: Adopt the requirements of SCAQMD rule 1130 and 1130.1 *Emission Reductions*: Under evaluation *Control Cost*: Under evaluation *Timing of Implementation*: Assuming 2007 or 2008 effective date of rule, emission reductions in 2009 or 2010 *Implementation Area*: OTR	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	Under review
Candidate measure: Same option as CM1, except potentially require that publication, packaging and product rotogravure and wide web flexo printers that are equipped with capture and control equipment, meet the capture and control efficiency requirement in the MACT standard for VOC reductions (this would apply to facilities not major for HAPs). *Implementation Area:* OTR	**VOC** OTB 2009: BOTW 2009: Reduction from BOTW:	Under review
Candidate measure: Adopt September 2006 CTGs. In September 2006, EPA determined that control technique guideline (CTG) documents will be substantially as effective as national regulations in reducing VOC emissions in ozone nonattainment areas from the following Group II product categories: lithographic printing materials, letterpress printing materials, and flexible packaging printing materials *Implementation Area:* OTR		Under Review
Policy Recommendation: Final recommendation not made as of June, 2006.		
Brief Rationale for Recommended Strategy:		

CONTROL MEASURE SUMMARY FOR *Portable Fuel Containers*

<table>
<tr><td>Control Measure Summary: Portable Fuel Containers
This control measure establishes design and manufacturing specifications for portable fuel containers (PFCs) based on the California Air Resources Board (CARB) rules. PFCs are used to refuel residential and commercial equipment and vehicles. PFCs are used to refuel a broad range of small off-road engines and other equipment (e.g., lawnmowers, chainsaws, personal watercraft, motorcycles, etc.).</td><td colspan="2">VOC Emissions
in Ozone Transport Region</td></tr>
<tr><td>2002 Existing Measure: None</td><td>2002 Annual:
2002 Summer:</td><td>99,919 tpy
315.3 tpd</td></tr>
<tr><td>2009 On-the-Books Measure: Adopt the OTC Model Rule for PFCs, which is based on the 2000 CARB rule for PFCs.
Emission Reductions: Based on a CE=65%, RE=100%, RP=based on the number of years the rule has been in place based on the assumed 10-yr turnover of the sale of the cans, and Total control = 65% when fully implemented after 10 years.
Control Cost: $581 per ton
Timing of Implementation: State specific with a 10% per year turnover, full reductions are achieved after 10 years. CARB, and the EPA, have estimated a 5 year turnover for the cans, but the OTC used a more conservative 10 year turnover in calculating emission reductions.
Implementation Area: OTR</td><td>Annual:
2009 Reduction:
2009 Remaining:

Summer:
2009 Reduction:
2009 Remaining:</td><td>
<u>33,055</u> tpy
66,864 tpy

<u>107.1</u> tpd
208.2 tpd</td></tr>
<tr><td>2009 On-the-Way Measure: Proposed Federal HAP Mobile Source Reg (Feb 28, 2006) Rule – This rule proposes to regulate PFCs similar to CARBs 2006 rule amendments and will regulate permeability to 0.3 grams of HC per gallon per day (2001 OTC Model Rule has 0.4 grams per gallon per day). It does not contain CARBs amendments regarding kerosene containers and utility jugs.
Emission Reductions: EPA estimates about a 9% reduction nationwide in 2009 and a 61% reduction when fully implemented after 5 years.
Control Cost: $180 per ton without fuel savings; over the long term, fuel savings outweigh costs.
Timing of Implementation: Jan.1, 2009 effective date of rule and 20% per year turnover, full reductions are achieved after 5 years, in 2014.
Implementation Area: Nationwide</td><td>Annual:
2009 Reduction:
2009 Remaining:

Summer:
2009 Reduction:
2009 Remaining:</td><td>
<u>negligible</u>
66,864 tpy

<u>negligible</u>
208.2 tpd</td></tr>
<tr><td>Candidate measure: Adopt the CARB 2006 amendments broadening PFC definition to include kerosene containers and utility jugs, increasing the permeability requirement from 0.3 grams of hydrocarbons per gallon per day to 0.4 grams of hydrocarbons per gallon per day, and other changes needed to make the OTC Model Rule consistent with CARB
Emission Reductions: CARB estimates their amendments are expected to reduce ROG emissions by 58% after full penetration into the marketplace, assumed to be 5 years.
Control Cost: CARB estimate is $800 to $1,400 per ton reduced
Timing of Implementation: State specific with a 10% per year turnover, full reductions are achieved after 10 years
Implementation Area: OTR</td><td>Annual:
2009 Base:
2009 Reduction:
2009 Remaining:

Summer:
2009 Base:
2009 Reduction:
2009 Remaining:</td><td>
66,864 tpy
<u>4,152 tpy</u>
62,712 tpy

208.2 tpd
<u>12.8 tpd</u>
195.4 tpd</td></tr>
</table>

Summary of Candidate Measure:
The California Air Resources Board (CARB) 2000 PFC regulation establishes design and manufacturing specifications for PFCs. PFC emissions are calculated by accounting for emissions from five different components related to gas container use: permeation, diurnal, transport-spillage, refueling spillage and refueling vapor displacement emissions. The permeation, diurnal emissions (associated with storage) and transport-spillage emissions are included in the area source inventory. The equipment refueling spillage and refueling vapor displacement emissions are calculated from the non-road model and are included in the non-road inventory. After four years of implementation and a comprehensive assessment of the program, CARB staff identified some problems with the rule related to consumer acceptance and reducing anticipated emission reductions. Their 2006 amendments address these issues, as well as expanding on the regulation to increase emission reductions. The amendments include the following:

1. Eliminate the requirement for an auto shutoff.
2. Eliminate fuel flow rate and fill level standards.
3. Eliminate one opening standard.
4. Reduce pressure standard from 10 psig to 5 psig.
5. Establish a certification program for PFCs.
6. Expand the definition of a PFC to include utility jugs and kerosene containers. CARB staff determined that consumers were using these containers for gasoline.
7. Change permeability standard from 0.4 grams ROG /gallon-day to 0.3 grams/gallon-day.
8. Combine the evaporation and permeation standards into a new diurnal standard to simplify certification and compliance testing.
9. Adopt new PFC test procedures.
10. Include a voluntary Consumer Acceptance Program to support and encourage user-friendly PFC designs (i.e., allowing the use of the ARB Star Rating system to clearly identify superior designs as determined by users).

While ARB staff does not expect these changes to affect the cost of gasoline cans, the price of kerosene cans could rise to as much as $8.50 per container once the regulations are implemented. CARB also estimates the cost-effectiveness to be between $0.40 to $0.70 per pound.

Recommended Strategy: CARB, through their comprehensive history of research and multiple product surveys, have the best technical data available to create rules to regulate portable fuel containers. Most portable fuel container manufacturers market their products nationally, therefore many will be selling the new products nationally after they have produced cans than conform with the CARB rules. The CARB rule contains some revisions to their original rule to ease consumer acceptance of the cans, for states that have adopted the original OTC model rule. In addition the CARB rule amendments regulate kerosene cans and utility jugs, which the Federal rule proposal does not.

References:

2009 On-the-Books Measure (OTC Model Rule):

E.H. Pechan & Associates, Inc., *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules*, March 31, 2001. Much of the analysis in this report was based on CARB's analysis for CARB's original 1999 PFC rule , which estimated a 75% reduction that would be fully achieved after 5 years (CARB's assumed life cycle for PFCs). The OTC used a more conservative 10-year turnover rate in its analysis. Table II-5 of the Pechan report shows the cost of compliance to be $581/ton.

2009 On-the-Way Measure (Proposed 2/28/06 Federal Rule):

U.S. EPA Office of Transportation and Air Quality. *Estimating Emissions Associated with Portable Fuel Containers (PFCs), Draft Report*, EPA420-D-06-003, February 2006.

U.S. EPA Office of Transportation and Air Quality. *Draft Regulatory Impact Analysis: Control of Hazardous Air Pollutants from Mobile Sources*, EPA420-D-06-004, February 2006.

Candidate Measure (CARB 2006 Amendments):

California Air Resources Board. *Final Statement of Reasons for Rulemaking, Including Summary of Comments and Agency Response: PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE PORTABLE FUEL CONTAINER REGULATIONS.* September 15, 2005.

California Air Resources Board. *Initial Statement of Reasons for Proposed Amendments to the Portable Fuel Container Regulations.* July 29, 2005. Table 5.1 shows the cost-effectiveness of the proposed amendments to be $0.40 to $0.70 per pound ($800 to $1,400 per ton)

CONTROL MEASURE SUMMARY FOR
Regional Fuel

Control Measure Summary: The OTR proposes a common fuel standard for the OTR states that does not require MTBE or Ethanol, but exhibits Environmentally Beneficial Combustion Properties.	**NOx Emissions (tons/summer day) in OTR**	
2002 existing measure: Federal program in the CAA requiring RFG in certain non-attainment areas and allowing other states with non-attainment areas to opt-in. All but two states in the OTR are participating, in whole or in part, with the federal program, however nearly 1/3 of the gasoline sold in the OTR is not RFG.		
Candidate measure: *Measure ID:* OTR-wide Regional Fuel *Emission Reductions*: *Control Cost*: unknown at this time *Timing of Implementation*: *Implementation Area*: All states in the OTR	NOx VOC	~ 4.8 tpsd ~ 139.4 tpsd
Policy Recommendation: Continue to examine the potential for a regional fuel, keeping in mind that some states like PA may have statutory/legislative constraints.		
Brief Rationale for Recommended Strategy: The Energy Policy Act of 2005 provides the opportunity for the OTR to achieve a single clean-burning gasoline without MTBE, as it also eliminates the oxygen content requirement for RFG. The authority provided in Energy Act is consistent with what states promoted through the long debate over MTBE/ethanol/RFG. Approximately one-third of the gasoline currently sold in the OTR is not RFG; most is conventional gasoline. The new authority plus the potential for emission reductions from the amount of non-RFG sold in the OTR provides an opportunity for additional emission reductions in the region as well as for a reduced number of fuels, and possibly a single fuel, to be utilized throughout the region.		

Appendix D – VOC Emissions by County for 2002 and 2009

Table D-1 Adhesives and Sealants VOC Area Source Emission Summary for 2002 and 2009 by County

Table D-2 Adhesives and Sealants VOC Point Source Emission Summary for 2002 and 2009 by County

Table D-3 Cutback and Emulsified Asphalt Paving VOC Area Source Emission Summary for 2002 and 2009 by County

Table D-4 Consumer Products VOC Area Source Emission Summary for 2002 and 2009 by County

Table D-5 Portable Fuel Containers VOC Area Source Emission Summary for 2002 and 2009 by County

Table D-6 Portable Fuel Containers VOC Nonroad Source Emission Summary for 2002 and 2009 by State

Table D-7 Reformulated Gasoline Emission Summary by State

Due to their large size, these tables are being transmitted electronically in the spreadsheet named Appendix_D_VOC_2009.xls. There are separate tabs for each of the tables listed above.

	Adhesives/Sealants VOC Emissions (tpd)				Asphalt Paving VOC Emissions (tpd)				Consumer Products VOC Emissions (tpd)				PFCs (Area Source) VOC Emissions (tpd)				PFCs (Nonroad Source) VOC Emissions (tpd)				RFG* VOC Emissions (tpd)				Total for Five Categories VOC Emissions (tpd)			
		2009	2009	2009		2009	2009	2009		2009	2009	2009		2009	2009	2009		2009	2009	2009		2006	2006	2006		2009	2009	2009
State	**2002**	**OTB/W**	**BOTW**	**Benefit**	**2002**	**OTB/W**	**BOTW**	**Benefit**	**2002**	**OTB/W**	**BOTW**	**Benefit**	**2002**	**OTB/W**	**BOTW**	**Benefit**	**2002**	**OTB/W**	**BOTW**	**Benefit**	**2006**	**OTB/W**	**BOTW**	**Benefit**	**2002**	**OTB/W**	**BOTW**	**Benefit**
CT	4.8	6.6	2.4	4.2	4.5	4.5	0.3	4.3	40.1	35.4	34.7	0.7	9.7	6.5	6.1	0.4	2.9	1.9	1.8	0.1	87.9	87.9	87.9	0.0	149.9	142.9	133.2	9.7
DE	1.4	1.6	0.6	1.0	0.1	0.1	0.1	0.0	7.3	6.7	6.5	0.1	3.0	2.1	1.9	0.1	0.9	0.6	0.6	0.0	26.6	26.6	26.6	0.0	39.3	37.7	36.3	1.4
DC	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	5.7	5.1	5.0	0.1	3.6	2.5	2.4	0.1	1.1	0.8	0.7	0.0	9.1	9.1	9.1	0.0	19.6	17.6	17.2	0.4
ME	3.1	3.9	1.4	2.5	8.6	10.6	0.0	10.6	10.9	9.7	9.5	0.2	3.6	2.4	2.3	0.1	1.1	0.7	0.7	0.0	56.2	56.2	47.1	9.1	83.5	83.6	60.9	22.6
MD	6.9	9.1	3.3	5.8	0.0	0.0	0.0	0.0	52.8	48.4	47.4	1.0	39.6	24.5	23.1	1.4	11.9	7.4	6.9	0.4	158.7	158.7	155.6	3.2	270.0	248.1	236.3	11.8
MA	10.6	14.7	5.8	8.9	8.4	8.6	0.5	8.1	62.2	64.1	53.9	10.2	18.1	18.6	16.9	1.7	5.4	5.6	5.1	0.5	148.6	148.6	148.6	0.0	253.3	260.1	230.8	29.3
NH	2.5	3.6	1.3	2.3	3.8	4.8	0.5	4.4	13.7	12.6	12.4	0.3	3.6	3.0	2.8	0.2	1.1	0.9	0.8	0.1	45.3	45.3	41.0	4.3	70.0	70.3	58.8	11.5
NJ	14.9	15.2	6.0	9.2	4.9	4.8	0.1	4.7	82.9	71.9	70.5	1.4	24.4	17.7	16.7	1.0	7.3	5.3	5.0	0.3	219.6	219.6	219.6	0.0	354.1	334.6	317.9	16.7
NY	24.7	33.4	11.9	21.5	15.4	18.3	1.8	16.4	209.6	183.3	179.6	3.7	76.6	45.0	42.4	2.6	23.0	13.5	12.7	0.8	465.0	465.0	408.1	56.9	814.2	758.4	656.5	101.9
PA	25.5	34.0	12.2	21.8	7.7	9.3	0.9	8.4	119.6	104.4	102.4	2.1	47.0	27.6	26.0	1.6	14.1	8.3	7.8	0.5	363.0	363.0	305.0	58.0	576.8	546.7	454.3	92.3
RI	1.8	2.4	0.9	1.5	1.0	1.2	0.1	1.1	10.6	9.3	9.1	0.2	3.0	2.7	2.5	0.2	0.9	0.8	0.8	0.0	22.2	22.2	22.2	0.0	39.5	38.6	35.6	3.0
VT	2.4	3.4	1.2	2.2	1.4	1.8	0.0	1.8	6.1	5.6	5.5	0.1	1.7	1.5	1.5	0.1	0.5	0.5	0.4	0.0	35.9	35.9	27.9	7.9	48.0	48.7	36.5	12.1
No. VA	1.2	1.6	0.6	1.0	<0.1	<0.1	<0.1	<0.1	21.5	23.0	22.5	0.5	8.6	6.1	5.7	0.4	2.6	1.8	1.7	0.1	54.9	54.9	54.9	0.0	88.8	87.4	85.4	1.9
OTR	**99.8**	**129.8**	**47.5**	**82.3**	**55.9**	**64.0**	**4.3**	**59.8**	**642.9**	**579.5**	**559.0**	**20.5**	**242.5**	**160.1**	**150.3**	**9.9**	**72.8**	**48.0**	**45.1**	**3.0**	**1693.1**	**1693.1**	**1553.7**	**139.4**	**2,807.0**	**2,674.6**	**2,359.8**	**314.8**

* 2006 Emission Estimates from NESCAUM

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
G	
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-61-021-xxx. 24-61-022-xxx

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Annual Control Factor
Q	Summer Control Factor (100% for cutback; 90% for emulsified, except 0 in DE and 96.9% in NJ))
R, S	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
T, U	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

ASPHALT PAVING

State	County	FIPS	SCC	2002 VOC Emissions: Annual (tpy)	2002 VOC Emissions: Summer Day from Inventory (tpd)	2002 VOC Emissions: Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions: Annual (tpy)	2009 VOC OTB/OTW Emissions: Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions: Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	2009 BOTW Emissions: Annual (tpy)	2009 BOTW Emissions: Summer Day Calculated (tpd)	2009 BOTW Reductions: Annual (tpy)	2009 BOTW Reductions: Summer Day (tpd)	SCC Description
CT	Fairfield	09001	2461021000	20.18	0.2302	0.230	74.1	25.1	20.18	0.2302	0.230	1.00	0.00	0.00	100.00	20.18	0.000	0.00	0.230	Cutback Asphalt
CT	Hartford	09003	2461021000	4.80	0.0548	0.055	74.3	25.1	4.80	0.0548	0.055	1.00	0.00	0.00	100.00	4.80	0.000	0.00	0.055	Cutback Asphalt
CT	Litchfield	09005	2461021000	97.67	1.1047	1.105	73.5	25.1	97.67	1.1047	1.105	1.00	0.00	0.00	100.00	97.67	0.000	0.00	1.105	Cutback Asphalt
CT	Middlesex	09007	2461021000	0.00	0.0000	0.000	0.0	25.1	0.00	0.0000	0.000	1.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
CT	New Haven	09009	2461021000	15.93	0.1765	0.176	72.0	25.1	15.93	0.1765	0.176	1.00	0.00	0.00	100.00	15.93	0.000	0.00	0.176	Cutback Asphalt
CT	New London	09011	2461021000	0.00	0.0000	0.000	0.0	25.1	0.00	0.0000	0.000	1.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
CT	Tolland	09013	2461021000	5.17	0.0597	0.060	75.2	25.1	5.17	0.0597	0.060	1.00	0.00	0.00	100.00	5.17	0.000	0.00	0.060	Cutback Asphalt
CT	Windham	09015	2461021000	33.08	0.3324	0.332	65.3	25.1	33.08	0.3324	0.332	1.00	0.00	0.00	100.00	33.08	0.000	0.00	0.332	Cutback Asphalt
DE	Kent	10001	2461021000	9.54	0.0000	0.000	0.0	25.1	11.62	0.0000	0.000	1.22	0.00	0.00	100.00	11.62	0.000	0.00	0.000	Cutback Asphalt
DE	New Castle	10003	2461021000	15.64	0.0000	0.000	0.0	25.1	19.05	0.0000	0.000	1.22	0.00	0.00	100.00	19.05	0.000	0.00	0.000	Cutback Asphalt
DE	Sussex	10005	2461021000	23.19	0.0622	0.062	24.0	25.1	28.24	0.0758	0.076	1.22	0.00	0.00	100.00	28.24	0.000	0.00	0.076	Cutback Asphalt
ME	Androscoggin	23001	2461021000	190.79	Missing	0.526	Missing	25.1	235.74	Missing	0.650	1.24	0.00	0.00	100.00	235.74	0.000	0.00	0.650	Cutback Asphalt
ME	Aroostook	23003	2461021000	164.34	Missing	0.453	Missing	25.1	203.05	Missing	0.560	1.24	0.00	0.00	100.00	203.05	0.000	0.00	0.560	Cutback Asphalt
ME	Cumberland	23005	2461021000	650.02	Missing	1.793	Missing	25.1	803.14	Missing	2.215	1.24	0.00	0.00	100.00	803.14	0.000	0.00	2.215	Cutback Asphalt
ME	Franklin	23007	2461021000	73.27	Missing	0.202	Missing	25.1	90.52	Missing	0.250	1.24	0.00	0.00	100.00	90.52	0.000	0.00	0.250	Cutback Asphalt
ME	Hancock	23009	2461021000	155.75	Missing	0.430	Missing	25.1	192.44	Missing	0.531	1.24	0.00	0.00	100.00	192.44	0.000	0.00	0.531	Cutback Asphalt
ME	Kennebec	23011	2461021000	309.81	Missing	0.855	Missing	25.1	382.79	Missing	1.056	1.24	0.00	0.00	100.00	382.79	0.000	0.00	1.056	Cutback Asphalt
ME	Knox	23013	2461021000	81.58	Missing	0.225	Missing	25.1	100.80	Missing	0.278	1.24	0.00	0.00	100.00	100.80	0.000	0.00	0.278	Cutback Asphalt
ME	Lincoln	23015	2461021000	83.49	Missing	0.230	Missing	25.1	103.16	Missing	0.285	1.24	0.00	0.00	100.00	103.16	0.000	0.00	0.285	Cutback Asphalt
ME	Oxford	23017	2461021000	120.60	Missing	0.333	Missing	25.1	149.01	Missing	0.411	1.24	0.00	0.00	100.00	149.01	0.000	0.00	0.411	Cutback Asphalt
ME	Penobscot	23019	2461021000	359.97	Missing	0.993	Missing	25.1	444.76	Missing	1.227	1.24	0.00	0.00	100.00	444.76	0.000	0.00	1.227	Cutback Asphalt
ME	Piscataquis	23021	2461021000	39.10	Missing	0.108	Missing	25.1	48.31	Missing	0.133	1.24	0.00	0.00	100.00	48.31	0.000	0.00	0.133	Cutback Asphalt
ME	Sagadahoc	23023	2461021000	100.29	Missing	0.277	Missing	25.1	123.92	Missing	0.342	1.24	0.00	0.00	100.00	123.92	0.000	0.00	0.342	Cutback Asphalt
ME	Somerset	23025	2461021000	143.54	Missing	0.396	Missing	25.1	177.35	Missing	0.489	1.24	0.00	0.00	100.00	177.35	0.000	0.00	0.489	Cutback Asphalt
ME	Waldo	23027	2461021000	91.91	Missing	0.254	Missing	25.1	113.57	Missing	0.313	1.24	0.00	0.00	100.00	113.57	0.000	0.00	0.313	Cutback Asphalt
ME	Washington	23029	2461021000	90.59	Missing	0.250	Missing	25.1	111.93	Missing	0.309	1.24	0.00	0.00	100.00	111.93	0.000	0.00	0.309	Cutback Asphalt
ME	York	23031	2461021000	458.46	Missing	1.265	Missing	25.1	566.46	Missing	1.562	1.24	0.00	0.00	100.00	566.46	0.000	0.00	1.562	Cutback Asphalt
MA	Barnstable	25001	2461021000	11.63	Missing	0.13	Missing	25.1	11.84	Missing	0.130	1.02	0.00	0.00	100.00	11.84	0.000	0.00	0.130	Cutback Asphalt
MA	Berkshire	25003	2461021000	6.77	Missing	0.07	Missing	25.1	6.89	Missing	0.076	1.02	0.00	0.00	100.00	6.89	0.000	0.00	0.076	Cutback Asphalt
MA	Bristol	25005	2461021000	28.05	Missing	0.31	Missing	25.1	28.55	Missing	0.313	1.02	0.00	0.00	100.00	28.55	0.000	0.00	0.313	Cutback Asphalt
MA	Dukes	25007	2461021000	0.80	Missing	0.01	Missing	25.1	0.81	Missing	0.009	1.02	0.00	0.00	100.00	0.81	0.000	0.00	0.009	Cutback Asphalt
MA	Essex	25009	2461021000	37.90	Missing	0.42	Missing	25.1	38.59	Missing	0.423	1.02	0.00	0.00	100.00	38.59	0.000	0.00	0.423	Cutback Asphalt
MA	Franklin	25011	2461021000	3.71	Missing	0.04	Missing	25.1	3.78	Missing	0.041	1.02	0.00	0.00	100.00	3.78	0.000	0.00	0.041	Cutback Asphalt
MA	Hampden	25013	2461021000	23.70	Missing	0.26	Missing	25.1	24.12	Missing	0.264	1.02	0.00	0.00	100.00	24.12	0.000	0.00	0.264	Cutback Asphalt
MA	Hampshire	25015	2461021000	7.87	Missing	0.09	Missing	25.1	8.01	Missing	0.088	1.02	0.00	0.00	100.00	8.01	0.000	0.00	0.088	Cutback Asphalt
MA	Middlesex	25017	2461021000	74.90	Missing	0.82	Missing	25.1	76.25	Missing	0.836	1.02	0.00	0.00	100.00	76.25	0.000	0.00	0.836	Cutback Asphalt
MA	Nantucket	25019	2461021000	0.52	Missing	0.01	Missing	25.1	0.53	Missing	0.006	1.02	0.00	0.00	100.00	0.53	0.000	0.00	0.006	Cutback Asphalt
MA	Norfolk	25021	2461021000	33.55	Missing	0.37	Missing	25.1	34.16	Missing	0.374	1.02	0.00	0.00	100.00	34.16	0.000	0.00	0.374	Cutback Asphalt

ASPHALT PAVING				2002 VOC Emissions					2009 VOC OTB/OTW Emissions								2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
MA	Plymouth	25023	2461021000	25.28	Missing	0.28	Missing	25.1	25.73	Missing	0.282	1.02	0.00	0.00	100.00	25.73	0.000	0.00	0.282	Cutback Asphalt
MA	Suffolk	25025	2461021000	33.60	Missing	0.37	Missing	25.1	34.20	Missing	0.375	1.02	0.00	0.00	100.00	34.20	0.000	0.00	0.375	Cutback Asphalt
MA	Worcester	25027	2461021000	40.21	Missing	0.44	Missing	25.1	40.94	Missing	0.449	1.02	0.00	0.00	100.00	40.94	0.000	0.00	0.449	Cutback Asphalt
NJ	Atlantic	34001	2461021000	24.65	0.0948	0.095	25.0	25.1	24.16	0.0929	0.093	0.98	0.00	0.00	100.00	24.16	0.000	0.00	0.093	Cutback Asphalt
NJ	Bergen	34003	2461021000	36.69	0.1411	0.141	25.0	25.1	35.96	0.1383	0.138	0.98	0.00	0.00	100.00	35.96	0.000	0.00	0.138	Cutback Asphalt
NJ	Burlington	34005	2461021000	32.60	0.1254	0.125	25.0	25.1	31.95	0.1229	0.123	0.98	0.00	0.00	100.00	31.95	0.000	0.00	0.123	Cutback Asphalt
NJ	Camden	34007	2461021000	25.33	0.0974	0.097	25.0	25.1	24.82	0.0955	0.096	0.98	0.00	0.00	100.00	24.82	0.000	0.00	0.096	Cutback Asphalt
NJ	Cape May	34009	2461021000	12.97	0.0499	0.050	25.0	25.1	12.71	0.0489	0.049	0.98	0.00	0.00	100.00	12.71	0.000	0.00	0.049	Cutback Asphalt
NJ	Cumberland	34011	2461021000	15.85	0.0610	0.061	25.0	25.1	15.53	0.0597	0.060	0.98	0.00	0.00	100.00	15.53	0.000	0.00	0.060	Cutback Asphalt
NJ	Essex	34013	2461021000	22.25	0.0856	0.086	25.0	25.1	21.81	0.0839	0.084	0.98	0.00	0.00	100.00	21.81	0.000	0.00	0.084	Cutback Asphalt
NJ	Gloucester	34015	2461021000	17.94	0.0690	0.069	25.0	25.1	17.59	0.0676	0.068	0.98	0.00	0.00	100.00	17.59	0.000	0.00	0.068	Cutback Asphalt
NJ	Hudson	34017	2461021000	8.49	0.0327	0.033	25.0	25.1	8.32	0.0320	0.032	0.98	0.00	0.00	100.00	8.32	0.000	0.00	0.032	Cutback Asphalt
NJ	Hunterdon	34019	2461021000	17.84	0.0686	0.069	25.0	25.1	17.49	0.0673	0.067	0.98	0.00	0.00	100.00	17.49	0.000	0.00	0.067	Cutback Asphalt
NJ	Mercer	34021	2461021000	21.47	0.0826	0.083	25.0	25.1	21.04	0.0809	0.081	0.98	0.00	0.00	100.00	21.04	0.000	0.00	0.081	Cutback Asphalt
NJ	Middlesex	34023	2461021000	30.82	0.1185	0.119	25.0	25.1	30.21	0.1162	0.116	0.98	0.00	0.00	100.00	30.21	0.000	0.00	0.116	Cutback Asphalt
NJ	Monmouth	34025	2461021000	39.12	0.1505	0.151	25.0	25.1	38.34	0.1475	0.148	0.98	0.00	0.00	100.00	38.34	0.000	0.00	0.148	Cutback Asphalt
NJ	Morris	34027	2461021000	29.95	0.1152	0.115	25.0	25.1	29.35	0.1129	0.113	0.98	0.00	0.00	100.00	29.35	0.000	0.00	0.113	Cutback Asphalt
NJ	Ocean	34029	2461021000	35.65	0.1371	0.137	25.0	25.1	34.94	0.1344	0.134	0.98	0.00	0.00	100.00	34.94	0.000	0.00	0.134	Cutback Asphalt
NJ	Passaic	34031	2461021000	16.91	0.0650	0.065	25.0	25.1	16.57	0.0637	0.064	0.98	0.00	0.00	100.00	16.57	0.000	0.00	0.064	Cutback Asphalt
NJ	Salem	34033	2461021000	11.07	0.0426	0.043	25.0	25.1	10.85	0.0417	0.042	0.98	0.00	0.00	100.00	10.85	0.000	0.00	0.042	Cutback Asphalt
NJ	Somerset	34035	2461021000	20.07	0.0772	0.077	25.0	25.1	19.67	0.0757	0.076	0.98	0.00	0.00	100.00	19.67	0.000	0.00	0.076	Cutback Asphalt
NJ	Sussex	34037	2461021000	17.41	0.0669	0.067	25.0	25.1	17.06	0.0656	0.066	0.98	0.00	0.00	100.00	17.06	0.000	0.00	0.066	Cutback Asphalt
NJ	Union	34039	2461021000	18.30	0.0704	0.070	25.0	25.1	17.94	0.0690	0.069	0.98	0.00	0.00	100.00	17.94	0.000	0.00	0.069	Cutback Asphalt
NJ	Warren	34041	2461021000	15.03	0.0578	0.058	25.0	25.1	14.73	0.0567	0.057	0.98	0.00	0.00	100.00	14.73	0.000	0.00	0.057	Cutback Asphalt
PA	Adams	42001	2461021000	56.75	0.0000	0.000	0.0	25.1	68.27	0.0000	0.000	1.20	0.00	0.00	100.00	68.27	0.000	0.00	0.000	Cutback Asphalt
PA	Allegheny	42003	2461021000	132.61	0.0000	0.000	0.0	25.1	159.55	0.0000	0.000	1.20	0.00	0.00	100.00	159.55	0.000	0.00	0.000	Cutback Asphalt
PA	Armstrong	42005	2461021000	67.09	0.0000	0.000	0.0	25.1	80.72	0.0000	0.000	1.20	0.00	0.00	100.00	80.72	0.000	0.00	0.000	Cutback Asphalt
PA	Beaver	42007	2461021000	66.05	0.0000	0.000	0.0	25.1	79.46	0.0000	0.000	1.20	0.00	0.00	100.00	79.46	0.000	0.00	0.000	Cutback Asphalt
PA	Bedford	42009	2461021000	87.42	0.0000	0.000	0.0	25.1	105.17	0.0000	0.000	1.20	0.00	0.00	100.00	105.17	0.000	0.00	0.000	Cutback Asphalt
PA	Berks	42011	2461021000	98.60	0.0000	0.000	0.0	25.1	118.62	0.0000	0.000	1.20	0.00	0.00	100.00	118.62	0.000	0.00	0.000	Cutback Asphalt
PA	Blair	42013	2461021000	43.11	0.0000	0.000	0.0	25.1	51.86	0.0000	0.000	1.20	0.00	0.00	100.00	51.86	0.000	0.00	0.000	Cutback Asphalt
PA	Bradford	42015	2461021000	91.23	0.0000	0.000	0.0	25.1	109.76	0.0000	0.000	1.20	0.00	0.00	100.00	109.76	0.000	0.00	0.000	Cutback Asphalt
PA	Bucks	42017	2461021000	116.52	0.0000	0.000	0.0	25.1	140.19	0.0000	0.000	1.20	0.00	0.00	100.00	140.19	0.000	0.00	0.000	Cutback Asphalt
PA	Butler	42019	2461021000	75.76	0.0000	0.000	0.0	25.1	91.15	0.0000	0.000	1.20	0.00	0.00	100.00	91.15	0.000	0.00	0.000	Cutback Asphalt
PA	Cambria	42021	2461021000	71.38	0.0000	0.000	0.0	25.1	85.87	0.0000	0.000	1.20	0.00	0.00	100.00	85.87	0.000	0.00	0.000	Cutback Asphalt
PA	Cameron	42023	2461021000	11.50	0.0000	0.000	0.0	25.1	13.83	0.0000	0.000	1.20	0.00	0.00	100.00	13.83	0.000	0.00	0.000	Cutback Asphalt
PA	Carbon	42025	2461021000	35.01	0.0000	0.000	0.0	25.1	42.12	0.0000	0.000	1.20	0.00	0.00	100.00	42.12	0.000	0.00	0.000	Cutback Asphalt
PA	Centre	42027	2461021000	59.67	0.0000	0.000	0.0	25.1	71.79	0.0000	0.000	1.20	0.00	0.00	100.00	71.79	0.000	0.00	0.000	Cutback Asphalt
PA	Chester	42029	2461021000	113.86	0.0000	0.000	0.0	25.1	136.98	0.0000	0.000	1.20	0.00	0.00	100.00	136.98	0.000	0.00	0.000	Cutback Asphalt
PA	Clarion	42031	2461021000	47.44	0.0000	0.000	0.0	25.1	57.08	0.0000	0.000	1.20	0.00	0.00	100.00	57.08	0.000	0.00	0.000	Cutback Asphalt
PA	Clearfield	42033	2461021000	84.18	0.0000	0.000	0.0	25.1	101.27	0.0000	0.000	1.20	0.00	0.00	100.00	101.27	0.000	0.00	0.000	Cutback Asphalt
PA	Clinton	42035	2461021000	29.84	0.0000	0.000	0.0	25.1	35.90	0.0000	0.000	1.20	0.00	0.00	100.00	35.90	0.000	0.00	0.000	Cutback Asphalt
PA	Columbia	42037	2461021000	51.31	0.0000	0.000	0.0	25.1	61.73	0.0000	0.000	1.20	0.00	0.00	100.00	61.73	0.000	0.00	0.000	Cutback Asphalt
PA	Crawford	42039	2461021000	92.64	0.0000	0.000	0.0	25.1	111.46	0.0000	0.000	1.20	0.00	0.00	100.00	111.46	0.000	0.00	0.000	Cutback Asphalt
PA	Cumberland	42041	2461021000	71.43	0.0000	0.000	0.0	25.1	85.93	0.0000	0.000	1.20	0.00	0.00	100.00	85.93	0.000	0.00	0.000	Cutback Asphalt
PA	Dauphin	42043	2461021000	60.93	0.0000	0.000	0.0	25.1	73.30	0.0000	0.000	1.20	0.00	0.00	100.00	73.30	0.000	0.00	0.000	Cutback Asphalt
PA	Delaware	42045	2461021000	62.28	0.0000	0.000	0.0	25.1	74.93	0.0000	0.000	1.20	0.00	0.00	100.00	74.93	0.000	0.00	0.000	Cutback Asphalt
PA	Elk	42047	2461021000	29.47	0.0000	0.000	0.0	25.1	35.46	0.0000	0.000	1.20	0.00	0.00	100.00	35.46	0.000	0.00	0.000	Cutback Asphalt
PA	Erie	42049	2461021000	79.37	0.0000	0.000	0.0	25.1	95.49	0.0000	0.000	1.20	0.00	0.00	100.00	95.49	0.000	0.00	0.000	Cutback Asphalt
PA	Fayette	42051	2461021000	78.80	0.0000	0.000	0.0	25.1	94.80	0.0000	0.000	1.20	0.00	0.00	100.00	94.80	0.000	0.00	0.000	Cutback Asphalt
PA	Forest	42053	2461021000	19.65	0.0000	0.000	0.0	25.1	23.64	0.0000	0.000	1.20	0.00	0.00	100.00	23.64	0.000	0.00	0.000	Cutback Asphalt
PA	Franklin	42055	2461021000	63.80	0.0000	0.000	0.0	25.1	76.76	0.0000	0.000	1.20	0.00	0.00	100.00	76.76	0.000	0.00	0.000	Cutback Asphalt
PA	Fulton	42057	2461021000	42.79	0.0000	0.000	0.0	25.1	51.49	0.0000	0.000	1.20	0.00	0.00	100.00	51.49	0.000	0.00	0.000	Cutback Asphalt
PA	Greene	42059	2461021000	59.10	0.0000	0.000	0.0	25.1	71.10	0.0000	0.000	1.20	0.00	0.00	100.00	71.10	0.000	0.00	0.000	Cutback Asphalt
PA	Huntingdon	42061	2461021000	61.76	0.0000	0.000	0.0	25.1	74.31	0.0000	0.000	1.20	0.00	0.00	100.00	74.31	0.000	0.00	0.000	Cutback Asphalt
PA	Indiana	42063	2461021000	84.39	0.0000	0.000	0.0	25.1	101.53	0.0000	0.000	1.20	0.00	0.00	100.00	101.53	0.000	0.00	0.000	Cutback Asphalt
PA	Jefferson	42065	2461021000	58.47	0.0000	0.000	0.0	25.1	70.34	0.0000	0.000	1.20	0.00	0.00	100.00	70.34	0.000	0.00	0.000	Cutback Asphalt
PA	Juniata	42067	2461021000	35.32	0.0000	0.000	0.0	25.1	42.50	0.0000	0.000	1.20	0.00	0.00	100.00	42.50	0.000	0.00	0.000	Cutback Asphalt
PA	Lackawanna	42069	2461021000	66.46	0.0000	0.000	0.0	25.1	79.96	0.0000	0.000	1.20	0.00	0.00	100.00	79.96	0.000	0.00	0.000	Cutback Asphalt

ASPHALT PAVING				2002 VOC Emissions					2009 VOC OTB/OTW Emissions								2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
PA	Lancaster	42071	2461021000	111.19	0.0000	0.000	0.0	25.1	133.77	0.0000	0.000	1.20	0.00	0.00	100.00	133.77	0.000	0.00	0.000	Cutback Asphalt
PA	Lawrence	42073	2461021000	38.46	0.0000	0.000	0.0	25.1	46.27	0.0000	0.000	1.20	0.00	0.00	100.00	46.27	0.000	0.00	0.000	Cutback Asphalt
PA	Lebanon	42075	2461021000	40.08	0.0000	0.000	0.0	25.1	48.22	0.0000	0.000	1.20	0.00	0.00	100.00	48.22	0.000	0.00	0.000	Cutback Asphalt
PA	Lehigh	42077	2461021000	63.96	0.0000	0.000	0.0	25.1	76.95	0.0000	0.000	1.20	0.00	0.00	100.00	76.95	0.000	0.00	0.000	Cutback Asphalt
PA	Luzerne	42079	2461021000	96.51	0.0000	0.000	0.0	25.1	116.11	0.0000	0.000	1.20	0.00	0.00	100.00	116.11	0.000	0.00	0.000	Cutback Asphalt
PA	Lycoming	42081	2461021000	76.91	0.0000	0.000	0.0	25.1	92.54	0.0000	0.000	1.20	0.00	0.00	100.00	92.54	0.000	0.00	0.000	Cutback Asphalt
PA	McKean	42083	2461021000	38.04	0.0000	0.000	0.0	25.1	45.76	0.0000	0.000	1.20	0.00	0.00	100.00	45.76	0.000	0.00	0.000	Cutback Asphalt
PA	Mercer	42085	2461021000	80.15	0.0000	0.000	0.0	25.1	96.43	0.0000	0.000	1.20	0.00	0.00	100.00	96.43	0.000	0.00	0.000	Cutback Asphalt
PA	Mifflin	42087	2461021000	24.19	0.0000	0.000	0.0	25.1	29.11	0.0000	0.000	1.20	0.00	0.00	100.00	29.11	0.000	0.00	0.000	Cutback Asphalt
PA	Monroe	42089	2461021000	57.79	0.0000	0.000	0.0	25.1	69.53	0.0000	0.000	1.20	0.00	0.00	100.00	69.53	0.000	0.00	0.000	Cutback Asphalt
PA	Montgomery	42091	2461021000	98.91	0.0000	0.000	0.0	25.1	119.00	0.0000	0.000	1.20	0.00	0.00	100.00	119.00	0.000	0.00	0.000	Cutback Asphalt
PA	Montour	42093	2461021000	18.13	0.0000	0.000	0.0	25.1	21.81	0.0000	0.000	1.20	0.00	0.00	100.00	21.81	0.000	0.00	0.000	Cutback Asphalt
PA	Northampton	42095	2461021000	53.04	0.0000	0.000	0.0	25.1	63.81	0.0000	0.000	1.20	0.00	0.00	100.00	63.81	0.000	0.00	0.000	Cutback Asphalt
PA	Northumberland	42097	2461021000	57.37	0.0000	0.000	0.0	25.1	69.02	0.0000	0.000	1.20	0.00	0.00	100.00	69.02	0.000	0.00	0.000	Cutback Asphalt
PA	Perry	42099	2461021000	43.47	0.0000	0.000	0.0	25.1	52.30	0.0000	0.000	1.20	0.00	0.00	100.00	52.30	0.000	0.00	0.000	Cutback Asphalt
PA	Philadelphia	42101	2461021000	59.72	0.0000	0.000	0.0	25.1	71.85	0.0000	0.000	1.20	0.00	0.00	100.00	71.85	0.000	0.00	0.000	Cutback Asphalt
PA	Pike	42103	2461021000	39.35	0.0000	0.000	0.0	25.1	47.34	0.0000	0.000	1.20	0.00	0.00	100.00	47.34	0.000	0.00	0.000	Cutback Asphalt
PA	Potter	42105	2461021000	41.59	0.0000	0.000	0.0	25.1	50.04	0.0000	0.000	1.20	0.00	0.00	100.00	50.04	0.000	0.00	0.000	Cutback Asphalt
PA	Schuylkill	42107	2461021000	70.80	0.0000	0.000	0.0	25.1	85.18	0.0000	0.000	1.20	0.00	0.00	100.00	85.18	0.000	0.00	0.000	Cutback Asphalt
PA	Snyder	42109	2461021000	33.08	0.0000	0.000	0.0	25.1	39.79	0.0000	0.000	1.20	0.00	0.00	100.00	39.79	0.000	0.00	0.000	Cutback Asphalt
PA	Somerset	42111	2461021000	100.48	0.0000	0.000	0.0	25.1	120.89	0.0000	0.000	1.20	0.00	0.00	100.00	120.89	0.000	0.00	0.000	Cutback Asphalt
PA	Sullivan	42113	2461021000	23.98	0.0000	0.000	0.0	25.1	28.85	0.0000	0.000	1.20	0.00	0.00	100.00	28.85	0.000	0.00	0.000	Cutback Asphalt
PA	Susquehanna	42115	2461021000	78.59	0.0000	0.000	0.0	25.1	94.55	0.0000	0.000	1.20	0.00	0.00	100.00	94.55	0.000	0.00	0.000	Cutback Asphalt
PA	Tioga	42117	2461021000	63.43	0.0000	0.000	0.0	25.1	76.32	0.0000	0.000	1.20	0.00	0.00	100.00	76.32	0.000	0.00	0.000	Cutback Asphalt
PA	Union	42119	2461021000	30.46	0.0000	0.000	0.0	25.1	36.65	0.0000	0.000	1.20	0.00	0.00	100.00	36.65	0.000	0.00	0.000	Cutback Asphalt
PA	Venango	42121	2461021000	55.39	0.0000	0.000	0.0	25.1	66.64	0.0000	0.000	1.20	0.00	0.00	100.00	66.64	0.000	0.00	0.000	Cutback Asphalt
PA	Warren	42123	2461021000	54.34	0.0000	0.000	0.0	25.1	65.38	0.0000	0.000	1.20	0.00	0.00	100.00	65.38	0.000	0.00	0.000	Cutback Asphalt
PA	Washington	42125	2461021000	119.45	0.0000	0.000	0.0	25.1	143.71	0.0000	0.000	1.20	0.00	0.00	100.00	143.71	0.000	0.00	0.000	Cutback Asphalt
PA	Wayne	42127	2461021000	72.16	0.0000	0.000	0.0	25.1	86.82	0.0000	0.000	1.20	0.00	0.00	100.00	86.82	0.000	0.00	0.000	Cutback Asphalt
PA	Westmoreland	42129	2461021000	137.84	0.0000	0.000	0.0	25.1	165.83	0.0000	0.000	1.20	0.00	0.00	100.00	165.83	0.000	0.00	0.000	Cutback Asphalt
PA	Wyoming	42131	2461021000	37.36	0.0000	0.000	0.0	25.1	44.95	0.0000	0.000	1.20	0.00	0.00	100.00	44.95	0.000	0.00	0.000	Cutback Asphalt
PA	York	42133	2461021000	126.55	0.0000	0.000	0.0	25.1	152.26	0.0000	0.000	1.20	0.00	0.00	100.00	152.26	0.000	0.00	0.000	Cutback Asphalt
RI	Bristol	44001	2461021000	7.14	0.0000	0.000	25.0	25.1	8.75	0.0000	0.000	1.23	0.00	0.00	100.00	8.75	0.000	0.00	0.000	Cutback Asphalt
RI	Kent	44003	2461021000	22.85	0.0000	0.000	25.0	25.1	28.00	0.0000	0.000	1.23	0.00	0.00	100.00	28.00	0.000	0.00	0.000	Cutback Asphalt
RI	Newport	44005	2461021000	11.42	0.0000	0.000	0.0	25.1	13.99	0.0000	0.000	1.23	0.00	0.00	100.00	13.99	0.000	0.00	0.000	Cutback Asphalt
RI	Providence	44007	2461021000	84.25	0.0000	0.000	25.0	25.1	103.22	0.0000	0.000	1.23	0.00	0.00	100.00	103.22	0.000	0.00	0.000	Cutback Asphalt
RI	Washington	44009	2461021000	17.14	0.0000	0.000	25.0	25.1	21.00	0.0000	0.000	1.23	0.00	0.00	100.00	21.00	0.000	0.00	0.000	Cutback Asphalt
VT	Addison	50001	2461021000	30.31	Missing	0.083	25.0	25.1	37.99	Missing	0.104	1.25	0.00	0.00	100.00	37.99	0.000	0.00	0.104	Cutback Asphalt
VT	Bennington	50003	2461021000	34.07	Missing	0.094	25.0	25.1	42.71	Missing	0.117	1.25	0.00	0.00	100.00	42.71	0.000	0.00	0.117	Cutback Asphalt
VT	Caledonia	50005	2461021000	25.81	Missing	0.071	25.0	25.1	32.35	Missing	0.089	1.25	0.00	0.00	100.00	32.35	0.000	0.00	0.089	Cutback Asphalt
VT	Chittenden	50007	2461021000	120.85	Missing	0.332	25.0	25.1	151.49	Missing	0.416	1.25	0.00	0.00	100.00	151.49	0.000	0.00	0.416	Cutback Asphalt
VT	Essex	50009	2461021000	6.43	Missing	0.018	25.0	25.1	8.06	Missing	0.022	1.25	0.00	0.00	100.00	8.06	0.000	0.00	0.022	Cutback Asphalt
VT	Franklin	50011	2461021000	35.99	Missing	0.099	25.0	25.1	45.11	Missing	0.124	1.25	0.00	0.00	100.00	45.11	0.000	0.00	0.124	Cutback Asphalt
VT	Grand Isle	50013	2461021000	5.14	Missing	0.014	25.0	25.1	6.44	Missing	0.018	1.25	0.00	0.00	100.00	6.44	0.000	0.00	0.018	Cutback Asphalt
VT	Lamoille	50015	2461021000	17.46	Missing	0.048	25.0	25.1	21.89	Missing	0.060	1.25	0.00	0.00	100.00	21.89	0.000	0.00	0.060	Cutback Asphalt
VT	Orange	50017	2461021000	23.36	Missing	0.064	25.0	25.1	29.28	Missing	0.080	1.25	0.00	0.00	100.00	29.28	0.000	0.00	0.080	Cutback Asphalt
VT	Orleans	50019	2461021000	23.36	Missing	0.064	25.0	25.1	29.28	Missing	0.080	1.25	0.00	0.00	100.00	29.28	0.000	0.00	0.080	Cutback Asphalt
VT	Rutland	50021	2461021000	58.06	Missing	0.160	25.0	25.1	72.78	Missing	0.200	1.25	0.00	0.00	100.00	72.78	0.000	0.00	0.200	Cutback Asphalt
VT	Washington	50023	2461021000	52.18	Missing	0.143	25.0	25.1	65.41	Missing	0.180	1.25	0.00	0.00	100.00	65.41	0.000	0.00	0.180	Cutback Asphalt
VT	Windham	50025	2461021000	38.68	Missing	0.106	25.0	25.1	48.49	Missing	0.133	1.25	0.00	0.00	100.00	48.49	0.000	0.00	0.133	Cutback Asphalt
VT	Windsor	50027	2461021000	51.96	Missing	0.143	25.0	25.1	65.13	Missing	0.179	1.25	0.00	0.00	100.00	65.13	0.000	0.00	0.179	Cutback Asphalt
VA	Arlington	51013	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
VA	Fairfax	51059	2461021000	0.11	Missing	0.000	25.0	25.1	0.13	Missing	0.000	0.00	0.00	0.00	100.00	0.13	0.000	0.00	0.000	Cutback Asphalt
VA	Loudoun	51107	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
VA	Prince William	51153	2461021000	0.01	Missing	0.000	25.0	25.1	0.01	Missing	0.000	0.00	0.00	0.00	100.00	0.01	0.000	0.00	0.000	Cutback Asphalt
VA	Stafford	51179	2461021000	0.67	Missing	0.002	25.0	25.1	0.80	Missing	0.002	0.00	0.00	0.00	100.00	0.80	0.000	0.00	0.002	Cutback Asphalt
VA	Alexandria	51510	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
VA	Fairfax City	51600	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
VA	Falls Chruch	51610	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt

ASPHALT PAVING

State	County	FIPS	SCC	2002 VOC Emissions: Annual (tpy)	2002 VOC Emissions: Summer Day from Inventory (tpd)	2002 VOC Emissions: Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions: Annual (tpy)	2009 VOC OTB/OTW Emissions: Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions: Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	2009 BOTW Emissions: Annual (tpy)	2009 BOTW Emissions: Summer Day Calculated (tpd)	2009 BOTW Reductions: Annual (tpy)	2009 BOTW Reductions: Summer Day (tpd)	SCC Description
VA	Manassas City	51683	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
VA	Manassas Park City	51685	2461021000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	0.00	100.00	0.00	0.000	0.00	0.000	Cutback Asphalt
CT	Fairfield	09001	2461022000	25.99	0.2861	0.286	71.5	25.1	25.99	0.2861	0.286	1.00	0.00	90.00	90.00	2.60	0.029	23.39	0.257	Emulsified Asphalt
CT	Hartford	09003	2461022000	25.58	0.2874	0.287	73.0	25.1	25.58	0.2874	0.287	1.00	0.00	90.00	90.00	2.56	0.029	23.02	0.259	Emulsified Asphalt
CT	Litchfield	09005	2461022000	57.98	0.6266	0.627	70.2	25.1	57.98	0.6266	0.627	1.00	0.00	90.00	90.00	5.80	0.063	52.18	0.564	Emulsified Asphalt
CT	Middlesex	09007	2461022000	26.60	0.2854	0.285	69.8	25.1	26.60	0.2854	0.285	1.00	0.00	90.00	90.00	2.66	0.029	23.94	0.257	Emulsified Asphalt
CT	New Haven	09009	2461022000	16.00	0.1824	0.182	74.1	25.1	16.00	0.1824	0.182	1.00	0.00	90.00	90.00	1.60	0.018	14.40	0.164	Emulsified Asphalt
CT	New London	09011	2461022000	24.06	0.2584	0.258	69.8	25.1	24.06	0.2584	0.258	1.00	0.00	90.00	90.00	2.41	0.026	21.65	0.233	Emulsified Asphalt
CT	Tolland	09013	2461022000	20.29	0.2341	0.234	75.0	25.1	20.29	0.2341	0.234	1.00	0.00	90.00	90.00	2.03	0.023	18.26	0.211	Emulsified Asphalt
CT	Windham	09015	2461022000	37.35	0.4176	0.418	72.7	25.1	37.35	0.4176	0.418	1.00	0.00	90.00	90.00	3.74	0.042	33.62	0.376	Emulsified Asphalt
DE	Kent	10001	2461022000	1.77	0.0195	0.020	100.0	25.1	2.16	0.0238	0.024	1.22	0.00	0.00	0.00	2.16	0.024	0.00	0.000	Emulsified Asphalt
DE	New Castle	10003	2461022000	0.02	0.0000	0.000	8.0	25.1	0.03	0.0000	0.000	1.22	0.00	0.00	0.00	0.03	0.000	0.00	0.000	Emulsified Asphalt
DE	Sussex	10005	2461022000	5.85	0.0462	0.046	72.0	25.1	7.13	0.0562	0.056	1.22	0.00	0.00	0.00	7.13	0.056	0.00	0.000	Emulsified Asphalt
MD	Allegany	24001	2461022000	0.15	0.0006	0.001	Missing	25.1	0.15	0.0006	0.001	0.98	0.00	90.00	90.00	0.01	0.000	0.13	0.001	Emulsified Asphalt
MD	Anne Arundel	24003	2461022000	1.01	0.0039	0.004	Missing	25.1	1.05	0.0040	0.004	1.04	0.00	90.00	90.00	0.11	0.000	0.95	0.004	Emulsified Asphalt
MD	Baltimore	24005	2461022000	1.54	0.0059	0.006	Missing	25.1	1.60	0.0062	0.006	1.04	0.00	90.00	90.00	0.16	0.001	1.44	0.006	Emulsified Asphalt
MD	Calvert	24009	2461022000	0.16	0.0006	0.001	Missing	25.1	0.19	0.0007	0.001	1.15	0.00	90.00	90.00	0.02	0.000	0.17	0.001	Emulsified Asphalt
MD	Caroline	24011	2461022000	0.06	0.0002	0.000	Missing	25.1	0.06	0.0002	0.000	1.06	0.00	90.00	90.00	0.01	0.000	0.06	0.000	Emulsified Asphalt
MD	Carroll	24013	2461022000	0.32	0.0012	0.001	Missing	25.1	0.36	0.0014	0.001	1.12	0.00	90.00	90.00	0.04	0.000	0.32	0.001	Emulsified Asphalt
MD	Cecil	24015	2461022000	0.18	0.0007	0.001	Missing	25.1	0.20	0.0008	0.001	1.11	0.00	90.00	90.00	0.02	0.000	0.18	0.001	Emulsified Asphalt
MD	Charles	24017	2461022000	0.26	0.0010	0.001	Missing	25.1	0.30	0.0012	0.001	1.17	0.00	90.00	90.00	0.03	0.000	0.27	0.001	Emulsified Asphalt
MD	Dorchester	24019	2461022000	0.06	0.0002	0.000	Missing	25.1	0.06	0.0002	0.000	1.03	0.00	90.00	90.00	0.01	0.000	0.06	0.000	Emulsified Asphalt
MD	Frederick	24021	2461022000	0.42	0.0016	0.002	Missing	25.1	0.49	0.0019	0.002	1.16	0.00	90.00	90.00	0.05	0.000	0.44	0.002	Emulsified Asphalt
MD	Garrett	24023	2461022000	0.06	0.0002	0.000	Missing	25.1	0.06	0.0002	0.000	1.03	0.00	90.00	90.00	0.01	0.000	0.06	0.000	Emulsified Asphalt
MD	Harford	24025	2461022000	0.46	0.0018	0.002	Missing	25.1	0.51	0.0020	0.002	1.11	0.00	90.00	90.00	0.05	0.000	0.46	0.002	Emulsified Asphalt
MD	Howard	24027	2461022000	0.52	0.0020	0.002	Missing	25.1	0.58	0.0022	0.002	1.11	0.00	90.00	90.00	0.06	0.000	0.52	0.002	Emulsified Asphalt
MD	Kent	24029	2461022000	0.04	0.0002	0.000	Missing	25.1	0.04	0.0002	0.000	1.08	0.00	90.00	90.00	0.00	0.000	0.04	0.000	Emulsified Asphalt
MD	Montgomery	24031	2461022000	1.82	0.0070	0.007	Missing	25.1	2.00	0.0077	0.008	1.10	0.00	90.00	90.00	0.20	0.001	1.80	0.007	Emulsified Asphalt
MD	Prince Georges	24033	2461022000	1.67	0.0064	0.006	Missing	25.1	1.75	0.0067	0.007	1.05	0.00	90.00	90.00	0.18	0.001	1.58	0.006	Emulsified Asphalt
MD	Queen Annes	24035	2461022000	0.09	0.0003	0.000	Missing	25.1	0.10	0.0004	0.000	1.14	0.00	90.00	90.00	0.01	0.000	0.09	0.000	Emulsified Asphalt
MD	St. Marys	24037	2461022000	0.18	0.0007	0.001	Missing	25.1	0.20	0.0008	0.001	1.12	0.00	90.00	90.00	0.02	0.000	0.18	0.001	Emulsified Asphalt
MD	Somerset	24039	2461022000	0.05	0.0002	0.000	Missing	25.1	0.05	0.0002	0.000	1.02	0.00	90.00	90.00	0.01	0.000	0.05	0.000	Emulsified Asphalt
MD	Talbot	24041	2461022000	0.07	0.0003	0.000	Missing	25.1	0.07	0.0003	0.000	1.07	0.00	90.00	90.00	0.01	0.000	0.07	0.000	Emulsified Asphalt
MD	Washington	24043	2461022000	0.27	0.0010	0.001	Missing	25.1	0.29	0.0011	0.001	1.07	0.00	90.00	90.00	0.03	0.000	0.26	0.001	Emulsified Asphalt
MD	Wicomico	24045	2461022000	0.17	0.0007	0.001	Missing	25.1	0.19	0.0007	0.001	1.08	0.00	90.00	90.00	0.02	0.000	0.17	0.001	Emulsified Asphalt
MD	Worcester	24047	2461022000	0.10	0.0004	0.000	Missing	25.1	0.11	0.0004	0.000	1.10	0.00	90.00	90.00	0.01	0.000	0.10	0.000	Emulsified Asphalt
MD	Baltimore City	24510	2461022000	1.28	0.0049	0.005	Missing	25.1	1.26	0.0049	0.005	0.99	0.00	90.00	90.00	0.13	0.000	1.14	0.004	Emulsified Asphalt
MA	Barnstable	25001	2461022000	15.38	0.17	0.170	Missing	25.1	15.65	Missing	0.173	1.02	0.00	90.00	90.00	1.57	0.017	14.09	0.156	Emulsified Asphalt
MA	Berkshire	25003	2461022000	8.95	0.10	0.099	Missing	25.1	9.11	Missing	0.101	1.02	0.00	90.00	90.00	0.91	0.010	8.20	0.091	Emulsified Asphalt
MA	Bristol	25005	2461022000	37.09	0.41	0.410	Missing	25.1	37.76	Missing	0.417	1.02	0.00	90.00	90.00	3.78	0.042	33.98	0.375	Emulsified Asphalt
MA	Dukes	25007	2461022000	1.06	0.01	0.012	Missing	25.1	1.08	Missing	0.012	1.02	0.00	90.00	90.00	0.11	0.001	0.97	0.011	Emulsified Asphalt
MA	Essex	25009	2461022000	50.12	0.55	0.554	Missing	25.1	51.02	Missing	0.564	1.02	0.00	90.00	90.00	5.10	0.056	45.92	0.507	Emulsified Asphalt
MA	Franklin	25011	2461022000	4.91	0.05	0.054	Missing	25.1	5.00	Missing	0.055	1.02	0.00	90.00	90.00	0.50	0.006	4.50	0.050	Emulsified Asphalt
MA	Hampden	25013	2461022000	31.34	0.35	0.346	Missing	25.1	31.90	Missing	0.352	1.02	0.00	90.00	90.00	3.19	0.035	28.71	0.317	Emulsified Asphalt
MA	Hampshire	25015	2461022000	10.41	0.12	0.115	Missing	25.1	10.60	Missing	0.117	1.02	0.00	90.00	90.00	1.06	0.012	9.54	0.105	Emulsified Asphalt
MA	Middlesex	25017	2461022000	99.05	1.09	1.094	Missing	25.1	100.83	Missing	1.114	1.02	0.00	90.00	90.00	10.08	0.111	90.75	1.003	Emulsified Asphalt
MA	Nantucket	25019	2461022000	0.69	0.01	0.008	Missing	25.1	0.70	Missing	0.008	1.02	0.00	90.00	90.00	0.07	0.001	0.63	0.007	Emulsified Asphalt
MA	Norfolk	25021	2461022000	44.37	0.49	0.490	Missing	25.1	45.17	Missing	0.499	1.02	0.00	90.00	90.00	4.52	0.050	40.65	0.449	Emulsified Asphalt
MA	Plymouth	25023	2461022000	33.43	0.37	0.369	Missing	25.1	34.03	Missing	0.376	1.02	0.00	90.00	90.00	3.40	0.038	30.63	0.338	Emulsified Asphalt
MA	Suffolk	25025	2461022000	44.43	0.49	0.491	Missing	25.1	45.23	Missing	0.500	1.02	0.00	90.00	90.00	4.52	0.050	40.70	0.450	Emulsified Asphalt
MA	Worcester	25027	2461022000	53.17	0.59	0.588	Missing	25.1	54.13	Missing	0.598	1.02	0.00	90.00	90.00	5.41	0.060	48.72	0.538	Emulsified Asphalt
NH	Belknap	33001	2461022000	85.09	0.2331	0.233	Missing	25.1	107.20	0.2937	0.294	1.26	0.00	90.00	90.00	10.72	0.029	96.48	0.264	Emulsified Asphalt
NH	Carroll	33003	2461022000	103.48	0.2835	0.284	Missing	25.1	130.37	0.3572	0.357	1.26	0.00	90.00	90.00	13.04	0.036	117.33	0.321	Emulsified Asphalt
NH	Cheshire	33005	2461022000	114.50	0.3137	0.314	Missing	25.1	144.26	0.3952	0.395	1.26	0.00	90.00	90.00	14.43	0.040	129.83	0.356	Emulsified Asphalt
NH	Coos	33007	2461022000	82.06	0.2248	0.225	Missing	25.1	103.39	0.2832	0.283	1.26	0.00	90.00	90.00	10.34	0.028	93.05	0.255	Emulsified Asphalt
NH	Grafton	33009	2461022000	186.29	0.5104	0.510	Missing	25.1	234.70	0.6430	0.643	1.26	0.00	90.00	90.00	23.47	0.064	211.23	0.579	Emulsified Asphalt
NH	Hillsborough	33011	2461022000	272.74	0.7472	0.747	Missing	25.1	343.62	0.9414	0.941	1.26	0.00	90.00	90.00	34.36	0.094	309.26	0.847	Emulsified Asphalt
NH	Merrimack	33013	2461022000	183.04	0.5015	0.502	Missing	25.1	230.61	0.6318	0.632	1.26	0.00	90.00	90.00	23.06	0.063	207.55	0.569	Emulsified Asphalt
NH	Rockingham	33015	2461022000	211.53	0.5795	0.580	Missing	25.1	266.50	0.7301	0.730	1.26	0.00	90.00	90.00	26.65	0.073	239.85	0.657	Emulsified Asphalt

ASPHALT PAVING				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
NH	Strafford	33017	2461022000	84.74	0.2322	0.232	Missing	25.1	106.76	0.2925	0.293	1.26	0.00	90.00	90.00	10.68	0.029	96.09	0.263	Emulsified Asphalt
NH	Sullivan	33019	2461022000	79.86	0.2188	0.219	Missing	25.1	100.61	0.2757	0.276	1.26	0.00	90.00	90.00	10.06	0.028	90.55	0.248	Emulsified Asphalt
NJ	Atlantic	34001	2461022000	42.28	0.1626	0.163	25.0	25.1	41.43	0.1594	0.159	0.98	0.00	96.90	96.90	1.28	0.005	40.15	0.154	Emulsified Asphalt
NJ	Bergen	34003	2461022000	62.94	0.2421	0.242	25.0	25.1	61.68	0.2372	0.237	0.98	0.00	96.90	96.90	1.91	0.007	59.77	0.230	Emulsified Asphalt
NJ	Burlington	34005	2461022000	55.92	0.2151	0.215	25.0	25.1	54.80	0.2108	0.211	0.98	0.00	96.90	96.90	1.70	0.007	53.11	0.204	Emulsified Asphalt
NJ	Camden	34007	2461022000	43.45	0.1671	0.167	25.0	25.1	42.58	0.1638	0.164	0.98	0.00	96.90	96.90	1.32	0.005	41.26	0.159	Emulsified Asphalt
NJ	Cape May	34009	2461022000	22.24	0.0855	0.086	25.0	25.1	21.80	0.0838	0.084	0.98	0.00	96.90	96.90	0.68	0.003	21.12	0.081	Emulsified Asphalt
NJ	Cumberland	34011	2461022000	27.19	0.1046	0.105	25.0	25.1	26.65	0.1025	0.103	0.98	0.00	96.90	96.90	0.83	0.003	25.82	0.099	Emulsified Asphalt
NJ	Essex	34013	2461022000	38.16	0.1468	0.147	25.0	25.1	37.40	0.1439	0.144	0.98	0.00	96.90	96.90	1.16	0.004	36.24	0.139	Emulsified Asphalt
NJ	Gloucester	34015	2461022000	30.78	0.1184	0.118	25.0	25.1	30.16	0.1160	0.116	0.98	0.00	96.90	96.90	0.94	0.004	29.23	0.112	Emulsified Asphalt
NJ	Hudson	34017	2461022000	14.57	0.0560	0.056	25.0	25.1	14.28	0.0549	0.055	0.98	0.00	96.90	96.90	0.44	0.002	13.83	0.053	Emulsified Asphalt
NJ	Hunterdon	34019	2461022000	30.61	0.1177	0.118	25.0	25.1	30.00	0.1154	0.115	0.98	0.00	96.90	96.90	0.93	0.004	29.07	0.112	Emulsified Asphalt
NJ	Mercer	34021	2461022000	36.83	0.1417	0.142	25.0	25.1	36.10	0.1388	0.139	0.98	0.00	96.90	96.90	1.12	0.004	34.98	0.134	Emulsified Asphalt
NJ	Middlesex	34023	2461022000	52.86	0.2033	0.203	25.0	25.1	51.81	0.1993	0.199	0.98	0.00	96.90	96.90	1.61	0.006	50.21	0.193	Emulsified Asphalt
NJ	Monmouth	34025	2461022000	67.11	0.2581	0.258	25.0	25.1	65.77	0.2530	0.253	0.98	0.00	96.90	96.90	2.04	0.008	63.73	0.245	Emulsified Asphalt
NJ	Morris	34027	2461022000	51.37	0.1976	0.198	25.0	25.1	50.35	0.1936	0.194	0.98	0.00	96.90	96.90	1.56	0.006	48.79	0.188	Emulsified Asphalt
NJ	Ocean	34029	2461022000	61.15	0.2352	0.235	25.0	25.1	59.94	0.2305	0.231	0.98	0.00	96.90	96.90	1.86	0.007	58.08	0.223	Emulsified Asphalt
NJ	Passaic	34031	2461022000	29.00	0.1116	0.112	25.0	25.1	28.43	0.1093	0.109	0.98	0.00	96.90	96.90	0.88	0.003	27.55	0.106	Emulsified Asphalt
NJ	Salem	34033	2461022000	18.98	0.0730	0.073	25.0	25.1	18.60	0.0716	0.072	0.98	0.00	96.90	96.90	0.58	0.002	18.03	0.069	Emulsified Asphalt
NJ	Somerset	34035	2461022000	34.43	0.1324	0.132	25.0	25.1	33.75	0.1298	0.130	0.98	0.00	96.90	96.90	1.05	0.004	32.70	0.126	Emulsified Asphalt
NJ	Sussex	34037	2461022000	29.85	0.1148	0.115	25.0	25.1	29.26	0.1125	0.113	0.98	0.00	96.90	96.90	0.91	0.003	28.35	0.109	Emulsified Asphalt
NJ	Union	34039	2461022000	31.39	0.1207	0.121	25.0	25.1	30.76	0.1183	0.118	0.98	0.00	96.90	96.90	0.95	0.004	29.81	0.115	Emulsified Asphalt
NJ	Warren	34041	2461022000	25.78	0.0992	0.099	25.0	25.1	25.27	0.0972	0.097	0.98	0.00	96.90	96.90	0.78	0.003	24.48	0.094	Emulsified Asphalt
NY	Albany	36001	2461022000	333.24	Missing	0.919	Missing	25.1	396.09	Missing	1.093	1.19	0.00	90.00	90.00	39.61	0.109	356.48	0.983	Emulsified Asphalt
NY	Allegany	36003	2461022000	23.85	Missing	0.066	Missing	25.1	28.35	Missing	0.078	1.19	0.00	90.00	90.00	2.84	0.008	25.52	0.070	Emulsified Asphalt
NY	Bronx	36005	2461022000	16.81	Missing	0.046	Missing	25.1	19.98	Missing	0.055	1.19	0.00	90.00	90.00	2.00	0.006	17.98	0.050	Emulsified Asphalt
NY	Broome	36007	2461022000	433.02	Missing	1.194	Missing	25.1	514.69	Missing	1.420	1.19	0.00	90.00	90.00	51.47	0.142	463.22	1.278	Emulsified Asphalt
NY	Cattaraugus	36009	2461022000	33.26	Missing	0.092	Missing	25.1	39.53	Missing	0.109	1.19	0.00	90.00	90.00	3.95	0.011	35.58	0.098	Emulsified Asphalt
NY	Cayuga	36011	2461022000	31.76	Missing	0.088	Missing	25.1	37.75	Missing	0.104	1.19	0.00	90.00	90.00	3.78	0.010	33.98	0.094	Emulsified Asphalt
NY	Chautauqua	36013	2461022000	157.89	Missing	0.435	Missing	25.1	187.66	Missing	0.518	1.19	0.00	90.00	90.00	18.77	0.052	168.90	0.466	Emulsified Asphalt
NY	Chemung	36015	2461022000	170.37	Missing	0.470	Missing	25.1	202.50	Missing	0.559	1.19	0.00	90.00	90.00	20.25	0.056	182.25	0.503	Emulsified Asphalt
NY	Chenango	36017	2461022000	46.13	Missing	0.127	Missing	25.1	54.83	Missing	0.151	1.19	0.00	90.00	90.00	5.48	0.015	49.34	0.136	Emulsified Asphalt
NY	Clinton	36019	2461022000	164.57	Missing	0.454	Missing	25.1	195.61	Missing	0.540	1.19	0.00	90.00	90.00	19.56	0.054	176.05	0.486	Emulsified Asphalt
NY	Columbia	36021	2461022000	11.42	Missing	0.032	Missing	25.1	13.58	Missing	0.037	1.19	0.00	90.00	90.00	1.36	0.004	12.22	0.034	Emulsified Asphalt
NY	Cortland	36023	2461022000	7.96	Missing	0.022	Missing	25.1	9.46	Missing	0.026	1.19	0.00	90.00	90.00	0.95	0.003	8.51	0.023	Emulsified Asphalt
NY	Delaware	36025	2461022000	37.86	Missing	0.104	Missing	25.1	45.00	Missing	0.124	1.19	0.00	90.00	90.00	4.50	0.012	40.50	0.112	Emulsified Asphalt
NY	Dutchess	36027	2461022000	38.61	Missing	0.106	Missing	25.1	45.89	Missing	0.127	1.19	0.00	90.00	90.00	4.59	0.013	41.30	0.114	Emulsified Asphalt
NY	Erie	36029	2461022000	208.84	Missing	0.576	Missing	25.1	248.22	Missing	0.685	1.19	0.00	90.00	90.00	24.82	0.068	223.40	0.616	Emulsified Asphalt
NY	Essex	36031	2461022000	15.32	Missing	0.042	Missing	25.1	18.21	Missing	0.050	1.19	0.00	90.00	90.00	1.82	0.005	16.39	0.045	Emulsified Asphalt
NY	Franklin	36033	2461022000	8.23	Missing	0.023	Missing	25.1	9.78	Missing	0.027	1.19	0.00	90.00	90.00	0.98	0.003	8.80	0.024	Emulsified Asphalt
NY	Fulton	36035	2461022000	26.34	Missing	0.073	Missing	25.1	31.31	Missing	0.086	1.19	0.00	90.00	90.00	3.13	0.009	28.17	0.078	Emulsified Asphalt
NY	Genesee	36037	2461022000	83.98	Missing	0.232	Missing	25.1	99.82	Missing	0.275	1.19	0.00	90.00	90.00	9.98	0.028	89.84	0.248	Emulsified Asphalt
NY	Greene	36039	2461022000	11.62	Missing	0.032	Missing	25.1	13.81	Missing	0.038	1.19	0.00	90.00	90.00	1.38	0.004	12.43	0.034	Emulsified Asphalt
NY	Herkimer	36043	2461022000	7.06	Missing	0.019	Missing	25.1	8.39	Missing	0.023	1.19	0.00	90.00	90.00	0.84	0.002	7.55	0.021	Emulsified Asphalt
NY	Jefferson	36045	2461022000	14.66	Missing	0.040	Missing	25.1	17.43	Missing	0.048	1.19	0.00	90.00	90.00	1.74	0.005	15.69	0.043	Emulsified Asphalt
NY	Kings	36047	2461022000	0.27	Missing	0.001	Missing	25.1	0.33	Missing	0.001	1.19	0.00	90.00	90.00	0.03	0.000	0.29	0.001	Emulsified Asphalt
NY	Lewis	36049	2461022000	49.44	Missing	0.136	Missing	25.1	58.76	Missing	0.162	1.19	0.00	90.00	90.00	5.88	0.016	52.88	0.146	Emulsified Asphalt
NY	Livingston	36051	2461022000	16.50	Missing	0.046	Missing	25.1	19.61	Missing	0.054	1.19	0.00	90.00	90.00	1.96	0.005	17.65	0.049	Emulsified Asphalt
NY	Madison	36053	2461022000	20.10	Missing	0.055	Missing	25.1	23.89	Missing	0.066	1.19	0.00	90.00	90.00	2.39	0.007	21.50	0.059	Emulsified Asphalt
NY	Monroe	36055	2461022000	150.39	Missing	0.415	Missing	25.1	178.75	Missing	0.493	1.19	0.00	90.00	90.00	17.88	0.049	160.88	0.444	Emulsified Asphalt
NY	Montgomery	36057	2461022000	27.05	Missing	0.075	Missing	25.1	32.15	Missing	0.089	1.19	0.00	90.00	90.00	3.22	0.009	28.94	0.080	Emulsified Asphalt
NY	Nassau	36059	2461022000	876.27	Missing	2.417	Missing	25.1	1,041.54	Missing	2.873	1.19	0.00	90.00	90.00	104.15	0.287	937.39	2.586	Emulsified Asphalt
NY	New York	36061	2461022000	27.33	Missing	0.075	Missing	25.1	32.48	Missing	0.090	1.19	0.00	90.00	90.00	3.25	0.009	29.23	0.081	Emulsified Asphalt
NY	Niagara	36063	2461022000	12.41	Missing	0.034	Missing	25.1	14.75	Missing	0.041	1.19	0.00	90.00	90.00	1.48	0.004	13.28	0.037	Emulsified Asphalt
NY	Oneida	36065	2461022000	324.89	Missing	0.896	Missing	25.1	386.17	Missing	1.065	1.19	0.00	90.00	90.00	38.62	0.107	347.55	0.959	Emulsified Asphalt
NY	Onondaga	36067	2461022000	177.16	Missing	0.489	Missing	25.1	210.57	Missing	0.581	1.19	0.00	90.00	90.00	21.06	0.058	189.51	0.523	Emulsified Asphalt
NY	Ontario	36069	2461022000	50.76	Missing	0.140	Missing	25.1	60.34	Missing	0.166	1.19	0.00	90.00	90.00	6.03	0.017	54.30	0.150	Emulsified Asphalt
NY	Orange	36071	2461022000	456.14	Missing	1.258	Missing	25.1	542.17	Missing	1.495	1.19	0.00	90.00	90.00	54.22	0.150	487.95	1.346	Emulsified Asphalt
NY	Orleans	36073	2461022000	30.27	Missing	0.084	Missing	25.1	35.98	Missing	0.099	1.19	0.00	90.00	90.00	3.60	0.010	32.39	0.089	Emulsified Asphalt

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
NY	Oswego	36075	2461022000	347.15	Missing	0.958	Missing	25.1	412.63	Missing	1.138	1.19	0.00	90.00	90.00	41.26	0.114	371.36	1.024	Emulsified Asphalt
NY	Otsego	36077	2461022000	37.54	Missing	0.104	Missing	25.1	44.62	Missing	0.123	1.19	0.00	90.00	90.00	4.46	0.012	40.16	0.111	Emulsified Asphalt
NY	Putnam	36079	2461022000	10.26	Missing	0.028	Missing	25.1	12.19	Missing	0.034	1.19	0.00	90.00	90.00	1.22	0.003	10.97	0.030	Emulsified Asphalt
NY	Queens	36081	2461022000	89.92	Missing	0.248	Missing	25.1	106.88	Missing	0.295	1.19	0.00	90.00	90.00	10.69	0.029	96.20	0.265	Emulsified Asphalt
NY	Rensselaer	36083	2461022000	39.50	Missing	0.109	Missing	25.1	46.95	Missing	0.129	1.19	0.00	90.00	90.00	4.69	0.013	42.25	0.117	Emulsified Asphalt
NY	Richmond	36085	2461022000	41.32	Missing	0.114	Missing	25.1	49.11	Missing	0.135	1.19	0.00	90.00	90.00	4.91	0.014	44.20	0.122	Emulsified Asphalt
NY	St. Lawrence	36089	2461022000	40.71	Missing	0.112	Missing	25.1	48.39	Missing	0.133	1.19	0.00	90.00	90.00	4.84	0.013	43.55	0.120	Emulsified Asphalt
NY	Saratoga	36091	2461022000	51.79	Missing	0.143	Missing	25.1	61.56	Missing	0.170	1.19	0.00	90.00	90.00	6.16	0.017	55.41	0.153	Emulsified Asphalt
NY	Schenectady	36093	2461022000	85.67	Missing	0.236	Missing	25.1	101.83	Missing	0.281	1.19	0.00	90.00	90.00	10.18	0.028	91.65	0.253	Emulsified Asphalt
NY	Schoharie	36095	2461022000	35.05	Missing	0.097	Missing	25.1	41.66	Missing	0.115	1.19	0.00	90.00	90.00	4.17	0.011	37.50	0.103	Emulsified Asphalt
NY	Steuben	36101	2461022000	15.59	Missing	0.043	Missing	25.1	18.53	Missing	0.051	1.19	0.00	90.00	90.00	1.85	0.005	16.68	0.046	Emulsified Asphalt
NY	Suffolk	36103	2461022000	170.18	Missing	0.469	Missing	25.1	202.28	Missing	0.558	1.19	0.00	90.00	90.00	20.23	0.056	182.05	0.502	Emulsified Asphalt
NY	Sullivan	36105	2461022000	80.97	Missing	0.223	Missing	25.1	96.24	Missing	0.265	1.19	0.00	90.00	90.00	9.62	0.027	86.62	0.239	Emulsified Asphalt
NY	Tioga	36107	2461022000	4.93	Missing	0.014	Missing	25.1	5.86	Missing	0.016	1.19	0.00	90.00	90.00	0.59	0.002	5.27	0.015	Emulsified Asphalt
NY	Tompkins	36109	2461022000	33.79	Missing	0.093	Missing	25.1	40.17	Missing	0.111	1.19	0.00	90.00	90.00	4.02	0.011	36.15	0.100	Emulsified Asphalt
NY	Ulster	36111	2461022000	36.53	Missing	0.101	Missing	25.1	43.42	Missing	0.120	1.19	0.00	90.00	90.00	4.34	0.012	39.08	0.108	Emulsified Asphalt
NY	Warren	36113	2461022000	2.24	Missing	0.006	Missing	25.1	2.66	Missing	0.007	1.19	0.00	90.00	90.00	0.27	0.001	2.40	0.007	Emulsified Asphalt
NY	Washington	36115	2461022000	11.83	Missing	0.033	Missing	25.1	14.06	Missing	0.039	1.19	0.00	90.00	90.00	1.41	0.004	12.66	0.035	Emulsified Asphalt
NY	Wayne	36117	2461022000	20.39	Missing	0.056	Missing	25.1	24.23	Missing	0.067	1.19	0.00	90.00	90.00	2.42	0.007	21.81	0.060	Emulsified Asphalt
NY	Westchester	36119	2461022000	298.67	Missing	0.824	Missing	25.1	355.00	Missing	0.979	1.19	0.00	90.00	90.00	35.50	0.098	319.50	0.881	Emulsified Asphalt
NY	Yates	36123	2461022000	11.30	Missing	0.031	Missing	25.1	13.43	Missing	0.037	1.19	0.00	90.00	90.00	1.34	0.004	12.09	0.033	Emulsified Asphalt
PA	Adams	42001	2461022000	24.47	0.1009	0.101	38.0	25.1	29.44	0.1214	0.121	1.20	0.00	90.00	90.00	2.94	0.012	26.49	0.109	Emulsified Asphalt
PA	Allegheny	42003	2461022000	57.18	0.2359	0.236	38.0	25.1	68.79	0.2838	0.284	1.20	0.00	90.00	90.00	6.88	0.028	61.91	0.255	Emulsified Asphalt
PA	Armstrong	42005	2461022000	28.93	0.1193	0.119	38.0	25.1	34.80	0.1436	0.144	1.20	0.00	90.00	90.00	3.48	0.014	31.32	0.129	Emulsified Asphalt
PA	Beaver	42007	2461022000	28.48	0.1175	0.118	38.0	25.1	34.26	0.1413	0.141	1.20	0.00	90.00	90.00	3.43	0.014	30.83	0.127	Emulsified Asphalt
PA	Bedford	42009	2461022000	37.69	0.1555	0.156	38.0	25.1	45.35	0.1871	0.187	1.20	0.00	90.00	90.00	4.53	0.019	40.81	0.168	Emulsified Asphalt
PA	Berks	42011	2461022000	42.51	0.1754	0.175	38.0	25.1	51.15	0.2110	0.211	1.20	0.00	90.00	90.00	5.11	0.021	46.03	0.190	Emulsified Asphalt
PA	Blair	42013	2461022000	18.59	0.0767	0.077	38.0	25.1	22.36	0.0922	0.092	1.20	0.00	90.00	90.00	2.24	0.009	20.12	0.083	Emulsified Asphalt
PA	Bradford	42015	2461022000	39.34	0.1623	0.162	38.0	25.1	47.32	0.1952	0.195	1.20	0.00	90.00	90.00	4.73	0.020	42.59	0.176	Emulsified Asphalt
PA	Bucks	42017	2461022000	50.24	0.2072	0.207	38.0	25.1	60.44	0.2493	0.249	1.20	0.00	90.00	90.00	6.04	0.025	54.40	0.224	Emulsified Asphalt
PA	Butler	42019	2461022000	32.67	0.1348	0.135	38.0	25.1	39.30	0.1621	0.162	1.20	0.00	90.00	90.00	3.93	0.016	35.37	0.146	Emulsified Asphalt
PA	Cambria	42021	2461022000	30.77	0.1269	0.127	38.0	25.1	37.02	0.1527	0.153	1.20	0.00	90.00	90.00	3.70	0.015	33.32	0.137	Emulsified Asphalt
PA	Cameron	42023	2461022000	4.96	0.0204	0.020	38.0	25.1	5.96	0.0246	0.025	1.20	0.00	90.00	90.00	0.60	0.002	5.37	0.022	Emulsified Asphalt
PA	Carbon	42025	2461022000	15.09	0.0623	0.062	38.0	25.1	18.16	0.0749	0.075	1.20	0.00	90.00	90.00	1.82	0.007	16.34	0.067	Emulsified Asphalt
PA	Centre	42027	2461022000	25.73	0.1061	0.106	38.0	25.1	30.95	0.1277	0.128	1.20	0.00	90.00	90.00	3.10	0.013	27.86	0.115	Emulsified Asphalt
PA	Chester	42029	2461022000	49.09	0.2025	0.203	38.0	25.1	59.06	0.2436	0.244	1.20	0.00	90.00	90.00	5.91	0.024	53.15	0.219	Emulsified Asphalt
PA	Clarion	42031	2461022000	20.46	0.0844	0.084	38.0	25.1	24.61	0.1015	0.102	1.20	0.00	90.00	90.00	2.46	0.010	22.15	0.091	Emulsified Asphalt
PA	Clearfield	42033	2461022000	36.29	0.1497	0.150	38.0	25.1	43.67	0.1801	0.180	1.20	0.00	90.00	90.00	4.37	0.018	39.30	0.162	Emulsified Asphalt
PA	Clinton	42035	2461022000	12.86	0.0531	0.053	38.0	25.1	15.48	0.0638	0.064	1.20	0.00	90.00	90.00	1.55	0.006	13.93	0.057	Emulsified Asphalt
PA	Columbia	42037	2461022000	22.12	0.0913	0.091	38.0	25.1	26.62	0.1098	0.110	1.20	0.00	90.00	90.00	2.66	0.011	23.95	0.099	Emulsified Asphalt
PA	Crawford	42039	2461022000	39.94	0.1648	0.165	38.0	25.1	48.06	0.1982	0.198	1.20	0.00	90.00	90.00	4.81	0.020	43.25	0.178	Emulsified Asphalt
PA	Cumberland	42041	2461022000	30.80	0.1270	0.127	38.0	25.1	37.05	0.1528	0.153	1.20	0.00	90.00	90.00	3.71	0.015	33.35	0.138	Emulsified Asphalt
PA	Dauphin	42043	2461022000	26.27	0.1084	0.108	38.0	25.1	31.60	0.1304	0.130	1.20	0.00	90.00	90.00	3.16	0.013	28.44	0.117	Emulsified Asphalt
PA	Delaware	42045	2461022000	26.85	0.1108	0.111	38.0	25.1	32.31	0.1333	0.133	1.20	0.00	90.00	90.00	3.23	0.013	29.08	0.120	Emulsified Asphalt
PA	Elk	42047	2461022000	12.71	0.0524	0.052	38.0	25.1	15.29	0.0631	0.063	1.20	0.00	90.00	90.00	1.53	0.006	13.76	0.057	Emulsified Asphalt
PA	Erie	42049	2461022000	34.22	0.1412	0.141	38.0	25.1	41.17	0.1698	0.170	1.20	0.00	90.00	90.00	4.12	0.017	37.05	0.153	Emulsified Asphalt
PA	Fayette	42051	2461022000	33.97	0.1401	0.140	38.0	25.1	40.87	0.1686	0.169	1.20	0.00	90.00	90.00	4.09	0.017	36.79	0.152	Emulsified Asphalt
PA	Forest	42053	2461022000	8.47	0.0349	0.035	38.0	25.1	10.19	0.0420	0.042	1.20	0.00	90.00	90.00	1.02	0.004	9.17	0.038	Emulsified Asphalt
PA	Franklin	42055	2461022000	27.51	0.1135	0.114	38.0	25.1	33.09	0.1365	0.137	1.20	0.00	90.00	90.00	3.31	0.014	29.78	0.123	Emulsified Asphalt
PA	Fulton	42057	2461022000	18.45	0.0761	0.076	38.0	25.1	22.20	0.0916	0.092	1.20	0.00	90.00	90.00	2.22	0.009	19.98	0.082	Emulsified Asphalt
PA	Greene	42059	2461022000	25.48	0.1051	0.105	38.0	25.1	30.65	0.1265	0.127	1.20	0.00	90.00	90.00	3.07	0.013	27.59	0.114	Emulsified Asphalt
PA	Huntingdon	42061	2461022000	26.63	0.1098	0.110	38.0	25.1	32.04	0.1322	0.132	1.20	0.00	90.00	90.00	3.20	0.013	28.83	0.119	Emulsified Asphalt
PA	Indiana	42063	2461022000	36.38	0.1501	0.150	38.0	25.1	43.77	0.1806	0.181	1.20	0.00	90.00	90.00	4.38	0.018	39.40	0.163	Emulsified Asphalt
PA	Jefferson	42065	2461022000	25.21	0.1040	0.104	38.0	25.1	30.33	0.1251	0.125	1.20	0.00	90.00	90.00	3.03	0.013	27.30	0.113	Emulsified Asphalt
PA	Juniata	42067	2461022000	15.23	0.0628	0.063	38.0	25.1	18.32	0.0756	0.076	1.20	0.00	90.00	90.00	1.83	0.008	16.49	0.068	Emulsified Asphalt
PA	Lackawanna	42069	2461022000	28.66	0.1182	0.118	38.0	25.1	34.48	0.1422	0.142	1.20	0.00	90.00	90.00	3.45	0.014	31.03	0.128	Emulsified Asphalt
PA	Lancaster	42071	2461022000	47.94	0.1978	0.198	38.0	25.1	57.68	0.2379	0.238	1.20	0.00	90.00	90.00	5.77	0.024	51.91	0.214	Emulsified Asphalt
PA	Lawrence	42073	2461022000	16.58	0.0684	0.068	38.0	25.1	19.95	0.0823	0.082	1.20	0.00	90.00	90.00	1.99	0.008	17.95	0.074	Emulsified Asphalt
PA	Lebanon	42075	2461022000	17.28	0.0713	0.071	38.0	25.1	20.79	0.0858	0.086	1.20	0.00	90.00	90.00	2.08	0.009	18.71	0.077	Emulsified Asphalt

ASPHALT PAVING				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Annual Control Factor	2009 BOTW Summer Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
PA	Lehigh	42077	2461022000	27.58	0.1137	0.114	38.0	25.1	33.18	0.1369	0.137	1.20	0.00	90.00	90.00	3.32	0.014	29.86	0.123	Emulsified Asphalt
PA	Luzerne	42079	2461022000	41.61	0.1716	0.172	38.0	25.1	50.06	0.2065	0.207	1.20	0.00	90.00	90.00	5.01	0.021	45.06	0.186	Emulsified Asphalt
PA	Lycoming	42081	2461022000	33.16	0.1368	0.137	38.0	25.1	39.90	0.1646	0.165	1.20	0.00	90.00	90.00	3.99	0.016	35.91	0.148	Emulsified Asphalt
PA	McKean	42083	2461022000	16.40	0.0677	0.068	38.0	25.1	19.73	0.0814	0.081	1.20	0.00	90.00	90.00	1.97	0.008	17.76	0.073	Emulsified Asphalt
PA	Mercer	42085	2461022000	34.56	0.1426	0.143	38.0	25.1	41.58	0.1715	0.172	1.20	0.00	90.00	90.00	4.16	0.017	37.42	0.154	Emulsified Asphalt
PA	Mifflin	42087	2461022000	10.43	0.0430	0.043	38.0	25.1	12.55	0.0518	0.052	1.20	0.00	90.00	90.00	1.25	0.005	11.29	0.047	Emulsified Asphalt
PA	Monroe	42089	2461022000	24.92	0.1028	0.103	38.0	25.1	29.98	0.1237	0.124	1.20	0.00	90.00	90.00	3.00	0.012	26.98	0.111	Emulsified Asphalt
PA	Montgomery	42091	2461022000	42.65	0.1759	0.176	38.0	25.1	51.31	0.2116	0.212	1.20	0.00	90.00	90.00	5.13	0.021	46.18	0.190	Emulsified Asphalt
PA	Montour	42093	2461022000	7.82	0.0322	0.032	38.0	25.1	9.41	0.0388	0.039	1.20	0.00	90.00	90.00	0.94	0.004	8.46	0.035	Emulsified Asphalt
PA	Northampton	42095	2461022000	22.87	0.0943	0.094	38.0	25.1	27.51	0.1135	0.114	1.20	0.00	90.00	90.00	2.75	0.011	24.76	0.102	Emulsified Asphalt
PA	Northumberland	42097	2461022000	24.74	0.1020	0.102	38.0	25.1	29.76	0.1228	0.123	1.20	0.00	90.00	90.00	2.98	0.012	26.78	0.111	Emulsified Asphalt
PA	Perry	42099	2461022000	18.74	0.0773	0.077	38.0	25.1	22.55	0.0930	0.093	1.20	0.00	90.00	90.00	2.26	0.009	20.30	0.084	Emulsified Asphalt
PA	Philadelphia	42101	2461022000	25.75	0.1062	0.106	38.0	25.1	30.98	0.1278	0.128	1.20	0.00	90.00	90.00	3.10	0.013	27.88	0.115	Emulsified Asphalt
PA	Pike	42103	2461022000	16.96	0.0700	0.070	38.0	25.1	20.41	0.0842	0.084	1.20	0.00	90.00	90.00	2.04	0.008	18.37	0.076	Emulsified Asphalt
PA	Potter	42105	2461022000	17.93	0.0740	0.074	38.0	25.1	21.58	0.0890	0.089	1.20	0.00	90.00	90.00	2.16	0.009	19.42	0.080	Emulsified Asphalt
PA	Schuylkill	42107	2461022000	30.53	0.1259	0.126	38.0	25.1	36.73	0.1515	0.152	1.20	0.00	90.00	90.00	3.67	0.015	33.05	0.136	Emulsified Asphalt
PA	Snyder	42109	2461022000	14.26	0.0588	0.059	38.0	25.1	17.16	0.0708	0.071	1.20	0.00	90.00	90.00	1.72	0.007	15.44	0.064	Emulsified Asphalt
PA	Somerset	42111	2461022000	43.32	0.1787	0.179	38.0	25.1	52.12	0.2150	0.215	1.20	0.00	90.00	90.00	5.21	0.022	46.91	0.194	Emulsified Asphalt
PA	Sullivan	42113	2461022000	10.34	0.0427	0.043	38.0	25.1	12.44	0.0513	0.051	1.20	0.00	90.00	90.00	1.24	0.005	11.20	0.046	Emulsified Asphalt
PA	Susquehanna	42115	2461022000	33.88	0.1398	0.140	38.0	25.1	40.76	0.1682	0.168	1.20	0.00	90.00	90.00	4.08	0.017	36.69	0.151	Emulsified Asphalt
PA	Tioga	42117	2461022000	27.35	0.1128	0.113	38.0	25.1	32.90	0.1357	0.136	1.20	0.00	90.00	90.00	3.29	0.014	29.61	0.122	Emulsified Asphalt
PA	Union	42119	2461022000	13.13	0.0542	0.054	38.0	25.1	15.80	0.0652	0.065	1.20	0.00	90.00	90.00	1.58	0.007	14.22	0.059	Emulsified Asphalt
PA	Venango	42121	2461022000	23.88	0.0985	0.099	38.0	25.1	28.73	0.1185	0.119	1.20	0.00	90.00	90.00	2.87	0.012	25.86	0.107	Emulsified Asphalt
PA	Warren	42123	2461022000	23.43	0.0966	0.097	38.0	25.1	28.19	0.1163	0.116	1.20	0.00	90.00	90.00	2.82	0.012	25.37	0.105	Emulsified Asphalt
PA	Washington	42125	2461022000	51.50	0.2124	0.212	38.0	25.1	61.96	0.2556	0.256	1.20	0.00	90.00	90.00	6.20	0.026	55.76	0.230	Emulsified Asphalt
PA	Wayne	42127	2461022000	31.11	0.1283	0.128	38.0	25.1	37.43	0.1544	0.154	1.20	0.00	90.00	90.00	3.74	0.015	33.69	0.139	Emulsified Asphalt
PA	Westmoreland	42129	2461022000	59.43	0.2452	0.245	38.0	25.1	71.50	0.2949	0.295	1.20	0.00	90.00	90.00	7.15	0.029	64.35	0.265	Emulsified Asphalt
PA	Wyoming	42131	2461022000	16.11	0.0664	0.066	38.0	25.1	19.38	0.0799	0.080	1.20	0.00	90.00	90.00	1.94	0.008	17.44	0.072	Emulsified Asphalt
PA	York	42133	2461022000	54.56	0.2251	0.225	38.0	25.1	65.65	0.2708	0.271	1.20	0.00	90.00	90.00	6.56	0.027	59.08	0.244	Emulsified Asphalt
RI	Bristol	44001	2461022000	1.97	0.0485	0.049	25.0	25.1	2.41	0.0594	0.059	1.23	0.00	90.00	90.00	0.24	0.006	2.17	0.053	Emulsified Asphalt
RI	Kent	44003	2461022000	6.31	0.1550	0.155	25.0	25.1	7.73	0.1899	0.190	1.23	0.00	90.00	90.00	0.77	0.019	6.96	0.171	Emulsified Asphalt
RI	Newport	44005	2461022000	3.15	0.0775	0.078	0.0	25.1	3.86	0.0950	0.095	1.23	0.00	90.00	90.00	0.39	0.009	3.47	0.085	Emulsified Asphalt
RI	Providence	44007	2461022000	23.26	0.5718	0.572	25.0	25.1	28.50	0.7006	0.701	1.23	0.00	90.00	90.00	2.85	0.070	25.65	0.631	Emulsified Asphalt
RI	Washington	44009	2461022000	4.73	0.1163	0.116	25.0	25.1	5.80	0.1425	0.142	1.23	0.00	90.00	90.00	0.58	0.014	5.22	0.128	Emulsified Asphalt
VA	Arlington	51013	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Fairfax	51059	2461022000	0.24	Missing	0.001	25.0	25.1	0.30	Missing	0.001	0.00	0.00	90.00	90.00	0.03	0.000	0.27	0.001	Emulsified Asphalt
VA	Loudoun	51107	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Prince William	51153	2461022000	0.02	Missing	0.000	25.0	25.1	0.02	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.02	0.000	Emulsified Asphalt
VA	Stafford	51179	2461022000	0.16	Missing	0.000	25.0	25.1	0.19	Missing	0.001	0.00	0.00	90.00	90.00	0.02	0.000	0.17	0.000	Emulsified Asphalt
VA	Alexandria	51510	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Fairfax City	51600	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Falls Chruch	51610	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Manassas City	51683	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
VA	Manassas Park City	51685	2461022000	0.00	Missing	0.000	25.0	25.1	0.00	Missing	0.000	0.00	0.00	90.00	90.00	0.00	0.000	0.00	0.000	Emulsified Asphalt
			MANEVU	19,280.02		54.10			22,815.27		61.86					12,083.52	4.06	10,731.75	57.81	

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
G	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-40-020-xxx

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental Control Factor (percent reduction due to OTC 2006 Control Measure)
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

Adhesives and Sealants

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
CT	Fairfield	09001	2440020000	441.56	Missing	1.232	Missing	25.4	606.23	Missing	1.692	1.37	0.00	64.40	215.82	0.602	390.41	1.090	Adhesive (Industrial) Application
CT	Hartford	09003	2440020000	423.67	Missing	1.183	Missing	25.4	581.66	Missing	1.624	1.37	0.00	64.40	207.07	0.578	374.59	1.046	Adhesive (Industrial) Application
CT	Litchfield	09005	2440020000	146.19	Missing	0.408	Missing	25.4	200.71	Missing	0.560	1.37	0.00	64.40	71.45	0.199	129.26	0.361	Adhesive (Industrial) Application
CT	Middlesex	09007	2440020000	117.52	Missing	0.328	Missing	25.4	161.34	Missing	0.450	1.37	0.00	64.40	57.44	0.160	103.90	0.290	Adhesive (Industrial) Application
CT	New Haven	09009	2440020000	287.40	Missing	0.802	Missing	25.4	394.58	Missing	1.101	1.37	0.00	64.40	140.47	0.392	254.11	0.709	Adhesive (Industrial) Application
CT	New London	09011	2440020000	122.62	Missing	0.342	Missing	25.4	168.35	Missing	0.470	1.37	0.00	64.40	59.93	0.167	108.42	0.303	Adhesive (Industrial) Application
CT	Tolland	09013	2440020000	41.49	Missing	0.116	Missing	25.4	56.97	Missing	0.159	1.37	0.00	64.40	20.28	0.057	36.69	0.102	Adhesive (Industrial) Application
CT	Windham	09015	2440020000	133.65	Missing	0.373	Missing	25.4	183.49	Missing	0.512	1.37	0.00	64.40	65.32	0.182	118.17	0.330	Adhesive (Industrial) Application
DE	Kent	10001	2440020000	101.78	Missing	0.284	Missing	25.4	123.09	Missing	0.344	1.21	0.00	64.40	43.82	0.122	79.27	0.221	Adhesive (Industrial) Application
DE	New Castle	10003	2440020000	316.69	Missing	0.884	Missing	25.4	382.99	Missing	1.069	1.21	0.00	64.40	136.35	0.381	246.65	0.688	Adhesive (Industrial) Application
DE	Sussex	10005	2440020000	54.36	Missing	0.152	Missing	25.4	65.75	Missing	0.184	1.21	0.00	64.40	23.41	0.065	42.34	0.118	Adhesive (Industrial) Application
DC	Washington	11001	2440020000	62.88	Missing	0.176	Missing	25.4	70.55	Missing	0.197	1.12	0.00	64.40	25.12	0.070	45.43	0.127	Adhesive (Industrial) Application
ME	Androscoggin	23001	2440020000	129.97	Missing	0.357	25.0	25.4	166.63	Missing	0.458	1.28	0.00	64.40	59.32	0.163	107.31	0.295	Adhesive (Industrial) Application
ME	Aroostook	23003	2440020000	67.05	Missing	0.184	25.0	25.4	85.96	Missing	0.236	1.28	0.00	64.40	30.60	0.084	55.36	0.152	Adhesive (Industrial) Application
ME	Cumberland	23005	2440020000	191.92	Missing	0.527	25.0	25.4	246.05	Missing	0.676	1.28	0.00	64.40	87.59	0.241	158.45	0.435	Adhesive (Industrial) Application
ME	Franklin	23007	2440020000	55.94	Missing	0.154	25.0	25.4	71.72	Missing	0.197	1.28	0.00	64.40	25.53	0.070	46.19	0.127	Adhesive (Industrial) Application
ME	Hancock	23009	2440020000	31.30	Missing	0.086	25.0	25.4	40.13	Missing	0.110	1.28	0.00	64.40	14.29	0.039	25.84	0.071	Adhesive (Industrial) Application
ME	Kennebec	23011	2440020000	83.37	Missing	0.229	25.0	25.4	106.88	Missing	0.294	1.28	0.00	64.40	38.05	0.105	68.83	0.189	Adhesive (Industrial) Application
ME	Knox	23013	2440020000	31.03	Missing	0.085	25.0	25.4	39.78	Missing	0.109	1.28	0.00	64.40	14.16	0.039	25.62	0.070	Adhesive (Industrial) Application
ME	Lincoln	23015	2440020000	9.66	Missing	0.027	25.0	25.4	12.38	Missing	0.034	1.28	0.00	64.40	4.41	0.012	7.98	0.022	Adhesive (Industrial) Application
ME	Oxford	23017	2440020000	53.79	Missing	0.148	25.0	25.4	68.96	Missing	0.189	1.28	0.00	64.40	24.55	0.067	44.41	0.122	Adhesive (Industrial) Application
ME	Penobscot	23019	2440020000	150.42	Missing	0.413	25.0	25.4	192.84	Missing	0.530	1.28	0.00	64.40	68.65	0.189	124.19	0.341	Adhesive (Industrial) Application
ME	Piscataquis	23021	2440020000	29.21	Missing	0.080	25.0	25.4	37.45	Missing	0.103	1.28	0.00	64.40	13.33	0.037	24.12	0.066	Adhesive (Industrial) Application
ME	Sagadahoc	23023	2440020000	55.03	Missing	0.151	25.0	25.4	70.55	Missing	0.194	1.28	0.00	64.40	25.12	0.069	45.43	0.125	Adhesive (Industrial) Application
ME	Somerset	23025	2440020000	59.00	Missing	0.162	25.0	25.4	75.64	Missing	0.208	1.28	0.00	64.40	26.93	0.074	48.71	0.134	Adhesive (Industrial) Application
ME	Waldo	23027	2440020000	13.53	Missing	0.037	25.0	25.4	17.35	Missing	0.048	1.28	0.00	64.40	6.18	0.017	11.17	0.031	Adhesive (Industrial) Application
ME	Washington	23029	2440020000	21.53	Missing	0.059	25.0	25.4	27.60	Missing	0.076	1.28	0.00	64.40	9.83	0.027	17.78	0.049	Adhesive (Industrial) Application
ME	York	23031	2440020000	135.77	Missing	0.373	25.0	25.4	174.06	Missing	0.478	1.28	0.00	64.40	61.97	0.170	112.10	0.308	Adhesive (Industrial) Application
MD	Allegany	24001	2440020000	39.33	Missing	0.110	Missing	25.4	51.32	Missing	0.143	1.30	0.00	64.40	18.27	0.051	33.05	0.092	Adhesive (Industrial) Application
MD	Anne Arundel	24003	2440020000	201.72	Missing	0.563	Missing	25.4	263.25	Missing	0.735	1.30	0.00	64.40	93.72	0.262	169.53	0.473	Adhesive (Industrial) Application
MD	Baltimore	24005	2440020000	559.49	Missing	1.562	Missing	25.4	730.12	Missing	2.038	1.30	0.00	64.40	259.92	0.726	470.20	1.312	Adhesive (Industrial) Application
MD	Calvert	24009	2440020000	13.12	Missing	0.037	Missing	25.4	17.13	Missing	0.048	1.30	0.00	64.40	6.10	0.017	11.03	0.031	Adhesive (Industrial) Application
MD	Caroline	24011	2440020000	122.81	Missing	0.343	Missing	25.4	160.26	Missing	0.447	1.30	0.00	64.40	57.05	0.159	103.21	0.288	Adhesive (Industrial) Application
MD	Carroll	24013	2440020000	69.55	Missing	0.194	Missing	25.4	90.76	Missing	0.253	1.30	0.00	64.40	32.31	0.090	58.45	0.163	Adhesive (Industrial) Application
MD	Cecil	24015	2440020000	45.36	Missing	0.127	Missing	25.4	59.19	Missing	0.165	1.30	0.00	64.40	21.07	0.059	38.12	0.106	Adhesive (Industrial) Application
MD	Charles	24017	2440020000	56.88	Missing	0.159	Missing	25.4	74.22	Missing	0.207	1.30	0.00	64.40	26.42	0.074	47.80	0.133	Adhesive (Industrial) Application
MD	Dorchester	24019	2440020000	19.16	Missing	0.053	Missing	25.4	25.00	Missing	0.070	1.30	0.00	64.40	8.90	0.025	16.10	0.045	Adhesive (Industrial) Application
MD	Frederick	24021	2440020000	86.05	Missing	0.240	Missing	25.4	112.29	Missing	0.313	1.30	0.00	64.40	39.98	0.112	72.32	0.202	Adhesive (Industrial) Application
MD	Garrett	24023	2440020000	17.81	Missing	0.050	Missing	25.4	23.24	Missing	0.065	1.30	0.00	64.40	8.27	0.023	14.96	0.042	Adhesive (Industrial) Application

Adhesives and Sealants				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
MD	Harford	24025	2440020000	80.41	Missing	0.224	Missing	25.4	104.93	Missing	0.293	1.30	0.00	64.40	37.36	0.104	67.58	0.189	Adhesive (Industrial) Application
MD	Howard	24027	2440020000	75.82	Missing	0.212	Missing	25.4	98.94	Missing	0.276	1.30	0.00	64.40	35.22	0.098	63.72	0.178	Adhesive (Industrial) Application
MD	Kent	24029	2440020000	5.29	Missing	0.015	Missing	25.4	6.91	Missing	0.019	1.30	0.00	64.40	2.46	0.007	4.45	0.012	Adhesive (Industrial) Application
MD	Montgomery	24031	2440020000	187.47	Missing	0.523	Missing	25.4	244.64	Missing	0.683	1.30	0.00	64.40	87.09	0.243	157.55	0.440	Adhesive (Industrial) Application
MD	Prince Georges	24033	2440020000	242.06	Missing	0.676	Missing	25.4	315.89	Missing	0.882	1.30	0.00	64.40	112.46	0.314	203.43	0.568	Adhesive (Industrial) Application
MD	Queen Annes	24035	2440020000	8.99	Missing	0.025	Missing	25.4	11.73	Missing	0.033	1.30	0.00	64.40	4.18	0.012	7.55	0.021	Adhesive (Industrial) Application
MD	St. Marys	24037	2440020000	21.71	Missing	0.061	Missing	25.4	28.33	Missing	0.079	1.30	0.00	64.40	10.09	0.028	18.25	0.051	Adhesive (Industrial) Application
MD	Somerset	24039	2440020000	1.48	Missing	0.004	Missing	25.4	1.93	Missing	0.005	1.30	0.00	64.40	0.69	0.002	1.24	0.003	Adhesive (Industrial) Application
MD	Talbot	24041	2440020000	31.19	Missing	0.087	Missing	25.4	40.71	Missing	0.114	1.30	0.00	64.40	14.49	0.040	26.22	0.073	Adhesive (Industrial) Application
MD	Washington	24043	2440020000	111.08	Missing	0.310	Missing	25.4	144.96	Missing	0.405	1.30	0.00	64.40	51.61	0.144	93.35	0.261	Adhesive (Industrial) Application
MD	Wicomico	24045	2440020000	84.70	Missing	0.236	Missing	25.4	110.53	Missing	0.309	1.30	0.00	64.40	39.35	0.110	71.18	0.199	Adhesive (Industrial) Application
MD	Worcester	24047	2440020000	17.48	Missing	0.049	Missing	25.4	22.81	Missing	0.064	1.30	0.00	64.40	8.12	0.023	14.69	0.041	Adhesive (Industrial) Application
MD	Baltimore City	24510	2440020000	330.13	Missing	0.921	Missing	25.4	430.81	Missing	1.202	1.30	0.00	64.40	153.37	0.428	277.44	0.774	Adhesive (Industrial) Application
MA	Barnstable	25001	2440020000	125.19	0.3430	0.343	Missing	25.4	172.67	0.4731	0.473	1.38	0.00	64.40	61.47	0.168	111.20	0.305	Adhesive (Industrial) Application
MA	Berkshire	25003	2440020000	73.32	0.2009	0.201	Missing	25.4	101.13	0.2771	0.277	1.38	0.00	64.40	36.00	0.099	65.13	0.178	Adhesive (Industrial) Application
MA	Bristol	25005	2440020000	299.12	0.8195	0.820	Missing	25.4	412.58	1.1304	1.130	1.38	0.00	64.40	146.88	0.402	265.70	0.728	Adhesive (Industrial) Application
MA	Dukes	25007	2440020000	8.48	0.0232	0.023	Missing	25.4	11.70	0.0320	0.032	1.38	0.00	64.40	4.16	0.011	7.53	0.021	Adhesive (Industrial) Application
MA	Essex	25009	2440020000	405.09	1.1098	1.110	Missing	25.4	558.75	1.5308	1.531	1.38	0.00	64.40	198.91	0.545	359.83	0.986	Adhesive (Industrial) Application
MA	Franklin	25011	2440020000	39.57	0.1084	0.108	Missing	25.4	54.58	0.1495	0.150	1.38	0.00	64.40	19.43	0.053	35.15	0.096	Adhesive (Industrial) Application
MA	Hampden	25013	2440020000	252.79	0.6926	0.693	Missing	25.4	348.68	0.9553	0.955	1.38	0.00	64.40	124.13	0.340	224.55	0.615	Adhesive (Industrial) Application
MA	Hampshire	25015	2440020000	83.94	0.2300	0.230	Missing	25.4	115.78	0.3172	0.317	1.38	0.00	64.40	41.22	0.113	74.56	0.204	Adhesive (Industrial) Application
MA	Middlesex	25017	2440020000	807.78	2.2131	2.213	Missing	25.4	1,114.17	3.0525	3.053	1.38	0.00	64.40	396.64	1.087	717.52	1.966	Adhesive (Industrial) Application
MA	Nantucket	25019	2440020000	5.43	0.0149	0.015	Missing	25.4	7.49	0.0205	0.021	1.38	0.00	64.40	2.67	0.007	4.83	0.013	Adhesive (Industrial) Application
MA	Norfolk	25021	2440020000	359.54	0.9850	0.985	Missing	25.4	495.91	1.3587	1.359	1.38	0.00	64.40	176.55	0.484	319.37	0.875	Adhesive (Industrial) Application
MA	Plymouth	25023	2440020000	266.54	0.7302	0.730	Missing	25.4	367.64	1.0072	1.007	1.38	0.00	64.40	130.88	0.359	236.76	0.649	Adhesive (Industrial) Application
MA	Suffolk	25025	2440020000	376.85	1.0325	1.033	Missing	25.4	519.79	1.4241	1.424	1.38	0.00	64.40	185.05	0.507	334.75	0.917	Adhesive (Industrial) Application
MA	Worcester	25027	2440020000	423.25	1.1596	1.160	Missing	25.4	583.79	1.5994	1.599	1.38	0.00	64.40	207.83	0.569	375.96	1.030	Adhesive (Industrial) Application
NH	Belknap	33001	2440020000	35.01	Missing	0.096	25.0	25.4	51.67	Missing	0.142	1.48	0.00	64.40	18.39	0.051	33.28	0.091	Adhesive (Industrial) Application
NH	Carroll	33003	2440020000	9.32	Missing	0.026	25.0	25.4	13.76	Missing	0.038	1.48	0.00	64.40	4.90	0.013	8.86	0.024	Adhesive (Industrial) Application
NH	Cheshire	33005	2440020000	58.91	Missing	0.162	25.0	25.4	86.94	Missing	0.239	1.48	0.00	64.40	30.95	0.085	55.99	0.154	Adhesive (Industrial) Application
NH	Coos	33007	2440020000	36.45	Missing	0.100	25.0	25.4	53.80	Missing	0.148	1.48	0.00	64.40	19.15	0.053	34.64	0.095	Adhesive (Industrial) Application
NH	Grafton	33009	2440020000	51.26	Missing	0.141	25.0	25.4	75.65	Missing	0.208	1.48	0.00	64.40	26.93	0.074	48.72	0.134	Adhesive (Industrial) Application
NH	Hillsborough	33011	2440020000	303.75	Missing	0.834	25.0	25.4	448.30	Missing	1.232	1.48	0.00	64.40	159.59	0.438	288.70	0.793	Adhesive (Industrial) Application
NH	Merrimack	33013	2440020000	83.67	Missing	0.230	25.0	25.4	123.49	Missing	0.339	1.48	0.00	64.40	43.96	0.121	79.53	0.218	Adhesive (Industrial) Application
NH	Rockingham	33015	2440020000	115.32	Missing	0.317	25.0	25.4	170.20	Missing	0.468	1.48	0.00	64.40	60.59	0.166	109.61	0.301	Adhesive (Industrial) Application
NH	Strafford	33017	2440020000	11.41	Missing	0.031	25.0	25.4	16.84	Missing	0.046	1.48	0.00	64.40	5.99	0.016	10.84	0.030	Adhesive (Industrial) Application
NH	Sullivan	33019	2440020000	35.22	Missing	0.097	25.0	25.4	51.98	Missing	0.143	1.48	0.00	64.40	18.50	0.051	33.48	0.092	Adhesive (Industrial) Application
NJ	Atlantic	34001	2440020000	138.73	0.4186	0.419	27.0	25.4	140.26	0.4232	0.423	1.01	0.00	64.40	49.93	0.151	90.33	0.273	Adhesive (Industrial) Application
NJ	Bergen	34003	2440020000	488.92	1.4751	1.475	27.0	25.4	494.31	1.4913	1.491	1.01	0.00	64.40	175.97	0.531	318.33	0.960	Adhesive (Industrial) Application
NJ	Burlington	34005	2440020000	236.25	0.7128	0.713	27.0	25.4	238.86	0.7206	0.721	1.01	0.00	64.40	85.03	0.257	153.82	0.464	Adhesive (Industrial) Application
NJ	Camden	34007	2440020000	280.54	0.8464	0.846	27.0	25.4	283.63	0.8557	0.856	1.01	0.00	64.40	100.97	0.305	182.66	0.551	Adhesive (Industrial) Application
NJ	Cape May	34009	2440020000	58.49	0.1765	0.177	27.0	25.4	59.13	0.1784	0.178	1.01	0.00	64.40	21.05	0.064	38.08	0.115	Adhesive (Industrial) Application
NJ	Cumberland	34011	2440020000	80.65	0.2433	0.243	27.0	25.4	81.54	0.2460	0.246	1.01	0.00	64.40	29.03	0.088	52.51	0.158	Adhesive (Industrial) Application
NJ	Essex	34013	2440020000	439.06	1.3247	1.325	27.0	25.4	443.90	1.3393	1.339	1.01	0.00	64.40	158.03	0.477	285.87	0.863	Adhesive (Industrial) Application
NJ	Gloucester	34015	2440020000	142.45	0.4298	0.430	27.0	25.4	144.02	0.4345	0.435	1.01	0.00	64.40	51.27	0.155	92.75	0.280	Adhesive (Industrial) Application
NJ	Hudson	34017	2440020000	339.55	1.0244	1.024	27.0	25.4	343.29	1.0357	1.036	1.01	0.00	64.40	122.21	0.369	221.08	0.667	Adhesive (Industrial) Application
NJ	Hunterdon	34019	2440020000	68.67	0.2072	0.207	27.0	25.4	69.43	0.2095	0.210	1.01	0.00	64.40	24.72	0.075	44.71	0.135	Adhesive (Industrial) Application
NJ	Mercer	34021	2440020000	195.41	0.5896	0.590	27.0	25.4	197.57	0.5961	0.596	1.01	0.00	64.40	70.33	0.212	127.23	0.384	Adhesive (Industrial) Application
NJ	Middlesex	34023	2440020000	418.98	1.2641	1.264	27.0	25.4	423.59	1.2780	1.278	1.01	0.00	64.40	150.80	0.455	272.79	0.823	Adhesive (Industrial) Application
NJ	Monmouth	34025	2440020000	347.60	1.0487	1.049	27.0	25.4	351.44	1.0603	1.060	1.01	0.00	64.40	125.11	0.377	226.33	0.683	Adhesive (Industrial) Application
NJ	Morris	34027	2440020000	271.72	0.8198	0.820	27.0	25.4	274.72	0.8288	0.829	1.01	0.00	64.40	97.80	0.295	176.92	0.534	Adhesive (Industrial) Application
NJ	Ocean	34029	2440020000	294.94	0.8899	0.890	27.0	25.4	298.20	0.8997	0.900	1.01	0.00	64.40	106.16	0.320	192.04	0.579	Adhesive (Industrial) Application
NJ	Passaic	34031	2440020000	271.67	0.8196	0.820	27.0	25.4	274.67	0.8287	0.829	1.01	0.00	64.40	97.78	0.295	176.89	0.534	Adhesive (Industrial) Application
NJ	Salem	34033	2440020000	36.10	0.1089	0.109	27.0	25.4	36.50	0.1101	0.110	1.01	0.00	64.40	12.99	0.039	23.51	0.071	Adhesive (Industrial) Application
NJ	Somerset	34035	2440020000	165.99	0.5008	0.501	27.0	25.4	167.82	0.5063	0.506	1.01	0.00	64.40	59.75	0.180	108.08	0.326	Adhesive (Industrial) Application
NJ	Sussex	34037	2440020000	80.25	0.2421	0.242	27.0	25.4	81.14	0.2448	0.245	1.01	0.00	64.40	28.89	0.087	52.25	0.158	Adhesive (Industrial) Application
NJ	Union	34039	2440020000	288.40	0.8701	0.870	27.0	25.4	291.58	0.8797	0.880	1.01	0.00	64.40	103.80	0.313	187.78	0.567	Adhesive (Industrial) Application
NJ	Warren	34041	2440020000	57.30	0.1729	0.173	27.0	25.4	57.94	0.1748	0.175	1.01	0.00	64.40	20.63	0.062	37.31	0.113	Adhesive (Industrial) Application
NY	Albany	36001	2440020000	109.78	Missing	0.302	25.0	25.4	148.89	Missing	0.409	1.36	0.00	64.40	53.00	0.146	95.88	0.263	Adhesive (Industrial) Application

Adhesives and Sealants				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
NY	Allegany	36003	2440020000	25.12	Missing	0.069	25.0	25.4	34.07	Missing	0.094	1.36	0.00	64.40	12.13	0.033	21.94	0.060	Adhesive (Industrial) Application
NY	Bronx	36005	2440020000	154.90	Missing	0.426	25.0	25.4	210.08	Missing	0.577	1.36	0.00	64.40	74.79	0.205	135.29	0.372	Adhesive (Industrial) Application
NY	Broome	36007	2440020000	222.89	Missing	0.612	25.0	25.4	302.29	Missing	0.830	1.36	0.00	64.40	107.61	0.296	194.67	0.535	Adhesive (Industrial) Application
NY	Cattaraugus	36009	2440020000	59.64	Missing	0.164	25.0	25.4	80.88	Missing	0.222	1.36	0.00	64.40	28.79	0.079	52.09	0.143	Adhesive (Industrial) Application
NY	Cayuga	36011	2440020000	39.97	Missing	0.110	25.0	25.4	54.21	Missing	0.149	1.36	0.00	64.40	19.30	0.053	34.91	0.096	Adhesive (Industrial) Application
NY	Chautauqua	36013	2440020000	114.07	Missing	0.313	25.0	25.4	154.70	Missing	0.425	1.36	0.00	64.40	55.07	0.151	99.63	0.274	Adhesive (Industrial) Application
NY	Chemung	36015	2440020000	59.20	Missing	0.163	25.0	25.4	80.29	Missing	0.221	1.36	0.00	64.40	28.58	0.079	51.71	0.142	Adhesive (Industrial) Application
NY	Chenango	36017	2440020000	46.58	Missing	0.128	25.0	25.4	63.17	Missing	0.174	1.36	0.00	64.40	22.49	0.062	40.68	0.112	Adhesive (Industrial) Application
NY	Clinton	36019	2440020000	29.48	Missing	0.081	25.0	25.4	39.98	Missing	0.110	1.36	0.00	64.40	14.23	0.039	25.75	0.071	Adhesive (Industrial) Application
NY	Columbia	36021	2440020000	21.03	Missing	0.058	25.0	25.4	28.52	Missing	0.078	1.36	0.00	64.40	10.15	0.028	18.37	0.050	Adhesive (Industrial) Application
NY	Cortland	36023	2440020000	42.42	Missing	0.117	25.0	25.4	57.53	Missing	0.158	1.36	0.00	64.40	20.48	0.056	37.05	0.102	Adhesive (Industrial) Application
NY	Delaware	36025	2440020000	40.17	Missing	0.110	25.0	25.4	54.48	Missing	0.150	1.36	0.00	64.40	19.39	0.053	35.08	0.096	Adhesive (Industrial) Application
NY	Dutchess	36027	2440020000	221.05	Missing	0.607	25.0	25.4	299.79	Missing	0.824	1.36	0.00	64.40	106.73	0.293	193.07	0.530	Adhesive (Industrial) Application
NY	Erie	36029	2440020000	607.52	Missing	1.669	25.0	25.4	823.93	Missing	2.264	1.36	0.00	64.40	293.32	0.806	530.61	1.458	Adhesive (Industrial) Application
NY	Essex	36031	2440020000	11.54	Missing	0.032	25.0	25.4	15.65	Missing	0.043	1.36	0.00	64.40	5.57	0.015	10.08	0.028	Adhesive (Industrial) Application
NY	Franklin	36033	2440020000	9.97	Missing	0.027	25.0	25.4	13.52	Missing	0.037	1.36	0.00	64.40	4.81	0.013	8.71	0.024	Adhesive (Industrial) Application
NY	Fulton	36035	2440020000	44.50	Missing	0.122	25.0	25.4	60.35	Missing	0.166	1.36	0.00	64.40	21.49	0.059	38.87	0.107	Adhesive (Industrial) Application
NY	Genesee	36037	2440020000	36.57	Missing	0.100	25.0	25.4	49.60	Missing	0.136	1.36	0.00	64.40	17.66	0.049	31.94	0.088	Adhesive (Industrial) Application
NY	Greene	36039	2440020000	8.53	Missing	0.023	25.0	25.4	11.57	Missing	0.032	1.36	0.00	64.40	4.12	0.011	7.45	0.020	Adhesive (Industrial) Application
NY	Hamilton	36041	2440020000	0.88	Missing	0.002	25.0	25.4	1.19	Missing	0.003	1.36	0.00	64.40	0.42	0.001	0.77	0.002	Adhesive (Industrial) Application
NY	Herkimer	36043	2440020000	38.29	Missing	0.105	25.0	25.4	51.93	Missing	0.143	1.36	0.00	64.40	18.49	0.051	33.44	0.092	Adhesive (Industrial) Application
NY	Jefferson	36045	2440020000	38.41	Missing	0.106	25.0	25.4	52.09	Missing	0.143	1.36	0.00	64.40	18.54	0.051	33.55	0.092	Adhesive (Industrial) Application
NY	Kings	36047	2440020000	503.38	Missing	1.383	25.0	25.4	682.69	Missing	1.876	1.36	0.00	64.40	243.04	0.668	439.65	1.208	Adhesive (Industrial) Application
NY	Lewis	36049	2440020000	14.14	Missing	0.039	25.0	25.4	19.18	Missing	0.053	1.36	0.00	64.40	6.83	0.019	12.35	0.034	Adhesive (Industrial) Application
NY	Livingston	36051	2440020000	24.71	Missing	0.068	25.0	25.4	33.51	Missing	0.092	1.36	0.00	64.40	11.93	0.033	21.58	0.059	Adhesive (Industrial) Application
NY	Madison	36053	2440020000	19.74	Missing	0.054	25.0	25.4	26.77	Missing	0.074	1.36	0.00	64.40	9.53	0.026	17.24	0.047	Adhesive (Industrial) Application
NY	Monroe	36055	2440020000	854.33	Missing	2.347	25.0	25.4	1,158.66	Missing	3.183	1.36	0.00	64.40	412.48	1.133	746.17	2.050	Adhesive (Industrial) Application
NY	Montgomery	36057	2440020000	48.83	Missing	0.134	25.0	25.4	66.22	Missing	0.182	1.36	0.00	64.40	23.58	0.065	42.65	0.117	Adhesive (Industrial) Application
NY	Nassau	36059	2440020000	594.06	Missing	1.632	25.0	25.4	805.67	Missing	2.213	1.36	0.00	64.40	286.82	0.788	518.85	1.425	Adhesive (Industrial) Application
NY	New York	36061	2440020000	1,548.38	Missing	4.254	25.0	25.4	2,099.94	Missing	5.769	1.36	0.00	64.40	747.58	2.054	1352.36	3.715	Adhesive (Industrial) Application
NY	Niagara	36063	2440020000	170.91	Missing	0.470	25.0	25.4	231.79	Missing	0.637	1.36	0.00	64.40	82.52	0.227	149.27	0.410	Adhesive (Industrial) Application
NY	Oneida	36065	2440020000	144.35	Missing	0.397	25.0	25.4	195.77	Missing	0.538	1.36	0.00	64.40	69.69	0.191	126.08	0.346	Adhesive (Industrial) Application
NY	Onondaga	36067	2440020000	331.16	Missing	0.910	25.0	25.4	449.12	Missing	1.234	1.36	0.00	64.40	159.89	0.439	289.24	0.795	Adhesive (Industrial) Application
NY	Ontario	36069	2440020000	53.67	Missing	0.147	25.0	25.4	72.79	Missing	0.200	1.36	0.00	64.40	25.91	0.071	46.88	0.129	Adhesive (Industrial) Application
NY	Orange	36071	2440020000	97.78	Missing	0.269	25.0	25.4	132.61	Missing	0.364	1.36	0.00	64.40	47.21	0.130	85.40	0.235	Adhesive (Industrial) Application
NY	Orleans	36073	2440020000	21.03	Missing	0.058	25.0	25.4	28.52	Missing	0.078	1.36	0.00	64.40	10.15	0.028	18.37	0.050	Adhesive (Industrial) Application
NY	Oswego	36075	2440020000	61.52	Missing	0.169	25.0	25.4	83.43	Missing	0.229	1.36	0.00	64.40	29.70	0.082	53.73	0.148	Adhesive (Industrial) Application
NY	Otsego	36077	2440020000	16.18	Missing	0.044	25.0	25.4	21.94	Missing	0.060	1.36	0.00	64.40	7.81	0.021	14.13	0.039	Adhesive (Industrial) Application
NY	Putnam	36079	2440020000	13.77	Missing	0.038	25.0	25.4	18.68	Missing	0.051	1.36	0.00	64.40	6.65	0.018	12.03	0.033	Adhesive (Industrial) Application
NY	Queens	36081	2440020000	490.29	Missing	1.347	25.0	25.4	664.94	Missing	1.827	1.36	0.00	64.40	236.72	0.650	428.22	1.176	Adhesive (Industrial) Application
NY	Rensselaer	36083	2440020000	47.66	Missing	0.131	25.0	25.4	64.64	Missing	0.178	1.36	0.00	64.40	23.01	0.063	41.63	0.114	Adhesive (Industrial) Application
NY	Richmond	36085	2440020000	26.03	Missing	0.072	25.0	25.4	35.30	Missing	0.097	1.36	0.00	64.40	12.57	0.035	22.73	0.062	Adhesive (Industrial) Application
NY	Rockland	36087	2440020000	118.66	Missing	0.326	25.0	25.4	160.93	Missing	0.442	1.36	0.00	64.40	57.29	0.157	103.64	0.285	Adhesive (Industrial) Application
NY	St. Lawrence	36089	2440020000	39.97	Missing	0.110	25.0	25.4	54.21	Missing	0.149	1.36	0.00	64.40	19.30	0.053	34.91	0.096	Adhesive (Industrial) Application
NY	Saratoga	36091	2440020000	49.11	Missing	0.135	25.0	25.4	66.60	Missing	0.183	1.36	0.00	64.40	23.71	0.065	42.89	0.118	Adhesive (Industrial) Application
NY	Schenectady	36093	2440020000	57.40	Missing	0.158	25.0	25.4	77.85	Missing	0.214	1.36	0.00	64.40	27.71	0.076	50.13	0.138	Adhesive (Industrial) Application
NY	Schoharie	36095	2440020000	5.61	Missing	0.015	25.0	25.4	7.61	Missing	0.021	1.36	0.00	64.40	2.71	0.007	4.90	0.013	Adhesive (Industrial) Application
NY	Schuyler	36097	2440020000	8.05	Missing	0.022	25.0	25.4	10.92	Missing	0.030	1.36	0.00	64.40	3.89	0.011	7.03	0.019	Adhesive (Industrial) Application
NY	Seneca	36099	2440020000	27.83	Missing	0.076	25.0	25.4	37.74	Missing	0.104	1.36	0.00	64.40	13.44	0.037	24.31	0.067	Adhesive (Industrial) Application
NY	Steuben	36101	2440020000	101.05	Missing	0.278	25.0	25.4	137.05	Missing	0.376	1.36	0.00	64.40	48.79	0.134	88.26	0.242	Adhesive (Industrial) Application
NY	Suffolk	36103	2440020000	690.36	Missing	1.897	25.0	25.4	936.28	Missing	2.572	1.36	0.00	64.40	333.31	0.916	602.96	1.656	Adhesive (Industrial) Application
NY	Sullivan	36105	2440020000	7.09	Missing	0.019	25.0	25.4	9.62	Missing	0.026	1.36	0.00	64.40	3.42	0.009	6.19	0.017	Adhesive (Industrial) Application
NY	Tioga	36107	2440020000	58.64	Missing	0.161	25.0	25.4	79.53	Missing	0.218	1.36	0.00	64.40	28.31	0.078	51.22	0.141	Adhesive (Industrial) Application
NY	Tompkins	36109	2440020000	27.55	Missing	0.076	25.0	25.4	37.36	Missing	0.103	1.36	0.00	64.40	13.30	0.037	24.06	0.066	Adhesive (Industrial) Application
NY	Ulster	36111	2440020000	59.44	Missing	0.163	25.0	25.4	80.61	Missing	0.221	1.36	0.00	64.40	28.70	0.079	51.92	0.143	Adhesive (Industrial) Application
NY	Warren	36113	2440020000	40.85	Missing	0.112	25.0	25.4	55.40	Missing	0.152	1.36	0.00	64.40	19.72	0.054	35.68	0.098	Adhesive (Industrial) Application
NY	Washington	36115	2440020000	39.29	Missing	0.108	25.0	25.4	53.29	Missing	0.146	1.36	0.00	64.40	18.97	0.052	34.32	0.094	Adhesive (Industrial) Application
NY	Wayne	36117	2440020000	56.51	Missing	0.155	25.0	25.4	76.64	Missing	0.211	1.36	0.00	64.40	27.28	0.075	49.36	0.136	Adhesive (Industrial) Application
NY	Westchester	36119	2440020000	475.14	Missing	1.305	25.0	25.4	644.39	Missing	1.770	1.36	0.00	64.40	229.40	0.630	414.99	1.140	Adhesive (Industrial) Application

Adhesives and Sealants

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
NY	Wyoming	36121	2440020000	23.43	Missing	0.064	25.0	25.4	31.78	Missing	0.087	1.36	0.00	64.40	11.31	0.031	20.46	0.056	Adhesive (Industrial) Application
NY	Yates	36123	2440020000	7.09	Missing	0.019	25.0	25.4	9.62	Missing	0.026	1.36	0.00	64.40	3.42	0.009	6.19	0.017	Adhesive (Industrial) Application
PA	Adams	42001	2440020000	67.14	Missing	0.184	25.0	25.4	89.51	Missing	0.246	1.33	0.00	64.40	31.86	0.088	57.64	0.158	Adhesive (Industrial) Application
PA	Allegheny	42003	2440020000	756.21	Missing	2.078	25.0	25.4	1,008.14	Missing	2.770	1.33	0.00	64.40	358.90	0.986	649.24	1.784	Adhesive (Industrial) Application
PA	Armstrong	42005	2440020000	26.48	Missing	0.073	25.0	25.4	35.30	Missing	0.097	1.33	0.00	64.40	12.57	0.035	22.73	0.062	Adhesive (Industrial) Application
PA	Beaver	42007	2440020000	88.06	Missing	0.242	25.0	25.4	117.40	Missing	0.323	1.33	0.00	64.40	41.79	0.115	75.60	0.208	Adhesive (Industrial) Application
PA	Bedford	42009	2440020000	21.78	Missing	0.060	25.0	25.4	29.04	Missing	0.080	1.33	0.00	64.40	10.34	0.028	18.70	0.051	Adhesive (Industrial) Application
PA	Berks	42011	2440020000	424.94	Missing	1.167	25.0	25.4	566.51	Missing	1.556	1.33	0.00	64.40	201.68	0.554	364.83	1.002	Adhesive (Industrial) Application
PA	Blair	42013	2440020000	96.62	Missing	0.265	25.0	25.4	128.81	Missing	0.354	1.33	0.00	64.40	45.86	0.126	82.95	0.228	Adhesive (Industrial) Application
PA	Bradford	42015	2440020000	62.72	Missing	0.172	25.0	25.4	83.62	Missing	0.230	1.33	0.00	64.40	29.77	0.082	53.85	0.148	Adhesive (Industrial) Application
PA	Butler	42019	2440020000	106.94	Missing	0.294	25.0	25.4	142.57	Missing	0.392	1.33	0.00	64.40	50.75	0.139	91.81	0.252	Adhesive (Industrial) Application
PA	Cambria	42021	2440020000	75.51	Missing	0.207	25.0	25.4	100.67	Missing	0.277	1.33	0.00	64.40	35.84	0.098	64.83	0.178	Adhesive (Industrial) Application
PA	Cameron	42023	2440020000	9.22	Missing	0.025	25.0	25.4	12.29	Missing	0.034	1.33	0.00	64.40	4.38	0.012	7.92	0.022	Adhesive (Industrial) Application
PA	Carbon	42025	2440020000	39.75	Missing	0.109	25.0	25.4	52.99	Missing	0.146	1.33	0.00	64.40	18.87	0.052	34.13	0.094	Adhesive (Industrial) Application
PA	Centre	42027	2440020000	73.98	Missing	0.203	25.0	25.4	98.63	Missing	0.271	1.33	0.00	64.40	35.11	0.096	63.52	0.174	Adhesive (Industrial) Application
PA	Chester	42029	2440020000	262.07	Missing	0.720	25.0	25.4	349.38	Missing	0.960	1.33	0.00	64.40	124.38	0.342	225.00	0.618	Adhesive (Industrial) Application
PA	Clarion	42031	2440020000	22.44	Missing	0.062	25.0	25.4	29.92	Missing	0.082	1.33	0.00	64.40	10.65	0.029	19.27	0.053	Adhesive (Industrial) Application
PA	Clearfield	42033	2440020000	46.60	Missing	0.128	25.0	25.4	62.12	Missing	0.171	1.33	0.00	64.40	22.12	0.061	40.01	0.110	Adhesive (Industrial) Application
PA	Clinton	42035	2440020000	34.19	Missing	0.094	25.0	25.4	45.58	Missing	0.125	1.33	0.00	64.40	16.23	0.045	29.35	0.081	Adhesive (Industrial) Application
PA	Columbia	42037	2440020000	86.96	Missing	0.239	25.0	25.4	115.93	Missing	0.318	1.33	0.00	64.40	41.27	0.113	74.66	0.205	Adhesive (Industrial) Application
PA	Crawford	42039	2440020000	74.27	Missing	0.204	25.0	25.4	99.01	Missing	0.272	1.33	0.00	64.40	35.25	0.097	63.76	0.175	Adhesive (Industrial) Application
PA	Cumberland	42041	2440020000	156.62	Missing	0.430	25.0	25.4	208.80	Missing	0.574	1.33	0.00	64.40	74.33	0.204	134.47	0.369	Adhesive (Industrial) Application
PA	Dauphin	42043	2440020000	208.02	Missing	0.571	25.0	25.4	277.32	Missing	0.762	1.33	0.00	64.40	98.73	0.271	178.60	0.491	Adhesive (Industrial) Application
PA	Delaware	42045	2440020000	302.60	Missing	0.831	25.0	25.4	403.41	Missing	1.108	1.33	0.00	64.40	143.61	0.395	259.80	0.714	Adhesive (Industrial) Application
PA	Elk	42047	2440020000	63.57	Missing	0.175	25.0	25.4	84.75	Missing	0.233	1.33	0.00	64.40	30.17	0.083	54.58	0.150	Adhesive (Industrial) Application
PA	Erie	42049	2440020000	310.92	Missing	0.854	25.0	25.4	414.50	Missing	1.139	1.33	0.00	64.40	147.56	0.405	266.94	0.733	Adhesive (Industrial) Application
PA	Fayette	42051	2440020000	50.35	Missing	0.138	25.0	25.4	67.12	Missing	0.184	1.33	0.00	64.40	23.90	0.066	43.23	0.119	Adhesive (Industrial) Application
PA	Forest	42053	2440020000	2.23	Missing	0.006	25.0	25.4	2.97	Missing	0.008	1.33	0.00	64.40	1.06	0.003	1.91	0.005	Adhesive (Industrial) Application
PA	Franklin	42055	2440020000	116.63	Missing	0.320	25.0	25.4	155.49	Missing	0.427	1.33	0.00	64.40	55.35	0.152	100.13	0.275	Adhesive (Industrial) Application
PA	Fulton	42057	2440020000	8.08	Missing	0.022	25.0	25.4	10.77	Missing	0.030	1.33	0.00	64.40	3.83	0.011	6.94	0.019	Adhesive (Industrial) Application
PA	Greene	42059	2440020000	3.61	Missing	0.010	25.0	25.4	4.81	Missing	0.013	1.33	0.00	64.40	1.71	0.005	3.10	0.009	Adhesive (Industrial) Application
PA	Huntingdon	42061	2440020000	28.15	Missing	0.077	25.0	25.4	37.53	Missing	0.103	1.33	0.00	64.40	13.36	0.037	24.17	0.066	Adhesive (Industrial) Application
PA	Indiana	42063	2440020000	37.47	Missing	0.103	25.0	25.4	49.95	Missing	0.137	1.33	0.00	64.40	17.78	0.049	32.17	0.088	Adhesive (Industrial) Application
PA	Jefferson	42065	2440020000	42.56	Missing	0.117	25.0	25.4	56.74	Missing	0.156	1.33	0.00	64.40	20.20	0.055	36.54	0.100	Adhesive (Industrial) Application
PA	Juniata	42067	2440020000	23.25	Missing	0.064	25.0	25.4	31.00	Missing	0.085	1.33	0.00	64.40	11.03	0.030	19.96	0.055	Adhesive (Industrial) Application
PA	Lackawanna	42069	2440020000	224.62	Missing	0.617	25.0	25.4	299.45	Missing	0.823	1.33	0.00	64.40	106.61	0.293	192.85	0.530	Adhesive (Industrial) Application
PA	Lancaster	42071	2440020000	556.79	Missing	1.530	25.0	25.4	742.29	Missing	2.039	1.33	0.00	64.40	264.25	0.726	478.03	1.313	Adhesive (Industrial) Application
PA	Lawrence	42073	2440020000	63.71	Missing	0.175	25.0	25.4	84.94	Missing	0.233	1.33	0.00	64.40	30.24	0.083	54.70	0.150	Adhesive (Industrial) Application
PA	Lebanon	42075	2440020000	104.37	Missing	0.287	25.0	25.4	139.14	Missing	0.382	1.33	0.00	64.40	49.53	0.136	89.61	0.246	Adhesive (Industrial) Application
PA	Lehigh	42077	2440020000	351.67	Missing	0.966	25.0	25.4	468.83	Missing	1.288	1.33	0.00	64.40	166.90	0.459	301.93	0.829	Adhesive (Industrial) Application
PA	Luzerne	42079	2440020000	267.60	Missing	0.735	25.0	25.4	356.75	Missing	0.980	1.33	0.00	64.40	127.00	0.349	229.75	0.631	Adhesive (Industrial) Application
PA	Lycoming	42081	2440020000	152.63	Missing	0.419	25.0	25.4	203.48	Missing	0.559	1.33	0.00	64.40	72.44	0.199	131.04	0.360	Adhesive (Industrial) Application
PA	McKean	42083	2440020000	44.36	Missing	0.122	25.0	25.4	59.14	Missing	0.162	1.33	0.00	64.40	21.05	0.058	38.09	0.105	Adhesive (Industrial) Application
PA	Mercer	42085	2440020000	104.42	Missing	0.287	25.0	25.4	139.21	Missing	0.382	1.33	0.00	64.40	49.56	0.136	89.65	0.246	Adhesive (Industrial) Application
PA	Mifflin	42087	2440020000	51.31	Missing	0.141	25.0	25.4	68.40	Missing	0.188	1.33	0.00	64.40	24.35	0.067	44.05	0.121	Adhesive (Industrial) Application
PA	Monroe	42089	2440020000	45.70	Missing	0.126	25.0	25.4	60.93	Missing	0.167	1.33	0.00	64.40	21.69	0.060	39.24	0.108	Adhesive (Industrial) Application
PA	Montgomery	42091	2440020000	756.94	Missing	2.080	25.0	25.4	1,009.12	Missing	2.772	1.33	0.00	64.40	359.25	0.987	649.87	1.785	Adhesive (Industrial) Application
PA	Montour	42093	2440020000	19.92	Missing	0.055	25.0	25.4	26.56	Missing	0.073	1.33	0.00	64.40	9.45	0.026	17.10	0.047	Adhesive (Industrial) Application
PA	Northampton	42095	2440020000	227.80	Missing	0.626	25.0	25.4	303.69	Missing	0.834	1.33	0.00	64.40	108.11	0.297	195.58	0.537	Adhesive (Industrial) Application
PA	Northumberland	42097	2440020000	99.52	Missing	0.273	25.0	25.4	132.68	Missing	0.364	1.33	0.00	64.40	47.23	0.130	85.44	0.235	Adhesive (Industrial) Application
PA	Perry	42099	2440020000	6.61	Missing	0.018	25.0	25.4	8.81	Missing	0.024	1.33	0.00	64.40	3.14	0.009	5.67	0.016	Adhesive (Industrial) Application
PA	Philadelphia	42101	2440020000	773.19	Missing	2.124	25.0	25.4	1,030.78	Missing	2.832	1.33	0.00	64.40	366.96	1.008	663.82	1.824	Adhesive (Industrial) Application
PA	Pike	42103	2440020000	4.42	Missing	0.012	25.0	25.4	5.89	Missing	0.016	1.33	0.00	64.40	2.10	0.006	3.79	0.010	Adhesive (Industrial) Application
PA	Potter	42105	2440020000	10.94	Missing	0.030	25.0	25.4	14.58	Missing	0.040	1.33	0.00	64.40	5.19	0.014	9.39	0.026	Adhesive (Industrial) Application
PA	Schuylkill	42107	2440020000	159.29	Missing	0.438	25.0	25.4	212.36	Missing	0.583	1.33	0.00	64.40	75.60	0.208	136.76	0.376	Adhesive (Industrial) Application
PA	Snyder	42109	2440020000	22.25	Missing	0.061	25.0	25.4	29.66	Missing	0.081	1.33	0.00	64.40	10.56	0.029	19.10	0.052	Adhesive (Industrial) Application
PA	Somerset	42111	2440020000	44.17	Missing	0.121	25.0	25.4	58.89	Missing	0.162	1.33	0.00	64.40	20.96	0.058	37.92	0.104	Adhesive (Industrial) Application
PA	Sullivan	42113	2440020000	4.99	Missing	0.014	25.0	25.4	6.65	Missing	0.018	1.33	0.00	64.40	2.37	0.007	4.28	0.012	Adhesive (Industrial) Application
PA	Susquehanna	42115	2440020000	27.06	Missing	0.074	25.0	25.4	36.08	Missing	0.099	1.33	0.00	64.40	12.84	0.035	23.23	0.064	Adhesive (Industrial) Application

Adhesives and Sealants

2002 VOC Emissions | 2009 VOC OTB/OTW Emissions | 2009 BOTW Emissions | 2009 BOTW Reductions

State	County	FIPS	SCC	2002 Annual (tpy)	2002 Summer Day from Inventory (tpd)	2002 Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 Annual (tpy)	2009 Summer Day from Inventory (tpd)	2009 Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	BOTW Annual (tpy)	BOTW Summer Day Calculated (tpd)	Reductions Annual (tpy)	Reductions Summer Day (tpd)	SCC Description
PA	Tioga	42117	2440020000	26.20	Missing	0.072	25.0	25.4	34.93	Missing	0.096	1.33	0.00	64.40	12.43	0.034	22.49	0.062	Adhesive (Industrial) Application
PA	Union	42119	2440020000	38.94	Missing	0.107	25.0	25.4	51.91	Missing	0.143	1.33	0.00	64.40	18.48	0.051	33.43	0.092	Adhesive (Industrial) Application
PA	Venango	42121	2440020000	39.04	Missing	0.107	25.0	25.4	52.05	Missing	0.143	1.33	0.00	64.40	18.53	0.051	33.52	0.092	Adhesive (Industrial) Application
PA	Warren	42123	2440020000	37.85	Missing	0.104	25.0	25.4	50.46	Missing	0.139	1.33	0.00	64.40	17.96	0.049	32.50	0.089	Adhesive (Industrial) Application
PA	Washington	42125	2440020000	108.27	Missing	0.297	25.0	25.4	144.34	Missing	0.397	1.33	0.00	64.40	51.39	0.141	92.96	0.255	Adhesive (Industrial) Application
PA	Wayne	42127	2440020000	19.35	Missing	0.053	25.0	25.4	25.80	Missing	0.071	1.33	0.00	64.40	9.18	0.025	16.61	0.046	Adhesive (Industrial) Application
PA	Westmoreland	42129	2440020000	232.56	Missing	0.639	25.0	25.4	310.04	Missing	0.852	1.33	0.00	64.40	110.37	0.303	199.66	0.549	Adhesive (Industrial) Application
PA	Wyoming	42131	2440020000	26.34	Missing	0.072	25.0	25.4	35.12	Missing	0.096	1.33	0.00	64.40	12.50	0.034	22.61	0.062	Adhesive (Industrial) Application
PA	York	42133	2440020000	442.63	Missing	1.216	25.0	25.4	590.09	Missing	1.621	1.33	0.00	64.40	210.07	0.577	380.02	1.044	Adhesive (Industrial) Application
RI	Bristol	44001	2440020000	23.90	Missing	0.067	Missing	25.4	32.27	Missing	0.090	1.35	0.00	64.40	11.49	0.032	20.78	0.058	Adhesive (Industrial) Application
RI	Kent	44003	2440020000	58.29	Missing	0.163	Missing	25.4	78.70	Missing	0.220	1.35	0.00	64.40	28.02	0.078	50.68	0.141	Adhesive (Industrial) Application
RI	Newport	44005	2440020000	10.64	Missing	0.030	Missing	25.4	14.36	Missing	0.040	1.35	0.00	64.40	5.11	0.014	9.25	0.026	Adhesive (Industrial) Application
RI	Providence	44007	2440020000	454.95	Missing	1.270	Missing	25.4	614.25	Missing	1.715	1.35	0.00	64.40	218.67	0.610	395.58	1.104	Adhesive (Industrial) Application
RI	Washington	44009	2440020000	75.33	Missing	0.210	Missing	25.4	101.70	Missing	0.284	1.35	0.00	64.40	36.21	0.101	65.50	0.183	Adhesive (Industrial) Application
VT	Addison	50001	2440020000	50.71	Missing	0.139	25.0	25.4	72.43	Missing	0.199	1.43	0.00	64.40	25.78	0.071	46.64	0.128	Adhesive (Industrial) Application
VT	Bennington	50003	2440020000	70.94	Missing	0.195	25.0	25.4	101.32	Missing	0.278	1.43	0.00	64.40	36.07	0.099	65.25	0.179	Adhesive (Industrial) Application
VT	Caledonia	50005	2440020000	20.75	Missing	0.057	25.0	25.4	29.64	Missing	0.081	1.43	0.00	64.40	10.55	0.029	19.09	0.052	Adhesive (Industrial) Application
VT	Chittenden	50007	2440020000	289.23	Missing	0.795	25.0	25.4	413.11	Missing	1.135	1.43	0.00	64.40	147.07	0.404	266.04	0.731	Adhesive (Industrial) Application
VT	Essex	50009	2440020000	17.50	Missing	0.048	25.0	25.4	25.00	Missing	0.069	1.43	0.00	64.40	8.90	0.024	16.10	0.044	Adhesive (Industrial) Application
VT	Franklin	50011	2440020000	43.20	Missing	0.119	25.0	25.4	61.70	Missing	0.170	1.43	0.00	64.40	21.97	0.060	39.74	0.109	Adhesive (Industrial) Application
VT	Grand Isle	50013	2440020000	0.43	Missing	0.001	25.0	25.4	0.61	Missing	0.002	1.43	0.00	64.40	0.22	0.001	0.40	0.001	Adhesive (Industrial) Application
VT	Lamoille	50015	2440020000	11.01	Missing	0.030	25.0	25.4	15.73	Missing	0.043	1.43	0.00	64.40	5.60	0.015	10.13	0.028	Adhesive (Industrial) Application
VT	Orange	50017	2440020000	34.49	Missing	0.095	25.0	25.4	49.26	Missing	0.135	1.43	0.00	64.40	17.54	0.048	31.72	0.087	Adhesive (Industrial) Application
VT	Orleans	50019	2440020000	37.65	Missing	0.103	25.0	25.4	53.78	Missing	0.148	1.43	0.00	64.40	19.14	0.053	34.63	0.095	Adhesive (Industrial) Application
VT	Rutland	50021	2440020000	95.10	Missing	0.261	25.0	25.4	135.83	Missing	0.373	1.43	0.00	64.40	48.36	0.133	87.48	0.240	Adhesive (Industrial) Application
VT	Washington	50023	2440020000	54.04	Missing	0.148	25.0	25.4	77.19	Missing	0.212	1.43	0.00	64.40	27.48	0.075	49.71	0.137	Adhesive (Industrial) Application
VT	Windham	50025	2440020000	68.21	Missing	0.187	25.0	25.4	97.42	Missing	0.268	1.43	0.00	64.40	34.68	0.095	62.74	0.172	Adhesive (Industrial) Application
VT	Windsor	50027	2440020000	53.78	Missing	0.148	25.0	25.4	76.81	Missing	0.211	1.43	0.00	64.40	27.35	0.075	49.47	0.136	Adhesive (Industrial) Application
VA	Arlington	51013	2440020000	22.98	Missing	0.064	Missing	25.4	29.54	Missing	0.082	0.00	0.00	64.40	10.52	0.029	19.02	0.053	Adhesive (Industrial) Application
VA	Fairfax	51059	2440020000	204.09	Missing	0.570	Missing	25.4	262.31	Missing	0.732	0.00	0.00	64.40	93.38	0.261	168.93	0.472	Adhesive (Industrial) Application
VA	Loudoun	51107	2440020000	43.50	Missing	0.121	Missing	25.4	55.92	Missing	0.156	0.00	0.00	64.40	19.91	0.056	36.01	0.101	Adhesive (Industrial) Application
VA	Prince William	51153	2440020000	70.63	Missing	0.197	Missing	25.4	90.78	Missing	0.253	0.00	0.00	64.40	32.32	0.090	58.46	0.163	Adhesive (Industrial) Application
VA	Stafford	51179	2440020000	14.35	Missing	0.040	Missing	25.4	18.45	Missing	0.051	0.00	0.00	64.40	6.57	0.018	11.88	0.033	Adhesive (Industrial) Application
VA	Alexandria	51510	2440020000	33.28	Missing	0.093	Missing	25.4	42.78	Missing	0.119	0.00	0.00	64.40	15.23	0.043	27.55	0.077	Adhesive (Industrial) Application
VA	Fairfax City	51600	2440020000	26.89	Missing	0.075	Missing	25.4	34.56	Missing	0.096	0.00	0.00	64.40	12.30	0.034	22.26	0.062	Adhesive (Industrial) Application
VA	Falls Chruch	51610	2440020000	6.80	Missing	0.019	Missing	25.4	8.74	Missing	0.024	0.00	0.00	64.40	3.11	0.009	5.63	0.016	Adhesive (Industrial) Application
VA	Manassas City	51683	2440020000	11.60	Missing	0.032	Missing	25.4	14.92	Missing	0.042	0.00	0.00	64.40	5.31	0.015	9.61	0.027	Adhesive (Industrial) Application
VA	Manassas Park City	51685	2440020000	3.52	Missing	0.010	Missing	25.4	4.53	Missing	0.013	0.00	0.00	64.40	1.61	0.005	2.92	0.008	Adhesive (Industrial) Application
			MANEVU	34,019.38		94.93			44,275.42		123.19				15,762.05	43.86	28,513.37	79.33	

COLUMN	COLUMN DESCRIPTIONS
A-F	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
G	SCC-Source Classification Code
H	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
I	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
J	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
K	Summer season percentage from NIF Emission Process (EP) file
L	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
M	Total capture/control efficiency from NIF 2002 CE file
N	Blank

COLUMN	COLUMN DESCRIPTIONS
O	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS B
P	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
Q	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in invento 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 day b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
R	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
S	Total capture/control efficiency from NIF 2009 CE file
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental Control Factor (64.4% if uncontrolled, 0% if greater than 85% control system r
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW incremental control fact
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
CT	Hartford	09003	6484	R0131	01	40200701	2.3630	0.0099	0.010	25.0	25.5	0.00	2.2660	0.0090	0.009	0.984	0.00	64.40	0.81
CT	Hartford	09003	6484	R0132	01	40200701	2.3630	0.0099	0.010	25.0	25.5	0.00	2.2660	0.0090	0.009	0.984	0.00	64.40	0.81
CT	New Haven	09009	3371	R0263	01	40200701	3.1100	0.0130	0.013	29.0	25.5	98.00	2.7080	0.0110	0.011	0.984	98.00	0.00	2.71
CT	Windham	09015	0647	P0085	01	40200701	0.1900	0.0010	0.001	25.0	25.5	0.00	0.1820	0.0010	0.001	0.984	0.00	64.40	0.06
DE	Kent	10001	1000100004	003	2	40200701	2.7100	0.0104	0.010	25.0	25.5	0.00	2.7100	0.0100	0.010	1.000	0.00	64.40	0.96
DE	Kent	10001	1000100004	005	2	40200701	5.4200	0.0147	0.015	25.0	25.5	0.00	5.4200	0.0150	0.015	1.000	0.00	64.40	1.93
DE	Kent	10001	1000100004	005	3	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.000	0.00	64.40	0.00
DE	Kent	10001	1000100004	005	4	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.000	0.00	64.40	0.00
DE	Kent	10001	1000100004	005	5	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.000	0.00	64.40	0.00
DE	New Castle	10003	1000300365	002	1	40200710	1.8500	0.0072	0.007	25.0	24.9	0.00	1.8500	0.0070	0.007	1.000	0.00	64.40	0.66
DE	New Castle	10003	1000300365	002	2	40200706	0.0000	0.0000	0.000	25.0	29.9	0.00	0.0000	0.0000	0.000	1.000	0.00	64.40	0.00
ME	Androscoggin	23001	2300100076	003	2	40200701	0.2400	0.0006	0.001	24.0	25.5	0.00	0.3130	0.0010	0.001	1.305	0.00	64.40	0.11
MD	Anne Arundel	24003	003-0250	232	01F232	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Anne Arundel	24003	003-0250	232	01S232	40200701	0.2310	0.0006	0.001	25.0	25.5	0.00	0.2680	0.0010	0.001	1.159	0.00	64.40	0.10
MD	Baltimore	24005	005-2407	17	01F17	40200701	13.5290	0.0368	0.037	25.0	25.5	0.00	15.6800	0.0520	0.052	1.159	0.00	64.40	5.58
MD	Baltimore	24005	005-2407	17	01S17	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Baltimore	24005	005-2407	27	01F27	40200701	0.0000	0.0000	0.000	25.0	25.5	95.00	0.0000	0.0000	0.000	1.159	95.00	0.00	0.00
MD	Baltimore	24005	005-2407	27	01S27	40200701	2.0200	0.0055	0.006	25.0	25.5	95.00	2.3410	0.0080	0.008	1.159	95.00	0.00	2.34
MD	Baltimore	24005	005-2407	35	01F35	40200701	0.0000	0.0000	0.000	25.0	25.5	95.00	0.0000	0.0000	0.000	1.159	95.00	0.00	0.00
MD	Baltimore	24005	005-2407	35	01S35	40200701	0.4640	0.0013	0.001	25.0	25.5	95.00	0.5380	0.0020	0.002	1.159	95.00	0.00	0.54
MD	Harford	24025	025-0006	45	01F45	40200710	0.0000	0.0000	0.000	25.0	24.9	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Harford	24025	025-0006	45	01S45	40200710	0.0000	0.0000	0.000	25.0	24.9	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Harford	24025	025-0006	54	01F54	40200706	5.1800	0.0141	0.014	25.0	29.9	95.00	6.0040	0.0210	0.021	1.159	95.00	0.00	6.00
MD	Harford	24025	025-0006	54	01S54	40200706	2.6600	0.0072	0.007	25.0	29.9	95.00	3.0830	0.0110	0.011	1.159	95.00	0.00	3.08
MD	Harford	24025	025-0423	5	01F5	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Harford	24025	025-0423	5	01S5	40200701	4.0900	0.0111	0.011	25.0	25.5	0.00	4.7400	0.0210	0.021	1.159	0.00	64.40	1.69
MD	Harford	24025	025-0423	6	01F6	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Harford	24025	025-0423	6	01S6	40200701	3.5000	0.0095	0.010	25.0	25.5	0.00	4.0570	0.0250	0.025	1.159	0.00	64.40	1.44
MD	Harford	24025	025-0423	7	01F7	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MD	Harford	24025	025-0423	7	01S7	40200701	2.5700	0.0070	0.007	25.0	25.5	0.00	2.9790	0.0730	0.073	1.159	0.00	64.40	1.06
MD	Wicomico	24045	045-0082	12	01F12	40200710	0.5000	0.0014	0.001	25.0	24.9	0.00	0.5800	0.0030	0.003	1.159	0.00	64.40	0.21

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
MD	Wicomico	24045	045-0082	12	01S12	40200710	0.0000	0.0000	0.000	25.0	24.9	0.00	0.0000	0.0000	0.000	1.159	0.00	64.40	0.00
MA	Bristol	25005	1200077	12	0108	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Bristol	25005	1200100	23	0111	40200701	0.0020	Missing	0.000	25.0	25.5	0.00	0.0030	Missing	0.000	1.425	0.00	64.40	0.00
MA	Bristol	25005	1200100	26	0114	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Bristol	25005	1200100	28	0116	40200701	0.0360	Missing	0.000	25.0	25.5	0.00	0.0510	Missing	0.000	1.425	0.00	64.40	0.02
MA	Bristol	25005	1200101	08	0107	40200701	0.4620	Missing	0.001	25.0	25.5	0.00	0.6580	Missing	0.002	1.425	0.00	64.40	0.23
MA	Bristol	25005	1200101	09	0108	40200706	0.4620	Missing	0.001	25.0	29.9	0.00	0.6580	Missing	0.002	1.425	0.00	64.40	0.23
MA	Bristol	25005	1200101	10	0109	40200701	0.4620	Missing	0.001	25.0	25.5	0.00	0.6580	Missing	0.002	1.425	0.00	64.40	0.23
MA	Bristol	25005	1200101	11	0110	40200701	0.4620	Missing	0.001	25.0	25.5	0.00	0.6580	Missing	0.002	1.425	0.00	64.40	0.23
MA	Bristol	25005	1200101	12	0111	40200701	0.4620	Missing	0.001	25.0	25.5	0.00	0.6580	Missing	0.002	1.425	0.00	64.40	0.23
MA	Bristol	25005	1200183	07	0203	40200701	4.0260	Missing	0.011	25.0	25.5	0.00	5.7380	Missing	0.016	1.425	0.00	64.40	2.04
MA	Bristol	25005	1200388	04	0104	40200701	0.0010	Missing	0.000	25.0	25.5	0.00	0.0010	Missing	0.000	1.425	0.00	64.40	0.00
MA	Bristol	25005	1200388	05	0105	40200701	0.1465	Missing	0.000	25.0	25.5	0.00	0.2090	Missing	0.001	1.425	0.00	64.40	0.07
MA	Bristol	25005	1200388	05	0205	40200701	0.0505	Missing	0.000	25.0	25.5	0.00	0.0720	Missing	0.000	1.425	0.00	64.40	0.03
MA	Bristol	25005	1200509	04	0104	40200701	0.5500	Missing	0.002	25.0	25.5	0.00	0.7840	Missing	0.002	1.425	0.00	64.40	0.28
MA	Bristol	25005	1200585	02	0102	40200710	0.4000	Missing	0.001	25.0	24.9	0.00	0.5700	Missing	0.002	1.425	0.00	64.40	0.20
MA	Bristol	25005	1200673	07	0107	40200710	0.0010	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Bristol	25005	1200707	08	0106	40200710	0.1625	Missing	0.000	25.0	24.9	0.00	0.2320	Missing	0.001	1.425	0.00	64.40	0.08
MA	Bristol	25005	1200851	11	0110	40200710	0.5900	Missing	0.002	25.0	24.9	0.00	0.8410	Missing	0.002	1.425	0.00	64.40	0.30
MA	Essex	25009	1190683	03	0103	40200706	0.1000	Missing	0.000	25.0	29.9	0.00	0.1420	Missing	0.000	1.425	0.00	64.40	0.05
MA	Essex	25009	1190690	09	0108	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210001	08	0105	40200701	2.0000	Missing	0.005	25.0	25.5	97.00	2.8500	Missing	0.008	1.425	97.00	0.00	2.85
MA	Essex	25009	1210001	08	0205	40200701	2.0000	Missing	0.005	25.0	25.5	97.00	2.8500	Missing	0.008	1.425	97.00	0.00	2.85
MA	Essex	25009	1210026	15	0115	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210046	01	0101	40200706	1.0000	Missing	0.003	25.0	29.9	0.00	1.4250	Missing	0.004	1.425	0.00	64.40	0.51
MA	Essex	25009	1210083	05	0104	40200710	0.4745	Missing	0.001	25.0	24.9	0.00	0.6760	Missing	0.002	1.425	0.00	64.40	0.24
MA	Essex	25009	1210093	09	0209	40200701	0.0005	Missing	0.000	22.0	25.5	0.00	0.0010	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210110	01	0101	40200701	1.0000	Missing	0.003	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210212	30	0321	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210212	30	0721	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210212	32	0322	40200706	0.0200	Missing	0.000	25.0	29.9	0.00	0.0290	Missing	0.000	1.425	0.00	64.40	0.01
MA	Essex	25009	1210212	32	0622	40200706	0.0115	Missing	0.000	25.0	29.9	0.00	0.0160	Missing	0.000	1.425	0.00	64.40	0.01
MA	Essex	25009	1210212	32	0922	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210219	03	0102	40200710	3.0000	Missing	0.008	25.0	24.9	99.00	4.2760	Missing	0.012	1.425	99.00	0.00	4.28
MA	Essex	25009	1210276	03	0102	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210332	01	0101	40200701	0.5850	Missing	0.002	25.0	25.5	0.00	0.8340	Missing	0.002	1.425	0.00	64.40	0.30
MA	Essex	25009	1210332	02	0102	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210332	03	0103	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1210341	10	0110	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1211013	07	0105	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1211013	08	0306	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1211013	33	0331	40200701	0.0645	Missing	0.000	25.0	25.5	0.00	0.0920	Missing	0.000	1.425	0.00	64.40	0.03
MA	Essex	25009	1211013	72	0259	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Essex	25009	1211013	89	0253	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Hampden	25013	0420145	16	0112	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Hampden	25013	0420213	01	0201	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Hampden	25013	0420260	02	0102	40200710	0.0010	Missing	0.000	25.0	24.9	0.00	0.0010	Missing	0.000	1.425	0.00	64.40	0.00
MA	Hampden	25013	0420265	06	0105	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Hampden	25013	0420561	01	0101	40200701	21.0000	Missing	0.058	25.0	25.5	0.00	29.9300	Missing	0.082	1.425	0.00	64.40	10.66
MA	Hampden	25013	0420798	05	0105	40200710	4.0000	Missing	0.011	25.0	24.9	0.00	5.7010	Missing	0.016	1.425	0.00	64.40	2.03
MA	Hampden	25013	0420821	10	0106	40200701	0.1600	Missing	0.000	26.0	25.5	0.00	0.2280	Missing	0.001	1.425	0.00	64.40	0.08
MA	Hampshire	25015	0420558	01	0101	40200710	0.0400	Missing	0.000	25.0	24.9	0.00	0.0570	Missing	0.000	1.425	0.00	64.40	0.02

							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
MA	Hampshire	25015	0420558	02	0102	40200701	5.0000	Missing	0.014	25.0	25.5	99.00	7.1260	Missing	0.020	1.425	99.00	0.00	7.13
MA	Middlesex	25017	1180795	02	0102	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	03	0103	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	04	0104	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	05	0105	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	06	0106	40200706	0.0000	Missing	0.000	25.0	29.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	07	0107	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	08	0108	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1180795	09	0109	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190355	05	0101	40200706	2.0000	Missing	0.005	25.0	29.9	0.00	2.8500	Missing	0.008	1.425	0.00	64.40	1.01
MA	Middlesex	25017	1190424	04	0104	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	08	0106	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	11	0107	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	20	0110	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	24	0111	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	28	0112	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	32	0213	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190424	37	0117	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190429	06	0106	40200710	0.1305	Missing	0.000	25.0	24.9	0.00	0.1860	Missing	0.001	1.425	0.00	64.40	0.07
MA	Middlesex	25017	1190560	02	0101	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190560	23	0106	40200710	0.3200	Missing	0.001	25.0	24.9	0.00	0.4560	Missing	0.001	1.425	0.00	64.40	0.16
MA	Middlesex	25017	1190585	08	0104	40200706	0.1400	Missing	0.000	25.0	29.9	0.00	0.2000	Missing	0.001	1.425	0.00	64.40	0.07
MA	Middlesex	25017	1190585	17	0106	40200710	0.2300	Missing	0.001	25.0	24.9	0.00	0.3280	Missing	0.001	1.425	0.00	64.40	0.12
MA	Middlesex	25017	1190692	09	0107	40200701	0.0805	Missing	0.000	25.0	25.5	0.00	0.1150	Missing	0.000	1.425	0.00	64.40	0.04
MA	Middlesex	25017	1190692	10	0108	40200701	3.0000	Missing	0.008	25.0	25.5	0.00	4.2760	Missing	0.012	1.425	0.00	64.40	1.52
MA	Middlesex	25017	1190692	11	0108	40200701	0.1070	Missing	0.000	25.0	25.5	0.00	0.1530	Missing	0.000	1.425	0.00	64.40	0.05
MA	Middlesex	25017	1190953	04	0104	40200710	0.1300	Missing	0.000	25.0	24.9	0.00	0.1850	Missing	0.001	1.425	0.00	64.40	0.07
MA	Middlesex	25017	1190999	11	0111	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190999	11	0211	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1190999	13	0313	40200710	0.0005	Missing	0.000	25.0	24.9	0.00	0.0010	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191104	03	0103	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191192	05	0104	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191296	26	0116	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191296	27	0117	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191471	03	0102	40200710	1.0000	Missing	0.003	25.0	24.9	97.00	1.4250	Missing	0.004	1.425	97.00	0.00	1.43
MA	Middlesex	25017	1191471	04	0103	40200710	0.0005	Missing	0.000	25.0	24.9	0.00	0.0010	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1191471	07	0105	40200710	5.0000	Missing	0.014	25.0	24.9	97.00	7.1260	Missing	0.020	1.425	97.00	0.00	7.13
MA	Middlesex	25017	1191564	08	0108	40200710	0.0105	Missing	0.000	25.0	24.9	0.00	0.0150	Missing	0.000	1.425	0.00	64.40	0.01
MA	Middlesex	25017	1191844	53	0135	40200710	0.5000	Missing	0.001	25.0	24.9	0.00	0.7130	Missing	0.002	1.425	0.00	64.40	0.25
MA	Middlesex	25017	1191844	53	0335	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1192051	12	0107	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1192051	26	0115	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1210036	03	0103	40200701	0.0475	Missing	0.000	25.0	25.5	0.00	0.0680	Missing	0.000	1.425	0.00	64.40	0.02
MA	Middlesex	25017	1210036	05	0104	40200710	11.0000	Missing	0.030	25.0	24.9	0.00	15.6780	Missing	0.043	1.425	0.00	64.40	5.58
MA	Middlesex	25017	1210036	07	0105	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Middlesex	25017	1210036	08	0106	40200710	54.0000	Missing	0.148	25.0	24.9	90.00	76.9630	Missing	0.211	1.425	90.00	0.00	76.96
MA	Middlesex	25017	1210036	09	0106	40200701	0.0000	Missing	0.000	25.0	25.5	90.00	0.0000	Missing	0.000	1.425	90.00	0.00	0.00
MA	Middlesex	25017	1210036	10	0106	40200701	0.0000	Missing	0.000	25.0	25.5	90.00	0.0000	Missing	0.000	1.425	90.00	0.00	0.00
MA	Middlesex	25017	1210036	11	0107	40200710	20.0000	Missing	0.055	25.0	24.9	96.00	28.5050	Missing	0.078	1.425	96.00	0.00	28.51
MA	Middlesex	25017	1210036	12	0108	40200710	0.0000	Missing	0.000	25.0	24.9	96.00	0.0000	Missing	0.000	1.425	96.00	0.00	0.00
MA	Middlesex	25017	1210036	13	0109	40200710	0.0000	Missing	0.000	25.0	24.9	96.00	0.0000	Missing	0.000	1.425	96.00	0.00	0.00
MA	Middlesex	25017	1210373	01	0101	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10

							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
MA	Middlesex	25017	1210373	02	0102	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	03	0103	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	04	0104	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	04	0204	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	05	0105	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	05	0205	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	06	0106	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	06	0206	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210373	09	0109	40200701	0.1520	Missing	0.000	25.0	25.5	0.00	0.2170	Missing	0.001	1.425	0.00	64.40	0.08
MA	Middlesex	25017	1210373	10	0110	40200701	0.1870	Missing	0.001	25.0	25.5	0.00	0.2670	Missing	0.001	1.425	0.00	64.40	0.10
MA	Middlesex	25017	1210912	02	0202	40200710	8.0000	Missing	0.022	25.0	24.9	0.00	11.4020	Missing	0.031	1.425	0.00	64.40	4.06
MA	Norfolk	25021	1190114	15	0112	40200701	48.0000	Missing	0.132	25.0	25.5	97.40	68.4110	Missing	0.188	1.425	97.40	0.00	68.41
MA	Norfolk	25021	1190114	17	0114	40200701	7.0000	Missing	0.019	25.0	25.5	99.00	9.9770	Missing	0.027	1.425	99.00	0.00	9.98
MA	Norfolk	25021	1190319	04	0103	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Norfolk	25021	1190319	11	0111	40200710	0.0715	Missing	0.000	25.0	24.9	0.00	0.1020	Missing	0.000	1.425	0.00	64.40	0.04
MA	Norfolk	25021	1190569	23	0215	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Norfolk	25021	1191170	29	0110	40200701	0.0090	Missing	0.000	25.0	25.5	99.00	0.0130	Missing	0.000	1.425	99.00	0.00	0.01
MA	Norfolk	25021	1192106	03	0103	40200710	5.0000	Missing	0.014	25.0	24.9	0.00	7.1260	Missing	0.020	1.425	0.00	64.40	2.54
MA	Norfolk	25021	1192121	07	0107	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Norfolk	25021	1192131	03	0103	40200710	0.3500	Missing	0.001	25.0	24.9	0.00	0.4990	Missing	0.001	1.425	0.00	64.40	0.18
MA	Norfolk	25021	1192491	07	0107	40200701	0.0130	Missing	0.000	25.0	25.5	0.00	0.0180	Missing	0.000	1.425	0.00	64.40	0.01
MA	Norfolk	25021	1192491	08	0108	40200701	0.2970	Missing	0.001	25.0	25.5	0.00	0.4230	Missing	0.001	1.425	0.00	64.40	0.15
MA	Norfolk	25021	1200125	55	0146	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Norfolk	25021	1200125	56	0147	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Norfolk	25021	1200127	10	0209	40200710	0.1455	Missing	0.000	25.0	24.9	0.00	0.2070	Missing	0.001	1.425	0.00	64.40	0.07
MA	Norfolk	25021	1200228	04	0203	40200710	0.5600	Missing	0.002	25.0	24.9	0.00	0.7980	Missing	0.002	1.425	0.00	64.40	0.28
MA	Norfolk	25021	1200452	04	0102	40200701	0.0910	Missing	0.000	25.0	25.5	0.00	0.1300	Missing	0.000	1.425	0.00	64.40	0.05
MA	Plymouth	25023	1192198	11	0107	40200710	0.0660	Missing	0.000	23.0	24.9	0.00	0.0940	Missing	0.000	1.425	0.00	64.40	0.03
MA	Plymouth	25023	1192198	12	0108	40200710	1.0000	Missing	0.003	25.0	24.9	0.00	1.4250	Missing	0.004	1.425	0.00	64.40	0.51
MA	Plymouth	25023	1192198	19	0109	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Plymouth	25023	1192198	23	0109	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Plymouth	25023	1192198	25	0109	40200710	0.3310	Missing	0.001	25.0	24.9	0.00	0.4720	Missing	0.001	1.425	0.00	64.40	0.17
MA	Plymouth	25023	1192198	26	0109	40200710	0.0555	Missing	0.000	25.0	24.9	0.00	0.0790	Missing	0.000	1.425	0.00	64.40	0.03
MA	Plymouth	25023	1192203	01	0101	40200710	5.8700	Missing	0.016	25.0	24.9	0.00	8.3660	Missing	0.023	1.425	0.00	64.40	2.98
MA	Plymouth	25023	1192237	08	0102	40200710	0.2400	Missing	0.001	25.0	24.9	0.00	0.3420	Missing	0.001	1.425	0.00	64.40	0.12
MA	Plymouth	25023	1192436	04	0103	40200701	1.0000	Missing	0.003	25.0	25.5	98.10	1.4250	Missing	0.004	1.425	98.10	0.00	1.43
MA	Plymouth	25023	1192436	05	0103	40200701	1.0000	Missing	0.003	25.0	25.5	98.10	1.4250	Missing	0.004	1.425	98.10	0.00	1.43
MA	Plymouth	25023	1192436	07	0104	40200701	8.0000	Missing	0.022	25.0	25.5	98.00	11.4020	Missing	0.031	1.425	98.00	0.00	11.40
MA	Plymouth	25023	1192436	09	0105	40200701	2.0000	Missing	0.005	25.0	25.5	0.00	2.8500	Missing	0.008	1.425	0.00	64.40	1.01
MA	Plymouth	25023	1200177	05	0105	40200701	1.0000	Missing	0.003	25.0	25.5	0.00	1.4250	Missing	0.004	1.425	0.00	64.40	0.51
MA	Plymouth	25023	1200637	04	0104	40200710	0.1170	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Plymouth	25023	1200637	07	0105	40200707	0.0075	Missing	0.000	25.0	29.3	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Suffolk	25025	1191397	05	0106	40200701	10.5850	Missing	0.029	25.0	25.5	0.00	15.0860	Missing	0.041	1.425	0.00	64.40	5.37
MA	Suffolk	25025	1191397	06	0107	40200701	14.6260	Missing	0.040	25.0	25.5	0.00	20.8460	Missing	0.057	1.425	0.00	64.40	7.42
MA	Worcester	25027	1180025	01	0301	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180069	05	0102	40200701	1.0000	Missing	0.003	25.0	25.5	98.50	1.4250	Missing	0.004	1.425	98.50	0.00	1.43
MA	Worcester	25027	1180069	06	0102	40200701	0.2095	Missing	0.001	25.0	25.5	98.50	0.2990	Missing	0.001	1.425	98.50	0.00	0.30
MA	Worcester	25027	1180078	03	0102	40200710	3.0000	Missing	0.008	25.0	24.9	97.50	4.2760	Missing	0.012	1.425	97.50	0.00	4.28
MA	Worcester	25027	1180078	05	0102	40200710	3.0000	Missing	0.008	25.0	24.9	97.50	4.2760	Missing	0.012	1.425	97.50	0.00	4.28
MA	Worcester	25027	1180115	17	0209	40200701	2.5000	Missing	0.007	25.0	25.5	0.00	3.5630	Missing	0.010	1.425	0.00	64.40	1.27
MA	Worcester	25027	1180115	25	0311	40200710	0.0275	Missing	0.000	25.0	24.9	0.00	0.0390	Missing	0.000	1.425	0.00	64.40	0.01
MA	Worcester	25027	1180115	36	0117	40200710	1.2500	Missing	0.003	25.0	24.9	0.00	1.7820	Missing	0.005	1.425	0.00	64.40	0.63

							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
MA	Worcester	25027	1180115	39	0118	40200701	0.0650	Missing	0.000	25.0	25.5	0.00	0.0930	Missing	0.000	1.425	0.00	64.40	0.03
MA	Worcester	25027	1180115	77	0251	40200710	0.0350	Missing	0.000	25.0	24.9	0.00	0.0500	Missing	0.000	1.425	0.00	64.40	0.02
MA	Worcester	25027	1180225	04	0104	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180265	02	0202	40200701	6.1000	Missing	0.017	25.0	25.5	95.50	8.6940	Missing	0.024	1.425	95.50	0.00	8.69
MA	Worcester	25027	1180265	03	0303	40200701	0.6940	Missing	0.002	25.0	25.5	95.00	0.9890	Missing	0.003	1.425	95.00	0.00	0.99
MA	Worcester	25027	1180265	05	0205	40200701	2.0420	Missing	0.006	25.0	25.5	0.00	2.9100	Missing	0.008	1.425	0.00	64.40	1.04
MA	Worcester	25027	1180265	06	0206	40200701	1.0715	Missing	0.003	25.0	25.5	95.00	1.5270	Missing	0.004	1.425	95.00	0.00	1.53
MA	Worcester	25027	1180265	07	0202	40200701	0.2870	Missing	0.001	25.0	25.5	95.00	0.4090	Missing	0.001	1.425	95.00	0.00	0.41
MA	Worcester	25027	1180310	03	0203	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180310	03	0303	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180470	03	0202	40200701	2.0000	Missing	0.005	25.0	25.5	98.00	2.8500	Missing	0.008	1.425	98.00	0.00	2.85
MA	Worcester	25027	1180505	07	0107	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180505	23	0123	40200710	0.0000	Missing	0.000	25.0	24.9	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180998	12	0106	40200710	5.0000	Missing	0.014	25.0	24.9	98.50	7.1260	Missing	0.020	1.425	98.50	0.00	7.13
MA	Worcester	25027	1180998	14	0106	40200710	9.0000	Missing	0.025	25.0	24.9	98.50	12.8270	Missing	0.035	1.425	98.50	0.00	12.83
MA	Worcester	25027	1180998	16	0106	40200710	0.0000	Missing	0.000	25.0	24.9	98.50	0.0000	Missing	0.000	1.425	98.50	0.00	0.00
MA	Worcester	25027	1180998	17	0106	40200710	1.0000	Missing	0.003	25.0	24.9	98.50	1.4250	Missing	0.004	1.425	98.50	0.00	1.43
MA	Worcester	25027	1180998	19	0107	40200710	7.0000	Missing	0.019	25.0	24.9	97.00	9.9770	Missing	0.027	1.425	97.00	0.00	9.98
MA	Worcester	25027	1180998	21	0106	40200710	0.0200	Missing	0.000	25.0	24.9	98.50	0.0290	Missing	0.000	1.425	98.50	0.00	0.03
MA	Worcester	25027	1180998	23	0109	40200710	1.0000	Missing	0.003	25.0	24.9	97.00	1.4250	Missing	0.004	1.425	97.00	0.00	1.43
MA	Worcester	25027	1180998	25	0110	40200710	0.8200	Missing	0.002	25.0	24.9	97.60	1.1690	Missing	0.003	1.425	97.60	0.00	1.17
MA	Worcester	25027	1180998	27	0111	40200710	6.0000	Missing	0.016	25.0	24.9	0.00	8.5510	Missing	0.023	1.425	0.00	64.40	3.04
MA	Worcester	25027	1180998	29	0112	40200710	5.0000	Missing	0.014	25.0	24.9	99.30	7.1260	Missing	0.020	1.425	99.30	0.00	7.13
MA	Worcester	25027	1180998	30	0113	40200701	0.0000	Missing	0.000	25.0	25.5	0.00	0.0000	Missing	0.000	1.425	0.00	64.40	0.00
MA	Worcester	25027	1180998	33	0114	40200710	3.0000	Missing	0.008	25.0	24.9	99.10	4.2760	Missing	0.012	1.425	99.10	0.00	4.28
MA	Worcester	25027	1180998	34	0114	40200710	4.0000	Missing	0.011	25.0	24.9	99.10	5.7010	Missing	0.016	1.425	99.10	0.00	5.70
MA	Worcester	25027	1180998	36	0115	40200710	3.0000	Missing	0.008	25.0	24.9	99.10	4.2760	Missing	0.012	1.425	99.10	0.00	4.28
MA	Worcester	25027	1180998	37	0115	40200710	2.0000	Missing	0.005	25.0	24.9	99.10	2.8500	Missing	0.008	1.425	99.10	0.00	2.85
MA	Worcester	25027	1180998	40	0116	40200710	13.0000	Missing	0.036	25.0	24.9	99.00	18.5280	Missing	0.051	1.425	99.00	0.00	18.53
MA	Worcester	25027	1200856	12	0110	40200701	0.2100	Missing	0.001	25.0	25.5	0.00	0.2990	Missing	0.001	1.425	0.00	64.40	0.11
MA	Worcester	25027	1200856	13	0111	40200701	0.2100	Missing	0.001	25.0	25.5	0.00	0.2990	Missing	0.001	1.425	0.00	64.40	0.11
NH	Hillsborough	33011	3301100076	004	1	40200701	8.4128	0.0339	0.034	25.0	25.5	0.00	6.6140	0.0270	0.027	1.510	0.00	64.40	2.35
NH	Hillsborough	33011	3301100076	005	1	40200701	8.4128	0.0339	0.034	25.0	25.5	0.00	6.6140	0.0270	0.027	1.510	0.00	64.40	2.35
NH	Hillsborough	33011	3301100076	009	1	40200701	4.9517	0.0193	0.019	25.0	25.5	0.00	3.8930	0.0150	0.015	1.510	0.00	64.40	1.39
NH	Strafford	33017	3301700010	001	1	40200701	19.8072	0.1639	0.164	24.0	25.5	0.00	29.9040	0.2470	0.247	1.510	0.00	64.40	10.65
NH	Strafford	33017	3301700010	002	1	40200701	25.6358	0.2051	0.205	24.0	25.5	0.00	38.7030	0.3100	0.310	1.510	0.00	64.40	13.78
NJ	Bergen	34003	00917	U9	OS1	40200701	0.6400	0.0022	0.002	25.0	25.5	0.00	0.8360	0.0029	0.003	1.305	0.00	0.00	0.84
NJ	Bergen	34003	00917	U9	OS2	40200701	0.0400	0.0001	0.000	25.0	25.5	0.00	0.0520	0.0001	0.000	1.305	0.00	0.00	0.05
NJ	Bergen	34003	00917	U9	OS3	40200701	4.3000	0.0145	0.015	25.0	25.5	0.00	5.6140	0.0189	0.019	1.305	0.00	0.00	5.61
NJ	Bergen	34003	00917	U9	OS6	40200701	0.1700	0.0082	0.008	26.0	25.5	0.00	0.2220	0.0107	0.011	1.305	0.00	0.00	0.22
NJ	Bergen	34003	00917	U9	OS8	40200701	0.0000	0.0000	0.000	25.0	25.5	0.00	0.0000	0.0000	0.000	1.305	0.00	0.00	0.00
NJ	Hunterdon	34019	80047	U44	OS1	40200701	25.4300	0.0822	0.082	25.0	25.5	0.00	33.1980	0.1073	0.107	1.305	0.00	0.00	33.20
NJ	Middlesex	34023	15538	U16	OS1	40200701	2.7500	0.0110	0.011	25.0	25.5	0.00	3.5900	0.0144	0.014	1.305	0.00	0.00	3.59
NJ	Middlesex	34023	15538	U16	OS2	40200701	0.0200	0.0001	0.000	25.0	25.5	0.00	0.0260	0.0001	0.000	1.305	0.00	0.00	0.03
NJ	Middlesex	34023	15538	U2	OS1	40200701	2.0800	0.0083	0.008	25.0	25.5	0.00	2.7150	0.0108	0.011	1.305	0.00	0.00	2.72
NJ	Middlesex	34023	15538	U2	OS2	40200701	0.0900	0.0004	0.000	25.0	25.5	0.00	0.1170	0.0005	0.001	1.305	0.00	0.00	0.12
NJ	Middlesex	34023	15538	U3	OS1	40200701	2.0800	0.0083	0.008	25.0	25.5	0.00	2.7150	0.0108	0.011	1.305	0.00	0.00	2.72
NJ	Middlesex	34023	15538	U3	OS2	40200701	0.0900	0.0004	0.000	25.0	25.5	0.00	0.1170	0.0005	0.001	1.305	0.00	0.00	0.12
NJ	Middlesex	34023	15538	U4	OS1	40200701	2.0800	0.0083	0.008	25.0	25.5	0.00	2.7150	0.0108	0.011	1.305	0.00	0.00	2.72
NJ	Middlesex	34023	15538	U4	OS2	40200701	0.0900	0.0004	0.000	25.0	25.5	0.00	0.1170	0.0005	0.001	1.305	0.00	0.00	0.12
NJ	Middlesex	34023	15741	U4	OS1	40200701	0.5200	0.0020	0.002	25.0	25.5	0.00	0.6790	0.0026	0.003	1.305	0.00	0.00	0.68
NJ	Middlesex	34023	17719	U1	OS1	40200701	0.2300	0.0010	0.001	27.0	25.5	99.30	0.3000	0.0013	0.001	1.305	99.30	0.00	0.30

							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
NJ	Middlesex	34023	17719	U1	OS2	40200701	1.9400	0.0083	0.008	27.0	25.5	99.70	2.5330	0.0108	0.011	1.305	99.70	0.00	2.53
NJ	Middlesex	34023	17719	U1	OS3	40200701	3.0100	0.0208	0.021	26.0	25.5	98.85	3.9290	0.0272	0.027	1.305	98.85	0.00	3.93
NJ	Middlesex	34023	17719	U1	OS4	40200701	6.0000	0.0228	0.023	24.0	25.5	98.50	7.8330	0.0298	0.030	1.305	98.50	0.00	7.83
NJ	Middlesex	34023	17719	U1	OS47	40200701	1.2100	0.0051	0.005	25.0	25.5	0.00	1.5800	0.0067	0.007	1.305	0.00	0.00	1.58
NJ	Middlesex	34023	17719	U1	OS48	40200701	1.2100	0.0051	0.005	25.0	25.5	0.00	1.5800	0.0067	0.007	1.305	0.00	0.00	1.58
NJ	Middlesex	34023	17719	U1	OS49	40200701	3.5600	0.0147	0.015	25.0	25.5	0.00	4.6470	0.0192	0.019	1.305	0.00	0.00	4.65
NJ	Middlesex	34023	17719	U1	OS5	40200701	13.6700	0.2395	0.240	24.0	25.5	100.00	17.8460	0.3127	0.313	1.305	100.00	0.00	17.85
NJ	Middlesex	34023	17719	U1	OS50	40200701	0.4000	0.0017	0.002	25.0	25.5	0.00	0.5220	0.0022	0.002	1.305	0.00	0.00	0.52
NJ	Middlesex	34023	17719	U1	OS6	40200701	4.9700	0.1235	0.124	27.0	25.5	0.00	6.4880	0.1612	0.161	1.305	0.00	0.00	6.49
NJ	Middlesex	34023	17719	U1	OS7	40200701	23.5200	0.0896	0.090	25.0	25.5	0.00	30.7040	0.1170	0.117	1.305	0.00	0.00	30.70
NJ	Middlesex	34023	17719	U1	OS8	40200701	0.1700	0.0007	0.001	26.0	25.5	99.90	0.2220	0.0009	0.001	1.305	99.90	0.00	0.22
NJ	Middlesex	34023	17719	U41	OS0	40200701	0.0000	0.0000	0.000	Missing	25.5	0.00	0.0000	0.0000	0.000	1.305	0.00	0.00	0.00
NY	Niagara	36063	9290900018	ADHES1	HM1FP	40200701	0.5415	Missing	0.002	Missing	25.5	0.00	0.7570	Missing	0.002	1.398	0.00	64.40	0.27
NY	Ontario	36069	8329900028	000005	WABFP	40200701	3.2250	Missing	0.009	Missing	25.5	0.00	4.5090	Missing	0.013	1.398	0.00	64.40	1.61
NY	Suffolk	36103	1473000001	EI0001	E10EI	40200701	0.7770	Missing	0.002	Missing	25.5	0.00	1.0860	Missing	0.003	1.398	0.00	64.40	0.39
NY	Suffolk	36103	1473000001	U00002	103FP	40200706	2.1297	Missing	0.007	Missing	29.9	0.00	2.9780	Missing	0.010	1.398	0.00	64.40	1.06
NY	Washington	36115	5533000016	U00011	SL2FP	40200710	0.5150	Missing	0.001	Missing	24.9	0.00	0.7200	Missing	0.002	1.398	0.00	64.40	0.26
NY	Wayne	36117	8543600007	1MLDRB	SC3FP	40200701	9.5030	Missing	0.027	Missing	25.5	0.00	13.2870	Missing	0.037	1.398	0.00	64.40	4.73
NY	Wayne	36117	8543600007	2KLZRS	SC2FP	40200701	1.0437	Missing	0.003	Missing	25.5	0.00	1.4590	Missing	0.004	1.398	0.00	64.40	0.52
PA	Adams	42001	420010009	103	1	40200706	13.3000	Missing	0.039	27.0	29.9	0.00	18.2840	Missing	0.054	1.375	0.00	64.40	6.51
PA	Berks	42011	420110084	109	2	40200706	15.3082	Missing	0.064	38.0	29.9	73.00	21.0440	Missing	0.088	1.375	73.00	0.00	21.04
PA	Berks	42011	420110084	115	2	40200706	0.0698	Missing	0.000	41.0	29.9	73.00	0.0960	Missing	0.000	1.375	73.00	0.00	0.10
PA	Blair	42013	420130480	101	2	40200701	38.3800	Missing	0.101	24.0	25.5	0.00	52.7620	Missing	0.139	1.375	0.00	64.40	18.78
PA	Bucks	42017	420171041	101	1	40200701	0.1600	Missing	0.000	28.0	25.5	0.00	0.2200	Missing	0.001	1.375	0.00	64.40	0.08
PA	Butler	42019	420190029	104	1	40200701	0.4800	Missing	0.001	25.0	25.5	0.00	0.6600	Missing	0.002	1.375	0.00	64.40	0.23
PA	Butler	42019	420190029	105	1	40200701	0.1900	Missing	0.001	25.0	25.5	0.00	0.2610	Missing	0.001	1.375	0.00	64.40	0.09
PA	Butler	42019	420190090	102	1	40200701	0.9920	Missing	0.003	25.0	25.5	0.00	1.3640	Missing	0.004	1.375	0.00	64.40	0.49
PA	Butler	42019	420190090	102	2	40200701	0.9920	Missing	0.003	25.0	25.5	0.00	1.3640	Missing	0.004	1.375	0.00	64.40	0.49
PA	Butler	42019	420190090	102	3	40200701	0.9920	Missing	0.003	25.0	25.5	0.00	1.3640	Missing	0.004	1.375	0.00	64.40	0.49
PA	Butler	42019	420190090	102	4	40200701	0.9920	Missing	0.003	25.0	25.5	0.00	1.3640	Missing	0.004	1.375	0.00	64.40	0.49
PA	Butler	42019	420190090	102	5	40200701	0.9920	Missing	0.003	25.0	25.5	0.00	1.3640	Missing	0.004	1.375	0.00	64.40	0.49
PA	Butler	42019	420190090	102	6	40200701	1.2400	Missing	0.003	25.0	25.5	0.00	1.7050	Missing	0.005	1.375	0.00	64.40	0.61
PA	Clinton	42035	420350429	P105	1	40200710	9.1800	Missing	0.027	27.0	24.9	0.00	12.6200	Missing	0.037	1.375	0.00	64.40	4.49
PA	Clinton	42035	420350429	P106	1	40200710	0.7200	Missing	0.002	27.0	24.9	0.00	0.9900	Missing	0.003	1.375	0.00	64.40	0.35
PA	Crawford	42039	420390013	106	1	40200707	68.6000	Missing	0.188	25.0	29.3	0.00	94.3050	Missing	0.259	1.375	0.00	64.40	33.57
PA	Crawford	42039	420390014	102	1	40200701	9.7047	Missing	0.027	25.0	25.5	0.00	13.3410	Missing	0.037	1.375	0.00	64.40	4.75
PA	Crawford	42039	420390014	103	1	40200701	7.3471	Missing	0.020	25.0	25.5	0.00	10.1000	Missing	0.028	1.375	0.00	64.40	3.60
PA	Crawford	42039	420390014	104	1	40200701	20.9820	Missing	0.058	25.0	25.5	0.00	28.8440	Missing	0.079	1.375	0.00	64.40	10.27
PA	Crawford	42039	420390014	105	1	40200701	20.9820	Missing	0.058	25.0	25.5	0.00	28.8440	Missing	0.079	1.375	0.00	64.40	10.27
PA	Delaware	42045	420450954	121	1	40200701	0.7009	Missing	0.002	26.0	25.5	0.00	0.9640	Missing	0.003	1.375	0.00	64.40	0.34
PA	Franklin	42055	420550022	100	1	40200706	5.0230	Missing	0.019	35.0	29.9	0.00	6.9050	Missing	0.027	1.375	0.00	64.40	2.46
PA	Franklin	42055	420550022	101	1	40200706	1.4670	Missing	0.005	28.0	29.9	0.00	2.0170	Missing	0.006	1.375	0.00	64.40	0.72
PA	Huntingdon	42061	420610016	104	1	40200701	5.4000	Missing	0.015	Missing	25.5	0.00	7.4230	Missing	0.021	1.375	0.00	64.40	2.64
PA	Huntingdon	42061	420610016	105	1	40200701	0.5000	Missing	0.001	Missing	25.5	0.00	0.6870	Missing	0.002	1.375	0.00	64.40	0.24
PA	Huntingdon	42061	420610032	101	2	40200701	2.9668	Missing	0.008	Missing	25.5	0.00	4.0790	Missing	0.011	1.375	0.00	64.40	1.45
PA	Huntingdon	42061	420610032	101	4	40200701	0.9659	Missing	0.003	Missing	25.5	0.00	1.3280	Missing	0.004	1.375	0.00	64.40	0.47
PA	Huntingdon	42061	420610032	101	6	40200701	2.9668	Missing	0.008	Missing	25.5	0.00	4.0790	Missing	0.011	1.375	0.00	64.40	1.45
PA	Huntingdon	42061	420610032	102	2	40200701	2.4509	Missing	0.007	Missing	25.5	0.00	3.3690	Missing	0.009	1.375	0.00	64.40	1.20
PA	Huntingdon	42061	420610032	102	4	40200701	0.7980	Missing	0.002	Missing	25.5	0.00	1.0970	Missing	0.003	1.375	0.00	64.40	0.39
PA	Huntingdon	42061	420610032	102	6	40200701	2.4509	Missing	0.007	Missing	25.5	0.00	3.3690	Missing	0.009	1.375	0.00	64.40	1.20
PA	Huntingdon	42061	420610032	103	2	40200701	7.0994	Missing	0.020	Missing	25.5	0.00	9.7600	Missing	0.027	1.375	0.00	64.40	3.47
PA	Huntingdon	42061	420610032	103	4	40200701	2.8997	Missing	0.008	Missing	25.5	0.00	3.9860	Missing	0.011	1.375	0.00	64.40	1.42

							2002 VOC Emissions						2009 VOC OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
PA	Lackawanna	42069	420690023	107	1	40200701	0.5630	Missing	0.002	Missing	25.5	0.00	0.7740	Missing	0.002	1.375	0.00	64.40	0.28
PA	Lackawanna	42069	420690023	108	1	40200701	25.2100	Missing	0.133	48.0	25.5	0.00	34.6570	Missing	0.183	1.375	0.00	64.40	12.34
PA	Lancaster	42071	420710802	102	1	40200710	0.9300	Missing	0.003	26.0	24.9	0.00	1.2790	Missing	0.004	1.375	0.00	64.40	0.46
PA	Lancaster	42071	420710804	102	1	40200710	0.5500	Missing	0.002	28.0	24.9	0.00	0.7560	Missing	0.002	1.375	0.00	64.40	0.27
PA	Lehigh	42077	420770071	101	1	40200710	0.7000	Missing	0.002	25.0	24.9	0.00	0.9620	Missing	0.003	1.375	0.00	64.40	0.34
PA	Lehigh	42077	420770071	101	2	40200710	0.2640	Missing	0.001	25.0	24.9	0.00	0.3630	Missing	0.001	1.375	0.00	64.40	0.13
PA	Lehigh	42077	420770071	102	1	40200710	2.0000	Missing	0.005	25.0	24.9	0.00	2.7490	Missing	0.008	1.375	0.00	64.40	0.98
PA	Lehigh	42077	420770071	102	2	40200710	1.5114	Missing	0.004	25.0	24.9	0.00	2.0780	Missing	0.006	1.375	0.00	64.40	0.74
PA	Lehigh	42077	420770071	103	1	40200710	0.1000	Missing	0.000	25.0	24.9	0.00	0.1380	Missing	0.000	1.375	0.00	64.40	0.05
PA	Lehigh	42077	420770071	104	1	40200710	13.1000	Missing	0.036	25.0	24.9	0.00	18.0090	Missing	0.049	1.375	0.00	64.40	6.41
PA	Lehigh	42077	420770071	105	1	40200710	0.7000	Missing	0.002	25.0	24.9	0.00	0.9620	Missing	0.003	1.375	0.00	64.40	0.34
PA	Lycoming	42081	420810039	113	1	40200710	0.2000	Missing	0.001	24.0	24.9	0.00	0.2750	Missing	0.001	1.375	0.00	64.40	0.10
PA	Lycoming	42081	420810559	P104	1	40200710	0.1400	Missing	0.000	27.0	24.9	0.00	0.1930	Missing	0.001	1.375	0.00	64.40	0.07
PA	Montgomery	42091	420910826	002	1	40200701	0.3000	Missing	0.000	0.0	25.5	0.00	0.4120	Missing	0.000	1.375	0.00	64.40	0.15
PA	Montgomery	42091	420910874	101	1	40200707	0.5000	Missing	0.001	25.0	29.3	80.00	0.6870	Missing	0.002	1.375	80.00	0.00	0.69
PA	Montgomery	42091	420910874	102	1	40200707	1.9700	Missing	0.005	25.0	29.3	80.00	2.7080	Missing	0.007	1.375	80.00	0.00	2.71
PA	Northumberland	42097	420970001	105	1	40200710	9.1600	Missing	0.025	25.0	24.9	0.00	12.5920	Missing	0.035	1.375	0.00	64.40	4.48
PA	Northumberland	42097	420970001	201	1	40200710	2.3300	Missing	0.006	25.0	24.9	0.00	3.2030	Missing	0.009	1.375	0.00	64.40	1.14
PA	Northumberland	42097	420970001	202	1	40200710	23.8800	Missing	0.066	25.0	24.9	0.00	32.8280	Missing	0.090	1.375	0.00	64.40	11.69
PA	Northumberland	42097	420970034	104	1	40200710	1.3200	Missing	0.004	25.0	24.9	0.00	1.8150	Missing	0.005	1.375	0.00	64.40	0.65
PA	Northumberland	42097	420970034	105A	1	40200710	7.4200	Missing	0.019	23.0	24.9	0.00	10.2000	Missing	0.026	1.375	0.00	64.40	3.63
PA	Philadelphia	42101	4210101591	004	1	40200701	0.0000	0.0000	0.000	Missing	25.5	0.00	0.0000	0.0000	0.000	1.375	0.00	64.40	0.00
PA	Philadelphia	42101	4210102051	005	10	40200712	0.1155	0.0003	0.000	Missing	25.0	0.00	0.1590	0.0003	0.000	1.375	0.00	64.40	0.06
PA	Philadelphia	42101	4210102051	005	11	40200712	0.0866	0.0002	0.000	Missing	25.0	0.00	0.1190	0.0002	0.000	1.375	0.00	64.40	0.04
PA	Philadelphia	42101	4210102051	005	12	40200712	0.0000	0.0000	0.000	Missing	25.0	0.00	0.0000	0.0000	0.000	1.375	0.00	64.40	0.00
PA	Philadelphia	42101	4210102051	006	5	40200712	0.0938	0.0003	0.000	Missing	25.0	0.00	0.1290	0.0003	0.000	1.375	0.00	64.40	0.05
PA	Philadelphia	42101	4210102051	007	6	40200712	0.0938	0.0003	0.000	Missing	25.0	0.00	0.1290	0.0003	0.000	1.375	0.00	64.40	0.05
PA	Philadelphia	42101	4210102051	008	14	40200712	0.0938	0.0003	0.000	Missing	25.0	0.00	0.1290	0.0003	0.000	1.375	0.00	64.40	0.05
PA	Philadelphia	42101	4210102051	009	7	40200712	0.0938	0.0003	0.000	Missing	25.0	0.00	0.1290	0.0003	0.000	1.375	0.00	64.40	0.05
PA	Philadelphia	42101	4210103217	010	2	40200710	0.0000	0.0000	0.000	Missing	24.9	0.00	0.0000	0.0000	0.000	1.375	0.00	64.40	0.00
PA	Snyder	42109	421090001	113	1	40200710	6.6000	Missing	0.019	26.0	24.9	0.00	9.0730	Missing	0.026	1.375	0.00	64.40	3.23
PA	Snyder	42109	421090001	140	1	40200710	29.7000	Missing	0.091	28.0	24.9	0.00	40.8290	Missing	0.126	1.375	0.00	64.40	14.54
PA	Union	42119	421190477	P101	1	40200710	6.7900	Missing	0.019	26.0	24.9	0.00	9.3340	Missing	0.027	1.375	0.00	64.40	3.32
PA	Westmoreland	42129	421290071	105	1	40200701	1.4100	Missing	0.002	14.0	25.5	0.00	1.9380	Missing	0.003	1.375	0.00	64.40	0.69
PA	Westmoreland	42129	421290311	101	1	40200701	0.3240	Missing	0.001	29.0	25.5	0.00	0.4450	Missing	0.001	1.375	0.00	64.40	0.16
PA	York	42133	421330027	101	1	40200706	1.7250	Missing	0.005	26.0	29.9	98.00	2.3710	Missing	0.007	1.375	98.00	0.00	2.37
PA	York	42133	421330027	101	2	40200706	1.7250	Missing	0.005	26.0	29.9	98.00	2.3710	Missing	0.007	1.375	98.00	0.00	2.37
PA	York	42133	421330027	102	1	40200706	0.3600	Missing	0.001	16.0	29.9	98.00	0.4950	Missing	0.001	1.375	98.00	0.00	0.50
PA	York	42133	421330027	102	2	40200706	0.3600	Missing	0.001	16.0	29.9	98.00	0.4950	Missing	0.001	1.375	98.00	0.00	0.50
PA	York	42133	421330027	104	1	40200706	0.7650	Missing	0.002	26.0	29.9	98.00	1.0520	Missing	0.003	1.375	98.00	0.00	1.05
PA	York	42133	421330027	104	2	40200706	0.7650	Missing	0.002	26.0	29.9	98.00	1.0520	Missing	0.003	1.375	98.00	0.00	1.05
PA	York	42133	421330027	105	1	40200706	2.2200	Missing	0.006	26.0	29.9	98.00	3.0520	Missing	0.009	1.375	98.00	0.00	3.05
PA	York	42133	421330027	105	2	40200706	2.2200	Missing	0.006	26.0	29.9	98.00	3.0520	Missing	0.009	1.375	98.00	0.00	3.05
PA	York	42133	421330027	106	1	40200706	1.4650	Missing	0.003	21.0	29.9	98.00	2.0140	Missing	0.005	1.375	98.00	0.00	2.01
PA	York	42133	421330027	106	2	40200706	1.4650	Missing	0.003	21.0	29.9	98.00	2.0140	Missing	0.005	1.375	98.00	0.00	2.01
PA	York	42133	421330027	108	1	40200706	2.1350	Missing	0.006	25.0	29.9	98.00	2.9350	Missing	0.008	1.375	98.00	0.00	2.94
PA	York	42133	421330027	108	2	40200706	2.1350	Missing	0.006	25.0	29.9	98.00	2.9350	Missing	0.008	1.375	98.00	0.00	2.94
PA	York	42133	421330027	109	1	40200706	1.9700	Missing	0.006	27.0	29.9	98.00	2.7080	Missing	0.008	1.375	98.00	0.00	2.71
PA	York	42133	421330027	109	2	40200706	1.9700	Missing	0.006	27.0	29.9	98.00	2.7080	Missing	0.008	1.375	98.00	0.00	2.71
PA	York	42133	421330027	110	1	40200706	1.1850	Missing	0.004	28.0	29.9	98.00	1.6290	Missing	0.005	1.375	98.00	0.00	1.63
PA	York	42133	421330027	110	2	40200706	1.1850	Missing	0.004	28.0	29.9	98.00	1.6290	Missing	0.005	1.375	98.00	0.00	1.63
PA	York	42133	421330027	111	1	40200706	0.5500	Missing	0.001	20.0	29.9	98.00	0.7560	Missing	0.002	1.375	98.00	0.00	0.76

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
PA	York	42133	421330027	111	2	40200706	0.5500	Missing	0.001	20.0	29.9	98.00	0.7560	Missing	0.002	1.375	98.00	0.00	0.76
PA	York	42133	421330034	103	1	40200701	0.4710	Missing	0.001	27.0	25.5	0.00	0.6470	Missing	0.002	1.375	0.00	64.40	0.23
PA	York	42133	421330055	101	1	40200706	1.0000	Missing	0.003	27.0	29.9	0.00	1.3750	Missing	0.004	1.375	0.00	64.40	0.49
PA	York	42133	421330055	101	2	40200706	1.0000	Missing	0.003	27.0	29.9	0.00	1.3750	Missing	0.004	1.375	0.00	64.40	0.49
RI	Kent	44003	AIR1438	8	8	40200710	8.7646	Missing	0.024	Missing	24.9	0.00	9.4730	Missing	0.026	1.081	0.00	64.40	3.37
RI	Providence	44007	AIR1859	2	2	40200701	3.3140	Missing	0.009	Missing	25.5	0.00	3.5820	Missing	0.010	1.081	0.00	64.40	1.28
RI	Providence	44007	AIR3850	1	1	40200701	0.5255	Missing	0.001	Missing	25.5	0.00	0.5680	Missing	0.002	1.081	0.00	64.40	0.20
RI	Providence	44007	AIR537	2	2	40200710	0.5445	Missing	0.001	Missing	24.9	0.00	0.5890	Missing	0.002	1.081	0.00	64.40	0.21
RI	Washington	44009	AIR594	7	7	40200710	3.9755	Missing	0.011	Missing	24.9	0.00	4.2970	Missing	0.012	1.081	0.00	64.40	1.53
VT	Caledonia	50005	9	4	1	40200701	16.0500	0.0436	0.044	25.0	25.5	0.00	23.8570	0.0739	0.074	1.486	0.00	64.40	8.49
						MANEVU	1,031.58		3.63				1,402.77		5.04				840.31
						NOVA	0.00		0.00				0.00		0.00				0.00
						OTR	1,031.58		3.63				1,402.77		5.04				840.31
													493.57						

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Emissions	2009 BOTW Reductions		
Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.003	1.46	0.006	WASLEY PRODUCTS INC
0.003	1.46	0.006	WASLEY PRODUCTS INC
0.011	0.00	0.000	SAINT-GOBAIN PPL CORP
0.000	0.12	0.001	DELTA RUBBER CO SUB OF NN, INC
0.004	1.75	0.006	PROCTOR AND GAMBLE DOVER WIPES COMPANY
0.005	3.49	0.010	PROCTOR AND GAMBLE DOVER WIPES COMPANY
0.000	0.00	0.000	PROCTOR AND GAMBLE DOVER WIPES COMPANY
0.000	0.00	0.000	PROCTOR AND GAMBLE DOVER WIPES COMPANY
0.000	0.00	0.000	PROCTOR AND GAMBLE DOVER WIPES COMPANY
0.002	1.19	0.005	DASSAULT FALCON JET-WILMINGTON CORP
0.000	0.00	0.000	DASSAULT FALCON JET-WILMINGTON CORP
0.000	0.20	0.001	INTERNATIONAL PAPER - AUBURN
0.000	0.00	0.000	NORTHROP-GRUMMAN - BWI
0.000	0.17	0.001	NORTHROP-GRUMMAN - BWI
0.019	10.10	0.033	MIDDLE RIVER AIRCRAFT SYSTEMS
0.000	0.00	0.000	MIDDLE RIVER AIRCRAFT SYSTEMS
0.000	0.00	0.000	MIDDLE RIVER AIRCRAFT SYSTEMS
0.008	0.00	0.000	MIDDLE RIVER AIRCRAFT SYSTEMS
0.000	0.00	0.000	MIDDLE RIVER AIRCRAFT SYSTEMS
0.002	0.00	0.000	MIDDLE RIVER AIRCRAFT SYSTEMS
0.000	0.00	0.000	CYTEC ENGINEERED MATERIALS
0.000	0.00	0.000	CYTEC ENGINEERED MATERIALS
0.021	0.00	0.000	CYTEC ENGINEERED MATERIALS
0.011	0.00	0.000	CYTEC ENGINEERED MATERIALS
0.000	0.00	0.000	ALCORE - QUARRY DRIVE
0.007	3.05	0.014	ALCORE - QUARRY DRIVE
0.000	0.00	0.000	ALCORE - QUARRY DRIVE
0.009	2.61	0.016	ALCORE - QUARRY DRIVE
0.000	0.00	0.000	ALCORE - QUARRY DRIVE
0.026	1.92	0.047	ALCORE - QUARRY DRIVE
0.001	0.37	0.002	VPI MIRREX

' Emissions	2009 BOTW Reductions		
Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.00	0.000	VPI MIRREX
0.000	0.00	0.000	ACS AUXILIARIES GROUP
0.000	0.00	0.000	PRECIX
0.000	0.00	0.000	PRECIX
0.000	0.03	0.000	PRECIX
0.001	0.42	0.001	PRECIX
0.001	0.42	0.001	PRECIX
0.001	0.42	0.001	PRECIX
0.001	0.42	0.001	PRECIX
0.001	0.42	0.001	PRECIX
0.006	3.70	0.010	AMERICAN INSULATED WIRE
0.000	0.00	0.000	KIRKHILL-TA CO HASKON DIV
0.000	0.13	0.000	KIRKHILL-TA CO HASKON DIV
0.000	0.05	0.000	KIRKHILL-TA CO HASKON DIV
0.001	0.50	0.001	METFAB ENGINEERING
0.001	0.37	0.001	HUB FOLDING BOX COMPANY
0.000	0.00	0.000	HOMELAND BUILDERS
0.000	0.15	0.000	AD A DAY COMPANY INCORPORATED
0.001	0.54	0.001	WALTER A FURMAN CO
0.000	0.09	0.000	ITW DEVCON
0.000	0.00	0.000	SALEM SUEDE INCORPORATED
0.008	0.00	0.000	SHAWSHEEN RUBBER COMPANY
0.008	0.00	0.000	SHAWSHEEN RUBBER COMPANY
0.000	0.00	0.000	AW CHESTERTON CO
0.001	0.92	0.003	HERO COATINGS INC
0.001	0.44	0.001	GI PLASTEK LTD
0.000	0.00	0.000	VERNON PLASTICS INC
0.000	0.00	0.000	CUSTOM INDUSTRIES INC
0.000	0.00	0.000	MALDEN MILLS INDUSTRIES
0.000	0.00	0.000	MALDEN MILLS INDUSTRIES
0.000	0.02	0.000	MALDEN MILLS INDUSTRIES
0.000	0.01	0.000	MALDEN MILLS INDUSTRIES
0.000	0.00	0.000	MALDEN MILLS INDUSTRIES
0.012	0.00	0.000	ANDOVER COATED PRODUCTS INC
0.000	0.00	0.000	NEW BALANCE ATHLETIC SHOE
0.001	0.54	0.001	ARC TECHNOLOGIES INCORPORATED
0.000	0.00	0.000	ARC TECHNOLOGIES INCORPORATED
0.000	0.00	0.000	ARC TECHNOLOGIES INCORPORATED
0.000	0.00	0.000	VICOR CORPORATION
0.000	0.00	0.000	RAYTHEON SYSTEMS COMPANY - IDS
0.000	0.00	0.000	RAYTHEON SYSTEMS COMPANY - IDS
0.000	0.06	0.000	RAYTHEON SYSTEMS COMPANY - IDS
0.000	0.00	0.000	RAYTHEON SYSTEMS COMPANY - IDS
0.000	0.00	0.000	RAYTHEON SYSTEMS COMPANY - IDS
0.000	0.00	0.000	HOLYOKE CARD COMPANY
0.000	0.00	0.000	GENERAL DYNAMICS AVIATION SERVICES
0.000	0.00	0.000	POLYMER INJECTION MOLDING
0.000	0.00	0.000	AVERY DENNISON CORPORATION
0.029	19.27	0.053	OLD COLONY ENVELOPE
0.006	3.67	0.010	ROCK TENN COMPANY
0.000	0.15	0.000	TYCO HEALTHCARE LUDLOW
0.000	0.04	0.000	OCTOBER COMPANY-STIK II DIV

' Emissions	2009 BOTW Reductions		
Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.020	0.00	0.000	OCTOBER COMPANY-STIK II DIV
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.000	0.00	0.000	BEMIS ASSOCIATES INC
0.003	1.84	0.005	AMES SAFETY ENVELOPE
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.00	0.000	IVEX NOVACEL INC
0.000	0.12	0.000	EVERGREEN SOLAR, INC.
0.000	0.00	0.000	CHOMERICS DIVISION
0.000	0.29	0.001	CHOMERICS DIVISION
0.000	0.13	0.000	CHOMERICS INCORPORATED
0.000	0.21	0.001	CHOMERICS INCORPORATED
0.000	0.07	0.000	IONICS INCORPORATED
0.004	2.75	0.008	IONICS INCORPORATED
0.000	0.10	0.000	IONICS INCORPORATED
0.000	0.12	0.000	CHASE WALTON ELASTOMERS
0.000	0.00	0.000	RAYTHEON SYSTEMS
0.000	0.00	0.000	RAYTHEON SYSTEMS
0.000	0.00	0.000	RAYTHEON SYSTEMS
0.000	0.00	0.000	TYCO ADHESIVES
0.000	0.00	0.000	JEFFERSON SMURFIT CO
0.000	0.00	0.000	KIDDE FENWAL INCORPORATED
0.000	0.00	0.000	KIDDE FENWAL INCORPORATED
0.004	0.00	0.000	ROGERS FOAM COMPANY
0.000	0.00	0.000	ROGERS FOAM COMPANY
0.020	0.00	0.000	ROGERS FOAM COMPANY
0.000	0.01	0.000	BOSE CORPORATION
0.001	0.46	0.001	MIT
0.000	0.00	0.000	MIT
0.000	0.00	0.000	DATA INSTRUMENTS
0.000	0.00	0.000	DATA INSTRUMENTS
0.000	0.04	0.000	IDEAL TAPE COMPANY
0.015	10.10	0.028	IDEAL TAPE COMPANY
0.000	0.00	0.000	IDEAL TAPE COMPANY
0.211	0.00	0.000	IDEAL TAPE COMPANY
0.000	0.00	0.000	IDEAL TAPE COMPANY
0.000	0.00	0.000	IDEAL TAPE COMPANY
0.078	0.00	0.000	IDEAL TAPE COMPANY
0.000	0.00	0.000	IDEAL TAPE COMPANY
0.000	0.00	0.000	IDEAL TAPE COMPANY
0.000	0.17	0.000	M/A COM INCORPORATED

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.000	0.14	0.000	M/A COM INCORPORATED
0.000	0.17	0.000	M/A COM INCORPORATED
0.011	7.34	0.020	RUBBAIR DOOR INCORPORATED
0.188	0.00	0.000	PLYMOUTH RUBBER COMPANY
0.027	0.00	0.000	PLYMOUTH RUBBER COMPANY
0.000	0.00	0.000	CHASE & SONS INC
0.000	0.07	0.000	CHASE & SONS INC
0.000	0.00	0.000	WOLLASTON ALLOYS INC
0.000	0.00	0.000	BIRD INCORPORATED ROOFING
0.007	4.59	0.013	CUMING CORPORATION
0.000	0.00	0.000	AVON TAPE INC
0.000	0.32	0.001	EXHIBIT GROUP GILTSP
0.000	0.01	0.000	COURIER STOUGHTON
0.000	0.27	0.001	COURIER STOUGHTON
0.000	0.00	0.000	INVENSYS SYSTEMS
0.000	0.00	0.000	INVENSYS SYSTEMS
0.000	0.13	0.000	CLARK CUTLER MCDERMO
0.001	0.51	0.001	J&J CORRUGATED BOX CO
0.000	0.08	0.000	FABREEKA INTERNATIONAL INC
0.000	0.06	0.000	TITLEIST & FOOT JOY
0.001	0.92	0.003	TITLEIST & FOOT JOY
0.000	0.00	0.000	TITLEIST & FOOT JOY
0.000	0.00	0.000	TITLEIST & FOOT JOY
0.000	0.30	0.001	TITLEIST & FOOT JOY
0.000	0.05	0.000	TITLEIST & FOOT JOY
0.008	5.39	0.015	WARE RITE DISTRIBUTORS INC
0.000	0.22	0.001	GRAPHIC SERVICES
0.004	0.00	0.000	VENTURE TAPE
0.004	0.00	0.000	VENTURE TAPE
0.031	0.00	0.000	VENTURE TAPE
0.003	1.84	0.005	VENTURE TAPE
0.001	0.92	0.003	WINTHROP ATKINS COMPANY INC
0.000	0.00	0.000	FRANKLIN FIXTURES INC
0.000	0.00	0.000	FRANKLIN FIXTURES INC
0.015	9.72	0.027	BARRY CONTROLS
0.020	13.42	0.037	BARRY CONTROLS
0.000	0.00	0.000	NENSCO
0.004	0.00	0.000	JEN MANUFACTURING INCORPORATED
0.001	0.00	0.000	JEN MANUFACTURING INCORPORATED
0.012	0.00	0.000	FLEXCON COMPANY INC
0.012	0.00	0.000	FLEXCON COMPANY INC
0.003	2.29	0.006	ST GOBAIN
0.000	0.03	0.000	ST GOBAIN
0.002	1.15	0.003	ST GOBAIN

' Emissions	2009 BOTW Reductions		
Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.06	0.000	ST GOBAIN
0.000	0.03	0.000	ST GOBAIN
0.000	0.00	0.000	NEW ENGLAND WOODEN W
0.024	0.00	0.000	NYLCO CORPORATION
0.003	0.00	0.000	NYLCO CORPORATION
0.003	1.87	0.005	NYLCO CORPORATION
0.004	0.00	0.000	NYLCO CORPORATION
0.001	0.00	0.000	NYLCO CORPORATION
0.000	0.00	0.000	BULLARD ABRASIVE PRODUCTS
0.000	0.00	0.000	BULLARD ABRASIVE PRODUCTS
0.008	0.00	0.000	INDUSTRIAL POLYMERS
0.000	0.00	0.000	ST GOBAIN CERAMICS & PLASTICS
0.000	0.00	0.000	ST GOBAIN CERAMICS & PLASTICS
0.020	0.00	0.000	FLEXCON COMPANY INC
0.035	0.00	0.000	FLEXCON COMPANY INC
0.000	0.00	0.000	FLEXCON COMPANY INC
0.004	0.00	0.000	FLEXCON COMPANY INC
0.027	0.00	0.000	FLEXCON COMPANY INC
0.000	0.00	0.000	FLEXCON COMPANY INC
0.004	0.00	0.000	FLEXCON COMPANY INC
0.003	0.00	0.000	FLEXCON COMPANY INC
0.008	5.51	0.015	FLEXCON COMPANY INC
0.020	0.00	0.000	FLEXCON COMPANY INC
0.000	0.00	0.000	FLEXCON COMPANY INC
0.012	0.00	0.000	FLEXCON COMPANY INC
0.016	0.00	0.000	FLEXCON COMPANY INC
0.012	0.00	0.000	FLEXCON COMPANY INC
0.008	0.00	0.000	FLEXCON COMPANY INC
0.051	0.00	0.000	FLEXCON COMPANY INC
0.000	0.19	0.001	ST GOBAIN CONTAINERS
0.000	0.19	0.001	ST GOBAIN CONTAINERS
0.010	4.26	0.017	KALWALL PANELS & ACCESSORIES
0.010	4.26	0.017	KALWALL PANELS & ACCESSORIES
0.005	2.51	0.010	KALWALL PANELS & ACCESSORIES
0.088	19.26	0.159	TAPE-O CORPORATION
0.110	24.92	0.200	TAPE-O CORPORATION
0.003	0.00	0.000	SCAPA TAPES NORTH AMERICA
0.000	0.00	0.000	SCAPA TAPES NORTH AMERICA
0.019	0.00	0.000	SCAPA TAPES NORTH AMERICA
0.011	0.00	0.000	SCAPA TAPES NORTH AMERICA
0.000	0.00	0.000	SCAPA TAPES NORTH AMERICA
0.107	0.00	0.000	BEMIS CO. INC.
0.014	0.00	0.000	FERRO INDUSTRIES, INC.
0.000	0.00	0.000	FERRO INDUSTRIES, INC.
0.011	0.00	0.000	FERRO INDUSTRIES, INC.
0.001	0.00	0.000	FERRO INDUSTRIES, INC.
0.011	0.00	0.000	FERRO INDUSTRIES, INC.
0.001	0.00	0.000	FERRO INDUSTRIES, INC.
0.011	0.00	0.000	FERRO INDUSTRIES, INC.
0.001	0.00	0.000	FERRO INDUSTRIES, INC.
0.003	0.00	0.000	Perth Amboy Tire
0.001	0.00	0.000	PERMACEL

/ Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.011	0.00	0.000	PERMACEL
0.027	0.00	0.000	PERMACEL
0.030	0.00	0.000	PERMACEL
0.007	0.00	0.000	PERMACEL
0.007	0.00	0.000	PERMACEL
0.019	0.00	0.000	PERMACEL
0.313	0.00	0.000	PERMACEL
0.002	0.00	0.000	PERMACEL
0.161	0.00	0.000	PERMACEL
0.117	0.00	0.000	PERMACEL
0.001	0.00	0.000	PERMACEL
0.000	0.00	0.000	PERMACEL
0.001	0.49	0.001	DELPHI AUTOMOTIVE SYSTEMS - LOCKPORT
0.004	2.90	0.008	MERIDIAN AUTOMOTIVE SYSTEMS
0.001	0.70	0.002	ADCHEM CORPORATION
0.003	1.92	0.006	ADCHEM CORPORATION
0.001	0.46	0.001	PLIANT SOLUTIONS CORPORATION
0.013	8.56	0.024	GARLOCK SEALING TECHNOLOGIES
0.001	0.94	0.003	GARLOCK SEALING TECHNOLOGIES
0.019	11.77	0.035	SCHINDLER ELEVATOR CORP/GETTYSBURG
0.088	0.00	0.000	PACKAGING GROUP/BOYERTOWN PRINTING PLT
0.000	0.00	0.000	PACKAGING GROUP/BOYERTOWN PRINTING PLT
0.050	33.98	0.090	HH BROWN SHOE CO/COVE SHOE MARTINSBURG
0.000	0.14	0.000	ROGERS FOAM CORP/MORRISVILLE
0.001	0.43	0.001	CASTLE RUBBER LLC/EAST BUTLER BORO
0.000	0.17	0.000	CASTLE RUBBER LLC/EAST BUTLER BORO
0.001	0.88	0.002	CUE INC/CRANBERRY TWP PLT
0.001	0.88	0.002	CUE INC/CRANBERRY TWP PLT
0.001	0.88	0.002	CUE INC/CRANBERRY TWP PLT
0.001	0.88	0.002	CUE INC/CRANBERRY TWP PLT
0.001	0.88	0.002	CUE INC/CRANBERRY TWP PLT
0.002	1.10	0.003	CUE INC/CRANBERRY TWP PLT
0.013	8.13	0.024	XL ACQUISITION CORP/AVIS AMER HENRY ST PLT
0.001	0.64	0.002	XL ACQUISITION CORP/AVIS AMER HENRY ST PLT
0.092	60.73	0.167	LORD CORP/SAEGERTOWN
0.013	8.59	0.024	LORD CORP/MECH PROD DIV
0.010	6.50	0.018	LORD CORP/MECH PROD DIV
0.028	18.58	0.051	LORD CORP/MECH PROD DIV
0.028	18.58	0.051	LORD CORP/MECH PROD DIV
0.001	0.62	0.002	JEFFERSON SMURFIT CO/ASTON CONTAINER DIV
0.009	4.45	0.017	ARMACLAD INC/QUINCY PLT
0.002	1.30	0.004	ARMACLAD INC/QUINCY PLT
0.007	4.78	0.013	AGY HUNTINGDON LLC/HUNTINGDON
0.001	0.44	0.001	AGY HUNTINGDON LLC/HUNTINGDON
0.004	2.63	0.007	OWENS CORNING/HUNTINGDON MAT PLANT
0.001	0.86	0.002	OWENS CORNING/HUNTINGDON MAT PLANT
0.004	2.63	0.007	OWENS CORNING/HUNTINGDON MAT PLANT
0.003	2.17	0.006	OWENS CORNING/HUNTINGDON MAT PLANT
0.001	0.71	0.002	OWENS CORNING/HUNTINGDON MAT PLANT
0.003	2.17	0.006	OWENS CORNING/HUNTINGDON MAT PLANT
0.010	6.29	0.018	OWENS CORNING/HUNTINGDON MAT PLANT
0.004	2.57	0.007	OWENS CORNING/HUNTINGDON MAT PLANT

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.001	0.50	0.001	MACTAC INC/SCRANTON FAC
0.065	22.32	0.118	MACTAC INC/SCRANTON FAC
0.001	0.82	0.002	HOMETTE CORP/SKYLINE HOMES EPHRATA
0.001	0.49	0.001	HOMETTE CORP/SKYLINE HOMES LEOLA
0.001	0.62	0.002	ALLEN ORGAN CO/MACUNGIE
0.000	0.23	0.001	ALLEN ORGAN CO/MACUNGIE
0.003	1.77	0.005	ALLEN ORGAN CO/MACUNGIE
0.002	1.34	0.004	ALLEN ORGAN CO/MACUNGIE
0.000	0.09	0.000	ALLEN ORGAN CO/MACUNGIE
0.018	11.60	0.032	ALLEN ORGAN CO/MACUNGIE
0.001	0.62	0.002	ALLEN ORGAN CO/MACUNGIE
0.000	0.18	0.000	SPECIALIZED VEHICLES CORP/MONTGOMERY PLT
0.000	0.12	0.000	JOHN SAVOY & SON INC/MONTOURSVILLE PLT
0.000	0.27	0.000	LOCKHEED MARTIN CORP/MISSILES & SPACE OPR
0.002	0.00	0.000	ATOFINA CHEM INC/KING OF PRUSSIA
0.007	0.00	0.000	ATOFINA CHEM INC/KING OF PRUSSIA
0.012	8.11	0.022	RESILITE SPORTS PROD/NORTHUMBERLAND PLT
0.003	2.06	0.006	RESILITE SPORTS PROD/NORTHUMBERLAND PLT
0.032	21.14	0.058	RESILITE SPORTS PROD/NORTHUMBERLAND PLT
0.002	1.17	0.003	FLEETWOOD MOTOR HOMES/MAIN PLT
0.009	6.57	0.017	FLEETWOOD MOTOR HOMES/MAIN PLT
0.000	0.00	0.000	PERFECSEAL
0.000	0.10	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.08	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.00	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.08	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.08	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.08	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.08	0.000	SMURFIT-STONE CONTAINER CORPORATION
0.000	0.00	0.000	GEII INSPECTION & REPAIR SERVICES
0.009	5.84	0.017	WOOD MODE INC/KREAMER PLT
0.045	26.29	0.081	WOOD MODE INC/KREAMER PLT
0.009	6.01	0.017	RITZ CRAFT CORP/MIFFLINBURG PLT
0.001	1.25	0.002	CHESTNUT RIDGE FOAM /LATROBE PLT
0.001	0.29	0.001	ADVANCE USA INC/NEW STANTON PLT
0.007	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.007	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.001	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.001	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.003	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.003	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.009	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.009	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.005	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.005	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.008	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.008	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.008	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.008	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.005	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.005	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.002	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK

' Emissions	2009 BOTW Reductions		
Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.002	0.00	0.000	ADHESIVES RESEARCH INC/GLEN ROCK
0.001	0.42	0.001	UNITED DEFENSE LTD P/YORK
0.001	0.89	0.003	TATE ACCESS FLOORS/RED LION
0.001	0.89	0.003	TATE ACCESS FLOORS/RED LION
0.009	6.10	0.017	STANLEY-BOSTITCH, INC. (EG)
0.004	2.31	0.006	ARLON INC.
0.001	0.37	0.001	LAMINATED PRODUCTS
0.001	0.38	0.001	FLAIR INDUSTRIES, INC.
0.004	2.77	0.008	ELECTRIC BOAT CORPORATION
0.026	15.36	0.048	EHV WEIDMANN INDUSTRIES
3.10	562.46	1.94	
0.00	0.00	0.00	
3.10	562.46	1.94	

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
G	
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 24-60-xxx-xxx, 24-65-xxx-xxx

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3.1 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3.1 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental OTB Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental BOTW Control Factor (percent reduction due to OTC 2006 Control Measure)
Q, R	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
S, T	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

CONSUMER PRODUCTS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
CT	Fairfield	09001	2465000000	3,759.86	10.3010	10.301	25.0	25.1	3,324.25	9.1075	9.108	1.03	14.20	2.00	3,257.76	8.925	66.48	0.182	All Products/Processes
CT	Hartford	09003	2465000000	2,485.81	6.8104	6.810	25.0	25.1	2,197.81	6.0214	6.021	1.03	14.20	2.00	2,153.85	5.901	43.96	0.120	All Products/Processes
CT	Litchfield	09005	2465000000	465.45	1.2752	1.275	25.0	25.1	411.52	1.1275	1.127	1.03	14.20	2.00	403.29	1.105	8.23	0.023	All Products/Processes
CT	Middlesex	09007	2465000000	564.22	1.5458	1.546	25.0	25.1	498.85	1.3667	1.367	1.03	14.20	2.00	488.87	1.339	9.98	0.027	All Products/Processes
CT	New Haven	09009	2465000000	4,362.35	11.9516	11.952	25.0	25.1	3,856.93	10.5669	10.567	1.03	14.20	2.00	3,779.79	10.356	77.14	0.211	All Products/Processes
CT	New London	09011	2465000000	2,319.84	6.3557	6.356	25.0	25.1	2,051.06	5.6194	5.619	1.03	14.20	2.00	2,010.04	5.507	41.02	0.112	All Products/Processes
CT	Tolland	09013	2465000000	383.36	1.0503	1.050	25.0	25.1	338.94	0.9286	0.929	1.03	14.20	2.00	332.17	0.910	6.78	0.019	All Products/Processes
CT	Windham	09015	2465000000	284.06	0.7783	0.778	25.0	25.1	251.15	0.6881	0.688	1.03	14.20	2.00	246.13	0.674	5.02	0.014	All Products/Processes
DE	Kent	10001	2460100000	68.81	0.1892	0.189	25.0	25.0	62.59	0.1721	0.172	1.06	14.20	2.00	61.34	0.169	1.25	0.003	All Personal Care Products
DE	Kent	10001	2460200000	84.54	0.2325	0.233	25.0	25.0	76.90	0.2115	0.212	1.06	14.20	2.00	75.36	0.207	1.54	0.004	All Household Products
DE	Kent	10001	2460400000	51.12	0.1406	0.141	25.0	25.0	46.49	0.1279	0.128	1.06	14.20	2.00	45.57	0.125	0.93	0.003	All Automotive Aftermarket Products
DE	Kent	10001	2460500000	90.44	0.2487	0.249	25.0	25.0	82.26	0.2262	0.226	1.06	14.20	2.00	80.61	0.222	1.65	0.005	All Coatings and Related Products
DE	Kent	10001	2460600000	18.35	0.0505	0.051	25.0	25.0	16.69	0.0459	0.046	1.06	14.20	2.00	16.36	0.045	0.33	0.001	All Adhesives and Sealants
DE	Kent	10001	2460800000	49.81	0.1916	0.192	25.0	25.0	45.30	0.1742	0.174	1.06	14.20	2.00	44.40	0.171	0.91	0.003	All FIFRA Related Products
DE	Kent	10001	2460900000	47.84	0.1316	0.132	25.0	25.0	43.51	0.1197	0.120	1.06	14.20	2.00	42.64	0.117	0.87	0.002	Miscellaneous Products (Not Otherw
DE	New Castle	10003	2460100000	268.99	0.7397	0.740	25.0	25.0	240.70	0.6619	0.662	1.04	14.20	2.00	235.89	0.649	4.81	0.013	All Personal Care Products
DE	New Castle	10003	2460200000	330.47	0.9088	0.909	25.0	25.0	295.72	0.8132	0.813	1.04	14.20	2.00	289.81	0.797	5.91	0.016	All Household Products
DE	New Castle	10003	2460400000	199.82	0.5495	0.550	25.0	25.0	178.81	0.4917	0.492	1.04	14.20	2.00	175.23	0.482	3.58	0.010	All Automotive Aftermarket Products
DE	New Castle	10003	2460500000	353.53	0.9722	0.972	25.0	25.0	316.35	0.8700	0.870	1.04	14.20	2.00	310.02	0.853	6.33	0.017	All Coatings and Related Products
DE	New Castle	10003	2460600000	71.73	0.1973	0.197	25.0	25.0	64.19	0.1765	0.177	1.04	14.20	2.00	62.90	0.173	1.28	0.004	All Adhesives and Sealants
DE	New Castle	10003	2460800000	194.70	0.7488	0.749	25.0	25.0	174.22	0.6701	0.670	1.04	14.20	2.00	170.74	0.657	3.48	0.013	All FIFRA Related Products
DE	New Castle	10003	2460900000	187.01	0.5143	0.514	25.0	25.0	167.35	0.4602	0.460	1.04	14.20	2.00	164.00	0.451	3.35	0.009	Miscellaneous Products (Not Otherw
DE	Sussex	10005	2460100000	86.07	0.2367	0.237	25.0	25.0	83.14	0.2286	0.229	1.13	14.20	2.00	81.48	0.224	1.66	0.005	All Personal Care Products
DE	Sussex	10005	2460200000	105.75	0.2908	0.291	25.0	25.0	102.15	0.2809	0.281	1.13	14.20	2.00	100.10	0.275	2.04	0.006	All Household Products
DE	Sussex	10005	2460400000	63.94	0.1758	0.176	25.0	25.0	61.76	0.1698	0.170	1.13	14.20	2.00	60.53	0.166	1.24	0.003	All Automotive Aftermarket Products
DE	Sussex	10005	2460500000	113.12	0.3111	0.311	25.0	25.0	109.27	0.3005	0.301	1.13	14.20	2.00	107.09	0.294	2.19	0.006	All Coatings and Related Products
DE	Sussex	10005	2460600000	22.95	0.0631	0.063	25.0	25.0	22.17	0.0610	0.061	1.13	14.20	2.00	21.73	0.060	0.44	0.001	All Adhesives and Sealants
DE	Sussex	10005	2460800000	62.30	0.2396	0.240	25.0	25.0	60.18	0.2315	0.232	1.13	14.20	2.00	58.97	0.227	1.20	0.005	All FIFRA Related Products
DE	Sussex	10005	2460900000	59.84	0.1646	0.165	25.0	25.0	57.80	0.1590	0.159	1.13	14.20	2.00	56.65	0.156	1.16	0.003	Miscellaneous Products (Not Otherw
DC	Washington	11001	2460100000	582.32	Missing	1.600	Missing	25.0	524.11	Missing	1.440	1.08	14.20	2.00	513.63	1.411	10.48	0.029	All Personal Care Products
DC	Washington	11001	2460200000	200.84	Missing	0.552	Missing	25.0	180.77	Missing	0.497	1.08	14.20	2.00	177.15	0.487	3.62	0.010	All Household Products
DC	Washington	11001	2460400000	353.39	Missing	0.971	Missing	25.0	318.06	Missing	0.874	1.08	14.20	2.00	311.70	0.856	6.36	0.017	All Automotive Aftermarket Products
DC	Washington	11001	2460500000	271.18	Missing	0.745	Missing	25.0	244.07	Missing	0.671	1.08	14.20	2.00	239.19	0.657	4.88	0.013	All Coatings and Related Products
DC	Washington	11001	2460600000	149.20	Missing	0.410	Missing	25.0	134.29	Missing	0.369	1.08	14.20	2.00	131.60	0.362	2.69	0.007	All Adhesives and Sealants
DC	Washington	11001	2460800000	482.29	Missing	1.325	Missing	25.0	434.08	Missing	1.193	1.08	14.20	2.00	425.40	1.169	8.68	0.024	All FIFRA Related Products
DC	Washington	11001	2460900000	19.98	Missing	0.055	Missing	25.0	17.98	Missing	0.049	1.08	14.20	2.00	17.62	0.048	0.36	0.001	Miscellaneous Products (Not Otherw
ME	Androscoggin	23001	2460100000	97.26	Missing	0.267	Missing	25.0	86.69	Missing	0.238	1.04	14.20	2.00	84.96	0.233	1.73	0.005	All Personal Care Products
ME	Androscoggin	23001	2460200000	33.12	Missing	0.091	Missing	25.0	29.52	Missing	0.081	1.04	14.20	2.00	28.93	0.079	0.59	0.002	All Household Products
ME	Androscoggin	23001	2460400000	57.01	Missing	0.157	Missing	25.0	50.82	Missing	0.140	1.04	14.20	2.00	49.80	0.137	1.02	0.003	All Automotive Aftermarket Products
ME	Androscoggin	23001	2460500000	39.83	Missing	0.109	Missing	25.0	35.50	Missing	0.098	1.04	14.20	2.00	34.79	0.096	0.71	0.002	All Coatings and Related Products

CONSUMER PRODUCTS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
ME	Androscoggin	23001	2460600000	23.90	Missing	0.066	Missing	25.0	21.30	Missing	0.059	1.04	14.20	2.00	20.87	0.057	0.43	0.001	All Adhesives and Sealants
ME	Androscoggin	23001	2460800000	74.62	Missing	0.205	Missing	25.0	66.51	Missing	0.183	1.04	14.20	2.00	65.18	0.179	1.33	0.004	All FIFRA Related Products
ME	Androscoggin	23001	2460900000	2.93	Missing	0.008	Missing	25.0	2.62	Missing	0.007	1.04	14.20	2.00	2.56	0.007	0.05	0.000	Miscellaneous Products (Not Otherw
ME	Aroostook	23003	2460100000	67.86	Missing	0.186	Missing	25.0	60.48	Missing	0.166	1.04	14.20	2.00	59.27	0.163	1.21	0.003	All Personal Care Products
ME	Aroostook	23003	2460200000	23.11	Missing	0.063	Missing	25.0	20.60	Missing	0.057	1.04	14.20	2.00	20.18	0.055	0.41	0.001	All Household Products
ME	Aroostook	23003	2460400000	39.78	Missing	0.109	Missing	25.0	35.46	Missing	0.097	1.04	14.20	2.00	34.75	0.095	0.71	0.002	All Automotive Aftermarket Products
ME	Aroostook	23003	2460500000	27.79	Missing	0.076	Missing	25.0	24.77	Missing	0.068	1.04	14.20	2.00	24.27	0.067	0.50	0.001	All Coatings and Related Products
ME	Aroostook	23003	2460600000	16.67	Missing	0.046	Missing	25.0	14.86	Missing	0.041	1.04	14.20	2.00	14.56	0.040	0.30	0.001	All Adhesives and Sealants
ME	Aroostook	23003	2460800000	52.06	Missing	0.143	Missing	25.0	46.41	Missing	0.127	1.04	14.20	2.00	45.48	0.125	0.93	0.003	All FIFRA Related Products
ME	Aroostook	23003	2460900000	2.05	Missing	0.006	Missing	25.0	1.82	Missing	0.005	1.04	14.20	2.00	1.79	0.005	0.04	0.000	Miscellaneous Products (Not Otherw
ME	Cumberland	23005	2460100000	249.71	Missing	0.686	Missing	25.0	222.57	Missing	0.611	1.04	14.20	2.00	218.12	0.599	4.45	0.012	All Personal Care Products
ME	Cumberland	23005	2460200000	85.03	Missing	0.234	Missing	25.0	75.79	Missing	0.208	1.04	14.20	2.00	74.27	0.204	1.52	0.004	All Household Products
ME	Cumberland	23005	2460400000	146.38	Missing	0.402	Missing	25.0	130.47	Missing	0.358	1.04	14.20	2.00	127.86	0.351	2.61	0.007	All Automotive Aftermarket Products
ME	Cumberland	23005	2460500000	102.25	Missing	0.281	Missing	25.0	91.14	Missing	0.250	1.04	14.20	2.00	89.32	0.245	1.82	0.005	All Coatings and Related Products
ME	Cumberland	23005	2460600000	61.35	Missing	0.169	Missing	25.0	54.68	Missing	0.150	1.04	14.20	2.00	53.59	0.147	1.09	0.003	All Adhesives and Sealants
ME	Cumberland	23005	2460800000	191.59	Missing	0.526	Missing	25.0	170.77	Missing	0.469	1.04	14.20	2.00	167.35	0.460	3.42	0.009	All FIFRA Related Products
ME	Cumberland	23005	2460900000	7.53	Missing	0.021	Missing	25.0	6.72	Missing	0.018	1.04	14.20	2.00	6.58	0.018	0.13	0.000	Miscellaneous Products (Not Otherw
ME	Franklin	23007	2460100000	27.55	Missing	0.076	Missing	25.0	24.55	Missing	0.067	1.04	14.20	2.00	24.06	0.066	0.49	0.001	All Personal Care Products
ME	Franklin	23007	2460200000	9.38	Missing	0.026	Missing	25.0	8.36	Missing	0.023	1.04	14.20	2.00	8.19	0.023	0.17	0.000	All Household Products
ME	Franklin	23007	2460400000	16.15	Missing	0.044	Missing	25.0	14.39	Missing	0.040	1.04	14.20	2.00	14.10	0.039	0.29	0.001	All Automotive Aftermarket Products
ME	Franklin	23007	2460500000	11.28	Missing	0.031	Missing	25.0	10.05	Missing	0.028	1.04	14.20	2.00	9.85	0.027	0.20	0.001	All Coatings and Related Products
ME	Franklin	23007	2460600000	6.77	Missing	0.019	Missing	25.0	6.03	Missing	0.017	1.04	14.20	2.00	5.91	0.016	0.12	0.000	All Adhesives and Sealants
ME	Franklin	23007	2460800000	21.13	Missing	0.058	Missing	25.0	18.84	Missing	0.052	1.04	14.20	2.00	18.46	0.051	0.38	0.001	All FIFRA Related Products
ME	Franklin	23007	2460900000	0.83	Missing	0.002	Missing	25.0	0.74	Missing	0.002	1.04	14.20	2.00	0.73	0.002	0.01	0.000	Miscellaneous Products (Not Otherw
ME	Hancock	23009	2460100000	48.59	Missing	0.133	Missing	25.0	43.31	Missing	0.119	1.04	14.20	2.00	42.44	0.117	0.87	0.002	All Personal Care Products
ME	Hancock	23009	2460200000	16.55	Missing	0.045	Missing	25.0	14.75	Missing	0.041	1.04	14.20	2.00	14.45	0.040	0.29	0.001	All Household Products
ME	Hancock	23009	2460400000	28.48	Missing	0.078	Missing	25.0	25.39	Missing	0.070	1.04	14.20	2.00	24.88	0.068	0.51	0.001	All Automotive Aftermarket Products
ME	Hancock	23009	2460500000	19.90	Missing	0.055	Missing	25.0	17.73	Missing	0.049	1.04	14.20	2.00	17.38	0.048	0.35	0.001	All Coatings and Related Products
ME	Hancock	23009	2460600000	11.94	Missing	0.033	Missing	25.0	10.64	Missing	0.029	1.04	14.20	2.00	10.43	0.029	0.21	0.001	All Adhesives and Sealants
ME	Hancock	23009	2460800000	37.28	Missing	0.102	Missing	25.0	33.23	Missing	0.091	1.04	14.20	2.00	32.56	0.089	0.66	0.002	All FIFRA Related Products
ME	Hancock	23009	2460900000	1.47	Missing	0.004	Missing	25.0	1.31	Missing	0.004	1.04	14.20	2.00	1.28	0.004	0.03	0.000	Miscellaneous Products (Not Otherw
ME	Kennebec	23011	2460100000	109.73	Missing	0.301	Missing	25.0	97.81	Missing	0.269	1.04	14.20	2.00	95.85	0.263	1.96	0.005	All Personal Care Products
ME	Kennebec	23011	2460200000	37.37	Missing	0.103	Missing	25.0	33.30	Missing	0.091	1.04	14.20	2.00	32.64	0.090	0.67	0.002	All Household Products
ME	Kennebec	23011	2460400000	64.32	Missing	0.177	Missing	25.0	57.33	Missing	0.158	1.04	14.20	2.00	56.19	0.154	1.15	0.003	All Automotive Aftermarket Products
ME	Kennebec	23011	2460500000	44.93	Missing	0.123	Missing	25.0	40.05	Missing	0.110	1.04	14.20	2.00	39.25	0.108	0.80	0.002	All Coatings and Related Products
ME	Kennebec	23011	2460600000	26.96	Missing	0.074	Missing	25.0	24.03	Missing	0.066	1.04	14.20	2.00	23.55	0.065	0.48	0.001	All Adhesives and Sealants
ME	Kennebec	23011	2460800000	84.19	Missing	0.231	Missing	25.0	75.04	Missing	0.206	1.04	14.20	2.00	73.54	0.202	1.50	0.004	All FIFRA Related Products
ME	Kennebec	23011	2460900000	3.31	Missing	0.009	Missing	25.0	2.95	Missing	0.008	1.04	14.20	2.00	2.89	0.008	0.06	0.000	Miscellaneous Products (Not Otherw
ME	Knox	23013	2460100000	37.56	Missing	0.103	Missing	25.0	33.48	Missing	0.092	1.04	14.20	2.00	32.81	0.090	0.67	0.002	All Personal Care Products
ME	Knox	23013	2460200000	12.79	Missing	0.035	Missing	25.0	11.40	Missing	0.031	1.04	14.20	2.00	11.17	0.031	0.23	0.001	All Household Products
ME	Knox	23013	2460400000	22.02	Missing	0.060	Missing	25.0	19.63	Missing	0.054	1.04	14.20	2.00	19.23	0.053	0.39	0.001	All Automotive Aftermarket Products
ME	Knox	23013	2460500000	15.38	Missing	0.042	Missing	25.0	13.71	Missing	0.038	1.04	14.20	2.00	13.44	0.037	0.27	0.001	All Coatings and Related Products
ME	Knox	23013	2460600000	9.23	Missing	0.025	Missing	25.0	8.23	Missing	0.023	1.04	14.20	2.00	8.06	0.022	0.16	0.000	All Adhesives and Sealants
ME	Knox	23013	2460800000	28.82	Missing	0.079	Missing	25.0	25.69	Missing	0.071	1.04	14.20	2.00	25.17	0.069	0.51	0.001	All FIFRA Related Products
ME	Knox	23013	2460900000	1.13	Missing	0.003	Missing	25.0	1.01	Missing	0.003	1.04	14.20	2.00	0.99	0.003	0.02	0.000	Miscellaneous Products (Not Otherw
ME	Lincoln	23015	2460100000	31.93	Missing	0.088	Missing	25.0	28.46	Missing	0.078	1.04	14.20	2.00	27.89	0.077	0.57	0.002	All Personal Care Products
ME	Lincoln	23015	2460200000	10.87	Missing	0.030	Missing	25.0	9.69	Missing	0.027	1.04	14.20	2.00	9.50	0.026	0.19	0.001	All Household Products
ME	Lincoln	23015	2460400000	18.72	Missing	0.051	Missing	25.0	16.68	Missing	0.046	1.04	14.20	2.00	16.35	0.045	0.33	0.001	All Automotive Aftermarket Products
ME	Lincoln	23015	2460500000	13.07	Missing	0.036	Missing	25.0	11.65	Missing	0.032	1.04	14.20	2.00	11.42	0.031	0.23	0.001	All Coatings and Related Products
ME	Lincoln	23015	2460600000	7.84	Missing	0.022	Missing	25.0	6.99	Missing	0.019	1.04	14.20	2.00	6.85	0.019	0.14	0.000	All Adhesives and Sealants
ME	Lincoln	23015	2460800000	24.50	Missing	0.067	Missing	25.0	21.84	Missing	0.060	1.04	14.20	2.00	21.40	0.059	0.44	0.001	All FIFRA Related Products
ME	Lincoln	23015	2460900000	0.96	Missing	0.003	Missing	25.0	0.86	Missing	0.002	1.04	14.20	2.00	0.84	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
ME	Oxford	23017	2460100000	51.60	Missing	0.142	Missing	25.0	45.99	Missing	0.126	1.04	14.20	2.00	45.07	0.124	0.92	0.003	All Personal Care Products
ME	Oxford	23017	2460200000	17.57	Missing	0.048	Missing	25.0	15.66	Missing	0.043	1.04	14.20	2.00	15.35	0.042	0.31	0.001	All Household Products
ME	Oxford	23017	2460400000	30.25	Missing	0.083	Missing	25.0	26.96	Missing	0.074	1.04	14.20	2.00	26.42	0.073	0.54	0.001	All Automotive Aftermarket Products
ME	Oxford	23017	2460500000	21.13	Missing	0.058	Missing	25.0	18.83	Missing	0.052	1.04	14.20	2.00	18.46	0.051	0.38	0.001	All Coatings and Related Products
ME	Oxford	23017	2460600000	12.68	Missing	0.035	Missing	25.0	11.30	Missing	0.031	1.04	14.20	2.00	11.07	0.030	0.23	0.001	All Adhesives and Sealants
ME	Oxford	23017	2460800000	39.59	Missing	0.109	Missing	25.0	35.29	Missing	0.097	1.04	14.20	2.00	34.58	0.095	0.71	0.002	All FIFRA Related Products
ME	Oxford	23017	2460900000	1.56	Missing	0.004	Missing	25.0	1.39	Missing	0.004	1.04	14.20	2.00	1.36	0.004	0.03	0.000	Miscellaneous Products (Not Otherw
ME	Penobscot	23019	2460100000	135.50	Missing	0.372	Missing	25.0	120.78	Missing	0.332	1.04	14.20	2.00	118.36	0.325	2.42	0.007	All Personal Care Products

CONSUMER PRODUCTS

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
ME	Penobscot	23019	2460200000	46.14	Missing	0.127	Missing	25.0	41.13	Missing	0.113	1.04	14.20	2.00	40.30	0.111	0.82	0.002	All Household Products
ME	Penobscot	23019	2460400000	79.43	Missing	0.218	Missing	25.0	70.80	Missing	0.195	1.04	14.20	2.00	69.38	0.191	1.42	0.004	All Automotive Aftermarket Products
ME	Penobscot	23019	2460500000	55.49	Missing	0.152	Missing	25.0	49.46	Missing	0.136	1.04	14.20	2.00	48.47	0.133	0.99	0.003	All Coatings and Related Products
ME	Penobscot	23019	2460600000	33.29	Missing	0.091	Missing	25.0	29.67	Missing	0.082	1.04	14.20	2.00	29.08	0.080	0.59	0.002	All Adhesives and Sealants
ME	Penobscot	23019	2460800000	12.25	Missing	0.034	Missing	25.0	10.92	Missing	0.030	1.04	14.20	2.00	10.70	0.029	0.22	0.001	All FIFRA Related Products
ME	Penobscot	23019	2460900000	4.09	Missing	0.011	Missing	25.0	3.64	Missing	0.010	1.04	14.20	2.00	3.57	0.010	0.07	0.000	Miscellaneous Products (Not Otherw
ME	Piscataquis	23021	2460100000	15.96	Missing	0.044	Missing	25.0	14.23	Missing	0.039	1.04	14.20	2.00	13.95	0.038	0.28	0.001	All Personal Care Products
ME	Piscataquis	23021	2460200000	5.44	Missing	0.015	Missing	25.0	4.85	Missing	0.013	1.04	14.20	2.00	4.75	0.013	0.10	0.000	All Household Products
ME	Piscataquis	23021	2460400000	9.36	Missing	0.026	Missing	25.0	8.34	Missing	0.023	1.04	14.20	2.00	8.17	0.022	0.17	0.000	All Automotive Aftermarket Products
ME	Piscataquis	23021	2460500000	6.54	Missing	0.018	Missing	25.0	5.83	Missing	0.016	1.04	14.20	2.00	5.71	0.016	0.12	0.000	All Coatings and Related Products
ME	Piscataquis	23021	2460600000	3.92	Missing	0.011	Missing	25.0	3.50	Missing	0.010	1.04	14.20	2.00	3.43	0.009	0.07	0.000	All Adhesives and Sealants
ME	Piscataquis	23021	2460800000	12.25	Missing	0.034	Missing	25.0	10.92	Missing	0.030	1.04	14.20	2.00	10.70	0.029	0.22	0.001	All FIFRA Related Products
ME	Piscataquis	23021	2460900000	0.48	Missing	0.001	Missing	25.0	0.43	Missing	0.001	1.04	14.20	2.00	0.42	0.001	0.01	0.000	Miscellaneous Products (Not Otherw
ME	Sagadahoc	23023	2460100000	33.39	Missing	0.092	Missing	25.0	29.76	Missing	0.082	1.04	14.20	2.00	29.17	0.080	0.60	0.002	All Personal Care Products
ME	Sagadahoc	23023	2460200000	11.37	Missing	0.031	Missing	25.0	10.14	Missing	0.028	1.04	14.20	2.00	9.93	0.027	0.20	0.001	All Household Products
ME	Sagadahoc	23023	2460400000	19.57	Missing	0.054	Missing	25.0	17.45	Missing	0.048	1.04	14.20	2.00	17.10	0.047	0.35	0.001	All Automotive Aftermarket Products
ME	Sagadahoc	23023	2460500000	13.67	Missing	0.038	Missing	25.0	12.19	Missing	0.033	1.04	14.20	2.00	11.94	0.033	0.24	0.001	All Coatings and Related Products
ME	Sagadahoc	23023	2460600000	8.20	Missing	0.023	Missing	25.0	7.31	Missing	0.020	1.04	14.20	2.00	7.17	0.020	0.15	0.000	All Adhesives and Sealants
ME	Sagadahoc	23023	2460800000	25.62	Missing	0.070	Missing	25.0	22.84	Missing	0.063	1.04	14.20	2.00	22.38	0.061	0.46	0.001	All FIFRA Related Products
ME	Sagadahoc	23023	2460900000	1.01	Missing	0.003	Missing	25.0	0.90	Missing	0.002	1.04	14.20	2.00	0.88	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
ME	Somerset	23025	2460100000	47.29	Missing	0.130	Missing	25.0	42.15	Missing	0.116	1.04	14.20	2.00	41.31	0.113	0.84	0.002	All Personal Care Products
ME	Somerset	23025	2460200000	16.10	Missing	0.044	Missing	25.0	14.35	Missing	0.039	1.04	14.20	2.00	14.07	0.039	0.29	0.001	All Household Products
ME	Somerset	23025	2460400000	27.72	Missing	0.076	Missing	25.0	24.71	Missing	0.068	1.04	14.20	2.00	24.22	0.067	0.49	0.001	All Automotive Aftermarket Products
ME	Somerset	23025	2460500000	19.37	Missing	0.053	Missing	25.0	17.26	Missing	0.047	1.04	14.20	2.00	16.92	0.046	0.35	0.001	All Coatings and Related Products
ME	Somerset	23025	2460600000	11.62	Missing	0.032	Missing	25.0	10.36	Missing	0.028	1.04	14.20	2.00	10.15	0.028	0.21	0.001	All Adhesives and Sealants
ME	Somerset	23025	2460800000	36.29	Missing	0.100	Missing	25.0	32.34	Missing	0.089	1.04	14.20	2.00	31.70	0.087	0.65	0.002	All FIFRA Related Products
ME	Somerset	23025	2460900000	1.43	Missing	0.004	Missing	25.0	1.27	Missing	0.003	1.04	14.20	2.00	1.25	0.003	0.03	0.000	Miscellaneous Products (Not Otherw
ME	Waldo	23027	2460100000	34.92	Missing	0.096	Missing	25.0	31.12	Missing	0.086	1.04	14.20	2.00	30.50	0.084	0.62	0.002	All Personal Care Products
ME	Waldo	23027	2460200000	11.89	Missing	0.033	Missing	25.0	10.60	Missing	0.029	1.04	14.20	2.00	10.39	0.029	0.21	0.001	All Household Products
ME	Waldo	23027	2460400000	20.47	Missing	0.056	Missing	25.0	18.25	Missing	0.050	1.04	14.20	2.00	17.88	0.049	0.36	0.001	All Automotive Aftermarket Products
ME	Waldo	23027	2460500000	14.30	Missing	0.039	Missing	25.0	12.74	Missing	0.035	1.04	14.20	2.00	12.49	0.034	0.25	0.001	All Coatings and Related Products
ME	Waldo	23027	2460600000	8.58	Missing	0.024	Missing	25.0	7.65	Missing	0.021	1.04	14.20	2.00	7.49	0.021	0.15	0.000	All Adhesives and Sealants
ME	Waldo	23027	2460800000	26.79	Missing	0.074	Missing	25.0	23.88	Missing	0.066	1.04	14.20	2.00	23.40	0.064	0.48	0.001	All FIFRA Related Products
ME	Waldo	23027	2460900000	1.05	Missing	0.003	Missing	25.0	0.94	Missing	0.003	1.04	14.20	2.00	0.92	0.003	0.02	0.000	Miscellaneous Products (Not Otherw
ME	Washington	23029	2460100000	31.00	Missing	0.085	Missing	25.0	27.63	Missing	0.076	1.04	14.20	2.00	27.08	0.074	0.55	0.002	All Personal Care Products
ME	Washington	23029	2460200000	10.55	Missing	0.029	Missing	25.0	9.41	Missing	0.026	1.04	14.20	2.00	9.22	0.025	0.19	0.001	All Household Products
ME	Washington	23029	2460400000	18.17	Missing	0.050	Missing	25.0	16.20	Missing	0.044	1.04	14.20	2.00	15.87	0.044	0.32	0.001	All Automotive Aftermarket Products
ME	Washington	23029	2460500000	12.69	Missing	0.035	Missing	25.0	11.31	Missing	0.031	1.04	14.20	2.00	11.09	0.030	0.23	0.001	All Coatings and Related Products
ME	Washington	23029	2460600000	7.62	Missing	0.021	Missing	25.0	6.79	Missing	0.019	1.04	14.20	2.00	6.65	0.018	0.14	0.000	All Adhesives and Sealants
ME	Washington	23029	2460800000	23.78	Missing	0.065	Missing	25.0	21.20	Missing	0.058	1.04	14.20	2.00	20.77	0.057	0.42	0.001	All FIFRA Related Products
ME	Washington	23029	2460900000	0.94	Missing	0.003	Missing	25.0	0.83	Missing	0.002	1.04	14.20	2.00	0.82	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
ME	York	23031	2460100000	181.41	Missing	0.498	Missing	25.0	161.70	Missing	0.444	1.04	14.20	2.00	158.46	0.435	3.23	0.009	All Personal Care Products
ME	York	23031	2460200000	61.77	Missing	0.170	Missing	25.0	55.06	Missing	0.151	1.04	14.20	2.00	53.96	0.148	1.10	0.003	All Household Products
ME	York	23031	2460400000	106.34	Missing	0.292	Missing	25.0	94.79	Missing	0.260	1.04	14.20	2.00	92.89	0.255	1.90	0.005	All Automotive Aftermarket Products
ME	York	23031	2460500000	74.29	Missing	0.204	Missing	25.0	66.21	Missing	0.182	1.04	14.20	2.00	64.89	0.178	1.32	0.004	All Coatings and Related Products
ME	York	23031	2460600000	44.57	Missing	0.122	Missing	25.0	39.73	Missing	0.109	1.04	14.20	2.00	38.93	0.107	0.79	0.002	All Adhesives and Sealants
ME	York	23031	2460800000	139.19	Missing	0.382	Missing	25.0	124.06	Missing	0.341	1.04	14.20	2.00	121.58	0.334	2.48	0.007	All FIFRA Related Products
ME	York	23031	2460900000	5.47	Missing	0.015	Missing	25.0	4.88	Missing	0.013	1.04	14.20	2.00	4.78	0.013	0.10	0.000	Miscellaneous Products (Not Otherw
MD	Allegany	24001	2465000000	261.94	0.7176	0.718	Missing	25.1	221.13	0.6058	0.606	0.98	14.20	2.00	216.71	0.594	4.42	0.012	All Products/Processes
MD	Anne Arundel	24003	2465000000	1,776.96	4.8684	4.868	Missing	25.1	1,592.66	4.3635	4.364	1.04	14.20	2.00	1,560.81	4.276	31.85	0.087	All Products/Processes
MD	Baltimore	24005	2465000000	2,719.15	7.4497	7.450	Missing	25.1	2,426.28	6.6474	6.647	1.04	14.20	2.00	2,377.76	6.514	48.53	0.133	All Products/Processes
MD	Calvert	24009	2465000000	285.60	0.7825	0.783	Missing	25.1	281.17	0.7703	0.770	1.15	14.20	2.00	275.54	0.755	5.62	0.015	All Products/Processes
MD	Caroline	24011	2465000000	106.96	0.2930	0.293	Missing	25.1	97.47	0.2670	0.267	1.06	14.20	2.00	95.52	0.262	1.95	0.005	All Products/Processes
MD	Carroll	24013	2465000000	561.36	1.5380	1.538	Missing	25.1	538.08	1.4742	1.474	1.12	14.20	2.00	527.32	1.445	10.76	0.029	All Products/Processes
MD	Cecil	24015	2465000000	318.88	0.8737	0.874	Missing	25.1	303.15	0.8305	0.831	1.11	14.20	2.00	297.08	0.814	6.06	0.017	All Products/Processes
MD	Charles	24017	2465000000	455.51	1.2480	1.248	Missing	25.1	457.67	1.2539	1.254	1.17	14.20	2.00	448.52	1.229	9.15	0.025	All Products/Processes
MD	Dorchester	24019	2465000000	107.49	0.2945	0.295	Missing	25.1	95.41	0.2614	0.261	1.03	14.20	2.00	93.50	0.256	1.91	0.005	All Products/Processes
MD	Frederick	24021	2465000000	738.21	2.0225	2.023	Missing	25.1	735.70	2.0156	2.016	1.16	14.20	2.00	720.98	1.975	14.71	0.040	All Products/Processes
MD	Garrett	24023	2465000000	105.47	0.2890	0.289	Missing	25.1	93.10	0.2551	0.255	1.03	14.20	2.00	91.24	0.250	1.86	0.005	All Products/Processes
MD	Harford	24025	2465000000	803.83	2.2023	2.202	Missing	25.1	768.76	2.1062	2.106	1.11	14.20	2.00	753.38	2.064	15.38	0.042	All Products/Processes

CONSUMER PRODUCTS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
MD	Howard	24027	2465000000	918.21	2.5157	2.516	Missing	25.1	877.49	2.4041	2.404	1.11	14.20	2.00	859.94	2.356	17.55	0.048	All Products/Processes
MD	Kent	24029	2465000000	69.23	0.1897	0.190	Missing	25.1	64.15	0.1758	0.176	1.08	14.20	2.00	62.87	0.172	1.28	0.004	All Products/Processes
MD	Montgomery	24031	2465000000	3,212.85	8.8023	8.802	Missing	25.1	3,024.76	8.2870	8.287	1.10	14.20	2.00	2,964.27	8.121	60.50	0.166	All Products/Processes
MD	Prince Georges	24033	2465000000	2,940.79	8.0569	8.057	Missing	25.1	2,653.82	7.2707	7.271	1.05	14.20	2.00	2,600.74	7.125	53.08	0.145	All Products/Processes
MD	Queen Annes	24035	2465000000	151.21	0.4143	0.414	Missing	25.1	147.83	0.4050	0.405	1.14	14.20	2.00	144.88	0.397	2.96	0.008	All Products/Processes
MD	St. Marys	24037	2465000000	317.86	0.8708	0.871	Missing	25.1	306.69	0.8402	0.840	1.12	14.20	2.00	300.56	0.823	6.13	0.017	All Products/Processes
MD	Somerset	24039	2465000000	90.21	0.2471	0.247	Missing	25.1	79.17	0.2169	0.217	1.02	14.20	2.00	77.59	0.213	1.58	0.004	All Products/Processes
MD	Talbot	24041	2465000000	120.95	0.3314	0.331	Missing	25.1	111.16	0.3045	0.305	1.07	14.20	2.00	108.93	0.298	2.22	0.006	All Products/Processes
MD	Washington	24043	2465000000	473.89	1.2983	1.298	Missing	25.1	433.99	1.1890	1.189	1.07	14.20	2.00	425.31	1.165	8.68	0.024	All Products/Processes
MD	Wicomico	24045	2465000000	304.70	0.8348	0.835	Missing	25.1	282.82	0.7749	0.775	1.08	14.20	2.00	277.17	0.759	5.66	0.015	All Products/Processes
MD	Worcester	24047	2465000000	171.66	0.4703	0.470	Missing	25.1	161.80	0.4433	0.443	1.10	14.20	2.00	158.56	0.434	3.24	0.009	All Products/Processes
MD	Baltimore City	24510	2465000000	2,254.31	6.1762	6.176	Missing	25.1	1,911.66	5.2374	5.237	0.99	14.20	2.00	1,873.43	5.133	38.23	0.105	All Products/Processes
MA	Barnstable	25001	2460000000	806.90	2.2100	2.210	25.0	25.4	831.48	2.2773	2.277	1.03	0.00	15.92	699.14	1.915	132.34	0.362	All Processes
MA	Berkshire	25003	2460000000	471.10	1.2900	1.290	25.0	25.4	485.45	1.3293	1.329	1.03	0.00	15.92	408.19	1.118	77.26	0.212	All Processes
MA	Bristol	25005	2460000000	1,918.30	5.2600	5.260	25.0	25.4	1,976.74	5.4203	5.420	1.03	0.00	15.92	1,662.13	4.558	314.62	0.863	All Processes
MA	Dukes	25007	2460000000	54.50	0.1500	0.150	25.0	25.4	56.16	0.1546	0.155	1.03	0.00	15.92	47.22	0.130	8.94	0.025	All Processes
MA	Essex	25009	2460000000	2,596.70	7.1100	7.110	25.0	25.4	2,675.81	7.3266	7.327	1.03	0.00	15.92	2,249.93	6.161	425.88	1.166	All Processes
MA	Franklin	25011	2460000000	253.20	0.6900	0.690	25.0	25.4	260.91	0.7110	0.711	1.03	0.00	15.92	219.39	0.598	41.53	0.113	All Processes
MA	Hampden	25013	2460000000	1,620.70	4.4400	4.440	25.0	25.4	1,670.08	4.5753	4.575	1.03	0.00	15.92	1,404.27	3.847	265.81	0.728	All Processes
MA	Hampshire	25015	2460000000	541.50	1.4800	1.480	25.0	25.4	558.00	1.5251	1.525	1.03	0.00	15.92	469.19	1.282	88.81	0.243	All Processes
MA	Middlesex	25017	2460000000	5,203.80	14.2600	14.260	25.0	25.4	5,362.34	14.6945	14.694	1.03	0.00	15.92	4,508.87	12.356	853.47	2.339	All Processes
MA	Nantucket	25019	2460000000	36.80	0.1000	0.100	25.0	25.4	37.92	0.1030	0.103	1.03	0.00	15.92	31.89	0.087	6.04	0.016	All Processes
MA	Norfolk	25021	2460000000	2,317.40	6.3500	6.350	25.0	25.4	2,388.00	6.5435	6.543	1.03	0.00	15.92	2,007.93	5.502	380.07	1.041	All Processes
MA	Plymouth	25023	2460000000	1,714.70	4.7000	4.700	25.0	25.4	1,766.94	4.8432	4.843	1.03	0.00	15.92	1,485.72	4.072	281.23	0.771	All Processes
MA	Suffolk	25025	2460000000	2,435.40	6.6700	6.670	25.0	25.4	2,509.60	6.8732	6.873	1.03	0.00	15.92	2,110.17	5.779	399.43	1.094	All Processes
MA	Worcester	25027	2460000000	2,719.20	7.4500	7.450	25.0	25.4	2,802.05	7.6770	7.677	1.03	0.00	15.92	2,356.07	6.455	445.97	1.222	All Processes
NH	Belknap	33001	2460000000	228.84	0.6270	0.627	Missing	25.4	210.95	0.5779	0.578	1.07	14.20	2.00	206.73	0.566	4.22	0.012	All Processes
NH	Carroll	33003	2460000000	176.90	0.4847	0.485	Missing	25.4	163.07	0.4468	0.447	1.07	14.20	2.00	159.81	0.438	3.26	0.009	All Processes
NH	Cheshire	33005	2460000000	296.42	0.8121	0.812	Missing	25.4	273.24	0.7486	0.749	1.07	14.20	2.00	267.78	0.734	5.46	0.015	All Processes
NH	Coos	33007	2460000000	132.86	0.3640	0.364	Missing	25.4	122.47	0.3355	0.336	1.07	14.20	2.00	120.02	0.329	2.45	0.007	All Processes
NH	Grafton	33009	2460000000	329.46	0.9026	0.903	Missing	25.4	303.70	0.8321	0.832	1.07	14.20	2.00	297.62	0.815	6.07	0.017	All Processes
NH	Hillsborough	33011	2460000000	1,535.31	4.2063	4.206	Missing	25.4	1,415.26	3.8774	3.877	1.07	14.20	2.00	1,386.96	3.800	28.31	0.078	All Processes
NH	Merrimack	33013	2460000000	552.51	1.5137	1.514	Missing	25.4	509.31	1.3954	1.395	1.07	14.20	2.00	499.12	1.367	10.19	0.028	All Processes
NH	Rockingham	33015	2460000000	1,128.80	3.0926	3.093	Missing	25.4	1,040.54	2.8508	2.851	1.07	14.20	2.00	1,019.73	2.794	20.81	0.057	All Processes
NH	Strafford	33017	2460000000	455.06	1.2467	1.247	Missing	25.4	419.48	1.1492	1.149	1.07	14.20	2.00	411.09	1.126	8.39	0.023	All Processes
NH	Sullivan	33019	2460000000	161.83	0.4434	0.443	Missing	25.4	149.18	0.4087	0.409	1.07	14.20	2.00	146.19	0.401	2.98	0.008	All Processes
NJ	Atlantic	34001	2465000000	891.00	2.4470	2.447	33.0	25.1	772.91	2.1226	2.123	1.01	14.20	2.00	757.45	2.080	15.46	0.042	All Products/Processes
NJ	Bergen	34003	2465000000	3,139.00	8.6235	8.624	33.0	25.1	2,722.95	7.4806	7.481	1.01	14.20	2.00	2,668.49	7.331	54.46	0.150	All Products/Processes
NJ	Burlington	34005	2465000000	1,517.00	4.1670	4.167	33.0	25.1	1,315.93	3.6147	3.615	1.01	14.20	2.00	1,289.62	3.542	26.32	0.072	All Products/Processes
NJ	Camden	34007	2465000000	1,801.00	4.9481	4.948	33.0	25.1	1,562.29	4.2923	4.292	1.01	14.20	2.00	1,531.05	4.206	31.25	0.086	All Products/Processes
NJ	Cape May	34009	2465000000	376.00	1.0316	1.032	33.0	25.1	326.16	0.8949	0.895	1.01	14.20	2.00	319.64	0.877	6.52	0.018	All Products/Processes
NJ	Cumberland	34011	2465000000	518.00	1.4225	1.423	33.0	25.1	449.34	1.2339	1.234	1.01	14.20	2.00	440.36	1.209	8.99	0.025	All Products/Processes
NJ	Essex	34013	2465000000	2,819.00	7.7442	7.744	33.0	25.1	2,445.37	6.7178	6.718	1.01	14.20	2.00	2,396.46	6.583	48.91	0.134	All Products/Processes
NJ	Gloucester	34015	2465000000	915.00	2.5126	2.513	33.0	25.1	793.72	2.1796	2.180	1.01	14.20	2.00	777.85	2.136	15.87	0.044	All Products/Processes
NJ	Hudson	34017	2465000000	2,180.00	5.9890	5.989	33.0	25.1	1,891.06	5.1952	5.195	1.01	14.20	2.00	1,853.24	5.091	37.82	0.104	All Products/Processes
NJ	Hunterdon	34019	2465000000	441.00	1.2113	1.211	33.0	25.1	382.55	1.0507	1.051	1.01	14.20	2.00	374.90	1.030	7.65	0.021	All Products/Processes
NJ	Mercer	34021	2465000000	1,255.00	3.4467	3.447	33.0	25.1	1,088.66	2.9898	2.990	1.01	14.20	2.00	1,066.89	2.930	21.77	0.060	All Products/Processes
NJ	Middlesex	34023	2465000000	2,690.00	7.3899	7.390	33.0	25.1	2,333.46	6.4104	6.410	1.01	14.20	2.00	2,286.79	6.282	46.67	0.128	All Products/Processes
NJ	Monmouth	34025	2465000000	2,232.00	6.1311	6.131	33.0	25.1	1,936.17	5.3184	5.318	1.01	14.20	2.00	1,897.44	5.212	38.72	0.106	All Products/Processes
NJ	Morris	34027	2465000000	1,745.00	4.7926	4.793	33.0	25.1	1,513.72	4.1574	4.157	1.01	14.20	2.00	1,483.44	4.074	30.27	0.083	All Products/Processes
NJ	Ocean	34029	2465000000	1,894.00	5.2022	5.202	33.0	25.1	1,642.97	4.5127	4.513	1.01	14.20	2.00	1,610.11	4.422	32.86	0.090	All Products/Processes
NJ	Passaic	34031	2465000000	1,744.00	4.7918	4.792	33.0	25.1	1,512.85	4.1567	4.157	1.01	14.20	2.00	1,482.59	4.074	30.26	0.083	All Products/Processes
NJ	Salem	34033	2465000000	232.00	0.6368	0.637	33.0	25.1	201.25	0.5524	0.552	1.01	14.20	2.00	197.23	0.541	4.03	0.011	All Products/Processes
NJ	Somerset	34035	2465000000	1,066.00	2.9278	2.928	33.0	25.1	924.71	2.5397	2.540	1.01	14.20	2.00	906.22	2.489	18.49	0.051	All Products/Processes
NJ	Sussex	34037	2465000000	515.00	1.4155	1.416	33.0	25.1	446.74	1.2279	1.228	1.01	14.20	2.00	437.81	1.203	8.93	0.025	All Products/Processes
NJ	Union	34039	2465000000	1,852.00	5.0869	5.087	33.0	25.1	1,606.53	4.4127	4.413	1.01	14.20	2.00	1,574.40	4.324	32.13	0.088	All Products/Processes
NJ	Warren	34041	2465000000	368.00	1.0107	1.011	33.0	25.1	319.22	0.8768	0.877	1.01	14.20	2.00	312.84	0.859	6.38	0.018	All Products/Processes
NY	Albany	36001	2460000000	1,161.00	Missing	3.241	Missing	25.4	998.14	Missing	2.786	1.00	14.20	2.00	978.18	2.730	19.96	0.056	All Processes
NY	Allegany	36003	2460000000	196.71	Missing	0.549	Missing	25.4	177.37	Missing	0.495	1.05	14.20	2.00	173.82	0.485	3.55	0.010	All Processes
NY	Bronx	36005	2460000000	5,307.95	Missing	14.816	Missing	25.4	4,771.44	Missing	13.318	1.05	14.20	2.00	4,676.01	13.052	95.43	0.266	All Processes

CONSUMER PRODUCTS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
NY	Broome	36007	2460000000	785.27	Missing	2.192	Missing	25.4	677.75	Missing	1.892	1.01	14.20	2.00	664.19	1.854	13.55	0.038	All Processes
NY	Cattaraugus	36009	2460000000	326.41	Missing	0.911	Missing	25.4	279.36	Missing	0.780	1.00	14.20	2.00	273.78	0.764	5.59	0.016	All Processes
NY	Cayuga	36011	2460000000	319.72	Missing	0.892	Missing	25.4	269.30	Missing	0.752	0.98	14.20	2.00	263.92	0.737	5.39	0.015	All Processes
NY	Chautauqua	36013	2460000000	542.26	Missing	1.514	Missing	25.4	459.52	Missing	1.283	0.99	14.20	2.00	450.33	1.257	9.19	0.026	All Processes
NY	Chemung	36015	2460000000	355.21	Missing	0.991	Missing	25.4	292.08	Missing	0.815	0.96	14.20	2.00	286.24	0.799	5.84	0.016	All Processes
NY	Chenango	36017	2460000000	201.19	Missing	0.562	Missing	25.4	169.21	Missing	0.472	0.98	14.20	2.00	165.83	0.463	3.38	0.009	All Processes
NY	Clinton	36019	2460000000	317.79	Missing	0.887	Missing	25.4	284.14	Missing	0.793	1.04	14.20	2.00	278.46	0.777	5.68	0.016	All Processes
NY	Columbia	36021	2460000000	249.05	Missing	0.695	Missing	25.4	209.14	Missing	0.584	0.98	14.20	2.00	204.96	0.572	4.18	0.012	All Processes
NY	Cortland	36023	2460000000	191.35	Missing	0.534	Missing	25.4	163.92	Missing	0.458	1.00	14.20	2.00	160.64	0.448	3.28	0.009	All Processes
NY	Delaware	36025	2460000000	185.42	Missing	0.518	Missing	25.4	159.10	Missing	0.444	1.00	14.20	2.00	155.92	0.435	3.18	0.009	All Processes
NY	Dutchess	36027	2460000000	1,127.99	Missing	3.148	Missing	25.4	999.47	Missing	2.790	1.03	14.20	2.00	979.48	2.734	19.99	0.056	All Processes
NY	Erie	36029	2460000000	3,704.59	Missing	10.340	Missing	25.4	3,074.35	Missing	8.581	0.97	14.20	2.00	3,012.86	8.410	61.49	0.172	All Processes
NY	Essex	36031	2460000000	152.63	Missing	0.426	Missing	25.4	133.94	Missing	0.374	1.02	14.20	2.00	131.27	0.366	2.68	0.007	All Processes
NY	Franklin	36033	2460000000	199.78	Missing	0.558	Missing	25.4	182.00	Missing	0.508	1.06	14.20	2.00	178.36	0.498	3.64	0.010	All Processes
NY	Fulton	36035	2460000000	215.79	Missing	0.602	Missing	25.4	183.81	Missing	0.513	0.99	14.20	2.00	180.13	0.503	3.68	0.010	All Processes
NY	Genesee	36037	2460000000	234.41	Missing	0.654	Missing	25.4	197.27	Missing	0.551	0.98	14.20	2.00	193.32	0.540	3.95	0.011	All Processes
NY	Greene	36039	2460000000	190.27	Missing	0.531	Missing	25.4	169.31	Missing	0.473	1.04	14.20	2.00	165.92	0.463	3.39	0.009	All Processes
NY	Hamilton	36041	2460000000	20.76	Missing	0.058	Missing	25.4	17.73	Missing	0.049	1.00	14.20	2.00	17.38	0.049	0.35	0.001	All Processes
NY	Herkimer	36043	2460000000	249.86	Missing	0.697	Missing	25.4	207.70	Missing	0.580	0.97	14.20	2.00	203.55	0.568	4.15	0.012	All Processes
NY	Jefferson	36045	2460000000	423.99	Missing	1.183	Missing	25.4	363.38	Missing	1.014	1.00	14.20	2.00	356.12	0.994	7.27	0.020	All Processes
NY	Kings	36047	2460000000	9,753.72	Missing	27.225	Missing	25.4	8,521.82	Missing	23.786	1.02	14.20	2.00	8,351.39	23.310	170.44	0.476	All Processes
NY	Lewis	36049	2460000000	104.56	Missing	0.292	Missing	25.4	88.85	Missing	0.248	0.99	14.20	2.00	87.07	0.243	1.78	0.005	All Processes
NY	Livingston	36051	2460000000	254.11	Missing	0.709	Missing	25.4	222.86	Missing	0.622	1.02	14.20	2.00	218.40	0.610	4.46	0.012	All Processes
NY	Madison	36053	2460000000	273.57	Missing	0.764	Missing	25.4	234.52	Missing	0.655	1.00	14.20	2.00	229.83	0.642	4.69	0.013	All Processes
NY	Monroe	36055	2460000000	2,894.61	Missing	8.079	Missing	25.4	2,478.24	Missing	6.917	1.00	14.20	2.00	2,428.67	6.779	49.56	0.138	All Processes
NY	Montgomery	36057	2460000000	193.60	Missing	0.540	Missing	25.4	157.35	Missing	0.439	0.95	14.20	2.00	154.21	0.430	3.15	0.009	All Processes
NY	Nassau	36059	2460000000	5,271.98	Missing	14.715	Missing	25.4	4,468.22	Missing	12.472	0.99	14.20	2.00	4,378.85	12.222	89.36	0.249	All Processes
NY	New York	36061	2460000000	6,063.68	Missing	16.925	Missing	25.4	5,317.05	Missing	14.841	1.02	14.20	2.00	5,210.71	14.544	106.34	0.297	All Processes
NY	Niagara	36063	2460000000	854.95	Missing	2.386	Missing	25.4	718.75	Missing	2.006	0.98	14.20	2.00	704.37	1.966	14.37	0.040	All Processes
NY	Oneida	36065	2460000000	921.07	Missing	2.571	Missing	25.4	786.16	Missing	2.194	0.99	14.20	2.00	770.44	2.150	15.72	0.044	All Processes
NY	Onondaga	36067	2460000000	1,806.24	Missing	5.042	Missing	25.4	1,511.48	Missing	4.219	0.98	14.20	2.00	1,481.25	4.134	30.23	0.084	All Processes
NY	Ontario	36069	2460000000	398.14	Missing	1.111	Missing	25.4	348.25	Missing	0.972	1.02	14.20	2.00	341.29	0.953	6.97	0.019	All Processes
NY	Orange	36071	2460000000	1,398.55	Missing	3.904	Missing	25.4	1,270.67	Missing	3.547	1.06	14.20	2.00	1,245.25	3.476	25.41	0.071	All Processes
NY	Orleans	36073	2460000000	172.05	Missing	0.480	Missing	25.4	152.91	Missing	0.427	1.04	14.20	2.00	149.86	0.418	3.06	0.009	All Processes
NY	Oswego	36075	2460000000	481.89	Missing	1.345	Missing	25.4	415.83	Missing	1.161	1.01	14.20	2.00	407.51	1.137	8.32	0.023	All Processes
NY	Otsego	36077	2460000000	243.31	Missing	0.679	Missing	25.4	213.35	Missing	0.596	1.02	14.20	2.00	209.08	0.584	4.27	0.012	All Processes
NY	Putnam	36079	2460000000	385.17	Missing	1.075	Missing	25.4	349.38	Missing	0.975	1.06	14.20	2.00	342.40	0.956	6.99	0.020	All Processes
NY	Queens	36081	2460000000	8,772.24	Missing	24.485	Missing	25.4	8,043.16	Missing	22.450	1.07	14.20	2.00	7,882.30	22.001	160.86	0.449	All Processes
NY	Rensselaer	36083	2460000000	600.93	Missing	1.677	Missing	25.4	504.48	Missing	1.408	0.98	14.20	2.00	494.39	1.380	10.09	0.028	All Processes
NY	Richmond	36085	2460000000	1,792.94	Missing	5.004	Missing	25.4	1,684.78	Missing	4.703	1.10	14.20	2.00	1,651.08	4.609	33.70	0.094	All Processes
NY	Rockland	36087	2460000000	1,143.99	Missing	3.193	Missing	25.4	992.43	Missing	2.770	1.01	14.20	2.00	972.58	2.715	19.85	0.055	All Processes
NY	St. Lawrence	36089	2460000000	435.80	Missing	1.216	Missing	25.4	379.06	Missing	1.058	1.01	14.20	2.00	371.48	1.037	7.58	0.021	All Processes
NY	Saratoga	36091	2460000000	811.97	Missing	2.266	Missing	25.4	726.67	Missing	2.028	1.04	14.20	2.00	712.14	1.988	14.53	0.041	All Processes
NY	Schenectady	36093	2460000000	576.71	Missing	1.610	Missing	25.4	479.51	Missing	1.338	0.97	14.20	2.00	469.92	1.312	9.59	0.027	All Processes
NY	Schoharie	36095	2460000000	124.87	Missing	0.349	Missing	25.4	104.79	Missing	0.293	0.98	14.20	2.00	102.70	0.287	2.10	0.006	All Processes
NY	Schuyler	36097	2460000000	75.95	Missing	0.212	Missing	25.4	65.00	Missing	0.181	1.00	14.20	2.00	63.70	0.178	1.30	0.004	All Processes
NY	Seneca	36099	2460000000	137.11	Missing	0.383	Missing	25.4	114.44	Missing	0.319	0.97	14.20	2.00	112.16	0.313	2.29	0.006	All Processes
NY	Steuben	36101	2460000000	389.31	Missing	1.087	Missing	25.4	328.61	Missing	0.917	0.98	14.20	2.00	322.04	0.899	6.57	0.018	All Processes
NY	Suffolk	36103	2460000000	5,717.93	Missing	15.960	Missing	25.4	4,991.13	Missing	13.931	1.02	14.20	2.00	4,891.31	13.653	99.82	0.279	All Processes
NY	Sullivan	36105	2460000000	291.15	Missing	0.813	Missing	25.4	262.79	Missing	0.733	1.05	14.20	2.00	257.53	0.719	5.26	0.015	All Processes
NY	Tioga	36107	2460000000	202.95	Missing	0.566	Missing	25.4	167.75	Missing	0.468	0.96	14.20	2.00	164.40	0.459	3.36	0.009	All Processes
NY	Tompkins	36109	2460000000	388.89	Missing	1.085	Missing	25.4	338.24	Missing	0.944	1.01	14.20	2.00	331.47	0.925	6.76	0.019	All Processes
NY	Ulster	36111	2460000000	705.55	Missing	1.969	Missing	25.4	635.14	Missing	1.773	1.05	14.20	2.00	622.43	1.737	12.70	0.035	All Processes
NY	Warren	36113	2460000000	250.51	Missing	0.699	Missing	25.4	221.22	Missing	0.617	1.03	14.20	2.00	216.79	0.605	4.42	0.012	All Processes
NY	Washington	36115	2460000000	239.88	Missing	0.670	Missing	25.4	207.33	Missing	0.579	1.01	14.20	2.00	203.19	0.567	4.15	0.012	All Processes
NY	Wayne	36117	2460000000	368.79	Missing	1.029	Missing	25.4	322.35	Missing	0.900	1.02	14.20	2.00	315.91	0.882	6.45	0.018	All Processes
NY	Westchester	36119	2460000000	3,674.13	Missing	10.255	Missing	25.4	3,158.92	Missing	8.817	1.00	14.20	2.00	3,095.74	8.641	63.18	0.176	All Processes
NY	Wyoming	36121	2460000000	169.21	Missing	0.472	Missing	25.4	147.42	Missing	0.411	1.02	14.20	2.00	144.47	0.403	2.95	0.008	All Processes
NY	Yates	36123	2460000000	96.13	Missing	0.268	Missing	25.4	86.25	Missing	0.241	1.05	14.20	2.00	84.52	0.236	1.72	0.005	All Processes
PA	Adams	42001	2465000000	334.21	0.9156	0.916	Missing	25.1	299.99	0.8219	0.822	1.05	14.20	2.00	293.99	0.805	6.00	0.016	All Products/Processes

CONSUMER PRODUCTS

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
PA	Allegheny	42003	2465000000	4,494.16	12.3128	12.313	Missing	25.1	3,693.90	10.1203	10.120	0.96	14.20	2.00	3,620.02	9.918	73.88	0.202	All Products/Processes
PA	Armstrong	42005	2465000000	253.65	0.6949	0.695	Missing	25.1	205.33	0.5625	0.563	0.94	14.20	2.00	201.22	0.551	4.11	0.011	All Products/Processes
PA	Beaver	42007	2465000000	634.72	1.7390	1.739	Missing	25.1	522.62	1.4318	1.432	0.96	14.20	2.00	512.17	1.403	10.45	0.029	All Products/Processes
PA	Bedford	42009	2465000000	176.75	0.4842	0.484	Missing	25.1	156.30	0.4282	0.428	1.03	14.20	2.00	153.17	0.420	3.13	0.009	All Products/Processes
PA	Berks	42011	2465000000	1,352.27	3.7049	3.705	Missing	25.1	1,204.42	3.2998	3.300	1.04	14.20	2.00	1,180.33	3.234	24.09	0.066	All Products/Processes
PA	Blair	42013	2465000000	452.42	1.2395	1.240	Missing	25.1	383.85	1.0517	1.052	0.99	14.20	2.00	376.18	1.031	7.68	0.021	All Products/Processes
PA	Bradford	42015	2465000000	222.28	0.6090	0.609	Missing	25.1	202.61	0.5551	0.555	1.06	14.20	2.00	198.56	0.544	4.05	0.011	All Products/Processes
PA	Bucks	42017	2465000000	2,160.33	5.9187	5.919	Missing	25.1	1,972.44	5.4039	5.404	1.06	14.20	2.00	1,932.99	5.296	39.45	0.108	All Products/Processes
PA	Butler	42019	2465000000	630.21	1.7266	1.727	Missing	25.1	544.83	1.4927	1.493	1.01	14.20	2.00	533.94	1.463	10.90	0.030	All Products/Processes
PA	Cambria	42021	2465000000	532.45	1.4588	1.459	Missing	25.1	435.20	1.1923	1.192	0.95	14.20	2.00	426.50	1.168	8.70	0.024	All Products/Processes
PA	Cameron	42023	2465000000	20.68	0.0567	0.057	Missing	25.1	17.06	0.0467	0.047	0.96	14.20	2.00	16.72	0.046	0.34	0.001	All Products/Processes
PA	Carbon	42025	2465000000	211.23	0.5787	0.579	Missing	25.1	187.34	0.5133	0.513	1.03	14.20	2.00	183.60	0.503	3.75	0.010	All Products/Processes
PA	Centre	42027	2465000000	490.23	1.3431	1.343	Missing	25.1	436.83	1.1968	1.197	1.04	14.20	2.00	428.09	1.173	8.74	0.024	All Products/Processes
PA	Chester	42029	2465000000	1,593.11	4.3647	4.365	Missing	25.1	1,468.74	4.0239	4.024	1.07	14.20	2.00	1,439.36	3.943	29.37	0.080	All Products/Processes
PA	Clarion	42031	2465000000	146.22	0.4006	0.401	Missing	25.1	124.42	0.3409	0.341	0.99	14.20	2.00	121.93	0.334	2.49	0.007	All Products/Processes
PA	Clearfield	42033	2465000000	294.45	0.8067	0.807	Missing	25.1	238.85	0.6544	0.654	0.95	14.20	2.00	234.07	0.641	4.78	0.013	All Products/Processes
PA	Clinton	42035	2465000000	133.35	0.3653	0.365	Missing	25.1	116.43	0.3190	0.319	1.02	14.20	2.00	114.10	0.313	2.33	0.006	All Products/Processes
PA	Columbia	42037	2465000000	226.97	0.6218	0.622	Missing	25.1	190.07	0.5207	0.521	0.98	14.20	2.00	186.26	0.510	3.80	0.010	All Products/Processes
PA	Crawford	42039	2465000000	318.00	0.8712	0.871	Missing	25.1	275.68	0.7553	0.755	1.01	14.20	2.00	270.17	0.740	5.51	0.015	All Products/Processes
PA	Cumberland	42041	2465000000	770.59	2.1112	2.111	Missing	25.1	743.44	2.0368	2.037	1.12	14.20	2.00	728.57	1.996	14.87	0.041	All Products/Processes
PA	Dauphin	42043	2465000000	895.12	2.4524	2.452	Missing	25.1	795.28	2.1788	2.179	1.04	14.20	2.00	779.37	2.135	15.91	0.044	All Products/Processes
PA	Delaware	42045	2465000000	1,958.59	5.3660	5.366	Missing	25.1	1,676.32	4.5927	4.593	1.00	14.20	2.00	1,642.79	4.501	33.53	0.092	All Products/Processes
PA	Elk	42047	2465000000	121.93	0.3341	0.334	Missing	25.1	99.30	0.2721	0.272	0.95	14.20	2.00	97.32	0.267	1.99	0.005	All Products/Processes
PA	Erie	42049	2465000000	992.22	2.7184	2.718	Missing	25.1	863.35	2.3654	2.365	1.01	14.20	2.00	846.09	2.318	17.27	0.047	All Products/Processes
PA	Fayette	42051	2465000000	519.01	1.4219	1.422	Missing	25.1	430.20	1.1786	1.179	0.97	14.20	2.00	421.60	1.155	8.60	0.024	All Products/Processes
PA	Forest	42053	2465000000	17.30	0.0474	0.047	Missing	25.1	15.06	0.0413	0.041	1.01	14.20	2.00	14.76	0.040	0.30	0.001	All Products/Processes
PA	Franklin	42055	2465000000	465.72	1.2760	1.276	Missing	25.1	403.90	1.1066	1.107	1.01	14.20	2.00	395.82	1.084	8.08	0.022	All Products/Processes
PA	Fulton	42057	2465000000	50.84	0.1393	0.139	Missing	25.1	46.01	0.1261	0.126	1.05	14.20	2.00	45.09	0.124	0.92	0.003	All Products/Processes
PA	Greene	42059	2465000000	143.40	0.3929	0.393	Missing	25.1	124.94	0.3423	0.342	1.02	14.20	2.00	122.45	0.335	2.50	0.007	All Products/Processes
PA	Huntingdon	42061	2465000000	161.76	0.4432	0.443	Missing	25.1	142.36	0.3900	0.390	1.03	14.20	2.00	139.51	0.382	2.85	0.008	All Products/Processes
PA	Indiana	42063	2465000000	314.19	0.8608	0.861	Missing	25.1	273.98	0.7506	0.751	1.02	14.20	2.00	268.50	0.736	5.48	0.015	All Products/Processes
PA	Jefferson	42065	2465000000	162.15	0.4442	0.444	Missing	25.1	133.28	0.3652	0.365	0.96	14.20	2.00	130.62	0.358	2.67	0.007	All Products/Processes
PA	Juniata	42067	2465000000	80.55	0.2207	0.221	Missing	25.1	67.20	0.1841	0.184	0.97	14.20	2.00	65.86	0.180	1.34	0.004	All Products/Processes
PA	Lackawanna	42069	2465000000	745.70	2.0430	2.043	Missing	25.1	635.41	1.7409	1.741	0.99	14.20	2.00	622.70	1.706	12.71	0.035	All Products/Processes
PA	Lancaster	42071	2465000000	1,693.62	4.6400	4.640	Missing	25.1	1,586.48	4.3465	4.347	1.09	14.20	2.00	1,554.75	4.260	31.73	0.087	All Products/Processes
PA	Lawrence	42073	2465000000	333.03	0.9124	0.912	Missing	25.1	273.46	0.7492	0.749	0.96	14.20	2.00	267.99	0.734	5.47	0.015	All Products/Processes
PA	Lebanon	42075	2465000000	428.92	1.1751	1.175	Missing	25.1	377.97	1.0355	1.036	1.03	14.20	2.00	370.41	1.015	7.56	0.021	All Products/Processes
PA	Lehigh	42077	2465000000	1,123.74	3.0787	3.079	Missing	25.1	1,001.81	2.7447	2.745	1.04	14.20	2.00	981.77	2.690	20.04	0.055	All Products/Processes
PA	Luzerne	42079	2465000000	1,113.51	3.0507	3.051	Missing	25.1	953.96	2.6136	2.614	1.00	14.20	2.00	934.88	2.561	19.08	0.052	All Products/Processes
PA	Lycoming	42081	2465000000	421.14	1.1538	1.154	Missing	25.1	365.62	1.0017	1.002	1.01	14.20	2.00	358.31	0.982	7.31	0.020	All Products/Processes
PA	McKean	42083	2465000000	158.84	0.4352	0.435	Missing	25.1	137.53	0.3768	0.377	1.01	14.20	2.00	134.78	0.369	2.75	0.008	All Products/Processes
PA	Mercer	42085	2465000000	422.96	1.1588	1.159	Missing	25.1	367.43	1.0067	1.007	1.01	14.20	2.00	360.08	0.987	7.35	0.020	All Products/Processes
PA	Mifflin	42087	2465000000	164.33	0.4502	0.450	Missing	25.1	139.64	0.3826	0.383	0.99	14.20	2.00	136.84	0.375	2.79	0.008	All Products/Processes
PA	Monroe	42089	2465000000	526.74	1.4431	1.443	Missing	25.1	531.95	1.4574	1.457	1.18	14.20	2.00	521.31	1.428	10.64	0.029	All Products/Processes
PA	Montgomery	42091	2465000000	2,712.69	7.4320	7.432	Missing	25.1	2,422.44	6.6368	6.637	1.04	14.20	2.00	2,373.99	6.504	48.45	0.133	All Products/Processes
PA	Montour	42093	2465000000	64.46	0.1766	0.177	Missing	25.1	57.72	0.1581	0.158	1.04	14.20	2.00	56.57	0.155	1.15	0.003	All Products/Processes
PA	Northampton	42095	2465000000	967.29	2.6501	2.650	Missing	25.1	882.29	2.4172	2.417	1.06	14.20	2.00	864.65	2.369	17.65	0.048	All Products/Processes
PA	Northumberland	42097	2465000000	330.44	0.9053	0.905	Missing	25.1	281.71	0.7718	0.772	0.99	14.20	2.00	276.08	0.756	5.63	0.015	All Products/Processes
PA	Perry	42099	2465000000	155.28	0.4254	0.425	Missing	25.1	154.12	0.4222	0.422	1.16	14.20	2.00	151.04	0.414	3.08	0.008	All Products/Processes
PA	Philadelphia	42101	2465000000	5,280.97	14.4684	14.468	Missing	25.1	4,528.40	12.4066	12.407	1.00	14.20	2.00	4,437.83	12.158	90.57	0.248	All Products/Processes
PA	Pike	42103	2465000000	177.29	0.4857	0.486	Missing	25.1	197.47	0.5410	0.541	1.30	14.20	2.00	193.52	0.530	3.95	0.011	All Products/Processes
PA	Potter	42105	2465000000	64.47	0.1766	0.177	Missing	25.1	51.72	0.1417	0.142	0.93	14.20	2.00	50.68	0.139	1.03	0.003	All Products/Processes
PA	Schuylkill	42107	2465000000	525.56	1.4399	1.440	Missing	25.1	446.36	1.2229	1.223	0.99	14.20	2.00	437.43	1.198	8.93	0.024	All Products/Processes
PA	Snyder	42109	2465000000	133.87	0.3668	0.367	Missing	25.1	127.59	0.3496	0.350	1.11	14.20	2.00	125.04	0.343	2.55	0.007	All Products/Processes
PA	Somerset	42111	2465000000	281.19	0.7704	0.770	Missing	25.1	230.82	0.6324	0.632	0.96	14.20	2.00	226.20	0.620	4.62	0.013	All Products/Processes
PA	Sullivan	42113	2465000000	22.94	0.0628	0.063	Missing	25.1	20.61	0.0565	0.057	1.05	14.20	2.00	20.20	0.055	0.41	0.001	All Products/Processes
PA	Susquehanna	42115	2465000000	148.93	0.4080	0.408	Missing	25.1	133.30	0.3652	0.365	1.04	14.20	2.00	130.64	0.358	2.67	0.007	All Products/Processes
PA	Tioga	42117	2465000000	146.73	0.4020	0.402	Missing	25.1	127.99	0.3506	0.351	1.02	14.20	2.00	125.43	0.344	2.56	0.007	All Products/Processes
PA	Union	42119	2465000000	148.66	0.4073	0.407	Missing	25.1	135.17	0.3703	0.370	1.06	14.20	2.00	132.47	0.363	2.70	0.007	All Products/Processes
PA	Venango	42121	2465000000	201.05	0.5508	0.551	Missing	25.1	165.33	0.4530	0.453	0.96	14.20	2.00	162.02	0.444	3.31	0.009	All Products/Processes

CONSUMER PRODUCTS

State	County	FIPS	SCC	2002 VOC Emissions Annual (tpy)	2002 VOC Emissions Summer Day from Inventory (tpd)	2002 VOC Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions Annual (tpy)	2009 VOC OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions Annual (tpy)	2009 BOTW Emissions Summer Day Calculated (tpd)	2009 BOTW Reductions Annual (tpy)	2009 BOTW Reductions Summer Day (tpd)	SCC Description
PA	Warren	42123	2465000000	153.20	0.4197	0.420	Missing	25.1	125.51	0.3439	0.344	0.95	14.20	2.00	123.00	0.337	2.51	0.007	All Products/Processes
PA	Washington	42125	2465000000	722.34	1.9790	1.979	Missing	25.1	607.06	1.6632	1.663	0.98	14.20	2.00	594.92	1.630	12.14	0.033	All Products/Processes
PA	Wayne	42127	2465000000	173.02	0.4740	0.474	Missing	25.1	152.34	0.4174	0.417	1.03	14.20	2.00	149.30	0.409	3.05	0.008	All Products/Processes
PA	Westmoreland	42129	2465000000	1,303.86	3.5722	3.572	Missing	25.1	1,101.26	3.0171	3.017	0.98	14.20	2.00	1,079.23	2.957	22.03	0.060	All Products/Processes
PA	Wyoming	42131	2465000000	98.39	0.2696	0.270	Missing	25.1	93.45	0.2560	0.256	1.11	14.20	2.00	91.58	0.251	1.87	0.005	All Products/Processes
PA	York	42133	2465000000	1,377.40	3.7737	3.774	Missing	25.1	1,218.38	3.3380	3.338	1.03	14.20	2.00	1,194.02	3.271	24.37	0.067	All Products/Processes
RI	Bristol	44001	2460100000	52.31	Missing	0.144	Missing	25.0	45.59	Missing	0.125	1.02	14.20	2.00	44.68	0.123	0.91	0.003	All Personal Care Products
RI	Bristol	44001	2460200000	18.04	Missing	0.050	Missing	25.0	15.72	Missing	0.043	1.02	14.20	2.00	15.41	0.042	0.31	0.001	All Household Products
RI	Bristol	44001	2460400000	31.75	Missing	0.087	Missing	25.0	27.67	Missing	0.076	1.02	14.20	2.00	27.11	0.074	0.55	0.002	All Automotive Aftermarket Products
RI	Bristol	44001	2460500000	24.36	Missing	0.067	Missing	25.0	21.23	Missing	0.058	1.02	14.20	2.00	20.81	0.057	0.42	0.001	All Coatings and Related Products
RI	Bristol	44001	2460600000	13.40	Missing	0.037	Missing	25.0	11.68	Missing	0.032	1.02	14.20	2.00	11.45	0.031	0.23	0.001	All Adhesives and Sealants
RI	Bristol	44001	2460800000	43.33	Missing	0.119	Missing	25.0	37.76	Missing	0.104	1.02	14.20	2.00	37.00	0.102	0.76	0.002	All FIFRA Related Products
RI	Bristol	44001	2460900000	1.80	Missing	0.005	Missing	25.0	1.56	Missing	0.004	1.02	14.20	2.00	1.53	0.004	0.03	0.000	Miscellaneous Products (Not Otherw
RI	Kent	44003	2460100000	173.91	Missing	0.478	Missing	25.0	151.69	Missing	0.417	1.02	14.20	2.00	148.66	0.408	3.03	0.008	All Personal Care Products
RI	Kent	44003	2460200000	59.98	Missing	0.165	Missing	25.0	52.32	Missing	0.144	1.02	14.20	2.00	51.27	0.141	1.05	0.003	All Household Products
RI	Kent	44003	2460400000	105.54	Missing	0.290	Missing	25.0	92.06	Missing	0.253	1.02	14.20	2.00	90.22	0.248	1.84	0.005	All Automotive Aftermarket Products
RI	Kent	44003	2460500000	80.99	Missing	0.222	Missing	25.0	70.64	Missing	0.194	1.02	14.20	2.00	69.23	0.190	1.41	0.004	All Coatings and Related Products
RI	Kent	44003	2460600000	44.56	Missing	0.122	Missing	25.0	38.87	Missing	0.107	1.02	14.20	2.00	38.09	0.105	0.78	0.002	All Adhesives and Sealants
RI	Kent	44003	2460800000	144.04	Missing	0.396	Missing	25.0	125.63	Missing	0.345	1.02	14.20	2.00	123.12	0.338	2.51	0.007	All FIFRA Related Products
RI	Kent	44003	2460900000	5.97	Missing	0.016	Missing	25.0	5.21	Missing	0.014	1.02	14.20	2.00	5.10	0.014	0.10	0.000	Miscellaneous Products (Not Otherw
RI	Newport	44005	2460100000	87.71	Missing	0.241	Missing	25.0	76.02	Missing	0.209	1.01	14.20	2.00	74.50	0.205	1.52	0.004	All Personal Care Products
RI	Newport	44005	2460200000	30.25	Missing	0.083	Missing	25.0	26.22	Missing	0.072	1.01	14.20	2.00	25.69	0.071	0.52	0.001	All Household Products
RI	Newport	44005	2460400000	53.23	Missing	0.146	Missing	25.0	46.13	Missing	0.127	1.01	14.20	2.00	45.21	0.124	0.92	0.003	All Automotive Aftermarket Products
RI	Newport	44005	2460500000	40.84	Missing	0.112	Missing	25.0	35.40	Missing	0.097	1.01	14.20	2.00	34.69	0.095	0.71	0.002	All Coatings and Related Products
RI	Newport	44005	2460600000	22.47	Missing	0.062	Missing	25.0	19.48	Missing	0.054	1.01	14.20	2.00	19.09	0.052	0.39	0.001	All Adhesives and Sealants
RI	Newport	44005	2460800000	72.64	Missing	0.200	Missing	25.0	62.96	Missing	0.173	1.01	14.20	2.00	61.70	0.170	1.26	0.003	All FIFRA Related Products
RI	Newport	44005	2460900000	3.01	Missing	0.008	Missing	25.0	2.61	Missing	0.007	1.01	14.20	2.00	2.56	0.007	0.05	0.000	Miscellaneous Products (Not Otherw
RI	Providence	44007	2460100000	647.52	Missing	1.779	Missing	25.0	565.22	Missing	1.553	1.02	14.20	2.00	553.91	1.522	11.30	0.031	All Personal Care Products
RI	Providence	44007	2460200000	223.33	Missing	0.614	Missing	25.0	194.94	Missing	0.536	1.02	14.20	2.00	191.05	0.525	3.90	0.011	All Household Products
RI	Providence	44007	2460400000	392.96	Missing	1.080	Missing	25.0	343.01	Missing	0.942	1.02	14.20	2.00	336.15	0.923	6.86	0.019	All Automotive Aftermarket Products
RI	Providence	44007	2460500000	301.54	Missing	0.828	Missing	25.0	263.21	Missing	0.723	1.02	14.20	2.00	257.95	0.709	5.26	0.014	All Coatings and Related Products
RI	Providence	44007	2460600000	165.91	Missing	0.456	Missing	25.0	144.82	Missing	0.398	1.02	14.20	2.00	141.93	0.390	2.90	0.008	All Adhesives and Sealants
RI	Providence	44007	2460800000	536.29	Missing	1.473	Missing	25.0	468.13	Missing	1.286	1.02	14.20	2.00	458.76	1.260	9.36	0.026	All FIFRA Related Products
RI	Providence	44007	2460900000	22.22	Missing	0.061	Missing	25.0	19.39	Missing	0.053	1.02	14.20	2.00	19.01	0.052	0.39	0.001	Miscellaneous Products (Not Otherw
RI	Washington	44009	2460100000	129.67	Missing	0.356	Missing	25.0	117.06	Missing	0.322	1.05	14.20	2.00	114.72	0.315	2.34	0.006	All Personal Care Products
RI	Washington	44009	2460200000	44.72	Missing	0.123	Missing	25.0	40.37	Missing	0.111	1.05	14.20	2.00	39.57	0.109	0.81	0.002	All Household Products
RI	Washington	44009	2460400000	78.69	Missing	0.216	Missing	25.0	71.04	Missing	0.195	1.05	14.20	2.00	69.62	0.191	1.42	0.004	All Automotive Aftermarket Products
RI	Washington	44009	2460500000	60.38	Missing	0.166	Missing	25.0	54.51	Missing	0.150	1.05	14.20	2.00	53.42	0.147	1.09	0.003	All Coatings and Related Products
RI	Washington	44009	2460600000	33.22	Missing	0.091	Missing	25.0	29.99	Missing	0.082	1.05	14.20	2.00	29.39	0.081	0.60	0.002	All Adhesives and Sealants
RI	Washington	44009	2460800000	107.39	Missing	0.295	Missing	25.0	96.95	Missing	0.266	1.05	14.20	2.00	95.01	0.261	1.94	0.005	All FIFRA Related Products
RI	Washington	44009	2460900000	4.45	Missing	0.012	Missing	25.0	4.02	Missing	0.011	1.05	14.20	2.00	3.94	0.011	0.08	0.000	Miscellaneous Products (Not Otherw
VT	Addison	50001	2460100000	37.28	Missing	0.102	Missing	25.0	34.22	Missing	0.094	1.07	14.20	2.00	33.54	0.092	0.68	0.002	All Personal Care Products
VT	Addison	50001	2460200000	12.86	Missing	0.035	Missing	25.0	11.80	Missing	0.032	1.07	14.20	2.00	11.57	0.032	0.24	0.001	All Household Products
VT	Addison	50001	2460400000	22.62	Missing	0.062	Missing	25.0	20.77	Missing	0.057	1.07	14.20	2.00	20.35	0.056	0.42	0.001	All Automotive Aftermarket Products
VT	Addison	50001	2460500000	17.36	Missing	0.048	Missing	25.0	15.94	Missing	0.044	1.07	14.20	2.00	15.62	0.043	0.32	0.001	All Coatings and Related Products
VT	Addison	50001	2460600000	9.55	Missing	0.026	Missing	25.0	8.77	Missing	0.024	1.07	14.20	2.00	8.59	0.024	0.18	0.000	All Adhesives and Sealants
VT	Addison	50001	2460800000	30.87	Missing	0.085	Missing	25.0	28.35	Missing	0.078	1.07	14.20	2.00	27.78	0.076	0.57	0.002	All FIFRA Related Products
VT	Addison	50001	2460900000	1.28	Missing	0.004	Missing	25.0	1.17	Missing	0.003	1.07	14.20	2.00	1.15	0.003	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Bennington	50003	2460100000	37.90	Missing	0.104	Missing	25.0	34.79	Missing	0.096	1.07	14.20	2.00	34.10	0.094	0.70	0.002	All Personal Care Products
VT	Bennington	50003	2460200000	13.07	Missing	0.036	Missing	25.0	12.00	Missing	0.033	1.07	14.20	2.00	11.76	0.032	0.24	0.001	All Household Products
VT	Bennington	50003	2460400000	23.00	Missing	0.063	Missing	25.0	21.12	Missing	0.058	1.07	14.20	2.00	20.69	0.057	0.42	0.001	All Automotive Aftermarket Products
VT	Bennington	50003	2460500000	17.65	Missing	0.048	Missing	25.0	16.20	Missing	0.045	1.07	14.20	2.00	15.88	0.044	0.32	0.001	All Coatings and Related Products
VT	Bennington	50003	2460600000	9.71	Missing	0.027	Missing	25.0	8.92	Missing	0.024	1.07	14.20	2.00	8.74	0.024	0.18	0.000	All Adhesives and Sealants
VT	Bennington	50003	2460800000	31.39	Missing	0.086	Missing	25.0	28.82	Missing	0.079	1.07	14.20	2.00	28.24	0.078	0.58	0.002	All FIFRA Related Products
VT	Bennington	50003	2460900000	1.30	Missing	0.004	Missing	25.0	1.19	Missing	0.003	1.07	14.20	2.00	1.17	0.003	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Caledonia	50005	2460100000	30.66	Missing	0.084	Missing	25.0	28.15	Missing	0.077	1.07	14.20	2.00	27.58	0.076	0.56	0.002	All Personal Care Products
VT	Caledonia	50005	2460200000	10.57	Missing	0.029	Missing	25.0	9.71	Missing	0.027	1.07	14.20	2.00	9.51	0.026	0.19	0.001	All Household Products
VT	Caledonia	50005	2460400000	18.60	Missing	0.051	Missing	25.0	17.08	Missing	0.047	1.07	14.20	2.00	16.74	0.046	0.34	0.001	All Automotive Aftermarket Products
VT	Caledonia	50005	2460500000	14.28	Missing	0.039	Missing	25.0	13.11	Missing	0.036	1.07	14.20	2.00	12.85	0.035	0.26	0.001	All Coatings and Related Products
VT	Caledonia	50005	2460600000	7.86	Missing	0.022	Missing	25.0	7.21	Missing	0.020	1.07	14.20	2.00	7.07	0.019	0.14	0.000	All Adhesives and Sealants

CONSUMER PRODUCTS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
VT	Caledonia	50005	2460800000	25.39	Missing	0.070	Missing	25.0	23.31	Missing	0.064	1.07	14.20	2.00	22.85	0.063	0.47	0.001	All FIFRA Related Products
VT	Caledonia	50005	2460900000	1.05	Missing	0.003	Missing	25.0	0.97	Missing	0.003	1.07	14.20	2.00	0.95	0.003	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Chittenden	50007	2460100000	151.89	Missing	0.417	Missing	25.0	139.46	Missing	0.383	1.07	14.20	2.00	136.67	0.375	2.79	0.008	All Personal Care Products
VT	Chittenden	50007	2460200000	52.39	Missing	0.144	Missing	25.0	48.10	Missing	0.132	1.07	14.20	2.00	47.14	0.130	0.96	0.003	All Household Products
VT	Chittenden	50007	2460400000	92.18	Missing	0.253	Missing	25.0	84.63	Missing	0.233	1.07	14.20	2.00	82.94	0.228	1.69	0.005	All Automotive Aftermarket Products
VT	Chittenden	50007	2460500000	70.74	Missing	0.194	Missing	25.0	64.95	Missing	0.178	1.07	14.20	2.00	63.65	0.175	1.30	0.004	All Coatings and Related Products
VT	Chittenden	50007	2460600000	38.92	Missing	0.107	Missing	25.0	35.73	Missing	0.098	1.07	14.20	2.00	35.02	0.096	0.71	0.002	All Adhesives and Sealants
VT	Chittenden	50007	2460800000	125.80	Missing	0.346	Missing	25.0	115.51	Missing	0.317	1.07	14.20	2.00	113.20	0.311	2.31	0.006	All FIFRA Related Products
VT	Chittenden	50007	2460900000	5.21	Missing	0.014	Missing	25.0	4.79	Missing	0.013	1.07	14.20	2.00	4.69	0.013	0.10	0.000	Miscellaneous Products (Not Otherw
VT	Essex	50009	2460100000	6.67	Missing	0.018	Missing	25.0	6.13	Missing	0.017	1.07	14.20	2.00	6.00	0.016	0.12	0.000	All Personal Care Products
VT	Essex	50009	2460200000	2.30	Missing	0.006	Missing	25.0	2.11	Missing	0.006	1.07	14.20	2.00	2.07	0.006	0.04	0.000	All Household Products
VT	Essex	50009	2460400000	4.05	Missing	0.011	Missing	25.0	3.72	Missing	0.010	1.07	14.20	2.00	3.64	0.010	0.07	0.000	All Automotive Aftermarket Products
VT	Essex	50009	2460500000	3.11	Missing	0.009	Missing	25.0	2.85	Missing	0.008	1.07	14.20	2.00	2.80	0.008	0.06	0.000	All Coatings and Related Products
VT	Essex	50009	2460600000	1.71	Missing	0.005	Missing	25.0	1.57	Missing	0.004	1.07	14.20	2.00	1.54	0.004	0.03	0.000	All Adhesives and Sealants
VT	Essex	50009	2460800000	5.53	Missing	0.015	Missing	25.0	5.07	Missing	0.014	1.07	14.20	2.00	4.97	0.014	0.10	0.000	All FIFRA Related Products
VT	Essex	50009	2460900000	0.23	Missing	0.001	Missing	25.0	0.21	Missing	0.001	1.07	14.20	2.00	0.21	0.001	0.00	0.000	Miscellaneous Products (Not Otherw
VT	Franklin	50011	2460100000	47.63	Missing	0.131	Missing	25.0	43.73	Missing	0.120	1.07	14.20	2.00	42.86	0.118	0.87	0.002	All Personal Care Products
VT	Franklin	50011	2460200000	16.43	Missing	0.045	Missing	25.0	15.08	Missing	0.041	1.07	14.20	2.00	14.78	0.041	0.30	0.001	All Household Products
VT	Franklin	50011	2460400000	28.90	Missing	0.079	Missing	25.0	26.54	Missing	0.073	1.07	14.20	2.00	26.01	0.071	0.53	0.001	All Automotive Aftermarket Products
VT	Franklin	50011	2460500000	22.18	Missing	0.061	Missing	25.0	20.36	Missing	0.056	1.07	14.20	2.00	19.96	0.055	0.41	0.001	All Coatings and Related Products
VT	Franklin	50011	2460600000	12.20	Missing	0.034	Missing	25.0	11.20	Missing	0.031	1.07	14.20	2.00	10.98	0.030	0.22	0.001	All Adhesives and Sealants
VT	Franklin	50011	2460800000	39.45	Missing	0.108	Missing	25.0	36.22	Missing	0.100	1.07	14.20	2.00	35.49	0.098	0.72	0.002	All FIFRA Related Products
VT	Franklin	50011	2460900000	1.63	Missing	0.004	Missing	25.0	1.50	Missing	0.004	1.07	14.20	2.00	1.47	0.004	0.03	0.000	Miscellaneous Products (Not Otherw
VT	Grand Isle	50013	2460100000	7.48	Missing	0.021	Missing	25.0	6.87	Missing	0.019	1.07	14.20	2.00	6.73	0.018	0.14	0.000	All Personal Care Products
VT	Grand Isle	50013	2460200000	2.58	Missing	0.007	Missing	25.0	2.37	Missing	0.007	1.07	14.20	2.00	2.32	0.006	0.05	0.000	All Household Products
VT	Grand Isle	50013	2460400000	4.54	Missing	0.012	Missing	25.0	4.17	Missing	0.011	1.07	14.20	2.00	4.08	0.011	0.08	0.000	All Automotive Aftermarket Products
VT	Grand Isle	50013	2460500000	3.48	Missing	0.010	Missing	25.0	3.20	Missing	0.009	1.07	14.20	2.00	3.13	0.009	0.06	0.000	All Coatings and Related Products
VT	Grand Isle	50013	2460600000	1.92	Missing	0.005	Missing	25.0	1.76	Missing	0.005	1.07	14.20	2.00	1.72	0.005	0.04	0.000	All Adhesives and Sealants
VT	Grand Isle	50013	2460800000	6.20	Missing	0.017	Missing	25.0	5.69	Missing	0.016	1.07	14.20	2.00	5.57	0.015	0.11	0.000	All FIFRA Related Products
VT	Grand Isle	50013	2460900000	0.26	Missing	0.001	Missing	25.0	0.24	Missing	0.001	1.07	14.20	2.00	0.23	0.001	0.00	0.000	Miscellaneous Products (Not Otherw
VT	Lamoille	50015	2460100000	24.39	Missing	0.067	Missing	25.0	22.40	Missing	0.062	1.07	14.20	2.00	21.95	0.060	0.45	0.001	All Personal Care Products
VT	Lamoille	50015	2460200000	8.41	Missing	0.023	Missing	25.0	7.72	Missing	0.021	1.07	14.20	2.00	7.57	0.021	0.15	0.000	All Household Products
VT	Lamoille	50015	2460400000	14.80	Missing	0.041	Missing	25.0	13.59	Missing	0.037	1.07	14.20	2.00	13.32	0.037	0.27	0.001	All Automotive Aftermarket Products
VT	Lamoille	50015	2460500000	11.36	Missing	0.031	Missing	25.0	10.43	Missing	0.029	1.07	14.20	2.00	10.22	0.028	0.21	0.001	All Coatings and Related Products
VT	Lamoille	50015	2460600000	6.25	Missing	0.017	Missing	25.0	5.74	Missing	0.016	1.07	14.20	2.00	5.62	0.015	0.11	0.000	All Adhesives and Sealants
VT	Lamoille	50015	2460800000	20.20	Missing	0.056	Missing	25.0	18.55	Missing	0.051	1.07	14.20	2.00	18.18	0.050	0.37	0.001	All FIFRA Related Products
VT	Lamoille	50015	2460900000	0.84	Missing	0.002	Missing	25.0	0.77	Missing	0.002	1.07	14.20	2.00	0.75	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Orange	50017	2460100000	29.26	Missing	0.080	Missing	25.0	26.86	Missing	0.074	1.07	14.20	2.00	26.32	0.072	0.54	0.001	All Personal Care Products
VT	Orange	50017	2460200000	10.09	Missing	0.028	Missing	25.0	9.26	Missing	0.025	1.07	14.20	2.00	9.08	0.025	0.19	0.001	All Household Products
VT	Orange	50017	2460400000	17.75	Missing	0.049	Missing	25.0	16.30	Missing	0.045	1.07	14.20	2.00	15.97	0.044	0.33	0.001	All Automotive Aftermarket Products
VT	Orange	50017	2460500000	13.62	Missing	0.037	Missing	25.0	12.51	Missing	0.034	1.07	14.20	2.00	12.26	0.034	0.25	0.001	All Coatings and Related Products
VT	Orange	50017	2460600000	7.50	Missing	0.021	Missing	25.0	6.88	Missing	0.019	1.07	14.20	2.00	6.74	0.019	0.14	0.000	All Adhesives and Sealants
VT	Orange	50017	2460800000	24.23	Missing	0.067	Missing	25.0	22.25	Missing	0.061	1.07	14.20	2.00	21.80	0.060	0.44	0.001	All FIFRA Related Products
VT	Orange	50017	2460900000	1.00	Missing	0.003	Missing	25.0	0.92	Missing	0.003	1.07	14.20	2.00	0.90	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Orleans	50019	2460100000	27.15	Missing	0.075	Missing	25.0	24.93	Missing	0.068	1.07	14.20	2.00	24.43	0.067	0.50	0.001	All Personal Care Products
VT	Orleans	50019	2460200000	9.37	Missing	0.026	Missing	25.0	8.60	Missing	0.024	1.07	14.20	2.00	8.43	0.023	0.17	0.000	All Household Products
VT	Orleans	50019	2460400000	16.48	Missing	0.045	Missing	25.0	15.13	Missing	0.042	1.07	14.20	2.00	14.83	0.041	0.30	0.001	All Automotive Aftermarket Products
VT	Orleans	50019	2460500000	12.65	Missing	0.035	Missing	25.0	11.61	Missing	0.032	1.07	14.20	2.00	11.38	0.031	0.23	0.001	All Coatings and Related Products
VT	Orleans	50019	2460600000	6.96	Missing	0.019	Missing	25.0	6.39	Missing	0.018	1.07	14.20	2.00	6.26	0.017	0.13	0.000	All Adhesives and Sealants
VT	Orleans	50019	2460800000	22.49	Missing	0.062	Missing	25.0	20.65	Missing	0.057	1.07	14.20	2.00	20.24	0.056	0.41	0.001	All FIFRA Related Products
VT	Orleans	50019	2460900000	0.93	Missing	0.003	Missing	25.0	0.86	Missing	0.002	1.07	14.20	2.00	0.84	0.002	0.02	0.000	Miscellaneous Products (Not Otherw
VT	Rutland	50021	2460100000	64.52	Missing	0.177	Missing	25.0	59.23	Missing	0.163	1.07	14.20	2.00	58.05	0.159	1.18	0.003	All Personal Care Products
VT	Rutland	50021	2460200000	22.25	Missing	0.061	Missing	25.0	20.43	Missing	0.056	1.07	14.20	2.00	20.02	0.055	0.41	0.001	All Household Products
VT	Rutland	50021	2460400000	39.15	Missing	0.108	Missing	25.0	35.95	Missing	0.099	1.07	14.20	2.00	35.23	0.097	0.72	0.002	All Automotive Aftermarket Products
VT	Rutland	50021	2460500000	30.04	Missing	0.083	Missing	25.0	27.59	Missing	0.076	1.07	14.20	2.00	27.03	0.074	0.55	0.002	All Coatings and Related Products
VT	Rutland	50021	2460600000	16.53	Missing	0.045	Missing	25.0	15.18	Missing	0.042	1.07	14.20	2.00	14.87	0.041	0.30	0.001	All Adhesives and Sealants
VT	Rutland	50021	2460800000	53.43	Missing	0.147	Missing	25.0	49.06	Missing	0.135	1.07	14.20	2.00	48.08	0.132	0.98	0.003	All FIFRA Related Products
VT	Rutland	50021	2460900000	2.21	Missing	0.006	Missing	25.0	2.03	Missing	0.006	1.07	14.20	2.00	1.99	0.005	0.04	0.000	Miscellaneous Products (Not Otherw
VT	Washington	50023	2460100000	60.01	Missing	0.165	Missing	25.0	55.10	Missing	0.151	1.07	14.20	2.00	54.00	0.148	1.10	0.003	All Personal Care Products
VT	Washington	50023	2460200000	20.70	Missing	0.057	Missing	25.0	19.00	Missing	0.052	1.07	14.20	2.00	18.62	0.051	0.38	0.001	All Household Products

CONSUMER PRODUCTS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description
VT	Washington	50023	2460400000	36.42	Missing	0.100	Missing	25.0	33.44	Missing	0.092	1.07	14.20	2.00	32.77	0.090	0.67	0.002	All Automotive Aftermarket Products
VT	Washington	50023	2460500000	27.95	Missing	0.077	Missing	25.0	25.66	Missing	0.070	1.07	14.20	2.00	25.15	0.069	0.51	0.001	All Coatings and Related Products
VT	Washington	50023	2460600000	15.38	Missing	0.042	Missing	25.0	14.12	Missing	0.039	1.07	14.20	2.00	13.84	0.038	0.28	0.001	All Adhesives and Sealants
VT	Washington	50023	2460800000	49.71	Missing	0.137	Missing	25.0	45.64	Missing	0.125	1.07	14.20	2.00	44.72	0.123	0.91	0.003	All FIFRA Related Products
VT	Washington	50023	2460900000	2.06	Missing	0.006	Missing	25.0	1.89	Missing	0.005	1.07	14.20	2.00	1.85	0.005	0.04	0.000	Miscellaneous Products (Not Otherw
VT	Windham	50025	2460100000	45.12	Missing	0.124	Missing	25.0	41.42	Missing	0.114	1.07	14.20	2.00	40.59	0.112	0.83	0.002	All Personal Care Products
VT	Windham	50025	2460200000	15.56	Missing	0.043	Missing	25.0	14.29	Missing	0.039	1.07	14.20	2.00	14.00	0.038	0.29	0.001	All Household Products
VT	Windham	50025	2460400000	27.38	Missing	0.075	Missing	25.0	25.14	Missing	0.069	1.07	14.20	2.00	24.64	0.068	0.50	0.001	All Automotive Aftermarket Products
VT	Windham	50025	2460500000	21.01	Missing	0.058	Missing	25.0	19.29	Missing	0.053	1.07	14.20	2.00	18.90	0.052	0.39	0.001	All Coatings and Related Products
VT	Windham	50025	2460600000	11.56	Missing	0.032	Missing	25.0	10.61	Missing	0.029	1.07	14.20	2.00	10.40	0.029	0.21	0.001	All Adhesives and Sealants
VT	Windham	50025	2460800000	37.37	Missing	0.103	Missing	25.0	34.31	Missing	0.094	1.07	14.20	2.00	33.62	0.092	0.69	0.002	All FIFRA Related Products
VT	Windham	50025	2460900000	1.55	Missing	0.004	Missing	25.0	1.42	Missing	0.004	1.07	14.20	2.00	1.39	0.004	0.03	0.000	Miscellaneous Products (Not Otherw
VT	Windsor	50027	2460100000	58.98	Missing	0.162	Missing	25.0	54.15	Missing	0.149	1.07	14.20	2.00	53.07	0.146	1.08	0.003	All Personal Care Products
VT	Windsor	50027	2460200000	20.34	Missing	0.056	Missing	25.0	18.68	Missing	0.051	1.07	14.20	2.00	18.30	0.050	0.37	0.001	All Household Products
VT	Windsor	50027	2460400000	35.79	Missing	0.098	Missing	25.0	32.86	Missing	0.090	1.07	14.20	2.00	32.20	0.088	0.66	0.002	All Automotive Aftermarket Products
VT	Windsor	50027	2460500000	27.46	Missing	0.075	Missing	25.0	25.22	Missing	0.069	1.07	14.20	2.00	24.71	0.068	0.50	0.001	All Coatings and Related Products
VT	Windsor	50027	2460600000	15.11	Missing	0.042	Missing	25.0	13.87	Missing	0.038	1.07	14.20	2.00	13.60	0.037	0.28	0.001	All Adhesives and Sealants
VT	Windsor	50027	2460800000	48.85	Missing	0.134	Missing	25.0	44.85	Missing	0.123	1.07	14.20	2.00	43.95	0.121	0.90	0.002	All FIFRA Related Products
VT	Windsor	50027	2460900000	2.02	Missing	0.006	Missing	25.0	1.86	Missing	0.005	1.07	14.20	2.00	1.82	0.005	0.04	0.000	Miscellaneous Products (Not Otherw
VA	Arlington	51013	2465800000	49.66	Missing	0.175	32.0	25.1	40.80	Missing	0.143	0.00	25.00	2.00	39.98	0.141	0.82	0.003	Pesticide Application
VA	Arlington	51013	2465900000	679.97	Missing	1.868	25.0	25.1	744.80	Missing	2.046	0.00	20.00	2.00	729.90	2.005	14.90	0.041	Miscellaneous Products: NEC
VA	Fairfax	51059	2465800000	319.99	Missing	1.125	32.0	25.1	262.88	Missing	0.924	0.00	25.00	2.00	257.62	0.906	5.26	0.018	Pesticide Application
VA	Fairfax	51059	2465900000	3,529.46	Missing	9.696	25.0	25.1	3,865.94	Missing	10.621	0.00	20.00	2.00	3,788.62	10.408	77.32	0.212	Miscellaneous Products: NEC
VA	Loudoun	51107	2465800000	38.11	Missing	0.134	32.0	25.1	31.31	Missing	0.110	0.00	25.00	2.00	30.68	0.108	0.63	0.002	Pesticide Application
VA	Loudoun	51107	2465900000	697.04	Missing	1.915	25.0	25.1	763.49	Missing	2.098	0.00	20.00	2.00	748.22	2.056	15.27	0.042	Miscellaneous Products: NEC
VA	Prince William	51153	2465800000	84.47	Missing	0.297	32.0	25.1	69.40	Missing	0.244	0.00	25.00	2.00	68.01	0.239	1.39	0.005	Pesticide Application
VA	Prince William	51153	2465900000	1,074.63	Missing	2.952	25.0	25.1	1,177.08	Missing	3.234	0.00	20.00	2.00	1,153.54	3.169	23.54	0.065	Miscellaneous Products: NEC
VA	Stafford	51179	2465800000	26.43	Missing	0.093	32.0	25.1	21.71	Missing	0.076	0.00	25.00	2.00	21.28	0.075	0.43	0.002	Pesticide Application
VA	Stafford	51179	2465900000	347.01	Missing	0.953	25.0	25.1	380.10	Missing	1.044	0.00	20.00	2.00	372.50	1.023	7.60	0.021	Miscellaneous Products: NEC
VA	Alexandria	51510	2465800000	27.65	Missing	0.097	32.0	25.1	22.72	Missing	0.080	0.00	25.00	2.00	22.27	0.078	0.45	0.002	Pesticide Application
VA	Alexandria	51510	2465900000	464.48	Missing	1.276	25.0	25.1	508.76	Missing	1.398	0.00	20.00	2.00	498.58	1.370	10.18	0.028	Miscellaneous Products: NEC
VA	Fairfax City	51600	2465800000	7.64	Missing	0.027	32.0	25.1	6.28	Missing	0.022	0.00	25.00	2.00	6.15	0.022	0.13	0.000	Pesticide Application
VA	Fairfax City	51600	2465900000	81.62	Missing	0.224	25.0	25.1	89.41	Missing	0.246	0.00	20.00	2.00	87.62	0.241	1.79	0.005	Miscellaneous Products: NEC
VA	Falls Chruch	51610	2465800000	3.97	Missing	0.014	32.0	25.1	3.26	Missing	0.011	0.00	25.00	2.00	3.19	0.011	0.07	0.000	Pesticide Application
VA	Falls Chruch	51610	2465900000	36.91	Missing	0.101	25.0	25.1	40.43	Missing	0.111	0.00	20.00	2.00	39.62	0.109	0.81	0.002	Miscellaneous Products: NEC
VA	Manassas City	51683	2465800000	10.57	Missing	0.037	32.0	25.1	8.68	Missing	0.031	0.00	25.00	2.00	8.51	0.030	0.17	0.001	Pesticide Application
VA	Manassas City	51683	2465900000	125.57	Missing	0.345	25.0	25.1	137.56	Missing	0.378	0.00	20.00	2.00	134.81	0.370	2.75	0.008	Miscellaneous Products: NEC
VA	Manassas Park City	51685	2465800000	3.08	Missing	0.011	32.0	25.1	2.54	Missing	0.009	0.00	25.00	2.00	2.49	0.009	0.05	0.000	Pesticide Application
VA	Manassas Park City	51685	2465900000	42.67	Missing	0.117	25.0	25.1	46.74	Missing	0.128	0.00	20.00	2.00	45.81	0.126	0.93	0.003	Miscellaneous Products: NEC
			MANEVU	225,161.96		621.41			201,672.72		556.50				194,385.49	536.46	7,287.22	20.04	

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	VOC 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	VOC 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
G	
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

COLUMN	COLUMN DESCRIPTIONS
K	VOC 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	VOC 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	VOC 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O, P	Year new containers requried: Incremental Control Factor for 2009 , assumes 10% turnover per year
Q	Incremental Control Factor (percent reduction due to OTC 2006 Control Measure) See Section 3.4.3 for derivation
R, S	VOC 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
T, U	VOC 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

Effective Date	CE	RE	RP	Control Factor
2003	65	100	65	42.3
2004	65	100	55	35.8
2005	65	100	45	29.3
2006	65	100	35	22.8
2007	65	100	25	16.3
2008	65	100	15	9.8
2009	65	100	5	3.3

PORTABLE FUEL CONTAINERS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descripti
CT	Fairfield	09001	2501060300	915.30	2.5077	2.508	Missing	24.9	610.68	1.5297	1.673	1.04	2004	35.80	5.80	575.26	1.576	35.42	0.097	Total
CT	Hartford	09003	2501060300	886.92	2.4299	2.430	Missing	24.9	591.75	1.4823	1.621	1.04	2004	35.80	5.80	557.43	1.527	34.32	0.094	Total
CT	Litchfield	09005	2501060300	190.68	0.5224	0.522	Missing	24.9	127.22	0.3187	0.349	1.04	2004	35.80	5.80	119.84	0.328	7.38	0.020	Total
CT	Middlesex	09007	2501060300	163.24	0.4472	0.447	Missing	24.9	108.91	0.2729	0.298	1.04	2004	35.80	5.80	102.60	0.281	6.32	0.017	Total
CT	New Haven	09009	2501060300	853.97	2.3396	2.340	Missing	24.9	569.76	1.4273	1.561	1.04	2004	35.80	5.80	536.71	1.470	33.05	0.091	Total
CT	New London	09011	2501060300	268.73	0.7363	0.736	Missing	24.9	179.30	0.4491	0.491	1.04	2004	35.80	5.80	168.90	0.463	10.40	0.028	Total
CT	Tolland	09013	2501060300	145.65	0.3990	0.399	Missing	24.9	97.18	0.2434	0.266	1.04	2004	35.80	5.80	91.54	0.251	5.64	0.015	Total
CT	Windham	09015	2501060300	113.69	0.3115	0.312	Missing	24.9	75.86	0.1900	0.208	1.04	2004	35.80	5.80	71.46	0.196	4.40	0.012	Total
DE	Kent	10001	2501011010	2.83	0.0083	0.008	27.0	30.9	1.93	0.0052	0.006	1.06	2004	35.80	5.80	1.81	0.005	0.11	0.000	Vapor Losses
DE	Kent	10001	2501011011	11.04	0.0325	0.033	27.0	30.9	7.52	0.0202	0.022	1.06	2004	35.80	5.80	7.08	0.021	0.44	0.001	Permeation
DE	Kent	10001	2501011012	95.38	0.2804	0.280	27.0	30.9	64.91	0.1745	0.191	1.06	2004	35.80	5.80	61.15	0.180	3.76	0.011	Diurnal
DE	Kent	10001	2501011015	10.26	0.0302	0.030	27.0	30.9	6.98	0.0187	0.021	1.06	2004	35.80	5.80	6.58	0.019	0.40	0.001	Spillage
DE	Kent	10001	2501011016	5.23	0.0154	0.015	27.0	30.9	3.56	0.0095	0.010	1.06	2004	35.80	5.80	3.36	0.010	0.21	0.001	Transport
DE	Kent	10001	2501012010	3.09	0.0091	0.009	27.0	30.9	2.10	0.0057	0.006	1.06	2004	35.80	5.80	1.98	0.006	0.12	0.000	Vapor Losses
DE	Kent	10001	2501012011	0.65	0.0019	0.002	27.0	30.9	0.44	0.0012	0.001	1.06	2004	35.80	5.80	0.41	0.001	0.03	0.000	Permeation
DE	Kent	10001	2501012012	6.31	0.0185	0.019	27.0	30.9	4.29	0.0115	0.013	1.06	2004	35.80	5.80	4.04	0.012	0.25	0.001	Diurnal
DE	Kent	10001	2501012015	13.32	0.0392	0.039	27.0	30.9	9.07	0.0243	0.027	1.06	2004	35.80	5.80	8.54	0.025	0.53	0.002	Spillage
DE	Kent	10001	2501012016	3.95	0.0116	0.012	27.0	30.9	2.69	0.0072	0.008	1.06	2004	35.80	5.80	2.53	0.007	0.16	0.000	Transport
DE	New Castle	10003	2501011010	8.12	0.0239	0.024	27.0	30.9	5.43	0.0146	0.016	1.04	2004	35.80	5.80	5.12	0.015	0.32	0.001	Vapor Losses
DE	New Castle	10003	2501011011	43.22	0.1271	0.127	27.0	30.9	28.94	0.0778	0.085	1.04	2004	35.80	5.80	27.26	0.080	1.68	0.005	Permeation
DE	New Castle	10003	2501011012	373.28	1.0973	1.097	27.0	30.9	249.93	0.6718	0.735	1.04	2004	35.80	5.80	235.44	0.692	14.50	0.043	Diurnal
DE	New Castle	10003	2501011015	38.46	0.1131	0.113	27.0	30.9	25.75	0.0692	0.076	1.04	2004	35.80	5.80	24.26	0.071	1.49	0.004	Spillage
DE	New Castle	10003	2501011016	20.48	0.0602	0.060	27.0	30.9	13.72	0.0368	0.040	1.04	2004	35.80	5.80	12.92	0.038	0.80	0.002	Transport
DE	New Castle	10003	2501012010	23.58	0.0693	0.069	27.0	30.9	15.79	0.0424	0.046	1.04	2004	35.80	5.80	14.87	0.044	0.92	0.003	Vapor Losses
DE	New Castle	10003	2501012011	1.97	0.0058	0.006	27.0	30.9	1.32	0.0035	0.004	1.04	2004	35.80	5.80	1.24	0.004	0.08	0.000	Permeation
DE	New Castle	10003	2501012012	19.19	0.0564	0.056	27.0	30.9	12.85	0.0345	0.038	1.04	2004	35.80	5.80	12.10	0.036	0.75	0.002	Diurnal
DE	New Castle	10003	2501012015	112.46	0.3306	0.331	27.0	30.9	75.30	0.2024	0.221	1.04	2004	35.80	5.80	70.93	0.209	4.37	0.013	Spillage
DE	New Castle	10003	2501012016	12.01	0.0353	0.035	27.0	30.9	8.04	0.0216	0.024	1.04	2004	35.80	5.80	7.58	0.022	0.47	0.001	Transport
DE	Sussex	10005	2501011010	5.72	0.0168	0.017	27.0	30.9	4.13	0.0111	0.012	1.13	2004	35.80	5.80	3.89	0.011	0.24	0.001	Vapor Losses

PORTABLE FUEL CONTAINERS

State	County	FIPS	SCC	2002 VOC Emissions: Annual (tpy)	2002 VOC Emissions: Summer Day from Inventory (tpd)	2002 VOC Emissions: Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2009 VOC OTB/OTW Emissions: Annual (tpy)	2009 VOC OTB/OTW Emissions: Summer Day from Inventory (tpd)	2009 VOC OTB/OTW Emissions: Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Emissions: Annual (tpy)	2009 BOTW Emissions: Summer Day Calculated (tpd)	2009 BOTW Reductions: Annual (tpy)	2009 BOTW Reductions: Summer Day (tpd)	SCC Descript
DE	Sussex	10005	2501011011	14.53	0.0427	0.043	27.0	30.9	10.50	0.0282	0.031	1.13	2004	35.80	5.80	9.90	0.029	0.61	0.002	Permeation
DE	Sussex	10005	2501011012	125.52	0.3690	0.369	27.0	30.9	90.72	0.2438	0.267	1.13	2004	35.80	5.80	85.46	0.251	5.26	0.015	Diurnal
DE	Sussex	10005	2501011015	19.32	0.0568	0.057	27.0	30.9	13.97	0.0376	0.041	1.13	2004	35.80	5.80	13.16	0.039	0.81	0.002	Spillage
DE	Sussex	10005	2501011016	6.89	0.0202	0.020	27.0	30.9	4.98	0.0134	0.015	1.13	2004	35.80	5.80	4.69	0.014	0.29	0.001	Transport
DE	Sussex	10005	2501012010	5.60	0.0165	0.017	27.0	30.9	4.05	0.0109	0.012	1.13	2004	35.80	5.80	3.81	0.011	0.23	0.001	Vapor Losses
DE	Sussex	10005	2501012011	1.02	0.0030	0.003	27.0	30.9	0.74	0.0020	0.002	1.13	2004	35.80	5.80	0.69	0.002	0.04	0.000	Permeation
DE	Sussex	10005	2501012012	9.96	0.0293	0.029	27.0	30.9	7.20	0.0193	0.021	1.13	2004	35.80	5.80	6.78	0.020	0.42	0.001	Diurnal
DE	Sussex	10005	2501012015	26.31	0.0774	0.077	27.0	30.9	19.02	0.0511	0.056	1.13	2004	35.80	5.80	17.92	0.053	1.10	0.003	Spillage
DE	Sussex	10005	2501012016	6.24	0.0183	0.018	27.0	30.9	4.51	0.0121	0.013	1.13	2004	35.80	5.80	4.25	0.012	0.26	0.001	Transport
DC	Washington	11001	2501011011	54.37	Missing	0.185	Missing	30.9	37.76	Missing	0.128	1.08	2004	35.80	5.80	35.57	0.121	2.19	0.007	Permeation
DC	Washington	11001	2501011012	469.50	Missing	1.594	Missing	30.9	326.10	Missing	1.107	1.08	2004	35.80	5.80	307.19	1.043	18.91	0.064	Diurnal
DC	Washington	11001	2501011016	25.77	Missing	0.087	Missing	30.9	17.90	Missing	0.061	1.08	2004	35.80	5.80	16.86	0.057	1.04	0.004	Transport
DC	Washington	11001	2501012011	2.42	Missing	0.008	Missing	30.9	1.68	Missing	0.006	1.08	2004	35.80	5.80	1.58	0.005	0.10	0.000	Permeation
DC	Washington	11001	2501012012	31.51	Missing	0.107	Missing	30.9	21.88	Missing	0.074	1.08	2004	35.80	5.80	20.61	0.070	1.27	0.004	Diurnal
DC	Washington	11001	2501012016	477.85	Missing	1.623	Missing	30.9	331.90	Missing	1.127	1.08	2004	35.80	5.80	312.65	1.062	19.25	0.065	Transport
ME	Androscoggin	23001	2501060300	107.64	0.2949	0.295	Missing	24.9	71.79	0.1798	0.197	1.04	2004	35.80	5.80	67.62	0.185	4.16	0.011	Total
ME	Aroostook	23003	2501060300	74.83	0.2050	0.205	Missing	24.9	49.90	0.1250	0.137	1.04	2004	35.80	5.80	47.01	0.129	2.89	0.008	Total
ME	Cumberland	23005	2501060300	276.05	0.7563	0.756	Missing	24.9	184.11	0.4612	0.504	1.04	2004	35.80	5.80	173.43	0.475	10.68	0.029	Total
ME	Franklin	23007	2501060300	30.41	0.0833	0.083	Missing	24.9	20.28	0.0508	0.056	1.04	2004	35.80	5.80	19.11	0.052	1.18	0.003	Total
ME	Hancock	23009	2501060300	53.44	0.1464	0.146	Missing	24.9	35.64	0.0893	0.098	1.04	2004	35.80	5.80	33.57	0.092	2.07	0.006	Total
ME	Kennebec	23011	2501060300	121.37	0.3325	0.333	Missing	24.9	80.94	0.2027	0.222	1.04	2004	35.80	5.80	76.25	0.209	4.69	0.013	Total
ME	Knox	23013	2501060300	41.45	0.1136	0.114	Missing	24.9	27.64	0.0692	0.076	1.04	2004	35.80	5.80	26.04	0.071	1.60	0.004	Total
ME	Lincoln	23015	2501060300	35.27	0.0966	0.097	Missing	24.9	23.52	0.0589	0.064	1.04	2004	35.80	5.80	22.16	0.061	1.36	0.004	Total
ME	Oxford	23017	2501060300	57.12	0.1565	0.157	Missing	24.9	38.10	0.0954	0.104	1.04	2004	35.80	5.80	35.89	0.098	2.21	0.006	Total
ME	Penobscot	23019	2501060300	150.26	0.4117	0.412	Missing	24.9	100.22	0.2511	0.275	1.04	2004	35.80	5.80	94.40	0.259	5.81	0.016	Total
ME	Piscataquis	23021	2501060300	17.66	0.0484	0.048	Missing	24.9	11.77	0.0295	0.032	1.04	2004	35.80	5.80	11.09	0.030	0.68	0.002	Total
ME	Sagadahoc	23023	2501060300	36.82	0.1009	0.101	Missing	24.9	24.55	0.0615	0.067	1.04	2004	35.80	5.80	23.13	0.063	1.42	0.004	Total
ME	Somerset	23025	2501060300	52.21	0.1430	0.143	Missing	24.9	34.82	0.0872	0.095	1.04	2004	35.80	5.80	32.80	0.090	2.02	0.006	Total
ME	Waldo	23027	2501060300	38.59	0.1057	0.106	Missing	24.9	25.73	0.0645	0.070	1.04	2004	35.80	5.80	24.24	0.066	1.49	0.004	Total
ME	Washington	23029	2501060300	34.18	0.0936	0.094	Missing	24.9	22.79	0.0571	0.062	1.04	2004	35.80	5.80	21.47	0.059	1.32	0.004	Total
ME	York	23031	2501060300	200.18	0.5484	0.548	Missing	24.9	133.51	0.3459	0.366	1.04	2004	35.80	5.80	125.77	0.345	7.74	0.021	Total
MD	Allegany	24001	2501011011	6.62	0.0180	0.018	Missing	30.9	3.76	0.0090	0.010	0.98	2003	42.30	5.80	3.54	0.010	0.22	0.001	Permeation
MD	Allegany	24001	2501011012	57.17	0.1570	0.157	Missing	30.9	32.45	0.0791	0.089	0.98	2003	42.30	5.80	30.57	0.084	1.88	0.005	Diurnal
MD	Allegany	24001	2501011016	3.14	0.0090	0.009	Missing	30.9	1.78	0.0045	0.005	0.98	2003	42.30	5.80	1.68	0.005	0.10	0.000	Transport
MD	Allegany	24001	2501012011	0.64	0.0020	0.002	Missing	30.9	0.36	0.0010	0.001	0.98	2003	42.30	5.80	0.34	0.001	0.02	0.000	Permeation
MD	Allegany	24001	2501012012	8.35	0.0230	0.023	Missing	30.9	4.74	0.0116	0.013	0.98	2003	42.30	5.80	4.47	0.012	0.28	0.001	Diurnal
MD	Allegany	24001	2501012016	126.70	0.3470	0.347	Missing	30.9	71.93	0.1748	0.197	0.98	2003	42.30	5.80	67.76	0.186	4.17	0.011	Transport
MD	Anne Arundel	24003	2501011011	41.08	0.1130	0.113	Missing	30.9	24.76	0.0605	0.068	1.04	2003	42.30	5.80	23.33	0.064	1.44	0.004	Permeation
MD	Anne Arundel	24003	2501011012	354.77	0.9720	0.972	Missing	30.9	213.84	0.5199	0.586	1.04	2003	42.30	5.80	201.43	0.552	12.40	0.034	Diurnal
MD	Anne Arundel	24003	2501011016	19.47	0.0530	0.053	Missing	30.9	11.74	0.0283	0.032	1.04	2003	42.30	5.80	11.05	0.030	0.68	0.002	Transport
MD	Anne Arundel	24003	2501012011	4.89	0.0130	0.013	Missing	30.9	2.94	0.0070	0.008	1.04	2003	42.30	5.80	2.77	0.007	0.17	0.000	Permeation
MD	Anne Arundel	24003	2501012012	63.64	0.1740	0.174	Missing	30.9	38.36	0.0931	0.105	1.04	2003	42.30	5.80	36.14	0.099	2.22	0.006	Diurnal
MD	Anne Arundel	24003	2501012016	965.25	2.6450	2.645	Missing	30.9	581.80	1.4147	1.594	1.04	2003	42.30	5.80	548.06	1.502	33.74	0.092	Transport
MD	Baltimore	24005	2501011011	68.39	0.1870	0.187	Missing	30.9	41.04	0.0996	0.112	1.04	2003	42.30	5.80	38.66	0.106	2.38	0.007	Permeation
MD	Baltimore	24005	2501011012	590.61	1.6180	1.618	Missing	30.9	354.40	0.8615	0.971	1.04	2003	42.30	5.80	333.85	0.915	20.56	0.056	Diurnal
MD	Baltimore	24005	2501011016	32.41	0.0890	0.089	Missing	30.9	19.45	0.0474	0.053	1.04	2003	42.30	5.80	18.32	0.050	1.13	0.003	Transport
MD	Baltimore	24005	2501012011	6.06	0.0170	0.017	Missing	30.9	3.64	0.0090	0.010	1.04	2003	42.30	5.80	3.43	0.010	0.21	0.001	Permeation
MD	Baltimore	24005	2501012012	78.96	0.2160	0.216	Missing	30.9	47.38	0.1150	0.130	1.04	2003	42.30	5.80	44.64	0.122	2.75	0.008	Diurnal
MD	Baltimore	24005	2501012016	1,197.62	3.2810	3.281	Missing	30.9	718.65	1.7470	1.969	1.04	2003	42.30	5.80	676.96	1.855	41.68	0.114	Transport
MD	Calvert	24009	2501011011	6.07	0.0170	0.017	Missing	30.9	4.02	0.0100	0.011	1.15	2003	42.30	5.80	3.79	0.011	0.23	0.001	Permeation
MD	Calvert	24009	2501011012	52.43	0.1440	0.144	Missing	30.9	34.71	0.0846	0.095	1.15	2003	42.30	5.80	32.70	0.090	2.01	0.006	Diurnal
MD	Calvert	24009	2501011016	2.88	0.0080	0.008	Missing	30.9	1.91	0.0047	0.005	1.15	2003	42.30	5.80	1.79	0.005	0.11	0.000	Transport
MD	Calvert	24009	2501012011	0.83	0.0020	0.002	Missing	30.9	0.55	0.0011	0.001	1.15	2003	42.30	5.80	0.51	0.001	0.03	0.000	Permeation
MD	Calvert	24009	2501012012	10.75	0.0290	0.029	Missing	30.9	7.12	0.0171	0.019	1.15	2003	42.30	5.80	6.70	0.018	0.41	0.001	Diurnal
MD	Calvert	24009	2501012016	163.01	0.4470	0.447	Missing	30.9	107.92	0.2626	0.296	1.15	2003	42.30	5.80	101.66	0.279	6.26	0.017	Transport
MD	Caroline	24011	2501011011	2.56	0.0070	0.007	Missing	30.9	1.57	0.0038	0.004	1.06	2003	42.30	5.80	1.48	0.004	0.09	0.000	Permeation
MD	Caroline	24011	2501011012	22.09	0.0610	0.061	Missing	30.9	13.54	0.0332	0.037	1.06	2003	42.30	5.80	12.75	0.035	0.79	0.002	Diurnal
MD	Caroline	24011	2501011016	1.21	0.0030	0.003	Missing	30.9	0.74	0.0016	0.002	1.06	2003	42.30	5.80	0.70	0.002	0.04	0.000	Transport
MD	Caroline	24011	2501012011	0.42	0.0010	0.001	Missing	30.9	0.26	0.0006	0.001	1.06	2003	42.30	5.80	0.24	0.001	0.01	0.000	Permeation

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
MD	Caroline	24011	2501012012	5.44	0.0150	0.015	Missing	30.9	3.33	0.0082	0.009	1.06	2003	42.30	5.80	3.14	0.009	0.19	0.001	Diurnal
MD	Caroline	24011	2501012016	82.46	0.2260	0.226	Missing	30.9	50.53	0.1229	0.138	1.06	2003	42.30	5.80	47.60	0.130	2.93	0.008	Transport
MD	Carroll	24013	2501011011	12.40	0.0340	0.034	Missing	30.9	7.99	0.0194	0.022	1.12	2003	42.30	5.80	7.53	0.021	0.46	0.001	Permeation
MD	Carroll	24013	2501011012	107.06	0.2930	0.293	Missing	30.9	69.01	0.1676	0.189	1.12	2003	42.30	5.80	65.01	0.178	4.00	0.011	Diurnal
MD	Carroll	24013	2501011016	5.88	0.0160	0.016	Missing	30.9	3.79	0.0092	0.010	1.12	2003	42.30	5.80	3.57	0.010	0.22	0.001	Transport
MD	Carroll	24013	2501012011	2.20	0.0060	0.006	Missing	30.9	1.42	0.0034	0.004	1.12	2003	42.30	5.80	1.33	0.004	0.08	0.000	Permeation
MD	Carroll	24013	2501012012	28.61	0.0780	0.078	Missing	30.9	18.44	0.0446	0.050	1.12	2003	42.30	5.80	17.37	0.047	1.07	0.003	Diurnal
MD	Carroll	24013	2501012016	433.88	1.1890	1.189	Missing	30.9	279.69	0.6801	0.766	1.12	2003	42.30	5.80	263.47	0.722	16.22	0.044	Transport
MD	Cecil	24015	2501011011	7.39	0.0200	0.020	Missing	30.9	4.73	0.0113	0.013	1.11	2003	42.30	5.80	4.45	0.012	0.27	0.001	Permeation
MD	Cecil	24015	2501011012	63.84	0.1750	0.175	Missing	30.9	40.81	0.0992	0.112	1.11	2003	42.30	5.80	38.45	0.105	2.37	0.006	Diurnal
MD	Cecil	24015	2501011016	3.50	0.0100	0.010	Missing	30.9	2.24	0.0057	0.006	1.11	2003	42.30	5.80	2.11	0.006	0.13	0.000	Transport
MD	Cecil	24015	2501012011	0.86	0.0020	0.002	Missing	30.9	0.55	0.0011	0.001	1.11	2003	42.30	5.80	0.52	0.001	0.03	0.000	Permeation
MD	Cecil	24015	2501012012	11.16	0.0310	0.031	Missing	30.9	7.14	0.0176	0.020	1.11	2003	42.30	5.80	6.72	0.019	0.41	0.001	Diurnal
MD	Cecil	24015	2501012016	169.29	0.4640	0.464	Missing	30.9	108.23	0.2632	0.297	1.11	2003	42.30	5.80	101.95	0.279	6.28	0.017	Transport
MD	Charles	24017	2501011011	9.94	0.0270	0.027	Missing	30.9	6.72	0.0162	0.018	1.17	2003	42.30	5.80	6.33	0.017	0.39	0.001	Permeation
MD	Charles	24017	2501011012	85.87	0.2350	0.235	Missing	30.9	58.02	0.1409	0.159	1.17	2003	42.30	5.80	54.66	0.150	3.37	0.009	Diurnal
MD	Charles	24017	2501011016	4.71	0.0130	0.013	Missing	30.9	3.18	0.0078	0.009	1.17	2003	42.30	5.80	3.00	0.008	0.18	0.001	Transport
MD	Charles	24017	2501012011	1.04	0.0030	0.003	Missing	30.9	0.70	0.0018	0.002	1.17	2003	42.30	5.80	0.66	0.002	0.04	0.000	Permeation
MD	Charles	24017	2501012012	13.59	0.0370	0.037	Missing	30.9	9.18	0.0222	0.025	1.17	2003	42.30	5.80	8.65	0.024	0.53	0.001	Diurnal
MD	Charles	24017	2501012016	206.16	0.5650	0.565	Missing	30.9	139.30	0.3388	0.382	1.17	2003	42.30	5.80	131.22	0.360	8.08	0.022	Transport
MD	Dorchester	24019	2501011011	2.91	0.0080	0.008	Missing	30.9	1.74	0.0042	0.005	1.03	2003	42.30	5.80	1.64	0.004	0.10	0.000	Permeation
MD	Dorchester	24019	2501011012	25.13	0.0690	0.069	Missing	30.9	15.00	0.0366	0.041	1.03	2003	42.30	5.80	14.13	0.039	0.87	0.002	Diurnal
MD	Dorchester	24019	2501011016	1.38	0.0040	0.004	Missing	30.9	0.82	0.0022	0.002	1.03	2003	42.30	5.80	0.78	0.002	0.05	0.000	Transport
MD	Dorchester	24019	2501012011	0.35	0.0010	0.001	Missing	30.9	0.21	0.0005	0.001	1.03	2003	42.30	5.80	0.20	0.001	0.01	0.000	Permeation
MD	Dorchester	24019	2501012012	4.54	0.0120	0.012	Missing	30.9	2.71	0.0064	0.007	1.03	2003	42.30	5.80	2.55	0.007	0.16	0.000	Diurnal
MD	Dorchester	24019	2501012016	68.81	0.1890	0.189	Missing	30.9	41.07	0.1001	0.113	1.03	2003	42.30	5.80	38.69	0.106	2.38	0.007	Transport
MD	Frederick	24021	2501011011	16.44	0.0450	0.045	Missing	30.9	11.02	0.0267	0.030	1.16	2003	42.30	5.80	10.38	0.028	0.64	0.002	Permeation
MD	Frederick	24021	2501011012	141.97	0.3890	0.389	Missing	30.9	95.15	0.2313	0.261	1.16	2003	42.30	5.80	89.63	0.246	5.52	0.015	Diurnal
MD	Frederick	24021	2501011016	7.79	0.0210	0.021	Missing	30.9	5.22	0.0125	0.014	1.16	2003	42.30	5.80	4.92	0.013	0.30	0.001	Transport
MD	Frederick	24021	2501012011	2.37	0.0060	0.006	Missing	30.9	1.59	0.0036	0.004	1.16	2003	42.30	5.80	1.50	0.004	0.09	0.000	Permeation
MD	Frederick	24021	2501012012	30.89	0.0850	0.085	Missing	30.9	20.71	0.0506	0.057	1.16	2003	42.30	5.80	19.50	0.054	1.20	0.003	Diurnal
MD	Frederick	24021	2501012016	468.56	1.2840	1.284	Missing	30.9	314.03	0.7636	0.861	1.16	2003	42.30	5.80	295.82	0.811	18.21	0.050	Transport
MD	Garrett	24023	2501011011	2.71	0.0070	0.007	Missing	30.9	1.61	0.0037	0.004	1.03	2003	42.30	5.80	1.52	0.004	0.09	0.000	Permeation
MD	Garrett	24023	2501011012	23.41	0.0640	0.064	Missing	30.9	13.90	0.0337	0.038	1.03	2003	42.30	5.80	13.09	0.036	0.81	0.002	Diurnal
MD	Garrett	24023	2501011016	1.29	0.0040	0.004	Missing	30.9	0.76	0.0021	0.002	1.03	2003	42.30	5.80	0.72	0.002	0.04	0.000	Transport
MD	Garrett	24023	2501012011	0.51	0.0010	0.001	Missing	30.9	0.30	0.0005	0.001	1.03	2003	42.30	5.80	0.29	0.001	0.02	0.000	Permeation
MD	Garrett	24023	2501012012	6.66	0.0180	0.018	Missing	30.9	3.95	0.0095	0.011	1.03	2003	42.30	5.80	3.72	0.010	0.23	0.001	Diurnal
MD	Garrett	24023	2501012016	101.03	0.2770	0.277	Missing	30.9	59.98	0.1459	0.164	1.03	2003	42.30	5.80	56.50	0.155	3.48	0.010	Transport
MD	Harford	24025	2501011011	18.66	0.0510	0.051	Missing	30.9	12.00	0.0291	0.033	1.11	2003	42.30	5.80	11.30	0.031	0.70	0.002	Permeation
MD	Harford	24025	2501011012	161.12	0.4410	0.441	Missing	30.9	103.62	0.2517	0.284	1.11	2003	42.30	5.80	97.61	0.267	6.01	0.016	Diurnal
MD	Harford	24025	2501011016	8.84	0.0240	0.024	Missing	30.9	5.69	0.0137	0.015	1.11	2003	42.30	5.80	5.36	0.015	0.33	0.001	Transport
MD	Harford	24025	2501012011	2.28	0.0060	0.006	Missing	30.9	1.46	0.0034	0.004	1.11	2003	42.30	5.80	1.38	0.004	0.08	0.000	Permeation
MD	Harford	24025	2501012012	29.67	0.0810	0.081	Missing	30.9	19.08	0.0463	0.052	1.11	2003	42.30	5.80	17.98	0.049	1.11	0.003	Diurnal
MD	Harford	24025	2501012016	450.00	1.2330	1.233	Missing	30.9	289.42	0.7037	0.793	1.11	2003	42.30	5.80	272.63	0.747	16.79	0.046	Transport
MD	Howard	24027	2501011011	20.78	0.0570	0.057	Missing	30.9	13.35	0.0325	0.037	1.11	2003	42.30	5.80	12.58	0.035	0.77	0.002	Permeation
MD	Howard	24027	2501011012	179.43	0.4920	0.492	Missing	30.9	115.31	0.2806	0.316	1.11	2003	42.30	5.80	108.62	0.298	6.69	0.018	Diurnal
MD	Howard	24027	2501011016	9.85	0.0270	0.027	Missing	30.9	6.33	0.0154	0.017	1.11	2003	42.30	5.80	5.96	0.016	0.37	0.001	Transport
MD	Howard	24027	2501012011	2.48	0.0070	0.007	Missing	30.9	1.59	0.0040	0.004	1.11	2003	42.30	5.80	1.50	0.004	0.09	0.000	Permeation
MD	Howard	24027	2501012012	32.25	0.0880	0.088	Missing	30.9	20.72	0.0502	0.057	1.11	2003	42.30	5.80	19.52	0.053	1.20	0.003	Diurnal
MD	Howard	24027	2501012016	489.04	1.3400	1.340	Missing	30.9	314.29	0.7641	0.861	1.11	2003	42.30	5.80	296.06	0.811	18.23	0.050	Transport
MD	Kent	24029	2501011011	1.83	0.0050	0.005	Missing	30.9	1.14	0.0028	0.003	1.08	2003	42.30	5.80	1.07	0.003	0.07	0.000	Permeation
MD	Kent	24029	2501011012	15.76	0.0430	0.043	Missing	30.9	9.82	0.0238	0.027	1.08	2003	42.30	5.80	9.25	0.025	0.57	0.002	Diurnal
MD	Kent	24029	2501011016	0.87	0.0020	0.002	Missing	30.9	0.54	0.0011	0.001	1.08	2003	42.30	5.80	0.51	0.001	0.03	0.000	Transport
MD	Kent	24029	2501012011	0.31	0.0010	0.001	Missing	30.9	0.19	0.0006	0.001	1.08	2003	42.30	5.80	0.18	0.001	0.01	0.000	Permeation
MD	Kent	24029	2501012012	4.05	0.0110	0.011	Missing	30.9	2.52	0.0061	0.007	1.08	2003	42.30	5.80	2.38	0.006	0.15	0.000	Diurnal
MD	Kent	24029	2501012016	61.44	0.1680	0.168	Missing	30.9	38.28	0.0929	0.105	1.08	2003	42.30	5.80	36.06	0.099	2.22	0.006	Transport
MD	Montgomery	24031	2501011011	74.65	0.2050	0.205	Missing	30.9	47.26	0.1152	0.130	1.10	2003	42.30	5.80	44.52	0.122	2.74	0.008	Permeation
MD	Montgomery	24031	2501011012	644.63	1.7660	1.766	Missing	30.9	408.13	0.9922	1.118	1.10	2003	42.30	5.80	384.46	1.053	23.67	0.065	Diurnal
MD	Montgomery	24031	2501011016	35.38	0.0970	0.097	Missing	30.9	22.40	0.0545	0.061	1.10	2003	42.30	5.80	21.10	0.058	1.30	0.004	Transport

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
MD	Montgomery	24031	2501012011	7.21	0.0200	0.020	Missing	30.9	4.56	0.0113	0.013	1.10	2003	42.30	5.80	4.30	0.012	0.26	0.001	Permeation
MD	Montgomery	24031	2501012012	93.89	0.2570	0.257	Missing	30.9	59.44	0.1443	0.163	1.10	2003	42.30	5.80	56.00	0.153	3.45	0.009	Diurnal
MD	Montgomery	24031	2501012016	1,423.98	3.9010	3.901	Missing	30.9	901.56	2.1916	2.470	1.10	2003	42.30	5.80	849.27	2.327	52.29	0.143	Transport
MD	Prince Georges	24033	2501011011	65.56	0.1800	0.180	Missing	30.9	39.78	0.0970	0.109	1.05	2003	42.30	5.80	37.48	0.103	2.31	0.006	Permeation
MD	Prince Georges	24033	2501011012	566.10	1.5510	1.551	Missing	30.9	343.55	0.8352	0.941	1.05	2003	42.30	5.80	323.62	0.887	19.93	0.055	Diurnal
MD	Prince Georges	24033	2501011016	31.07	0.0850	0.085	Missing	30.9	18.85	0.0458	0.052	1.05	2003	42.30	5.80	17.76	0.049	1.09	0.003	Transport
MD	Prince Georges	24033	2501012011	4.89	0.0130	0.013	Missing	30.9	2.96	0.0070	0.008	1.05	2003	42.30	5.80	2.79	0.007	0.17	0.000	Permeation
MD	Prince Georges	24033	2501012012	63.64	0.1740	0.174	Missing	30.9	38.62	0.0937	0.106	1.05	2003	42.30	5.80	36.38	0.099	2.24	0.006	Diurnal
MD	Prince Georges	24033	2501012016	965.25	2.6450	2.645	Missing	30.9	585.78	1.4243	1.605	1.05	2003	42.30	5.80	551.81	1.512	33.98	0.093	Transport
MD	Queen Annes	24035	2501011011	3.67	0.0100	0.010	Missing	30.9	2.41	0.0058	0.007	1.14	2003	42.30	5.80	2.27	0.006	0.14	0.000	Permeation
MD	Queen Annes	24035	2501011012	31.69	0.0870	0.087	Missing	30.9	20.84	0.0508	0.057	1.14	2003	42.30	5.80	19.63	0.054	1.21	0.003	Diurnal
MD	Queen Annes	24035	2501011016	1.74	0.0050	0.005	Missing	30.9	1.14	0.0029	0.003	1.14	2003	42.30	5.80	1.08	0.003	0.07	0.000	Transport
MD	Queen Annes	24035	2501012011	0.71	0.0020	0.002	Missing	30.9	0.46	0.0011	0.001	1.14	2003	42.30	5.80	0.44	0.001	0.03	0.000	Permeation
MD	Queen Annes	24035	2501012012	9.18	0.0250	0.025	Missing	30.9	6.04	0.0146	0.016	1.14	2003	42.30	5.80	5.69	0.015	0.35	0.001	Diurnal
MD	Queen Annes	24035	2501012016	139.26	0.3820	0.382	Missing	30.9	91.56	0.2229	0.251	1.14	2003	42.30	5.80	86.25	0.237	5.31	0.015	Transport
MD	St. Marys	24037	2501011011	6.90	0.0190	0.019	Missing	30.9	4.48	0.0110	0.012	1.12	2003	42.30	5.80	4.22	0.012	0.26	0.001	Permeation
MD	St. Marys	24037	2501011012	59.61	0.1630	0.163	Missing	30.9	38.68	0.0939	0.106	1.12	2003	42.30	5.80	36.44	0.100	2.24	0.006	Diurnal
MD	St. Marys	24037	2501011016	3.27	0.0090	0.009	Missing	30.9	2.12	0.0052	0.006	1.12	2003	42.30	5.80	2.00	0.006	0.12	0.000	Transport
MD	St. Marys	24037	2501012011	0.74	0.0020	0.002	Missing	30.9	0.48	0.0011	0.001	1.12	2003	42.30	5.80	0.45	0.001	0.03	0.000	Permeation
MD	St. Marys	24037	2501012012	9.58	0.0260	0.026	Missing	30.9	6.21	0.0150	0.017	1.12	2003	42.30	5.80	5.85	0.016	0.36	0.001	Diurnal
MD	St. Marys	24037	2501012016	145.27	0.3980	0.398	Missing	30.9	94.26	0.2292	0.258	1.12	2003	42.30	5.80	88.79	0.243	5.47	0.015	Transport
MD	Somerset	24039	2501011011	2.16	0.0060	0.006	Missing	30.9	1.27	0.0032	0.004	1.02	2003	42.30	5.80	1.20	0.003	0.07	0.000	Permeation
MD	Somerset	24039	2501011012	18.63	0.0510	0.051	Missing	30.9	11.00	0.0267	0.030	1.02	2003	42.30	5.80	10.36	0.028	0.64	0.002	Diurnal
MD	Somerset	24039	2501011016	1.02	0.0030	0.003	Missing	30.9	0.60	0.0016	0.002	1.02	2003	42.30	5.80	0.57	0.002	0.03	0.000	Transport
MD	Somerset	24039	2501012011	0.23	0.0010	0.001	Missing	30.9	0.14	0.0005	0.001	1.02	2003	42.30	5.80	0.13	0.001	0.01	0.000	Permeation
MD	Somerset	24039	2501012012	2.99	0.0080	0.008	Missing	30.9	1.76	0.0042	0.005	1.02	2003	42.30	5.80	1.66	0.004	0.10	0.000	Diurnal
MD	Somerset	24039	2501012016	45.33	0.1240	0.124	Missing	30.9	26.75	0.0650	0.073	1.02	2003	42.30	5.80	25.20	0.069	1.55	0.004	Transport
MD	Talbot	24041	2501011011	3.37	0.0090	0.009	Missing	30.9	2.08	0.0049	0.006	1.07	2003	42.30	5.80	1.96	0.005	0.12	0.000	Permeation
MD	Talbot	24041	2501011012	29.06	0.0800	0.080	Missing	30.9	17.96	0.0439	0.049	1.07	2003	42.30	5.80	16.92	0.047	1.04	0.003	Diurnal
MD	Talbot	24041	2501011016	1.60	0.0040	0.004	Missing	30.9	0.99	0.0022	0.002	1.07	2003	42.30	5.80	0.93	0.002	0.06	0.000	Transport
MD	Talbot	24041	2501012011	0.63	0.0020	0.002	Missing	30.9	0.39	0.0011	0.001	1.07	2003	42.30	5.80	0.37	0.001	0.02	0.000	Permeation
MD	Talbot	24041	2501012012	8.23	0.0230	0.023	Missing	30.9	5.09	0.0126	0.014	1.07	2003	42.30	5.80	4.79	0.013	0.29	0.001	Diurnal
MD	Talbot	24041	2501012016	124.79	0.3420	0.342	Missing	30.9	77.12	0.1876	0.211	1.07	2003	42.30	5.80	72.65	0.199	4.47	0.012	Transport
MD	Washington	24043	2501011011	11.58	0.0320	0.032	Missing	30.9	7.13	0.0175	0.020	1.07	2003	42.30	5.80	6.72	0.019	0.41	0.001	Permeation
MD	Washington	24043	2501011012	100.01	0.2740	0.274	Missing	30.9	61.59	0.1497	0.169	1.07	2003	42.30	5.80	58.02	0.159	3.57	0.010	Diurnal
MD	Washington	24043	2501011016	5.49	0.0150	0.015	Missing	30.9	3.38	0.0082	0.009	1.07	2003	42.30	5.80	3.18	0.009	0.20	0.001	Transport
MD	Washington	24043	2501012011	1.36	0.0040	0.004	Missing	30.9	0.84	0.0022	0.002	1.07	2003	42.30	5.80	0.79	0.002	0.05	0.000	Permeation
MD	Washington	24043	2501012012	17.75	0.0490	0.049	Missing	30.9	10.93	0.0267	0.030	1.07	2003	42.30	5.80	10.30	0.028	0.63	0.002	Diurnal
MD	Washington	24043	2501012016	269.23	0.7380	0.738	Missing	30.9	165.81	0.4033	0.455	1.07	2003	42.30	5.80	156.20	0.428	9.62	0.026	Transport
MD	Wicomico	24045	2501011011	7.53	0.0210	0.021	Missing	30.9	4.70	0.0116	0.013	1.08	2003	42.30	5.80	4.43	0.012	0.27	0.001	Permeation
MD	Wicomico	24045	2501011012	65.02	0.1780	0.178	Missing	30.9	40.59	0.0986	0.111	1.08	2003	42.30	5.80	38.23	0.105	2.35	0.006	Diurnal
MD	Wicomico	24045	2501011016	3.57	0.0100	0.010	Missing	30.9	2.23	0.0055	0.006	1.08	2003	42.30	5.80	2.10	0.006	0.13	0.000	Transport
MD	Wicomico	24045	2501012011	1.02	0.0030	0.003	Missing	30.9	0.63	0.0016	0.002	1.08	2003	42.30	5.80	0.60	0.002	0.04	0.000	Permeation
MD	Wicomico	24045	2501012012	13.25	0.0360	0.036	Missing	30.9	8.27	0.0199	0.022	1.08	2003	42.30	5.80	7.79	0.021	0.48	0.001	Diurnal
MD	Wicomico	24045	2501012016	200.97	0.5510	0.551	Missing	30.9	125.45	0.3052	0.344	1.08	2003	42.30	5.80	118.17	0.324	7.28	0.020	Transport
MD	Worcester	24047	2501011011	4.76	0.0130	0.013	Missing	30.9	3.02	0.0073	0.008	1.10	2003	42.30	5.80	2.84	0.008	0.17	0.000	Permeation
MD	Worcester	24047	2501011012	41.09	0.1130	0.113	Missing	30.9	26.04	0.0635	0.072	1.10	2003	42.30	5.80	24.53	0.067	1.51	0.004	Diurnal
MD	Worcester	24047	2501011016	2.26	0.0060	0.006	Missing	30.9	1.43	0.0034	0.004	1.10	2003	42.30	5.80	1.35	0.004	0.08	0.000	Transport
MD	Worcester	24047	2501012011	0.75	0.0020	0.002	Missing	30.9	0.47	0.0011	0.001	1.10	2003	42.30	5.80	0.45	0.001	0.03	0.000	Permeation
MD	Worcester	24047	2501012012	9.74	0.0270	0.027	Missing	30.9	6.17	0.0152	0.017	1.10	2003	42.30	5.80	5.82	0.016	0.36	0.001	Diurnal
MD	Worcester	24047	2501012016	147.72	0.4050	0.405	Missing	30.9	93.63	0.2278	0.257	1.10	2003	42.30	5.80	88.20	0.242	5.43	0.015	Transport
MD	Baltimore City	24510	2501011011	58.01	0.1590	0.159	Missing	30.9	33.08	0.0805	0.091	0.99	2003	42.30	5.80	31.16	0.085	1.92	0.005	Permeation
MD	Baltimore City	24510	2501011012	500.97	1.3730	1.373	Missing	30.9	285.69	0.6948	0.783	0.99	2003	42.30	5.80	269.12	0.738	16.57	0.045	Diurnal
MD	Baltimore City	24510	2501011016	27.49	0.0750	0.075	Missing	30.9	15.68	0.0379	0.043	0.99	2003	42.30	5.80	14.77	0.040	0.91	0.002	Transport
MD	Baltimore City	24510	2501012011	3.84	0.0110	0.011	Missing	30.9	2.19	0.0056	0.006	0.99	2003	42.30	5.80	2.06	0.006	0.13	0.000	Permeation
MD	Baltimore City	24510	2501012012	50.07	0.1370	0.137	Missing	30.9	28.55	0.0693	0.078	0.99	2003	42.30	5.80	26.90	0.074	1.66	0.005	Diurnal
MD	Baltimore City	24510	2501012016	759.37	2.0800	2.080	Missing	30.9	433.05	1.0525	1.186	0.99	2003	42.30	5.80	407.93	1.117	25.12	0.069	Transport
MA	Barnstable	25001	2501011000	233.30	0.6400	0.640	Missing		259.79	0.5787	0.713	1.11	2009	0.00	8.91	236.65	0.649	23.14	0.063	
MA	Barnstable	25001	2501012000	44.40	0.1200	0.120	Missing		49.44	0.1085	0.134	1.11	2009	0.00	8.91	45.04	0.122	4.40	0.012	

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
MA	Berkshire	25003	2501011000	147.20	0.4000	0.400	Missing		142.00	0.3133	0.386	0.96	2009	0.00	8.91	129.35	0.351	12.65	0.034	
MA	Berkshire	25003	2501012000	28.00	0.0800	0.080	Missing		27.01	0.0627	0.077	0.96	2009	0.00	8.91	24.60	0.070	2.41	0.007	
MA	Bristol	25005	2501011000	460.70	1.2600	1.260	Missing		475.92	1.0570	1.302	1.03	2009	0.00	8.91	433.53	1.186	42.40	0.116	
MA	Bristol	25005	2501012000	87.80	0.2400	0.240	Missing		90.70	0.2013	0.248	1.03	2009	0.00	8.91	82.62	0.226	8.08	0.022	
MA	Dukes	25007	2501011000	14.80	0.0400	0.040	Missing		16.93	0.0372	0.046	1.14	2009	0.00	8.91	15.42	0.042	1.51	0.004	
MA	Dukes	25007	2501012000	2.80	0.0100	0.010	Missing		3.20	0.0093	0.011	1.14	2009	0.00	8.91	2.92	0.010	0.29	0.001	
MA	Essex	25009	2501011000	638.80	1.7500	1.750	Missing		663.06	1.4749	1.816	1.04	2009	0.00	8.91	603.99	1.655	59.07	0.162	
MA	Essex	25009	2501012000	121.70	0.3300	0.330	Missing		126.32	0.2782	0.343	1.04	2009	0.00	8.91	115.07	0.312	11.25	0.031	
MA	Franklin	25011	2501011000	75.30	0.2100	0.210	Missing		76.88	0.1741	0.214	1.02	2009	0.00	8.91	70.03	0.195	6.85	0.019	
MA	Franklin	25011	2501012000	14.30	0.0400	0.040	Missing		14.60	0.0332	0.041	1.02	2009	0.00	8.91	13.30	0.037	1.30	0.004	
MA	Hampden	25013	2501011000	425.30	1.1700	1.170	Missing		426.47	0.9527	1.173	1.00	2009	0.00	8.91	388.48	1.069	37.99	0.105	
MA	Hampden	25013	2501012000	81.00	0.2200	0.220	Missing		81.22	0.1791	0.221	1.00	2009	0.00	8.91	73.99	0.201	7.24	0.020	
MA	Hampshire	25015	2501011000	129.50	0.3500	0.350	Missing		133.07	0.2920	0.360	1.03	2009	0.00	8.91	121.22	0.328	11.85	0.032	
MA	Hampshire	25015	2501012000	24.70	0.0700	0.070	Missing		25.38	0.0585	0.072	1.03	2009	0.00	8.91	23.12	0.066	2.26	0.006	
MA	Middlesex	25017	2501011000	1,287.70	3.5300	3.530	Missing		1,305.30	2.9056	3.578	1.01	2009	0.00	8.91	1,189.02	3.259	116.28	0.319	
MA	Middlesex	25017	2501012000	245.30	0.6700	0.670	Missing		248.65	0.5515	0.679	1.01	2009	0.00	8.91	226.50	0.619	22.15	0.061	
MA	Nantucket	25019	2501011000	6.80	0.0200	0.020	Missing		7.98	0.0191	0.023	1.17	2009	0.00	8.91	7.27	0.021	0.71	0.002	
MA	Nantucket	25019	2501012000	1.30	0.0000	0.000	Missing		1.53	0.0000	0.000	1.17	2009	0.00	8.91	1.39	0.000	0.14	0.000	
MA	Norfolk	25021	2501011000	640.80	1.7600	1.760	Missing		649.92	1.4494	1.785	1.01	2009	0.00	8.91	592.02	1.626	57.90	0.159	
MA	Norfolk	25021	2501012000	122.10	0.3300	0.330	Missing		123.84	0.2718	0.335	1.01	2009	0.00	8.91	112.81	0.305	11.03	0.030	
MA	Plymouth	25023	2501011000	453.60	1.2400	1.240	Missing		472.82	1.0496	1.293	1.04	2009	0.00	8.91	430.70	1.177	42.12	0.115	
MA	Plymouth	25023	2501012000	86.40	0.2400	0.240	Missing		90.06	0.2031	0.250	1.04	2009	0.00	8.91	82.04	0.228	8.02	0.022	
MA	Suffolk	25025	2501011000	357.00	0.9800	0.980	Missing		368.30	0.8210	1.011	1.03	2009	0.00	8.91	335.49	0.921	32.81	0.090	
MA	Suffolk	25025	2501012000	68.00	0.1900	0.190	Missing		70.15	0.1592	0.196	1.03	2009	0.00	8.91	63.90	0.179	6.25	0.017	
MA	Worcester	25027	2501011000	663.50	1.8200	1.820	Missing		692.78	1.5430	1.900	1.04	2009	0.00	8.91	631.07	1.731	61.72	0.169	
MA	Worcester	25027	2501012000	126.40	0.3500	0.350	Missing		131.98	0.2967	0.365	1.04	2009	0.00	8.91	120.22	0.333	11.76	0.033	
NH	Belknap	33001	2501060300	60.54	0.1659	0.166	Missing	24.9	50.21	0.1313	0.138	1.07	2006	22.80	5.80	47.30	0.130	2.91	0.008	Total
NH	Carroll	33003	2501060300	46.35	0.1270	0.127	Missing	24.9	38.44	0.1005	0.105	1.07	2006	22.80	5.80	36.21	0.099	2.23	0.006	Total
NH	Cheshire	33005	2501060300	76.94	0.2108	0.211	Missing	24.9	63.82	0.1669	0.175	1.07	2006	22.80	5.80	60.12	0.165	3.70	0.010	Total
NH	Coos	33007	2501060300	34.17	0.0936	0.094	Missing	24.9	28.34	0.0741	0.078	1.07	2006	22.80	5.80	26.70	0.073	1.64	0.005	Total
NH	Grafton	33009	2501060300	84.83	0.2324	0.232	Missing	24.9	70.36	0.1840	0.193	1.07	2006	22.80	5.80	66.28	0.182	4.08	0.011	Total
NH	Hillsborough	33011	2501060300	401.28	1.0994	1.099	Missing	24.9	332.82	0.8705	0.912	1.07	2006	22.80	5.80	313.52	0.859	19.30	0.053	Total
NH	Merrimack	33013	2501060300	145.06	0.3974	0.397	Missing	24.9	120.32	0.3147	0.330	1.07	2006	22.80	5.80	113.34	0.310	6.98	0.019	Total
NH	Rockingham	33015	2501060300	294.50	0.8068	0.807	Missing	24.9	244.26	0.6388	0.669	1.07	2006	22.80	5.80	230.09	0.630	14.17	0.039	Total
NH	Strafford	33017	2501060300	118.72	0.3253	0.325	Missing	24.9	98.47	0.2575	0.270	1.07	2006	22.80	5.80	92.76	0.254	5.71	0.016	Total
NH	Sullivan	33019	2501060300	42.42	0.1162	0.116	Missing	24.9	35.18	0.0920	0.096	1.07	2006	22.80	5.80	33.14	0.091	2.04	0.006	Total
NJ	Atlantic	34001	2501000120	309.55	0.8504	0.850	25.0	24.9	224.45	1.1547	0.617	1.03	2005	29.30	5.80	211.43	0.581	13.02	0.036	Gasoline
NJ	Bergen	34003	2501000120	929.69	2.5541	2.554	25.0	24.9	674.09	3.4681	1.852	1.03	2005	29.30	5.80	635.00	1.745	39.10	0.107	Gasoline
NJ	Burlington	34005	2501000120	438.18	1.2038	1.204	25.0	24.9	317.71	1.6346	0.873	1.03	2005	29.30	5.80	299.29	0.822	18.43	0.051	Gasoline
NJ	Camden	34007	2501000120	520.39	1.4296	1.430	25.0	24.9	377.32	1.9412	1.037	1.03	2005	29.30	5.80	355.44	0.976	21.88	0.060	Gasoline
NJ	Cape May	34009	2501000120	238.19	0.6544	0.654	25.0	24.9	172.70	0.8885	0.474	1.03	2005	29.30	5.80	162.69	0.447	10.02	0.028	Gasoline
NJ	Cumberland	34011	2501000120	146.08	0.4013	0.401	25.0	24.9	105.92	0.5449	0.291	1.03	2005	29.30	5.80	99.78	0.274	6.14	0.017	Gasoline
NJ	Essex	34013	2501000120	773.10	2.1239	2.124	25.0	24.9	560.56	2.8839	1.540	1.03	2005	29.30	5.80	528.04	1.451	32.51	0.089	Gasoline
NJ	Gloucester	34015	2501000120	265.64	0.7298	0.730	25.0	24.9	192.61	0.9909	0.529	1.03	2005	29.30	5.80	181.44	0.498	11.17	0.031	Gasoline
NJ	Hudson	34017	2501000120	594.86	1.6342	1.634	25.0	24.9	431.32	2.2190	1.185	1.03	2005	29.30	5.80	406.30	1.116	25.02	0.069	Gasoline
NJ	Hunterdon	34019	2501000120	137.54	0.3778	0.378	25.0	24.9	99.72	0.5131	0.274	1.03	2005	29.30	5.80	93.94	0.258	5.78	0.016	Gasoline
NJ	Mercer	34021	2501000120	352.56	0.9686	0.969	25.0	24.9	255.63	1.3152	0.702	1.03	2005	29.30	5.80	240.81	0.662	14.83	0.041	Gasoline
NJ	Middlesex	34023	2501000120	717.29	1.9706	1.971	25.0	24.9	520.09	2.6757	1.429	1.03	2005	29.30	5.80	489.92	1.346	30.17	0.083	Gasoline
NJ	Monmouth	34025	2501000120	664.38	1.8252	1.825	25.0	24.9	481.72	2.4784	1.323	1.03	2005	29.30	5.80	453.78	1.247	27.94	0.077	Gasoline
NJ	Morris	34027	2501000120	499.15	1.3713	1.371	25.0	24.9	361.92	1.8620	0.994	1.03	2005	29.30	5.80	340.93	0.937	20.99	0.058	Gasoline
NJ	Ocean	34029	2501000120	663.70	1.8234	1.823	25.0	24.9	481.23	2.4758	1.322	1.03	2005	29.30	5.80	453.32	1.245	27.91	0.077	Gasoline
NJ	Passaic	34031	2501000120	455.08	1.2502	1.250	25.0	24.9	329.96	1.6976	0.906	1.03	2005	29.30	5.80	310.83	0.854	19.14	0.053	Gasoline
NJ	Salem	34033	2501000120	71.81	0.1973	0.197	25.0	24.9	52.07	0.2679	0.143	1.03	2005	29.30	5.80	49.05	0.135	3.02	0.008	Gasoline
NJ	Somerset	34035	2501000120	311.98	0.8571	0.857	25.0	24.9	226.21	1.1638	0.621	1.03	2005	29.30	5.80	213.09	0.585	13.12	0.036	Gasoline
NJ	Sussex	34037	2501000120	163.97	0.4505	0.451	25.0	24.9	118.89	0.6117	0.327	1.03	2005	29.30	5.80	111.99	0.308	6.90	0.019	Gasoline
NJ	Union	34039	2501000120	514.65	1.4139	1.414	25.0	24.9	373.16	1.9198	1.025	1.03	2005	29.30	5.80	351.51	0.966	21.64	0.059	Gasoline
NJ	Warren	34041	2501000120	119.58	0.3285	0.329	25.0	24.9	86.70	0.4461	0.238	1.03	2005	29.30	5.80	81.67	0.224	5.03	0.014	Gasoline
NY	Albany	36001	2501011011	29.39	Missing	0.100	Missing	30.9	16.99	Missing	0.058	1.00	2003	42.30	5.80	16.01	0.054	0.99	0.003	Permeation
NY	Albany	36001	2501011012	253.79	Missing	0.862	Missing	30.9	146.73	Missing	0.498	1.00	2003	42.30	5.80	138.22	0.469	8.51	0.029	Diurnal

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
NY	Albany	36001	2501011016	13.93	Missing	0.047	Missing	30.9	8.05	Missing	0.027	1.00	2003	42.30	5.80	7.59	0.026	0.47	0.002	Transport
NY	Albany	36001	2501012011	2.96	Missing	0.010	Missing	30.9	1.71	Missing	0.006	1.00	2003	42.30	5.80	1.61	0.005	0.10	0.000	Permeation
NY	Albany	36001	2501012012	24.22	Missing	0.082	Missing	30.9	14.00	Missing	0.048	1.00	2003	42.30	5.80	13.19	0.045	0.81	0.003	Diurnal
NY	Albany	36001	2501012016	62.69	Missing	0.213	Missing	30.9	36.24	Missing	0.123	1.00	2003	42.30	5.80	34.14	0.116	2.10	0.007	Transport
NY	Allegany	36003	2501011011	5.55	Missing	0.019	Missing	30.9	3.36	Missing	0.011	1.05	2003	42.30	5.80	3.17	0.011	0.20	0.001	Permeation
NY	Allegany	36003	2501011012	47.89	Missing	0.163	Missing	30.9	29.04	Missing	0.099	1.05	2003	42.30	5.80	27.35	0.093	1.68	0.006	Diurnal
NY	Allegany	36003	2501011016	2.63	Missing	0.009	Missing	30.9	1.59	Missing	0.005	1.05	2003	42.30	5.80	1.50	0.005	0.09	0.000	Transport
NY	Allegany	36003	2501012011	0.40	Missing	0.001	Missing	30.9	0.24	Missing	0.001	1.05	2003	42.30	5.80	0.23	0.001	0.01	0.000	Permeation
NY	Allegany	36003	2501012012	3.25	Missing	0.011	Missing	30.9	1.97	Missing	0.007	1.05	2003	42.30	5.80	1.86	0.006	0.11	0.000	Diurnal
NY	Allegany	36003	2501012016	8.42	Missing	0.029	Missing	30.9	5.10	Missing	0.017	1.05	2003	42.30	5.80	4.81	0.016	0.30	0.001	Transport
NY	Bronx	36005	2501011011	110.35	Missing	0.375	Missing	30.9	66.71	Missing	0.227	1.05	2003	42.30	5.80	62.84	0.213	3.87	0.013	Permeation
NY	Bronx	36005	2501011012	952.88	Missing	3.236	Missing	30.9	576.04	Missing	1.956	1.05	2003	42.30	5.80	542.63	1.843	33.41	0.113	Diurnal
NY	Bronx	36005	2501011016	52.30	Missing	0.178	Missing	30.9	31.61	Missing	0.107	1.05	2003	42.30	5.80	29.78	0.101	1.83	0.006	Transport
NY	Bronx	36005	2501012011	4.57	Missing	0.016	Missing	30.9	2.76	Missing	0.009	1.05	2003	42.30	5.80	2.60	0.009	0.16	0.001	Permeation
NY	Bronx	36005	2501012012	37.42	Missing	0.127	Missing	30.9	22.62	Missing	0.077	1.05	2003	42.30	5.80	21.31	0.072	1.31	0.004	Diurnal
NY	Bronx	36005	2501012016	96.88	Missing	0.329	Missing	30.9	58.56	Missing	0.199	1.05	2003	42.30	5.80	55.17	0.187	3.40	0.012	Transport
NY	Broome	36007	2501011011	19.92	Missing	0.068	Missing	30.9	11.56	Missing	0.039	1.01	2003	42.30	5.80	10.89	0.037	0.67	0.002	Permeation
NY	Broome	36007	2501011012	172.04	Missing	0.584	Missing	30.9	99.85	Missing	0.339	1.01	2003	42.30	5.80	94.06	0.319	5.79	0.020	Diurnal
NY	Broome	36007	2501011016	9.44	Missing	0.032	Missing	30.9	5.48	Missing	0.019	1.01	2003	42.30	5.80	5.16	0.018	0.32	0.001	Transport
NY	Broome	36007	2501012011	1.67	Missing	0.006	Missing	30.9	0.97	Missing	0.003	1.01	2003	42.30	5.80	0.91	0.003	0.06	0.000	Permeation
NY	Broome	36007	2501012012	13.68	Missing	0.046	Missing	30.9	7.94	Missing	0.027	1.01	2003	42.30	5.80	7.48	0.025	0.46	0.002	Diurnal
NY	Broome	36007	2501012016	35.41	Missing	0.120	Missing	30.9	20.55	Missing	0.070	1.01	2003	42.30	5.80	19.36	0.066	1.19	0.004	Transport
NY	Cattaraugus	36009	2501011011	8.99	Missing	0.031	Missing	30.9	5.17	Missing	0.018	1.00	2003	42.30	5.80	4.87	0.017	0.30	0.001	Permeation
NY	Cattaraugus	36009	2501011012	77.59	Missing	0.263	Missing	30.9	44.66	Missing	0.152	1.00	2003	42.30	5.80	42.07	0.143	2.59	0.009	Diurnal
NY	Cattaraugus	36009	2501011016	4.26	Missing	0.014	Missing	30.9	2.45	Missing	0.008	1.00	2003	42.30	5.80	2.31	0.008	0.14	0.000	Transport
NY	Cattaraugus	36009	2501012011	0.82	Missing	0.003	Missing	30.9	0.47	Missing	0.002	1.00	2003	42.30	5.80	0.44	0.002	0.03	0.000	Permeation
NY	Cattaraugus	36009	2501012012	6.70	Missing	0.023	Missing	30.9	3.86	Missing	0.013	1.00	2003	42.30	5.80	3.63	0.012	0.22	0.001	Diurnal
NY	Cattaraugus	36009	2501012016	17.36	Missing	0.059	Missing	30.9	9.99	Missing	0.034	1.00	2003	42.30	5.80	9.41	0.032	0.58	0.002	Transport
NY	Cayuga	36011	2501011011	8.00	Missing	0.027	Missing	30.9	4.53	Missing	0.015	0.98	2003	42.30	5.80	4.27	0.014	0.26	0.001	Permeation
NY	Cayuga	36011	2501011012	69.09	Missing	0.235	Missing	30.9	39.13	Missing	0.133	0.98	2003	42.30	5.80	36.86	0.125	2.27	0.008	Diurnal
NY	Cayuga	36011	2501011016	3.79	Missing	0.013	Missing	30.9	2.15	Missing	0.007	0.98	2003	42.30	5.80	2.02	0.007	0.12	0.000	Transport
NY	Cayuga	36011	2501012011	0.68	Missing	0.002	Missing	30.9	0.38	Missing	0.001	0.98	2003	42.30	5.80	0.36	0.001	0.02	0.000	Permeation
NY	Cayuga	36011	2501012012	5.56	Missing	0.019	Missing	30.9	3.15	Missing	0.011	0.98	2003	42.30	5.80	2.97	0.010	0.18	0.001	Diurnal
NY	Cayuga	36011	2501012016	14.40	Missing	0.049	Missing	30.9	8.15	Missing	0.028	0.98	2003	42.30	5.80	7.68	0.026	0.47	0.002	Transport
NY	Chautauqua	36013	2501011011	14.59	Missing	0.050	Missing	30.9	8.32	Missing	0.028	0.99	2003	42.30	5.80	7.83	0.027	0.48	0.002	Permeation
NY	Chautauqua	36013	2501011012	126.03	Missing	0.428	Missing	30.9	71.82	Missing	0.244	0.99	2003	42.30	5.80	67.65	0.230	4.17	0.014	Diurnal
NY	Chautauqua	36013	2501011016	6.92	Missing	0.023	Missing	30.9	3.94	Missing	0.013	0.99	2003	42.30	5.80	3.71	0.013	0.23	0.001	Transport
NY	Chautauqua	36013	2501012011	1.28	Missing	0.004	Missing	30.9	0.73	Missing	0.002	0.99	2003	42.30	5.80	0.69	0.002	0.04	0.000	Permeation
NY	Chautauqua	36013	2501012012	10.45	Missing	0.035	Missing	30.9	5.95	Missing	0.020	0.99	2003	42.30	5.80	5.61	0.019	0.35	0.001	Diurnal
NY	Chautauqua	36013	2501012016	27.05	Missing	0.092	Missing	30.9	15.41	Missing	0.052	0.99	2003	42.30	5.80	14.52	0.049	0.89	0.003	Transport
NY	Chemung	36015	2501011011	8.51	Missing	0.029	Missing	30.9	4.71	Missing	0.016	0.96	2003	42.30	5.80	4.44	0.015	0.27	0.001	Permeation
NY	Chemung	36015	2501011012	73.52	Missing	0.250	Missing	30.9	40.66	Missing	0.138	0.96	2003	42.30	5.80	38.30	0.130	2.36	0.008	Diurnal
NY	Chemung	36015	2501011016	4.04	Missing	0.014	Missing	30.9	2.23	Missing	0.008	0.96	2003	42.30	5.80	2.10	0.007	0.13	0.000	Transport
NY	Chemung	36015	2501012011	0.73	Missing	0.002	Missing	30.9	0.40	Missing	0.001	0.96	2003	42.30	5.80	0.38	0.001	0.02	0.000	Permeation
NY	Chemung	36015	2501012012	5.99	Missing	0.020	Missing	30.9	3.31	Missing	0.011	0.96	2003	42.30	5.80	3.12	0.011	0.19	0.001	Diurnal
NY	Chemung	36015	2501012016	15.50	Missing	0.053	Missing	30.9	8.57	Missing	0.029	0.96	2003	42.30	5.80	8.07	0.027	0.50	0.002	Transport
NY	Chenango	36017	2501011011	5.40	Missing	0.018	Missing	30.9	3.05	Missing	0.010	0.98	2003	42.30	5.80	2.88	0.010	0.18	0.001	Permeation
NY	Chenango	36017	2501011012	46.64	Missing	0.158	Missing	30.9	26.38	Missing	0.090	0.98	2003	42.30	5.80	24.85	0.084	1.53	0.005	Diurnal
NY	Chenango	36017	2501011016	2.56	Missing	0.009	Missing	30.9	1.45	Missing	0.005	0.98	2003	42.30	5.80	1.36	0.005	0.08	0.000	Transport
NY	Chenango	36017	2501012011	0.42	Missing	0.001	Missing	30.9	0.24	Missing	0.001	0.98	2003	42.30	5.80	0.23	0.001	0.01	0.000	Permeation
NY	Chenango	36017	2501012012	3.48	Missing	0.012	Missing	30.9	1.97	Missing	0.007	0.98	2003	42.30	5.80	1.85	0.006	0.11	0.000	Diurnal
NY	Chenango	36017	2501012016	9.00	Missing	0.031	Missing	30.9	5.09	Missing	0.017	0.98	2003	42.30	5.80	4.79	0.016	0.30	0.001	Transport
NY	Clinton	36019	2501011011	7.54	Missing	0.026	Missing	30.9	4.54	Missing	0.015	1.04	2003	42.30	5.80	4.27	0.015	0.26	0.001	Permeation
NY	Clinton	36019	2501011012	65.14	Missing	0.221	Missing	30.9	39.17	Missing	0.133	1.04	2003	42.30	5.80	36.90	0.125	2.27	0.008	Diurnal
NY	Clinton	36019	2501011016	3.58	Missing	0.012	Missing	30.9	2.15	Missing	0.007	1.04	2003	42.30	5.80	2.03	0.007	0.12	0.000	Transport
NY	Clinton	36019	2501012011	0.79	Missing	0.003	Missing	30.9	0.48	Missing	0.002	1.04	2003	42.30	5.80	0.45	0.002	0.03	0.000	Permeation
NY	Clinton	36019	2501012012	6.50	Missing	0.022	Missing	30.9	3.91	Missing	0.013	1.04	2003	42.30	5.80	3.68	0.013	0.23	0.001	Diurnal
NY	Clinton	36019	2501012016	16.83	Missing	0.057	Missing	30.9	10.12	Missing	0.034	1.04	2003	42.30	5.80	9.53	0.032	0.59	0.002	Transport
NY	Columbia	36021	2501011011	6.85	Missing	0.023	Missing	30.9	3.87	Missing	0.013	0.98	2003	42.30	5.80	3.64	0.012	0.22	0.001	Permeation

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
NY	Columbia	36021	2501011012	59.14	Missing	0.201	Missing	30.9	33.40	Missing	0.113	0.98	2003	42.30	5.80	31.46	0.107	1.94	0.007	Diurnal
NY	Columbia	36021	2501011016	3.25	Missing	0.011	Missing	30.9	1.83	Missing	0.006	0.98	2003	42.30	5.80	1.73	0.006	0.11	0.000	Transport
NY	Columbia	36021	2501012011	0.84	Missing	0.003	Missing	30.9	0.47	Missing	0.002	0.98	2003	42.30	5.80	0.44	0.002	0.03	0.000	Permeation
NY	Columbia	36021	2501012012	6.84	Missing	0.023	Missing	30.9	3.86	Missing	0.013	0.98	2003	42.30	5.80	3.64	0.012	0.22	0.001	Diurnal
NY	Columbia	36021	2501012016	17.70	Missing	0.060	Missing	30.9	10.00	Missing	0.034	0.98	2003	42.30	5.80	9.42	0.032	0.58	0.002	Transport
NY	Cortland	36023	2501011011	4.52	Missing	0.015	Missing	30.9	2.60	Missing	0.009	1.00	2003	42.30	5.80	2.45	0.008	0.15	0.001	Permeation
NY	Cortland	36023	2501011012	39.03	Missing	0.133	Missing	30.9	22.48	Missing	0.076	1.00	2003	42.30	5.80	21.18	0.072	1.30	0.004	Diurnal
NY	Cortland	36023	2501011016	2.14	Missing	0.007	Missing	30.9	1.23	Missing	0.004	1.00	2003	42.30	5.80	1.16	0.004	0.07	0.000	Transport
NY	Cortland	36023	2501012011	0.44	Missing	0.001	Missing	30.9	0.25	Missing	0.001	1.00	2003	42.30	5.80	0.24	0.001	0.01	0.000	Permeation
NY	Cortland	36023	2501012012	3.57	Missing	0.012	Missing	30.9	2.05	Missing	0.007	1.00	2003	42.30	5.80	1.93	0.007	0.12	0.000	Diurnal
NY	Cortland	36023	2501012016	9.23	Missing	0.031	Missing	30.9	5.32	Missing	0.018	1.00	2003	42.30	5.80	5.01	0.017	0.31	0.001	Transport
NY	Delaware	36025	2501011011	6.54	Missing	0.022	Missing	30.9	3.77	Missing	0.013	1.00	2003	42.30	5.80	3.55	0.012	0.22	0.001	Permeation
NY	Delaware	36025	2501011012	56.44	Missing	0.192	Missing	30.9	32.57	Missing	0.111	1.00	2003	42.30	5.80	30.68	0.104	1.89	0.006	Diurnal
NY	Delaware	36025	2501011016	3.10	Missing	0.011	Missing	30.9	1.79	Missing	0.006	1.00	2003	42.30	5.80	1.68	0.006	0.10	0.000	Transport
NY	Delaware	36025	2501012011	0.57	Missing	0.002	Missing	30.9	0.33	Missing	0.001	1.00	2003	42.30	5.80	0.31	0.001	0.02	0.000	Permeation
NY	Delaware	36025	2501012012	4.66	Missing	0.016	Missing	30.9	2.69	Missing	0.009	1.00	2003	42.30	5.80	2.54	0.009	0.16	0.001	Diurnal
NY	Delaware	36025	2501012016	12.07	Missing	0.041	Missing	30.9	6.97	Missing	0.024	1.00	2003	42.30	5.80	6.56	0.022	0.40	0.001	Transport
NY	Dutchess	36027	2501011011	24.24	Missing	0.082	Missing	30.9	14.44	Missing	0.049	1.03	2003	42.30	5.80	13.61	0.046	0.84	0.003	Permeation
NY	Dutchess	36027	2501011012	209.32	Missing	0.711	Missing	30.9	124.73	Missing	0.424	1.03	2003	42.30	5.80	117.49	0.399	7.23	0.025	Diurnal
NY	Dutchess	36027	2501011016	11.49	Missing	0.039	Missing	30.9	6.85	Missing	0.023	1.03	2003	42.30	5.80	6.45	0.022	0.40	0.001	Transport
NY	Dutchess	36027	2501012011	3.48	Missing	0.012	Missing	30.9	2.08	Missing	0.007	1.03	2003	42.30	5.80	1.96	0.007	0.12	0.000	Permeation
NY	Dutchess	36027	2501012012	28.52	Missing	0.097	Missing	30.9	17.00	Missing	0.058	1.03	2003	42.30	5.80	16.01	0.054	0.99	0.003	Diurnal
NY	Dutchess	36027	2501012016	73.83	Missing	0.251	Missing	30.9	44.00	Missing	0.149	1.03	2003	42.30	5.80	41.44	0.141	2.55	0.009	Transport
NY	Erie	36029	2501011011	93.80	Missing	0.319	Missing	30.9	52.35	Missing	0.178	0.97	2003	42.30	5.80	49.31	0.167	3.04	0.010	Permeation
NY	Erie	36029	2501011012	810.04	Missing	2.751	Missing	30.9	452.07	Missing	1.535	0.97	2003	42.30	5.80	425.85	1.446	26.22	0.089	Diurnal
NY	Erie	36029	2501011016	44.46	Missing	0.151	Missing	30.9	24.81	Missing	0.084	0.97	2003	42.30	5.80	23.37	0.079	1.44	0.005	Transport
NY	Erie	36029	2501012011	8.66	Missing	0.029	Missing	30.9	4.83	Missing	0.016	0.97	2003	42.30	5.80	4.55	0.015	0.28	0.001	Permeation
NY	Erie	36029	2501012012	70.90	Missing	0.241	Missing	30.9	39.57	Missing	0.134	0.97	2003	42.30	5.80	37.27	0.127	2.29	0.008	Diurnal
NY	Erie	36029	2501012016	183.54	Missing	0.623	Missing	30.9	102.43	Missing	0.348	0.97	2003	42.30	5.80	96.49	0.328	5.94	0.020	Transport
NY	Essex	36031	2501011011	5.24	Missing	0.018	Missing	30.9	3.09	Missing	0.011	1.02	2003	42.30	5.80	2.91	0.010	0.18	0.001	Permeation
NY	Essex	36031	2501011012	45.28	Missing	0.154	Missing	30.9	26.72	Missing	0.091	1.02	2003	42.30	5.80	25.17	0.085	1.55	0.005	Diurnal
NY	Essex	36031	2501011016	2.48	Missing	0.008	Missing	30.9	1.47	Missing	0.005	1.02	2003	42.30	5.80	1.38	0.005	0.09	0.000	Transport
NY	Essex	36031	2501012011	0.56	Missing	0.002	Missing	30.9	0.33	Missing	0.001	1.02	2003	42.30	5.80	0.31	0.001	0.02	0.000	Permeation
NY	Essex	36031	2501012012	4.57	Missing	0.016	Missing	30.9	2.70	Missing	0.009	1.02	2003	42.30	5.80	2.54	0.009	0.16	0.001	Diurnal
NY	Essex	36031	2501012016	11.84	Missing	0.040	Missing	30.9	6.99	Missing	0.024	1.02	2003	42.30	5.80	6.58	0.022	0.41	0.001	Transport
NY	Franklin	36033	2501011011	5.39	Missing	0.018	Missing	30.9	3.30	Missing	0.011	1.06	2003	42.30	5.80	3.11	0.011	0.19	0.001	Permeation
NY	Franklin	36033	2501011012	46.57	Missing	0.158	Missing	30.9	28.53	Missing	0.097	1.06	2003	42.30	5.80	26.88	0.091	1.65	0.006	Diurnal
NY	Franklin	36033	2501011016	2.56	Missing	0.009	Missing	30.9	1.57	Missing	0.005	1.06	2003	42.30	5.80	1.48	0.005	0.09	0.000	Transport
NY	Franklin	36033	2501012011	0.51	Missing	0.002	Missing	30.9	0.31	Missing	0.001	1.06	2003	42.30	5.80	0.30	0.001	0.02	0.000	Permeation
NY	Franklin	36033	2501012012	4.19	Missing	0.014	Missing	30.9	2.57	Missing	0.009	1.06	2003	42.30	5.80	2.42	0.008	0.15	0.001	Diurnal
NY	Franklin	36033	2501012016	10.85	Missing	0.037	Missing	30.9	6.65	Missing	0.023	1.06	2003	42.30	5.80	6.26	0.021	0.39	0.001	Transport
NY	Fulton	36035	2501011011	6.25	Missing	0.021	Missing	30.9	3.58	Missing	0.012	0.99	2003	42.30	5.80	3.37	0.011	0.21	0.001	Permeation
NY	Fulton	36035	2501011012	53.99	Missing	0.183	Missing	30.9	30.93	Missing	0.105	0.99	2003	42.30	5.80	29.13	0.099	1.79	0.006	Diurnal
NY	Fulton	36035	2501011016	2.96	Missing	0.010	Missing	30.9	1.70	Missing	0.006	0.99	2003	42.30	5.80	1.60	0.005	0.10	0.000	Transport
NY	Fulton	36035	2501012011	0.47	Missing	0.002	Missing	30.9	0.27	Missing	0.001	0.99	2003	42.30	5.80	0.26	0.001	0.02	0.000	Permeation
NY	Fulton	36035	2501012012	3.88	Missing	0.013	Missing	30.9	2.22	Missing	0.008	0.99	2003	42.30	5.80	2.09	0.007	0.13	0.000	Diurnal
NY	Fulton	36035	2501012016	10.04	Missing	0.034	Missing	30.9	5.75	Missing	0.020	0.99	2003	42.30	5.80	5.42	0.018	0.33	0.001	Transport
NY	Genesee	36037	2501011011	5.45	Missing	0.018	Missing	30.9	3.08	Missing	0.010	0.98	2003	42.30	5.80	2.90	0.010	0.18	0.001	Permeation
NY	Genesee	36037	2501011012	47.05	Missing	0.160	Missing	30.9	26.62	Missing	0.090	0.98	2003	42.30	5.80	25.08	0.085	1.54	0.005	Diurnal
NY	Genesee	36037	2501011016	2.58	Missing	0.009	Missing	30.9	1.46	Missing	0.005	0.98	2003	42.30	5.80	1.38	0.005	0.08	0.000	Transport
NY	Genesee	36037	2501012011	0.67	Missing	0.002	Missing	30.9	0.38	Missing	0.001	0.98	2003	42.30	5.80	0.36	0.001	0.02	0.000	Permeation
NY	Genesee	36037	2501012012	5.52	Missing	0.019	Missing	30.9	3.12	Missing	0.011	0.98	2003	42.30	5.80	2.94	0.010	0.18	0.001	Diurnal
NY	Genesee	36037	2501012016	14.28	Missing	0.048	Missing	30.9	8.08	Missing	0.027	0.98	2003	42.30	5.80	7.61	0.026	0.47	0.002	Transport
NY	Greene	36039	2501011011	6.01	Missing	0.020	Missing	30.9	3.60	Missing	0.012	1.04	2003	42.30	5.80	3.39	0.012	0.21	0.001	Permeation
NY	Greene	36039	2501011012	51.91	Missing	0.176	Missing	30.9	31.06	Missing	0.105	1.04	2003	42.30	5.80	29.26	0.099	1.80	0.006	Diurnal
NY	Greene	36039	2501011016	2.85	Missing	0.010	Missing	30.9	1.70	Missing	0.006	1.04	2003	42.30	5.80	1.61	0.005	0.10	0.000	Transport
NY	Greene	36039	2501012011	0.63	Missing	0.002	Missing	30.9	0.38	Missing	0.001	1.04	2003	42.30	5.80	0.36	0.001	0.02	0.000	Permeation
NY	Greene	36039	2501012012	5.18	Missing	0.018	Missing	30.9	3.10	Missing	0.011	1.04	2003	42.30	5.80	2.92	0.010	0.18	0.001	Diurnal
NY	Greene	36039	2501012016	13.41	Missing	0.046	Missing	30.9	8.02	Missing	0.027	1.04	2003	42.30	5.80	7.56	0.026	0.47	0.002	Transport

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
NY	Hamilton	36041	2501011011	1.80	Missing	0.006	Missing	30.9	1.03	Missing	0.004	1.00	2003	42.30	5.80	0.97	0.003	0.06	0.000	Permeation
NY	Hamilton	36041	2501011012	15.52	Missing	0.053	Missing	30.9	8.92	Missing	0.030	1.00	2003	42.30	5.80	8.40	0.029	0.52	0.002	Diurnal
NY	Hamilton	36041	2501011016	0.85	Missing	0.003	Missing	30.9	0.49	Missing	0.002	1.00	2003	42.30	5.80	0.46	0.002	0.03	0.000	Transport
NY	Hamilton	36041	2501012011	0.15	Missing	0.000	Missing	30.9	0.08	Missing	0.000	1.00	2003	42.30	5.80	0.08	0.000	0.00	0.000	Permeation
NY	Hamilton	36041	2501012012	1.19	Missing	0.004	Missing	30.9	0.68	Missing	0.002	1.00	2003	42.30	5.80	0.64	0.002	0.04	0.000	Diurnal
NY	Hamilton	36041	2501012016	3.08	Missing	0.010	Missing	30.9	1.77	Missing	0.006	1.00	2003	42.30	5.80	1.67	0.006	0.10	0.000	Transport
NY	Herkimer	36043	2501011011	7.21	Missing	0.024	Missing	30.9	4.03	Missing	0.014	0.97	2003	42.30	5.80	3.80	0.013	0.23	0.001	Permeation
NY	Herkimer	36043	2501011012	62.25	Missing	0.211	Missing	30.9	34.80	Missing	0.118	0.97	2003	42.30	5.80	32.78	0.111	2.02	0.007	Diurnal
NY	Herkimer	36043	2501011016	3.42	Missing	0.012	Missing	30.9	1.91	Missing	0.006	0.97	2003	42.30	5.80	1.80	0.006	0.11	0.000	Transport
NY	Herkimer	36043	2501012011	0.55	Missing	0.002	Missing	30.9	0.31	Missing	0.001	0.97	2003	42.30	5.80	0.29	0.001	0.02	0.000	Permeation
NY	Herkimer	36043	2501012012	4.51	Missing	0.015	Missing	30.9	2.52	Missing	0.009	0.97	2003	42.30	5.80	2.37	0.008	0.15	0.000	Diurnal
NY	Herkimer	36043	2501012016	11.67	Missing	0.040	Missing	30.9	6.52	Missing	0.022	0.97	2003	42.30	5.80	6.14	0.021	0.38	0.001	Transport
NY	Jefferson	36045	2501011011	12.17	Missing	0.041	Missing	30.9	7.02	Missing	0.024	1.00	2003	42.30	5.80	6.61	0.022	0.41	0.001	Permeation
NY	Jefferson	36045	2501011012	105.11	Missing	0.357	Missing	30.9	60.58	Missing	0.206	1.00	2003	42.30	5.80	57.07	0.194	3.51	0.012	Diurnal
NY	Jefferson	36045	2501011016	5.77	Missing	0.020	Missing	30.9	3.32	Missing	0.011	1.00	2003	42.30	5.80	3.13	0.011	0.19	0.001	Transport
NY	Jefferson	36045	2501012011	0.97	Missing	0.003	Missing	30.9	0.56	Missing	0.002	1.00	2003	42.30	5.80	0.53	0.002	0.03	0.000	Permeation
NY	Jefferson	36045	2501012012	7.94	Missing	0.027	Missing	30.9	4.58	Missing	0.016	1.00	2003	42.30	5.80	4.31	0.015	0.27	0.001	Diurnal
NY	Jefferson	36045	2501012016	20.55	Missing	0.070	Missing	30.9	11.84	Missing	0.040	1.00	2003	42.30	5.80	11.16	0.038	0.69	0.002	Transport
NY	Kings	36047	2501011011	208.65	Missing	0.708	Missing	30.9	122.59	Missing	0.416	1.02	2003	42.30	5.80	115.48	0.392	7.11	0.024	Permeation
NY	Kings	36047	2501011012	1,801.78	Missing	6.118	Missing	30.9	1,058.65	Missing	3.595	1.02	2003	42.30	5.80	997.25	3.386	61.40	0.208	Diurnal
NY	Kings	36047	2501011016	98.88	Missing	0.336	Missing	30.9	58.10	Missing	0.197	1.02	2003	42.30	5.80	54.73	0.186	3.37	0.011	Transport
NY	Kings	36047	2501012011	11.48	Missing	0.039	Missing	30.9	6.75	Missing	0.023	1.02	2003	42.30	5.80	6.35	0.022	0.39	0.001	Permeation
NY	Kings	36047	2501012012	93.97	Missing	0.319	Missing	30.9	55.22	Missing	0.187	1.02	2003	42.30	5.80	52.01	0.177	3.20	0.011	Diurnal
NY	Kings	36047	2501012016	243.27	Missing	0.826	Missing	30.9	142.93	Missing	0.485	1.02	2003	42.30	5.80	134.64	0.457	8.29	0.028	Transport
NY	Lewis	36049	2501011011	3.46	Missing	0.012	Missing	30.9	1.98	Missing	0.007	0.99	2003	42.30	5.80	1.86	0.006	0.11	0.000	Permeation
NY	Lewis	36049	2501011012	29.85	Missing	0.101	Missing	30.9	17.06	Missing	0.058	0.99	2003	42.30	5.80	16.07	0.055	0.99	0.003	Diurnal
NY	Lewis	36049	2501011016	1.64	Missing	0.006	Missing	30.9	0.94	Missing	0.003	0.99	2003	42.30	5.80	0.88	0.003	0.05	0.000	Transport
NY	Lewis	36049	2501012011	0.32	Missing	0.001	Missing	30.9	0.18	Missing	0.001	0.99	2003	42.30	5.80	0.17	0.001	0.01	0.000	Permeation
NY	Lewis	36049	2501012012	2.62	Missing	0.009	Missing	30.9	1.50	Missing	0.005	0.99	2003	42.30	5.80	1.41	0.005	0.09	0.000	Diurnal
NY	Lewis	36049	2501012016	6.79	Missing	0.023	Missing	30.9	3.88	Missing	0.013	0.99	2003	42.30	5.80	3.66	0.012	0.23	0.001	Transport
NY	Livingston	36051	2501011011	5.49	Missing	0.019	Missing	30.9	3.24	Missing	0.011	1.02	2003	42.30	5.80	3.05	0.010	0.19	0.001	Permeation
NY	Livingston	36051	2501011012	47.40	Missing	0.161	Missing	30.9	27.95	Missing	0.095	1.02	2003	42.30	5.80	26.33	0.089	1.62	0.006	Diurnal
NY	Livingston	36051	2501011016	2.60	Missing	0.009	Missing	30.9	1.53	Missing	0.005	1.02	2003	42.30	5.80	1.45	0.005	0.09	0.000	Transport
NY	Livingston	36051	2501012011	0.64	Missing	0.002	Missing	30.9	0.38	Missing	0.001	1.02	2003	42.30	5.80	0.36	0.001	0.02	0.000	Permeation
NY	Livingston	36051	2501012012	5.27	Missing	0.018	Missing	30.9	3.11	Missing	0.011	1.02	2003	42.30	5.80	2.93	0.010	0.18	0.001	Diurnal
NY	Livingston	36051	2501012016	13.64	Missing	0.046	Missing	30.9	8.04	Missing	0.027	1.02	2003	42.30	5.80	7.58	0.026	0.47	0.002	Transport
NY	Madison	36053	2501011011	6.47	Missing	0.022	Missing	30.9	3.73	Missing	0.013	1.00	2003	42.30	5.80	3.51	0.012	0.22	0.001	Permeation
NY	Madison	36053	2501011012	55.88	Missing	0.190	Missing	30.9	32.21	Missing	0.109	1.00	2003	42.30	5.80	30.34	0.103	1.87	0.006	Diurnal
NY	Madison	36053	2501011016	3.07	Missing	0.010	Missing	30.9	1.77	Missing	0.006	1.00	2003	42.30	5.80	1.67	0.006	0.10	0.000	Transport
NY	Madison	36053	2501012011	0.79	Missing	0.003	Missing	30.9	0.45	Missing	0.002	1.00	2003	42.30	5.80	0.43	0.001	0.03	0.000	Permeation
NY	Madison	36053	2501012012	6.44	Missing	0.022	Missing	30.9	3.71	Missing	0.013	1.00	2003	42.30	5.80	3.49	0.012	0.22	0.001	Diurnal
NY	Madison	36053	2501012016	16.66	Missing	0.057	Missing	30.9	9.60	Missing	0.033	1.00	2003	42.30	5.80	9.05	0.031	0.56	0.002	Transport
NY	Monroe	36055	2501011011	68.93	Missing	0.234	Missing	30.9	39.69	Missing	0.135	1.00	2003	42.30	5.80	37.39	0.127	2.30	0.008	Permeation
NY	Monroe	36055	2501011012	595.26	Missing	2.021	Missing	30.9	342.73	Missing	1.164	1.00	2003	42.30	5.80	322.85	1.096	19.88	0.067	Diurnal
NY	Monroe	36055	2501011016	32.67	Missing	0.111	Missing	30.9	18.81	Missing	0.064	1.00	2003	42.30	5.80	17.72	0.060	1.09	0.004	Transport
NY	Monroe	36055	2501012011	6.29	Missing	0.021	Missing	30.9	3.62	Missing	0.012	1.00	2003	42.30	5.80	3.41	0.012	0.21	0.001	Permeation
NY	Monroe	36055	2501012012	51.53	Missing	0.175	Missing	30.9	29.67	Missing	0.101	1.00	2003	42.30	5.80	27.95	0.095	1.72	0.006	Diurnal
NY	Monroe	36055	2501012016	133.39	Missing	0.453	Missing	30.9	76.80	Missing	0.261	1.00	2003	42.30	5.80	72.34	0.246	4.45	0.015	Transport
NY	Montgomery	36057	2501011011	5.05	Missing	0.017	Missing	30.9	2.76	Missing	0.009	0.95	2003	42.30	5.80	2.60	0.009	0.16	0.001	Permeation
NY	Montgomery	36057	2501011012	43.60	Missing	0.148	Missing	30.9	23.83	Missing	0.081	0.95	2003	42.30	5.80	22.45	0.076	1.38	0.005	Diurnal
NY	Montgomery	36057	2501011016	2.39	Missing	0.008	Missing	30.9	1.31	Missing	0.004	0.95	2003	42.30	5.80	1.23	0.004	0.08	0.000	Transport
NY	Montgomery	36057	2501012011	0.51	Missing	0.002	Missing	30.9	0.28	Missing	0.001	0.95	2003	42.30	5.80	0.26	0.001	0.02	0.000	Permeation
NY	Montgomery	36057	2501012012	4.19	Missing	0.014	Missing	30.9	2.29	Missing	0.008	0.95	2003	42.30	5.80	2.16	0.007	0.13	0.000	Diurnal
NY	Montgomery	36057	2501012016	10.85	Missing	0.037	Missing	30.9	5.93	Missing	0.020	0.95	2003	42.30	5.80	5.59	0.019	0.34	0.001	Transport
NY	Nassau	36059	2501011011	102.90	Missing	0.349	Missing	30.9	58.65	Missing	0.199	0.99	2003	42.30	5.80	55.25	0.188	3.40	0.012	Permeation
NY	Nassau	36059	2501011012	888.58	Missing	3.017	Missing	30.9	506.46	Missing	1.720	0.99	2003	42.30	5.80	477.09	1.620	29.37	0.100	Diurnal
NY	Nassau	36059	2501011016	48.77	Missing	0.166	Missing	30.9	27.80	Missing	0.094	0.99	2003	42.30	5.80	26.18	0.089	1.61	0.005	Transport
NY	Nassau	36059	2501012011	15.92	Missing	0.054	Missing	30.9	9.07	Missing	0.031	0.99	2003	42.30	5.80	8.55	0.029	0.53	0.002	Permeation
NY	Nassau	36059	2501012012	130.30	Missing	0.442	Missing	30.9	74.27	Missing	0.252	0.99	2003	42.30	5.80	69.96	0.238	4.31	0.015	Diurnal

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
NY	Nassau	36059	2501012016	337.30	Missing	1.145	Missing	30.9	192.25	Missing	0.653	0.99	2003	42.30	5.80	181.10	0.615	11.15	0.038	Transport
NY	New York	36061	2501011011	180.38	Missing	0.613	Missing	30.9	106.37	Missing	0.361	1.02	2003	42.30	5.80	100.20	0.340	6.17	0.021	Permeation
NY	New York	36061	2501011012	1,557.70	Missing	5.289	Missing	30.9	918.56	Missing	3.119	1.02	2003	42.30	5.80	865.29	2.938	53.28	0.181	Diurnal
NY	New York	36061	2501011016	85.49	Missing	0.290	Missing	30.9	50.41	Missing	0.171	1.02	2003	42.30	5.80	47.49	0.161	2.92	0.010	Transport
NY	New York	36061	2501012011	10.65	Missing	0.036	Missing	30.9	6.28	Missing	0.021	1.02	2003	42.30	5.80	5.92	0.020	0.36	0.001	Permeation
NY	New York	36061	2501012012	87.18	Missing	0.296	Missing	30.9	51.41	Missing	0.175	1.02	2003	42.30	5.80	48.43	0.164	2.98	0.010	Diurnal
NY	New York	36061	2501012016	225.68	Missing	0.766	Missing	30.9	133.08	Missing	0.452	1.02	2003	42.30	5.80	125.36	0.426	7.72	0.026	Transport
NY	Niagara	36063	2501011011	21.62	Missing	0.073	Missing	30.9	12.22	Missing	0.041	0.98	2003	42.30	5.80	11.51	0.039	0.71	0.002	Permeation
NY	Niagara	36063	2501011012	186.66	Missing	0.634	Missing	30.9	105.53	Missing	0.358	0.98	2003	42.30	5.80	99.41	0.338	6.12	0.021	Diurnal
NY	Niagara	36063	2501011016	10.24	Missing	0.035	Missing	30.9	5.79	Missing	0.020	0.98	2003	42.30	5.80	5.46	0.019	0.34	0.001	Transport
NY	Niagara	36063	2501012011	1.91	Missing	0.006	Missing	30.9	1.08	Missing	0.004	0.98	2003	42.30	5.80	1.02	0.003	0.06	0.000	Permeation
NY	Niagara	36063	2501012012	15.61	Missing	0.053	Missing	30.9	8.82	Missing	0.030	0.98	2003	42.30	5.80	8.31	0.028	0.51	0.002	Diurnal
NY	Niagara	36063	2501012016	40.40	Missing	0.137	Missing	30.9	22.84	Missing	0.078	0.98	2003	42.30	5.80	21.52	0.073	1.32	0.004	Transport
NY	Oneida	36065	2501011011	23.08	Missing	0.078	Missing	30.9	13.25	Missing	0.045	0.99	2003	42.30	5.80	12.48	0.042	0.77	0.003	Permeation
NY	Oneida	36065	2501011012	199.33	Missing	0.677	Missing	30.9	114.41	Missing	0.388	0.99	2003	42.30	5.80	107.78	0.366	6.64	0.023	Diurnal
NY	Oneida	36065	2501011016	10.94	Missing	0.037	Missing	30.9	6.28	Missing	0.021	0.99	2003	42.30	5.80	5.91	0.020	0.36	0.001	Transport
NY	Oneida	36065	2501012011	1.93	Missing	0.007	Missing	30.9	1.11	Missing	0.004	0.99	2003	42.30	5.80	1.04	0.004	0.06	0.000	Permeation
NY	Oneida	36065	2501012012	15.79	Missing	0.054	Missing	30.9	9.06	Missing	0.031	0.99	2003	42.30	5.80	8.54	0.029	0.53	0.002	Diurnal
NY	Oneida	36065	2501012016	40.86	Missing	0.139	Missing	30.9	23.46	Missing	0.080	0.99	2003	42.30	5.80	22.10	0.075	1.36	0.005	Transport
NY	Onondaga	36067	2501011011	44.46	Missing	0.151	Missing	30.9	25.02	Missing	0.085	0.98	2003	42.30	5.80	23.57	0.080	1.45	0.005	Permeation
NY	Onondaga	36067	2501011012	383.92	Missing	1.304	Missing	30.9	216.05	Missing	0.734	0.98	2003	42.30	5.80	203.52	0.691	12.53	0.043	Diurnal
NY	Onondaga	36067	2501011016	21.07	Missing	0.072	Missing	30.9	11.86	Missing	0.040	0.98	2003	42.30	5.80	11.17	0.038	0.69	0.002	Transport
NY	Onondaga	36067	2501012011	4.52	Missing	0.015	Missing	30.9	2.54	Missing	0.009	0.98	2003	42.30	5.80	2.39	0.008	0.15	0.001	Permeation
NY	Onondaga	36067	2501012012	36.98	Missing	0.126	Missing	30.9	20.81	Missing	0.071	0.98	2003	42.30	5.80	19.60	0.067	1.21	0.004	Diurnal
NY	Onondaga	36067	2501012016	95.72	Missing	0.325	Missing	30.9	53.86	Missing	0.183	0.98	2003	42.30	5.80	50.74	0.172	3.12	0.011	Transport
NY	Ontario	36069	2501011011	9.76	Missing	0.033	Missing	30.9	5.74	Missing	0.019	1.02	2003	42.30	5.80	5.41	0.018	0.33	0.001	Permeation
NY	Ontario	36069	2501011012	84.27	Missing	0.286	Missing	30.9	49.57	Missing	0.168	1.02	2003	42.30	5.80	46.69	0.159	2.87	0.010	Diurnal
NY	Ontario	36069	2501011016	4.62	Missing	0.016	Missing	30.9	2.72	Missing	0.009	1.02	2003	42.30	5.80	2.56	0.009	0.16	0.001	Transport
NY	Ontario	36069	2501012011	1.22	Missing	0.004	Missing	30.9	0.72	Missing	0.002	1.02	2003	42.30	5.80	0.67	0.002	0.04	0.000	Permeation
NY	Ontario	36069	2501012012	9.96	Missing	0.034	Missing	30.9	5.86	Missing	0.020	1.02	2003	42.30	5.80	5.52	0.019	0.34	0.001	Diurnal
NY	Ontario	36069	2501012016	25.77	Missing	0.088	Missing	30.9	15.16	Missing	0.051	1.02	2003	42.30	5.80	14.28	0.048	0.88	0.003	Transport
NY	Orange	36071	2501011011	28.39	Missing	0.096	Missing	30.9	17.34	Missing	0.059	1.06	2003	42.30	5.80	16.34	0.055	1.01	0.003	Permeation
NY	Orange	36071	2501011012	245.13	Missing	0.832	Missing	30.9	149.78	Missing	0.509	1.06	2003	42.30	5.80	141.09	0.479	8.69	0.029	Diurnal
NY	Orange	36071	2501011016	13.45	Missing	0.046	Missing	30.9	8.22	Missing	0.028	1.06	2003	42.30	5.80	7.74	0.026	0.48	0.002	Transport
NY	Orange	36071	2501012011	3.93	Missing	0.013	Missing	30.9	2.40	Missing	0.008	1.06	2003	42.30	5.80	2.26	0.008	0.14	0.000	Permeation
NY	Orange	36071	2501012012	32.15	Missing	0.109	Missing	30.9	19.65	Missing	0.067	1.06	2003	42.30	5.80	18.51	0.063	1.14	0.004	Diurnal
NY	Orange	36071	2501012016	83.24	Missing	0.283	Missing	30.9	50.86	Missing	0.173	1.06	2003	42.30	5.80	47.91	0.163	2.95	0.010	Transport
NY	Orleans	36073	2501011011	3.90	Missing	0.013	Missing	30.9	2.33	Missing	0.008	1.04	2003	42.30	5.80	2.20	0.007	0.14	0.000	Permeation
NY	Orleans	36073	2501011012	33.71	Missing	0.114	Missing	30.9	20.15	Missing	0.068	1.04	2003	42.30	5.80	18.98	0.064	1.17	0.004	Diurnal
NY	Orleans	36073	2501011016	1.85	Missing	0.006	Missing	30.9	1.11	Missing	0.004	1.04	2003	42.30	5.80	1.04	0.004	0.06	0.000	Transport
NY	Orleans	36073	2501012011	0.38	Missing	0.001	Missing	30.9	0.23	Missing	0.001	1.04	2003	42.30	5.80	0.21	0.001	0.01	0.000	Permeation
NY	Orleans	36073	2501012012	3.09	Missing	0.011	Missing	30.9	1.85	Missing	0.006	1.04	2003	42.30	5.80	1.74	0.006	0.11	0.000	Diurnal
NY	Orleans	36073	2501012016	8.01	Missing	0.027	Missing	30.9	4.79	Missing	0.016	1.04	2003	42.30	5.80	4.51	0.015	0.28	0.001	Transport
NY	Oswego	36075	2501011011	11.96	Missing	0.041	Missing	30.9	6.94	Missing	0.024	1.01	2003	42.30	5.80	6.54	0.022	0.40	0.001	Permeation
NY	Oswego	36075	2501011012	103.30	Missing	0.351	Missing	30.9	59.95	Missing	0.204	1.01	2003	42.30	5.80	56.47	0.192	3.48	0.012	Diurnal
NY	Oswego	36075	2501011016	5.67	Missing	0.019	Missing	30.9	3.29	Missing	0.011	1.01	2003	42.30	5.80	3.10	0.011	0.19	0.001	Transport
NY	Oswego	36075	2501012011	1.14	Missing	0.004	Missing	30.9	0.66	Missing	0.002	1.01	2003	42.30	5.80	0.62	0.002	0.04	0.000	Permeation
NY	Oswego	36075	2501012012	9.35	Missing	0.032	Missing	30.9	5.43	Missing	0.018	1.01	2003	42.30	5.80	5.11	0.017	0.31	0.001	Diurnal
NY	Oswego	36075	2501012016	24.20	Missing	0.082	Missing	30.9	14.05	Missing	0.048	1.01	2003	42.30	5.80	13.23	0.045	0.81	0.003	Transport
NY	Otsego	36077	2501011011	6.66	Missing	0.023	Missing	30.9	3.93	Missing	0.013	1.02	2003	42.30	5.80	3.70	0.013	0.23	0.001	Permeation
NY	Otsego	36077	2501011012	57.49	Missing	0.195	Missing	30.9	33.90	Missing	0.115	1.02	2003	42.30	5.80	31.94	0.108	1.97	0.007	Diurnal
NY	Otsego	36077	2501011016	3.16	Missing	0.011	Missing	30.9	1.86	Missing	0.006	1.02	2003	42.30	5.80	1.75	0.006	0.11	0.000	Transport
NY	Otsego	36077	2501012011	0.53	Missing	0.002	Missing	30.9	0.31	Missing	0.001	1.02	2003	42.30	5.80	0.29	0.001	0.02	0.000	Permeation
NY	Otsego	36077	2501012012	4.31	Missing	0.015	Missing	30.9	2.54	Missing	0.009	1.02	2003	42.30	5.80	2.39	0.008	0.15	0.000	Diurnal
NY	Otsego	36077	2501012016	11.14	Missing	0.038	Missing	30.9	6.57	Missing	0.022	1.02	2003	42.30	5.80	6.19	0.021	0.38	0.001	Transport
NY	Putnam	36079	2501011011	8.00	Missing	0.027	Missing	30.9	4.88	Missing	0.017	1.06	2003	42.30	5.80	4.59	0.016	0.28	0.001	Permeation
NY	Putnam	36079	2501011012	69.05	Missing	0.234	Missing	30.9	42.12	Missing	0.143	1.06	2003	42.30	5.80	39.68	0.135	2.44	0.008	Diurnal
NY	Putnam	36079	2501011016	3.79	Missing	0.013	Missing	30.9	2.31	Missing	0.008	1.06	2003	42.30	5.80	2.18	0.007	0.13	0.000	Transport
NY	Putnam	36079	2501012011	1.73	Missing	0.006	Missing	30.9	1.06	Missing	0.004	1.06	2003	42.30	5.80	1.00	0.003	0.06	0.000	Permeation

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
NY	Putnam	36079	2501012012	14.19	Missing	0.048	Missing	30.9	8.66	Missing	0.029	1.06	2003	42.30	5.80	8.16	0.028	0.50	0.002	Diurnal
NY	Putnam	36079	2501012016	36.74	Missing	0.125	Missing	30.9	22.41	Missing	0.076	1.06	2003	42.30	5.80	21.11	0.072	1.30	0.004	Transport
NY	Queens	36081	2501011011	183.98	Missing	0.625	Missing	30.9	113.44	Missing	0.385	1.07	2003	42.30	5.80	106.86	0.363	6.58	0.022	Permeation
NY	Queens	36081	2501011012	1,588.74	Missing	5.395	Missing	30.9	979.62	Missing	3.326	1.07	2003	42.30	5.80	922.80	3.133	56.82	0.193	Diurnal
NY	Queens	36081	2501011016	87.19	Missing	0.296	Missing	30.9	53.76	Missing	0.183	1.07	2003	42.30	5.80	50.64	0.172	3.12	0.011	Transport
NY	Queens	36081	2501012011	14.48	Missing	0.049	Missing	30.9	8.93	Missing	0.030	1.07	2003	42.30	5.80	8.41	0.029	0.52	0.002	Permeation
NY	Queens	36081	2501012012	118.55	Missing	0.403	Missing	30.9	73.10	Missing	0.248	1.07	2003	42.30	5.80	68.86	0.234	4.24	0.014	Diurnal
NY	Queens	36081	2501012016	306.88	Missing	1.042	Missing	30.9	189.23	Missing	0.643	1.07	2003	42.30	5.80	178.25	0.605	10.98	0.037	Transport
NY	Rensselaer	36083	2501011011	14.93	Missing	0.051	Missing	30.9	8.43	Missing	0.029	0.98	2003	42.30	5.80	7.94	0.027	0.49	0.002	Permeation
NY	Rensselaer	36083	2501011012	128.93	Missing	0.438	Missing	30.9	72.79	Missing	0.247	0.98	2003	42.30	5.80	68.57	0.233	4.22	0.014	Diurnal
NY	Rensselaer	36083	2501011016	7.08	Missing	0.024	Missing	30.9	3.99	Missing	0.014	0.98	2003	42.30	5.80	3.76	0.013	0.23	0.001	Transport
NY	Rensselaer	36083	2501012011	1.40	Missing	0.005	Missing	30.9	0.79	Missing	0.003	0.98	2003	42.30	5.80	0.75	0.003	0.05	0.000	Permeation
NY	Rensselaer	36083	2501012012	11.48	Missing	0.039	Missing	30.9	6.48	Missing	0.022	0.98	2003	42.30	5.80	6.11	0.021	0.38	0.001	Diurnal
NY	Rensselaer	36083	2501012016	29.72	Missing	0.101	Missing	30.9	16.78	Missing	0.057	0.98	2003	42.30	5.80	15.80	0.054	0.97	0.003	Transport
NY	Richmond	36085	2501011011	37.82	Missing	0.128	Missing	30.9	23.90	Missing	0.081	1.10	2003	42.30	5.80	22.52	0.076	1.39	0.005	Permeation
NY	Richmond	36085	2501011012	326.62	Missing	1.109	Missing	30.9	206.40	Missing	0.701	1.10	2003	42.30	5.80	194.43	0.660	11.97	0.041	Diurnal
NY	Richmond	36085	2501011016	17.93	Missing	0.061	Missing	30.9	11.33	Missing	0.038	1.10	2003	42.30	5.80	10.67	0.036	0.66	0.002	Transport
NY	Richmond	36085	2501012011	3.33	Missing	0.011	Missing	30.9	2.10	Missing	0.007	1.10	2003	42.30	5.80	1.98	0.007	0.12	0.000	Permeation
NY	Richmond	36085	2501012012	27.27	Missing	0.093	Missing	30.9	17.23	Missing	0.059	1.10	2003	42.30	5.80	16.23	0.055	1.00	0.003	Diurnal
NY	Richmond	36085	2501012016	70.58	Missing	0.240	Missing	30.9	44.60	Missing	0.151	1.10	2003	42.30	5.80	42.02	0.143	2.59	0.009	Transport
NY	Rockland	36087	2501011011	21.49	Missing	0.073	Missing	30.9	12.54	Missing	0.043	1.01	2003	42.30	5.80	11.81	0.040	0.73	0.002	Permeation
NY	Rockland	36087	2501011012	185.58	Missing	0.630	Missing	30.9	108.26	Missing	0.368	1.01	2003	42.30	5.80	101.99	0.346	6.28	0.021	Diurnal
NY	Rockland	36087	2501011016	10.18	Missing	0.035	Missing	30.9	5.94	Missing	0.020	1.01	2003	42.30	5.80	5.60	0.019	0.34	0.001	Transport
NY	Rockland	36087	2501012011	3.13	Missing	0.011	Missing	30.9	1.83	Missing	0.006	1.01	2003	42.30	5.80	1.72	0.006	0.11	0.000	Permeation
NY	Rockland	36087	2501012012	25.61	Missing	0.087	Missing	30.9	14.94	Missing	0.051	1.01	2003	42.30	5.80	14.07	0.048	0.87	0.003	Diurnal
NY	Rockland	36087	2501012016	66.29	Missing	0.225	Missing	30.9	38.67	Missing	0.131	1.01	2003	42.30	5.80	36.43	0.124	2.24	0.008	Transport
NY	St. Lawrence	36089	2501011011	11.23	Missing	0.038	Missing	30.9	6.57	Missing	0.022	1.01	2003	42.30	5.80	6.19	0.021	0.38	0.001	Permeation
NY	St. Lawrence	36089	2501011012	97.01	Missing	0.329	Missing	30.9	56.74	Missing	0.193	1.01	2003	42.30	5.80	53.45	0.181	3.29	0.011	Diurnal
NY	St. Lawrence	36089	2501011016	5.32	Missing	0.018	Missing	30.9	3.11	Missing	0.011	1.01	2003	42.30	5.80	2.93	0.010	0.18	0.001	Transport
NY	St. Lawrence	36089	2501012011	0.28	Missing	0.001	Missing	30.9	0.17	Missing	0.001	1.01	2003	42.30	5.80	0.16	0.001	0.01	0.000	Permeation
NY	St. Lawrence	36089	2501012012	2.31	Missing	0.008	Missing	30.9	1.35	Missing	0.005	1.01	2003	42.30	5.80	1.27	0.004	0.08	0.000	Diurnal
NY	St. Lawrence	36089	2501012016	5.98	Missing	0.020	Missing	30.9	3.50	Missing	0.012	1.01	2003	42.30	5.80	3.29	0.011	0.20	0.001	Transport
NY	Saratoga	36091	2501011011	19.99	Missing	0.068	Missing	30.9	12.03	Missing	0.041	1.04	2003	42.30	5.80	11.33	0.038	0.70	0.002	Permeation
NY	Saratoga	36091	2501011012	172.62	Missing	0.586	Missing	30.9	103.89	Missing	0.353	1.04	2003	42.30	5.80	97.86	0.332	6.03	0.020	Diurnal
NY	Saratoga	36091	2501011016	9.47	Missing	0.032	Missing	30.9	5.70	Missing	0.019	1.04	2003	42.30	5.80	5.37	0.018	0.33	0.001	Transport
NY	Saratoga	36091	2501012011	1.06	Missing	0.004	Missing	30.9	0.64	Missing	0.002	1.04	2003	42.30	5.80	0.60	0.002	0.04	0.000	Permeation
NY	Saratoga	36091	2501012012	8.68	Missing	0.029	Missing	30.9	5.22	Missing	0.018	1.04	2003	42.30	5.80	4.92	0.017	0.30	0.001	Diurnal
NY	Saratoga	36091	2501012016	22.46	Missing	0.076	Missing	30.9	13.52	Missing	0.046	1.04	2003	42.30	5.80	12.74	0.043	0.78	0.003	Transport
NY	Schenectady	36093	2501011011	14.60	Missing	0.050	Missing	30.9	8.17	Missing	0.028	0.97	2003	42.30	5.80	7.69	0.026	0.47	0.002	Permeation
NY	Schenectady	36093	2501011012	126.11	Missing	0.428	Missing	30.9	70.51	Missing	0.239	0.97	2003	42.30	5.80	66.42	0.226	4.09	0.014	Diurnal
NY	Schenectady	36093	2501011016	6.92	Missing	0.024	Missing	30.9	3.87	Missing	0.013	0.97	2003	42.30	5.80	3.65	0.012	0.22	0.001	Transport
NY	Schenectady	36093	2501012011	2.12	Missing	0.007	Missing	30.9	1.18	Missing	0.004	0.97	2003	42.30	5.80	1.12	0.004	0.07	0.000	Permeation
NY	Schenectady	36093	2501012012	17.33	Missing	0.059	Missing	30.9	9.69	Missing	0.033	0.97	2003	42.30	5.80	9.13	0.031	0.56	0.002	Diurnal
NY	Schenectady	36093	2501012016	44.87	Missing	0.152	Missing	30.9	25.09	Missing	0.085	0.97	2003	42.30	5.80	23.63	0.080	1.46	0.005	Transport
NY	Schoharie	36095	2501011011	3.60	Missing	0.012	Missing	30.9	2.03	Missing	0.007	0.98	2003	42.30	5.80	1.92	0.007	0.12	0.000	Permeation
NY	Schoharie	36095	2501011012	31.11	Missing	0.106	Missing	30.9	17.56	Missing	0.060	0.98	2003	42.30	5.80	16.54	0.056	1.02	0.003	Diurnal
NY	Schoharie	36095	2501011016	1.71	Missing	0.006	Missing	30.9	0.96	Missing	0.003	0.98	2003	42.30	5.80	0.91	0.003	0.06	0.000	Transport
NY	Schoharie	36095	2501012011	1.36	Missing	0.005	Missing	30.9	0.77	Missing	0.003	0.98	2003	42.30	5.80	0.72	0.002	0.04	0.000	Permeation
NY	Schoharie	36095	2501012012	11.10	Missing	0.038	Missing	30.9	6.26	Missing	0.021	0.98	2003	42.30	5.80	5.90	0.020	0.36	0.001	Diurnal
NY	Schoharie	36095	2501012016	28.73	Missing	0.098	Missing	30.9	16.22	Missing	0.055	0.98	2003	42.30	5.80	15.28	0.052	0.94	0.003	Transport
NY	Schuyler	36097	2501011011	2.08	Missing	0.007	Missing	30.9	1.20	Missing	0.004	1.00	2003	42.30	5.80	1.13	0.004	0.07	0.000	Permeation
NY	Schuyler	36097	2501011012	17.94	Missing	0.061	Missing	30.9	10.32	Missing	0.035	1.00	2003	42.30	5.80	9.73	0.033	0.60	0.002	Diurnal
NY	Schuyler	36097	2501011016	0.98	Missing	0.003	Missing	30.9	0.57	Missing	0.002	1.00	2003	42.30	5.80	0.53	0.002	0.03	0.000	Transport
NY	Schuyler	36097	2501012011	0.33	Missing	0.001	Missing	30.9	0.19	Missing	0.001	1.00	2003	42.30	5.80	0.18	0.001	0.01	0.000	Permeation
NY	Schuyler	36097	2501012012	2.74	Missing	0.009	Missing	30.9	1.57	Missing	0.005	1.00	2003	42.30	5.80	1.48	0.005	0.09	0.000	Diurnal
NY	Schuyler	36097	2501012016	7.08	Missing	0.024	Missing	30.9	4.08	Missing	0.014	1.00	2003	42.30	5.80	3.84	0.013	0.24	0.001	Transport
NY	Seneca	36099	2501011011	3.33	Missing	0.011	Missing	30.9	1.87	Missing	0.006	0.97	2003	42.30	5.80	1.76	0.006	0.11	0.000	Permeation
NY	Seneca	36099	2501011012	28.77	Missing	0.098	Missing	30.9	16.15	Missing	0.055	0.97	2003	42.30	5.80	15.21	0.052	0.94	0.003	Diurnal
NY	Seneca	36099	2501011016	1.58	Missing	0.005	Missing	30.9	0.89	Missing	0.003	0.97	2003	42.30	5.80	0.83	0.003	0.05	0.000	Transport

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
NY	Seneca	36099	2501012011	0.16	Missing	0.001	Missing	30.9	0.09	Missing	0.000	0.97	2003	42.30	5.80	0.09	0.000	0.01	0.000	Permeation
NY	Seneca	36099	2501012012	1.32	Missing	0.004	Missing	30.9	0.74	Missing	0.003	0.97	2003	42.30	5.80	0.70	0.002	0.04	0.000	Diurnal
NY	Seneca	36099	2501012016	3.42	Missing	0.012	Missing	30.9	1.92	Missing	0.007	0.97	2003	42.30	5.80	1.81	0.006	0.11	0.000	Transport
NY	Steuben	36101	2501011011	10.46	Missing	0.036	Missing	30.9	5.94	Missing	0.020	0.98	2003	42.30	5.80	5.59	0.019	0.34	0.001	Permeation
NY	Steuben	36101	2501011012	90.32	Missing	0.307	Missing	30.9	51.27	Missing	0.174	0.98	2003	42.30	5.80	48.30	0.164	2.97	0.010	Diurnal
NY	Steuben	36101	2501011016	4.96	Missing	0.017	Missing	30.9	2.81	Missing	0.010	0.98	2003	42.30	5.80	2.65	0.009	0.16	0.001	Transport
NY	Steuben	36101	2501012011	0.64	Missing	0.002	Missing	30.9	0.37	Missing	0.001	0.98	2003	42.30	5.80	0.34	0.001	0.02	0.000	Permeation
NY	Steuben	36101	2501012012	5.27	Missing	0.018	Missing	30.9	2.99	Missing	0.010	0.98	2003	42.30	5.80	2.82	0.010	0.17	0.001	Diurnal
NY	Steuben	36101	2501012016	13.64	Missing	0.046	Missing	30.9	7.74	Missing	0.026	0.98	2003	42.30	5.80	7.29	0.025	0.45	0.002	Transport
NY	Suffolk	36103	2501011011	119.04	Missing	0.404	Missing	30.9	69.88	Missing	0.237	1.02	2003	42.30	5.80	65.82	0.224	4.05	0.014	Permeation
NY	Suffolk	36103	2501011012	1,027.93	Missing	3.490	Missing	30.9	603.41	Missing	2.049	1.02	2003	42.30	5.80	568.41	1.930	35.00	0.119	Diurnal
NY	Suffolk	36103	2501011016	56.41	Missing	0.192	Missing	30.9	33.12	Missing	0.112	1.02	2003	42.30	5.80	31.20	0.106	1.92	0.007	Transport
NY	Suffolk	36103	2501012011	21.20	Missing	0.072	Missing	30.9	12.45	Missing	0.042	1.02	2003	42.30	5.80	11.73	0.040	0.72	0.002	Permeation
NY	Suffolk	36103	2501012012	173.58	Missing	0.589	Missing	30.9	101.89	Missing	0.346	1.02	2003	42.30	5.80	95.98	0.326	5.91	0.020	Diurnal
NY	Suffolk	36103	2501012016	449.33	Missing	1.526	Missing	30.9	263.76	Missing	0.896	1.02	2003	42.30	5.80	248.46	0.844	15.30	0.052	Transport
NY	Sullivan	36105	2501011011	10.15	Missing	0.034	Missing	30.9	6.16	Missing	0.021	1.05	2003	42.30	5.80	5.81	0.020	0.36	0.001	Permeation
NY	Sullivan	36105	2501011012	87.68	Missing	0.298	Missing	30.9	53.22	Missing	0.181	1.05	2003	42.30	5.80	50.13	0.170	3.09	0.010	Diurnal
NY	Sullivan	36105	2501011016	4.81	Missing	0.016	Missing	30.9	2.92	Missing	0.010	1.05	2003	42.30	5.80	2.75	0.009	0.17	0.001	Transport
NY	Sullivan	36105	2501012011	0.93	Missing	0.003	Missing	30.9	0.56	Missing	0.002	1.05	2003	42.30	5.80	0.53	0.002	0.03	0.000	Permeation
NY	Sullivan	36105	2501012012	7.60	Missing	0.026	Missing	30.9	4.61	Missing	0.016	1.05	2003	42.30	5.80	4.35	0.015	0.27	0.001	Diurnal
NY	Sullivan	36105	2501012016	19.68	Missing	0.067	Missing	30.9	11.94	Missing	0.041	1.05	2003	42.30	5.80	11.25	0.038	0.69	0.002	Transport
NY	Tioga	36107	2501011011	4.85	Missing	0.016	Missing	30.9	2.69	Missing	0.009	0.96	2003	42.30	5.80	2.54	0.009	0.16	0.001	Permeation
NY	Tioga	36107	2501011012	41.86	Missing	0.142	Missing	30.9	23.27	Missing	0.079	0.96	2003	42.30	5.80	21.92	0.074	1.35	0.005	Diurnal
NY	Tioga	36107	2501011016	2.30	Missing	0.008	Missing	30.9	1.28	Missing	0.004	0.96	2003	42.30	5.80	1.20	0.004	0.07	0.000	Transport
NY	Tioga	36107	2501012011	0.45	Missing	0.002	Missing	30.9	0.25	Missing	0.001	0.96	2003	42.30	5.80	0.24	0.001	0.01	0.000	Permeation
NY	Tioga	36107	2501012012	3.72	Missing	0.013	Missing	30.9	2.07	Missing	0.007	0.96	2003	42.30	5.80	1.95	0.007	0.12	0.000	Diurnal
NY	Tioga	36107	2501012016	9.64	Missing	0.033	Missing	30.9	5.36	Missing	0.018	0.96	2003	42.30	5.80	5.05	0.017	0.31	0.001	Transport
NY	Tompkins	36109	2501011011	8.85	Missing	0.030	Missing	30.9	5.18	Missing	0.018	1.01	2003	42.30	5.80	4.88	0.017	0.30	0.001	Permeation
NY	Tompkins	36109	2501011012	76.45	Missing	0.260	Missing	30.9	44.71	Missing	0.152	1.01	2003	42.30	5.80	42.12	0.143	2.59	0.009	Diurnal
NY	Tompkins	36109	2501011016	4.20	Missing	0.014	Missing	30.9	2.45	Missing	0.008	1.01	2003	42.30	5.80	2.31	0.008	0.14	0.000	Transport
NY	Tompkins	36109	2501012011	0.62	Missing	0.002	Missing	30.9	0.37	Missing	0.001	1.01	2003	42.30	5.80	0.34	0.001	0.02	0.000	Permeation
NY	Tompkins	36109	2501012012	5.11	Missing	0.017	Missing	30.9	2.99	Missing	0.010	1.01	2003	42.30	5.80	2.82	0.010	0.17	0.001	Diurnal
NY	Tompkins	36109	2501012016	13.23	Missing	0.045	Missing	30.9	7.74	Missing	0.026	1.01	2003	42.30	5.80	7.29	0.025	0.45	0.002	Transport
NY	Ulster	36111	2501011011	17.62	Missing	0.060	Missing	30.9	10.67	Missing	0.036	1.05	2003	42.30	5.80	10.05	0.034	0.62	0.002	Permeation
NY	Ulster	36111	2501011012	152.13	Missing	0.517	Missing	30.9	92.10	Missing	0.313	1.05	2003	42.30	5.80	86.76	0.295	5.34	0.018	Diurnal
NY	Ulster	36111	2501011016	8.35	Missing	0.028	Missing	30.9	5.05	Missing	0.017	1.05	2003	42.30	5.80	4.76	0.016	0.29	0.001	Transport
NY	Ulster	36111	2501012011	2.00	Missing	0.007	Missing	30.9	1.21	Missing	0.004	1.05	2003	42.30	5.80	1.14	0.004	0.07	0.000	Permeation
NY	Ulster	36111	2501012012	16.37	Missing	0.056	Missing	30.9	9.91	Missing	0.034	1.05	2003	42.30	5.80	9.33	0.032	0.57	0.002	Diurnal
NY	Ulster	36111	2501012016	42.37	Missing	0.144	Missing	30.9	25.65	Missing	0.087	1.05	2003	42.30	5.80	24.16	0.082	1.49	0.005	Transport
NY	Warren	36113	2501011011	7.94	Missing	0.027	Missing	30.9	4.71	Missing	0.016	1.03	2003	42.30	5.80	4.44	0.015	0.27	0.001	Permeation
NY	Warren	36113	2501011012	68.53	Missing	0.233	Missing	30.9	40.70	Missing	0.138	1.03	2003	42.30	5.80	38.34	0.130	2.36	0.008	Diurnal
NY	Warren	36113	2501011016	3.76	Missing	0.013	Missing	30.9	2.23	Missing	0.008	1.03	2003	42.30	5.80	2.10	0.007	0.13	0.000	Transport
NY	Warren	36113	2501012011	0.95	Missing	0.003	Missing	30.9	0.56	Missing	0.002	1.03	2003	42.30	5.80	0.53	0.002	0.03	0.000	Permeation
NY	Warren	36113	2501012012	7.76	Missing	0.026	Missing	30.9	4.61	Missing	0.016	1.03	2003	42.30	5.80	4.34	0.015	0.27	0.001	Diurnal
NY	Warren	36113	2501012016	20.08	Missing	0.068	Missing	30.9	11.93	Missing	0.040	1.03	2003	42.30	5.80	11.24	0.038	0.69	0.002	Transport
NY	Washington	36115	2501011011	6.06	Missing	0.021	Missing	30.9	3.52	Missing	0.012	1.01	2003	42.30	5.80	3.32	0.011	0.20	0.001	Permeation
NY	Washington	36115	2501011012	52.33	Missing	0.178	Missing	30.9	30.42	Missing	0.103	1.01	2003	42.30	5.80	28.65	0.097	1.76	0.006	Diurnal
NY	Washington	36115	2501011016	2.87	Missing	0.010	Missing	30.9	1.67	Missing	0.006	1.01	2003	42.30	5.80	1.57	0.005	0.10	0.000	Transport
NY	Washington	36115	2501012011	0.60	Missing	0.002	Missing	30.9	0.35	Missing	0.001	1.01	2003	42.30	5.80	0.33	0.001	0.02	0.000	Permeation
NY	Washington	36115	2501012012	4.89	Missing	0.017	Missing	30.9	2.84	Missing	0.010	1.01	2003	42.30	5.80	2.68	0.009	0.16	0.001	Diurnal
NY	Washington	36115	2501012016	12.65	Missing	0.043	Missing	30.9	7.35	Missing	0.025	1.01	2003	42.30	5.80	6.93	0.024	0.43	0.001	Transport
NY	Wayne	36117	2501011011	8.81	Missing	0.030	Missing	30.9	5.18	Missing	0.018	1.02	2003	42.30	5.80	4.88	0.017	0.30	0.001	Permeation
NY	Wayne	36117	2501011012	76.08	Missing	0.258	Missing	30.9	44.72	Missing	0.152	1.02	2003	42.30	5.80	42.13	0.143	2.59	0.009	Diurnal
NY	Wayne	36117	2501011016	4.18	Missing	0.014	Missing	30.9	2.45	Missing	0.008	1.02	2003	42.30	5.80	2.31	0.008	0.14	0.000	Transport
NY	Wayne	36117	2501012011	0.92	Missing	0.003	Missing	30.9	0.54	Missing	0.002	1.02	2003	42.30	5.80	0.51	0.002	0.03	0.000	Permeation
NY	Wayne	36117	2501012012	7.51	Missing	0.026	Missing	30.9	4.42	Missing	0.015	1.02	2003	42.30	5.80	4.16	0.014	0.26	0.001	Diurnal
NY	Wayne	36117	2501012016	19.45	Missing	0.066	Missing	30.9	11.43	Missing	0.039	1.02	2003	42.30	5.80	10.77	0.037	0.66	0.002	Transport
NY	Westchester	36119	2501011011	78.91	Missing	0.268	Missing	30.9	45.63	Missing	0.155	1.00	2003	42.30	5.80	42.98	0.146	2.65	0.009	Permeation
NY	Westchester	36119	2501011012	681.43	Missing	2.314	Missing	30.9	394.00	Missing	1.338	1.00	2003	42.30	5.80	371.15	1.260	22.85	0.078	Diurnal

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
NY	Westchester	36119	2501011016	37.40	Missing	0.127	Missing	30.9	21.62	Missing	0.073	1.00	2003	42.30	5.80	20.37	0.069	1.25	0.004	Transport
NY	Westchester	36119	2501012011	12.11	Missing	0.041	Missing	30.9	7.00	Missing	0.024	1.00	2003	42.30	5.80	6.60	0.022	0.41	0.001	Permeation
NY	Westchester	36119	2501012012	99.13	Missing	0.337	Missing	30.9	57.32	Missing	0.195	1.00	2003	42.30	5.80	53.99	0.183	3.32	0.011	Diurnal
NY	Westchester	36119	2501012016	256.62	Missing	0.871	Missing	30.9	148.37	Missing	0.504	1.00	2003	42.30	5.80	139.77	0.475	8.61	0.029	Transport
NY	Wyoming	36121	2501011011	3.82	Missing	0.013	Missing	30.9	2.24	Missing	0.008	1.02	2003	42.30	5.80	2.11	0.007	0.13	0.000	Permeation
NY	Wyoming	36121	2501011012	32.99	Missing	0.112	Missing	30.9	19.33	Missing	0.066	1.02	2003	42.30	5.80	18.21	0.062	1.12	0.004	Diurnal
NY	Wyoming	36121	2501011016	1.81	Missing	0.006	Missing	30.9	1.06	Missing	0.004	1.02	2003	42.30	5.80	1.00	0.003	0.06	0.000	Transport
NY	Wyoming	36121	2501012011	0.41	Missing	0.001	Missing	30.9	0.24	Missing	0.001	1.02	2003	42.30	5.80	0.23	0.001	0.01	0.000	Permeation
NY	Wyoming	36121	2501012012	3.36	Missing	0.011	Missing	30.9	1.97	Missing	0.007	1.02	2003	42.30	5.80	1.86	0.006	0.11	0.000	Diurnal
NY	Wyoming	36121	2501012016	8.71	Missing	0.030	Missing	30.9	5.10	Missing	0.017	1.02	2003	42.30	5.80	4.81	0.016	0.30	0.001	Transport
NY	Yates	36123	2501011011	2.73	Missing	0.009	Missing	30.9	1.64	Missing	0.006	1.05	2003	42.30	5.80	1.55	0.005	0.10	0.000	Permeation
NY	Yates	36123	2501011012	23.53	Missing	0.080	Missing	30.9	14.20	Missing	0.048	1.05	2003	42.30	5.80	13.38	0.045	0.82	0.003	Diurnal
NY	Yates	36123	2501011016	1.29	Missing	0.004	Missing	30.9	0.78	Missing	0.003	1.05	2003	42.30	5.80	0.73	0.002	0.05	0.000	Transport
NY	Yates	36123	2501012011	0.26	Missing	0.001	Missing	30.9	0.16	Missing	0.001	1.05	2003	42.30	5.80	0.15	0.001	0.01	0.000	Permeation
NY	Yates	36123	2501012012	2.13	Missing	0.007	Missing	30.9	1.29	Missing	0.004	1.05	2003	42.30	5.80	1.21	0.004	0.07	0.000	Diurnal
NY	Yates	36123	2501012016	5.51	Missing	0.019	Missing	30.9	3.33	Missing	0.011	1.05	2003	42.30	5.80	3.13	0.011	0.19	0.001	Transport
PA	Adams	42001	2501060300	93.21	0.3572	0.357	36.0	24.9	56.27	0.1913	0.216	1.05	2003	42.30	5.80	53.00	0.203	3.26	0.013	Total
PA	Allegheny	42003	2501060300	1,321.52	5.0639	5.064	36.0	24.9	730.47	2.4837	2.799	0.96	2003	42.30	5.80	688.10	2.637	42.37	0.162	Total
PA	Armstrong	42005	2501060300	66.95	0.2566	0.257	36.0	24.9	36.45	0.1239	0.140	0.94	2003	42.30	5.80	34.33	0.132	2.11	0.008	Total
PA	Beaver	42007	2501060300	164.34	0.6297	0.630	36.0	24.9	91.00	0.3094	0.349	0.96	2003	42.30	5.80	85.72	0.328	5.28	0.020	Total
PA	Bedford	42009	2501060300	48.98	0.1877	0.188	36.0	24.9	29.13	0.0990	0.112	1.03	2003	42.30	5.80	27.44	0.105	1.69	0.006	Total
PA	Berks	42011	2501060300	359.02	1.3757	1.376	36.0	24.9	215.04	0.7311	0.824	1.04	2003	42.30	5.80	202.57	0.776	12.47	0.048	Total
PA	Blair	42013	2501060300	120.32	0.4610	0.461	36.0	24.9	68.65	0.2334	0.263	0.99	2003	42.30	5.80	64.67	0.248	3.98	0.015	Total
PA	Bradford	42015	2501060300	60.67	0.2325	0.233	36.0	24.9	37.19	0.1264	0.143	1.06	2003	42.30	5.80	35.03	0.134	2.16	0.008	Total
PA	Bucks	42017	2501060300	731.49	2.8030	2.803	36.0	24.9	449.14	1.5272	1.721	1.06	2003	42.30	5.80	423.09	1.621	26.05	0.100	Total
PA	Butler	42019	2501060300	183.09	0.7016	0.702	36.0	24.9	106.44	0.3619	0.408	1.01	2003	42.30	5.80	100.27	0.384	6.17	0.024	Total
PA	Cambria	42021	2501060300	131.00	0.5020	0.502	36.0	24.9	72.01	0.2448	0.276	0.95	2003	42.30	5.80	67.83	0.260	4.18	0.016	Total
PA	Cameron	42023	2501060300	4.89	0.0187	0.019	36.0	24.9	2.71	0.0093	0.010	0.96	2003	42.30	5.80	2.55	0.010	0.16	0.001	Total
PA	Carbon	42025	2501060300	50.68	0.1942	0.194	36.0	24.9	30.23	0.1028	0.116	1.03	2003	42.30	5.80	28.48	0.109	1.75	0.007	Total
PA	Centre	42027	2501060300	115.36	0.4421	0.442	36.0	24.9	69.13	0.2351	0.265	1.04	2003	42.30	5.80	65.12	0.250	4.01	0.015	Total
PA	Chester	42029	2501060300	508.36	1.9479	1.948	36.0	24.9	315.18	1.0717	1.208	1.07	2003	42.30	5.80	296.90	1.138	18.28	0.070	Total
PA	Clarion	42031	2501060300	39.77	0.1524	0.152	36.0	24.9	22.76	0.0774	0.087	0.99	2003	42.30	5.80	21.44	0.082	1.32	0.005	Total
PA	Clearfield	42033	2501060300	71.59	0.2743	0.274	36.0	24.9	39.05	0.1328	0.150	0.95	2003	42.30	5.80	36.79	0.141	2.26	0.009	Total
PA	Clinton	42035	2501060300	30.96	0.1186	0.119	36.0	24.9	18.18	0.0618	0.070	1.02	2003	42.30	5.80	17.12	0.066	1.05	0.004	Total
PA	Columbia	42037	2501060300	59.65	0.2286	0.229	36.0	24.9	33.59	0.1142	0.129	0.98	2003	42.30	5.80	31.64	0.121	1.95	0.007	Total
PA	Crawford	42039	2501060300	85.40	0.3273	0.327	36.0	24.9	49.79	0.1693	0.191	1.01	2003	42.30	5.80	46.90	0.180	2.89	0.011	Total
PA	Cumberland	42041	2501060300	217.61	0.8338	0.834	36.0	24.9	141.18	0.4800	0.541	1.12	2003	42.30	5.80	133.00	0.510	8.19	0.031	Total
PA	Dauphin	42043	2501060300	300.63	1.1520	1.152	36.0	24.9	179.62	0.6107	0.688	1.04	2003	42.30	5.80	169.21	0.648	10.42	0.040	Total
PA	Delaware	42045	2501060300	531.44	2.0364	2.036	36.0	24.9	305.89	1.0401	1.172	1.00	2003	42.30	5.80	288.14	1.104	17.74	0.068	Total
PA	Elk	42047	2501060300	33.30	0.1276	0.128	36.0	24.9	18.24	0.0620	0.070	0.95	2003	42.30	5.80	17.18	0.066	1.06	0.004	Total
PA	Erie	42049	2501060300	275.89	1.0572	1.057	36.0	24.9	161.44	0.5489	0.619	1.01	2003	42.30	5.80	152.07	0.583	9.36	0.036	Total
PA	Fayette	42051	2501060300	141.33	0.5416	0.542	36.0	24.9	78.78	0.2679	0.302	0.97	2003	42.30	5.80	74.21	0.284	4.57	0.018	Total
PA	Forest	42053	2501060300	6.51	0.0249	0.025	36.0	24.9	3.81	0.0130	0.015	1.01	2003	42.30	5.80	3.59	0.014	0.22	0.001	Total
PA	Franklin	42055	2501060300	131.11	0.5024	0.502	36.0	24.9	76.46	0.2600	0.293	1.01	2003	42.30	5.80	72.03	0.276	4.43	0.017	Total
PA	Fulton	42057	2501060300	15.16	0.0581	0.058	36.0	24.9	9.22	0.0313	0.035	1.05	2003	42.30	5.80	8.69	0.033	0.54	0.002	Total
PA	Greene	42059	2501060300	30.12	0.1154	0.115	36.0	24.9	17.65	0.0600	0.068	1.02	2003	42.30	5.80	16.62	0.064	1.02	0.004	Total
PA	Huntingdon	42061	2501060300	41.13	0.1576	0.158	36.0	24.9	24.34	0.0828	0.093	1.03	2003	42.30	5.80	22.93	0.088	1.41	0.005	Total
PA	Indiana	42063	2501060300	76.61	0.2935	0.294	36.0	24.9	44.92	0.1527	0.172	1.02	2003	42.30	5.80	42.32	0.162	2.61	0.010	Total
PA	Jefferson	42065	2501060300	42.78	0.1639	0.164	36.0	24.9	23.65	0.0804	0.091	0.96	2003	42.30	5.80	22.28	0.085	1.37	0.005	Total
PA	Juniata	42067	2501060300	23.76	0.0910	0.091	36.0	24.9	13.33	0.0453	0.051	0.97	2003	42.30	5.80	12.56	0.048	0.77	0.003	Total
PA	Lackawanna	42069	2501060300	196.05	0.7512	0.751	36.0	24.9	112.34	0.3820	0.430	0.99	2003	42.30	5.80	105.83	0.405	6.52	0.025	Total
PA	Lancaster	42071	2501060300	526.91	2.0190	2.019	36.0	24.9	331.93	1.1286	1.272	1.09	2003	42.30	5.80	312.67	1.198	19.25	0.074	Total
PA	Lawrence	42073	2501060300	82.73	0.3170	0.317	36.0	24.9	45.68	0.1553	0.175	0.96	2003	42.30	5.80	43.03	0.165	2.65	0.010	Total
PA	Lebanon	42075	2501060300	125.89	0.4824	0.482	36.0	24.9	74.60	0.2536	0.286	1.03	2003	42.30	5.80	70.28	0.269	4.33	0.017	Total
PA	Lehigh	42077	2501060300	339.44	1.3007	1.301	36.0	24.9	203.50	0.6919	0.780	1.04	2003	42.30	5.80	191.70	0.735	11.80	0.045	Total
PA	Luzerne	42079	2501060300	324.72	1.2443	1.244	36.0	24.9	187.08	0.6361	0.717	1.00	2003	42.30	5.80	176.23	0.675	10.85	0.042	Total
PA	Lycoming	42081	2501060300	109.79	0.4207	0.421	36.0	24.9	64.10	0.2180	0.246	1.01	2003	42.30	5.80	60.38	0.231	3.72	0.014	Total
PA	McKean	42083	2501060300	39.58	0.1517	0.152	36.0	24.9	23.04	0.0784	0.088	1.01	2003	42.30	5.80	21.71	0.083	1.34	0.005	Total
PA	Mercer	42085	2501060300	114.34	0.4381	0.438	36.0	24.9	66.80	0.2271	0.256	1.01	2003	42.30	5.80	62.92	0.241	3.87	0.015	Total

PORTABLE FUEL CONTAINERS				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
PA	Mifflin	42087	2501060300	41.33	0.1584	0.158	36.0	24.9	23.62	0.0803	0.091	0.99	2003	42.30	5.80	22.25	0.085	1.37	0.005	Total
PA	Monroe	42089	2501060300	135.93	0.5209	0.521	36.0	24.9	92.32	0.3139	0.354	1.18	2003	42.30	5.80	86.96	0.333	5.35	0.021	Total
PA	Montgomery	42091	2501060300	958.96	3.6746	3.675	36.0	24.9	575.90	1.9581	2.207	1.04	2003	42.30	5.80	542.49	2.079	33.40	0.128	Total
PA	Montour	42093	2501060300	15.08	0.0578	0.058	36.0	24.9	9.08	0.0308	0.035	1.04	2003	42.30	5.80	8.55	0.033	0.53	0.002	Total
PA	Northampton	42095	2501060300	254.16	0.9739	0.974	36.0	24.9	155.90	0.5301	0.597	1.06	2003	42.30	5.80	146.86	0.563	9.04	0.035	Total
PA	Northumberland	42097	2501060300	83.70	0.3207	0.321	36.0	24.9	47.99	0.1631	0.184	0.99	2003	42.30	5.80	45.21	0.173	2.78	0.011	Total
PA	Perry	42099	2501060300	43.55	0.1669	0.167	36.0	24.9	29.07	0.0988	0.111	1.16	2003	42.30	5.80	27.38	0.105	1.69	0.006	Total
PA	Philadelphia	42101	2501060300	1,116.42	4.2779	4.278	36.0	24.9	643.79	2.1890	2.467	1.00	2003	42.30	5.80	606.45	2.324	37.34	0.143	Total
PA	Pike	42103	2501060300	50.47	0.1934	0.193	36.0	24.9	37.80	0.1285	0.145	1.30	2003	42.30	5.80	35.61	0.136	2.19	0.008	Total
PA	Potter	42105	2501060300	17.55	0.0672	0.067	36.0	24.9	9.46	0.0322	0.036	0.93	2003	42.30	5.80	8.92	0.034	0.55	0.002	Total
PA	Schuylkill	42107	2501060300	135.18	0.5180	0.518	36.0	24.9	77.21	0.2625	0.296	0.99	2003	42.30	5.80	72.73	0.279	4.48	0.017	Total
PA	Snyder	42109	2501060300	33.45	0.1282	0.128	36.0	24.9	21.44	0.0729	0.082	1.11	2003	42.30	5.80	20.20	0.077	1.24	0.005	Total
PA	Somerset	42111	2501060300	82.02	0.3143	0.314	36.0	24.9	45.27	0.1540	0.173	0.96	2003	42.30	5.80	42.65	0.163	2.63	0.010	Total
PA	Sullivan	42113	2501060300	9.83	0.0377	0.038	36.0	24.9	5.94	0.0202	0.023	1.05	2003	42.30	5.80	5.59	0.021	0.34	0.001	Total
PA	Susquehanna	42115	2501060300	41.38	0.1586	0.159	36.0	24.9	24.91	0.0847	0.095	1.04	2003	42.30	5.80	23.47	0.090	1.44	0.006	Total
PA	Tioga	42117	2501060300	39.71	0.1522	0.152	36.0	24.9	23.29	0.0792	0.089	1.02	2003	42.30	5.80	21.94	0.084	1.35	0.005	Total
PA	Union	42119	2501060300	36.33	0.1392	0.139	36.0	24.9	22.21	0.0755	0.085	1.06	2003	42.30	5.80	20.92	0.080	1.29	0.005	Total
PA	Venango	42121	2501060300	54.07	0.2072	0.207	36.0	24.9	29.90	0.1017	0.115	0.96	2003	42.30	5.80	28.17	0.108	1.73	0.007	Total
PA	Warren	42123	2501060300	41.86	0.1604	0.160	36.0	24.9	23.06	0.0784	0.088	0.95	2003	42.30	5.80	21.72	0.083	1.34	0.005	Total
PA	Washington	42125	2501060300	198.85	0.7619	0.762	36.0	24.9	112.38	0.3821	0.431	0.98	2003	42.30	5.80	105.86	0.406	6.52	0.025	Total
PA	Wayne	42127	2501060300	83.68	0.3207	0.321	36.0	24.9	49.55	0.1685	0.190	1.03	2003	42.30	5.80	46.68	0.179	2.87	0.011	Total
PA	Westmoreland	42129	2501060300	411.57	1.5771	1.577	36.0	24.9	233.77	0.7949	0.896	0.98	2003	42.30	5.80	220.21	0.844	13.56	0.052	Total
PA	Wyoming	42131	2501060300	31.36	0.1202	0.120	36.0	24.9	20.03	0.0681	0.077	1.11	2003	42.30	5.80	18.87	0.072	1.16	0.004	Total
PA	York	42133	2501060300	364.85	1.3980	1.398	36.0	24.9	217.03	0.7380	0.832	1.03	2003	42.30	5.80	204.44	0.783	12.59	0.048	Total
RI	Bristol	44001	2501060300	53.34	0.1461	0.146	Missing	24.9	47.95	0.1275	0.131	1.07	2007	16.30	5.80	45.17	0.124	2.78	0.008	Total
RI	Kent	44003	2501060300	173.95	0.4766	0.477	Missing	24.9	156.37	0.4157	0.428	1.07	2007	16.30	5.80	147.30	0.404	9.07	0.025	Total
RI	Newport	44005	2501060300	87.64	0.2401	0.240	Missing	24.9	78.79	0.2094	0.216	1.07	2007	16.30	5.80	74.22	0.203	4.57	0.013	Total
RI	Providence	44007	2501060300	648.72	1.7773	1.777	Missing	24.9	583.16	1.5500	1.598	1.07	2007	16.30	5.80	549.34	1.505	33.82	0.093	Total
RI	Washington	44009	2501060300	129.71	0.3554	0.355	Missing	24.9	116.60	0.3099	0.319	1.07	2007	16.30	5.80	109.84	0.301	6.76	0.019	Total
VT	Addison	50001	2501060300	37.32	0.1022	0.102	Missing	24.9	33.42	0.0888	0.092	1.07	2007	16.30	5.80	31.48	0.086	1.94	0.005	Total
VT	Bennington	50003	2501060300	37.97	0.1040	0.104	Missing	24.9	34.01	0.0904	0.093	1.07	2007	16.30	5.80	32.04	0.088	1.97	0.005	Total
VT	Caledonia	50005	2501060300	30.66	0.0840	0.084	Missing	24.9	27.46	0.0730	0.075	1.07	2007	16.30	5.80	25.87	0.071	1.59	0.004	Total
VT	Chittenden	50007	2501060300	151.90	0.4162	0.416	Missing	24.9	136.06	0.3616	0.373	1.07	2007	16.30	5.80	128.16	0.351	7.89	0.022	Total
VT	Essex	50009	2501060300	6.70	0.0184	0.018	Missing	24.9	6.00	0.0159	0.016	1.07	2007	16.30	5.80	5.66	0.016	0.35	0.001	Total
VT	Franklin	50011	2501060300	47.71	0.1307	0.131	Missing	24.9	42.73	0.1136	0.117	1.07	2007	16.30	5.80	40.25	0.110	2.48	0.007	Total
VT	Grand Isle	50013	2501060300	7.48	0.0205	0.021	Missing	24.9	6.70	0.0179	0.018	1.07	2007	16.30	5.80	6.31	0.017	0.39	0.001	Total
VT	Lamoille	50015	2501060300	24.55	0.0673	0.067	Missing	24.9	21.99	0.0585	0.060	1.07	2007	16.30	5.80	20.71	0.057	1.28	0.003	Total
VT	Orange	50017	2501060300	29.51	0.0809	0.081	Missing	24.9	26.43	0.0703	0.072	1.07	2007	16.30	5.80	24.90	0.068	1.53	0.004	Total
VT	Orleans	50019	2501060300	27.30	0.0748	0.075	Missing	24.9	24.45	0.0651	0.067	1.07	2007	16.30	5.80	23.04	0.063	1.42	0.004	Total
VT	Rutland	50021	2501060300	64.78	0.1775	0.178	Missing	24.9	58.02	0.1542	0.159	1.07	2007	16.30	5.80	54.66	0.150	3.37	0.009	Total
VT	Washington	50023	2501060300	60.29	0.1652	0.165	Missing	24.9	54.00	0.1435	0.148	1.07	2007	16.30	5.80	50.87	0.139	3.13	0.009	Total
VT	Windham	50025	2501060300	45.21	0.1239	0.124	Missing	24.9	40.49	0.1076	0.111	1.07	2007	16.30	5.80	38.14	0.105	2.35	0.006	Total
VT	Windsor	50027	2501060300	59.23	0.1623	0.162	Missing	24.9	53.05	0.1410	0.145	1.07	2007	16.30	5.80	49.97	0.137	3.08	0.008	Total
VA	Arlington	51013	2501060300	86.84	Missing	0.353	37.0	24.9	61.40	Missing	0.250	1.00	2005	29.30	5.80	57.83	0.235	3.56	0.014	Total
VA	Fairfax	51059	2501060300	1,046.16	Missing	4.254	37.0	24.9	739.64	Missing	3.007	1.00	2005	29.30	5.80	696.74	2.833	42.90	0.174	Total
VA	Loudoun	51107	2501060300	460.02	Missing	1.870	37.0	24.9	325.23	Missing	1.322	1.00	2005	29.30	5.80	306.37	1.246	18.86	0.077	Total
VA	Prince William	51153	2501060300	280.71	Missing	1.141	37.0	24.9	198.46	Missing	0.807	1.00	2005	29.30	5.80	186.95	0.760	11.51	0.047	Total
VA	Stafford	51179	2501060300	51.78	Missing	0.211	37.0	24.9	36.61	Missing	0.149	1.00	2005	29.30	5.80	34.49	0.140	2.12	0.009	Total
VA	Alexandria	51510	2501060300	88.95	Missing	0.362	37.0	24.9	62.89	Missing	0.256	1.00	2005	29.30	5.80	59.24	0.241	3.65	0.015	Total
VA	Fairfax City	51600	2501060300	37.09	Missing	0.151	37.0	24.9	26.22	Missing	0.107	1.00	2005	29.30	5.80	24.70	0.100	1.52	0.006	Total
VA	Falls Chruch	51610	2501060300	22.42	Missing	0.091	37.0	24.9	15.85	Missing	0.064	1.00	2005	29.30	5.80	14.93	0.061	0.92	0.004	Total
VA	Manassas City	51683	2501060300	18.35	Missing	0.075	37.0	24.9	12.97	Missing	0.053	1.00	2005	29.30	5.80	12.22	0.050	0.75	0.003	Total
VA	Manassas Park City	51685	2501060300	21.02	Missing	0.085	37.0	24.9	14.86	Missing	0.060	1.00	2005	29.30	5.80	14.00	0.057	0.86	0.004	Total
			MANEVU	74,747.81		233.96			49,939.38		154.07					46,832.28	144.55	3,107.10	9.51	

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	30% of 2002 Area Source PFC Emissions
F	Blank
G	30% of 2002 Area Source PFC Emissions
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

COLUMN	COLUMN DESCRIPTIONS
K	30% of 2009 Area Source PFC Emissions
L	Blank
M	30% of 2009 Area Source PFC Emissions
N	Blank
O, P	Year new containers requried: Incremental Control Factor for 2009 , assumes 10% turnover per year

Effective Date	CE	RE	RP	Control Factor
2003	65	100	65	42.3
2004	65	100	55	35.8
2005	65	100	45	29.3
2006	65	100	35	22.8
2007	65	100	25	16.3
2008	65	100	15	9.8
2009	65	100	5	3.3

COLUMN	COLUMN DESCRIPTIONS
Q	Incremental Control Factor (percent reduction due to OTC 2006 Control Measure) See Section 3.4.3 for derivation
R, S	30% of 2009 Area Source PFC Emissions
T, U	30% of 2009 Area Source PFC Emissions

PORTABLE FUEL CONTAINERS

				2002 VOC Emissions					2009 VOC OTB/OTW Emissions							2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	Effective Date for OTC 2001 Model Rule	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Descript
CT			2501060300	1,061.46		2.91			708.20		1.94		2004	35.80	5.80	667.12	1.83	41.08	0.11	
DE			2501011010	307.78		0.90			210.11		0.62		2004	35.80	5.80	197.93	0.58	12.19	0.04	
DC			2501011011	318.42		1.08			221.17		0.75		2004	35.80	5.80	208.34	0.71	12.83	0.04	
ME			2501060300	398.24		1.09			265.60		0.73		2004	35.80	5.80	250.20	0.69	15.40	0.04	
MD			2501011011	4,340.22		11.89			2,685.84		7.36		2003	42.30	5.80	2,530.06	6.93	155.78	0.43	
MA			2501011000	1,976.55		5.42			2,032.60		5.57		2009	0.00	8.91	1,851.52	5.08	181.08	0.50	
NH			2501060300	391.44		1.07			324.67		0.89		2006	22.80	5.80	305.84	0.84	18.83	0.05	
NJ			2501000120	2,666.20		7.32			1,933.20		5.31		2005	29.30	5.80	1,821.07	5.00	112.13	0.31	
NY			2501011011	6,770.24		22.99			3,972.84		13.49		2003	42.30	5.80	3,742.41	12.71	230.42	0.78	
PA			2501060300	3,676.60		14.09			2,163.28		8.29		2003	42.30	5.80	2,037.81	7.81	125.47	0.48	
RI			2501060300	328.01		0.90			294.86		0.81		2007	16.30	5.80	277.76	0.76	17.10	0.05	
VT			2501060300	189.18		0.52			169.45		0.46		2007	16.30	5.80	159.62	0.44	9.83	0.03	
VA			2501060300	634.00		2.58			448.24		1.82		2005	29.30	5.80	422.24	1.72	26.00	0.11	
			MANEVU	22,424.34		70.19			14,981.81		46.22					14,049.68	43.37	932.13	2.85	

Data Supplied by NESCAUM - need documentation for how these were derived

ESTIMATED 2006 EMISSIONS (TONS PER SUMMER DAY)

	Current RFG Fraction	Current VOC tpsd	Full-RFG VOC tpsd	Reduction VOC tpsd
CT	100%	87.9	87.9	0.0
DE	100%	26.6	26.6	0.0
DC	100%	9.1	9.1	0.0
ME	0%	56.2	47.1	9.1
MD	86%	158.7	155.6	3.2
MA	100%	148.6	148.6	0.0
NH	64%	45.3	41.0	4.3
NJ	100%	219.6	219.6	0.0
NY	54%	465.0	408.1	56.9
PA	24%	363.0	305.0	58.0
RI	100%	22.2	22.2	0.0
VT	0%	35.9	27.9	7.9
VA	100%	54.9	54.9	0.0
OTR	**67%**	**1693.1**	**1553.7**	**139.4**

Appendix E – NOx Emissions by County for 2002 and 2009

Table E-1 Reformulated Gasoline Emission Summary by State

Table E-2 Chip Reflash Emission Summary by State

Table E-3 Asphalt Production Plant NOx Emission Summary for 2002 and 2009 by County

Table E-4 Cement Kiln NOx Emission Summary for 2002 and 2009 by County

Table E-5 Glass and Fiberglass Furnace NOx Emission Summary for 2002 and 2009 by County

Table E-6 ICI Boiler NOx Area Source Emission Summary for 2002 and 2009 by State

Table E-7 ICI Boiler NOx Point Source Emission Summary for 2002 and 2009 by State

Due to their large size, these tables are being transmitted electronically in the spreadsheet named Appendix_E_NOx_2009.xls. There are separate tabs for each of the tables listed above.

State	RFG* NOx Emissions (tpd) 2006	2006 OTB/W	2006 BOTW	2006 Benefit	Chip Reflash NOx Emissions (tpd) 2002	2009 OTB/W	2009 BOTW	2009 Benefit	Asphalt Production Plants NOx Emissions (tpd) 2002	2009 OTB/W	2009 BOTW	2009 Benefit	Cement Kilns NOx Emissions (tpd) 2002	2009 OTB/W	2009 BOTW	2009 Benefit
CT	81.3	81.3	81.3	0.0	66.7	n/a	n/a	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DE	24.8	24.8	24.8	0.0	21.8	n/a	n/a	0.6	0.6	0.6	0.4	0.2	0.0	0.0	0.0	0.0
DC	8.4	8.4	8.4	0.0	8.1	n/a	n/a	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ME	44.1	44.1	43.8	0.2	82.8	n/a	n/a	1.4	1.7	2.0	1.3	0.7	4.7	4.7	4.7	0.0
MD	144.0	144.0	144.0	0.0	105.0	n/a	n/a	5.6	0.2	0.2	0.1	0.1	17.2	17.2	4.1	13.1
MA	137.4	137.4	137.4	0.0	152.7	n/a	n/a	6.7	1.1	1.8	1.2	0.6	0.0	0.0	0.0	0.0
NH	38.4	38.4	38.2	0.2	30.5	n/a	n/a	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NJ	204.2	204.2	204.2	0.0	133.5	n/a	n/a	9.7	1.3	2.8	1.8	1.0	0.0	0.0	0.0	0.0
NY	381.3	381.3	379.1	2.1	177.6	n/a	n/a	16.1	0.0	0.1	0.0	0.0	35.1	35.1	19.8	15.3
PA	284.8	284.8	282.9	2.0	437.1	n/a	n/a	12.4	0.6	0.7	0.5	0.2	44.7	44.7	30.7	14.0
RI	20.5	20.5	20.5	0.0	8.3	n/a	n/a	0.8	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
VT	26.3	26.3	26.0	0.3	13.7	n/a	n/a	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
No. VA	50.8	50.8	50.8	0.0	16.6	n/a	n/a	2.5	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0
OTR	**1446.2**	**1446.2**	**1441.4**	**4.8**	**1254.5**	**0.0**	**0.0**	**63.0**	**5.9**	**8.6**	**5.6**	**3.0**	**101.9**	**101.9**	**59.4**	**42.5**

State	Glass Furnaces NOx Emissions (tpd) 2002	2009 OTB/W	2009 BOTW	2009 Benefit	ICI Boilers (minor/area) NOx Emissions (tpd) 2002	2009 OTB/W	2009 BOTW	2009 Benefit	ICI Boilers (major/point) NOx Emissions (tpd) 2002	2009 OTB/W	2009 BOTW	2009 Benefit	Total for Seven Categories NOx Emissions (tpd) 2002	2009 OTB/W	2009 BOTW	2009 Benefit
CT	0.0	0.0	0.0	0.0	8.9	9.4	6.5	2.8	5.8	5.6	3.5	2.1	162.7	n/a	n/a	8.4
DE	0.0	0.0	0.0	0.0	3.4	3.5	2.3	1.2	7.7	7.3	7.2	0.1	58.2	n/a	n/a	2.1
DC	0.0	0.0	0.0	0.0	1.3	1.6	1.1	0.4	1.0	1.1	0.8	0.4	18.8	n/a	n/a	1.6
ME	0.0	0.0	0.0	0.0	5.0	5.3	4.2	1.1	10.2	12.8	10.1	2.8	148.5	n/a	n/a	6.2
MD	0.3	0.3	0.1	0.3	3.5	4.0	2.9	1.2	14.2	11.2	8.8	2.4	284.4	n/a	n/a	22.7
MA	1.4	1.8	0.3	1.5	24.4	25.8	19.1	6.6	13.8	15.4	8.7	6.8	330.8	n/a	n/a	22.2
NH	0.0	0.0	0.0	0.0	21.3	24.2	20.8	3.4	3.9	4.8	2.9	1.9	94.1	n/a	n/a	7.5
NJ	7.7	7.1	2.2	4.9	20.5	15.6	15.6	0.0	12.9	10.8	7.4	3.4	380.0	n/a	n/a	19.0
NY	6.1	6.8	1.0	5.8	105.2	112.2	78.4	33.8	31.4	30.8	23.8	7.0	736.8	n/a	n/a	80.1
PA	36.3	44.3	20.0	24.3	38.0	39.8	27.6	12.2	33.4	36.5	26.7	9.8	874.9	n/a	n/a	74.9
RI	0.7	0.5	0.1	0.5	6.6	7.3	5.3	2.1	4.2	4.9	4.3	0.5	40.5	n/a	n/a	3.9
VT	0.0	0.0	0.0	0.0	2.3	2.9	1.9	0.9	0.7	0.9	0.5	0.4	42.9	n/a	n/a	2.5
No. VA	0.0	0.0	0.0	0.0	11.8	11.9	8.1	3.9	0.2	0.2	0.0	0.1	79.6	n/a	n/a	6.6
OTR	**52.5**	**60.9**	**23.6**	**37.3**	**252.0**	**263.4**	**193.9**	**69.5**	**139.3**	**142.3**	**104.6**	**37.7**	**3252.3**	n/a	n/a	**257.8**

* 2006 Emission Estimates from NESCAUM

Data Supplied by NESCAUM - need documentation for how these were derived

ESTIMATED 2006 EMISSIONS (TONS PER SUMMER DAY)

	Current RFG Fraction	Current NOx tpsd	Full-RFG NOx tpsd	Reduction NOx tpsd
CT	100%	81.3	81.3	0.0
DE	100%	24.8	24.8	0.0
DC	100%	8.4	8.4	0.0
ME	0%	44.1	43.8	0.2
MD	86%	144.0	144.0	0.0
MA	100%	137.4	137.4	0.0
NH	64%	38.4	38.2	0.2
NJ	100%	204.2	204.2	0.0
NY	54%	381.3	379.1	2.1
PA	24%	284.8	282.9	2.0
RI	100%	20.5	20.5	0.0
VT	0%	26.3	26.0	0.3
VA	100%	50.8	50.8	0.0
OTR	**67%**	**1446.2**	**1441.4**	**4.8**

* 2006 Emission Estimates from NESCAUM
2009 estimates are not currently available

ESTIMATED 2009 EMISSIONS (TONS PER SUMMER DAY)

	2002 NOx tons/year	2002 NOx tpsd	2009 OTB/W NOx tpsd	2009 BOTW NOx tpsd	Reduction NOx tpsd
CT	24349.0	66.7	n/a	n/a	3.5
DE	7959.0	21.8	n/a	n/a	0.6
DC	2962.0	8.1	n/a	n/a	0.8
ME	30236.0	82.8	n/a	n/a	1.4
MD	38333.0	105.0	n/a	n/a	5.6
MA	55732.0	152.7	n/a	n/a	6.7
NH	11140.0	30.5	n/a	n/a	2
NJ	48727.0	133.5	n/a	n/a	9.7
NY	64836.0	177.6	n/a	n/a	16.1
PA	159524.0	437.1	n/a	n/a	12.4
RI	3033.0	8.3	n/a	n/a	0.8
VT	4984.0	13.7	n/a	n/a	0.9
VA	6066.0	16.6	n/a	n/a	2.5
OTR	**457881.0**		**0.0**	**0.0**	**63.0**

2002 NOx ton per year from MANEVU 2002 Inventory Version 2
2002 NOx ton per day = annual divided by 365
2009 NOx emissions are not currently available
Reductions from NESCAUM Feb 20, 2006 Staff Report and analysis

COLUMN	COLUMN DESCRIPTIONS
A-F	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
G	SCC-Source Classification Code
H	NOx 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
I	NOx 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
J	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
K	Summer season percentage from NIF Emission Process (EP) file
L	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
M	Total capture/control efficiency from NIF 2002 CE file
N	Blank

COLUMN	COLUMN DESCRIPTIONS
O	NOx 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS B
P	NOx 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
Q	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in invento 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 day b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
R	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
S	Total capture/control efficiency from NIF 2009 CE file
T	Incremental BOTW Control Factor (35% if uncontrolled or 0 according to state specificatior BOTW_Regional_Modeling_Compilation_060828.xls)
U, V	NOx 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW incremental control facto
W, X	NOx 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)
Y	Plant Name

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
CT	Hartford	09003	0719	P0046	01	30500104	0.0000	0.0000	0.000	25.0	35.0	0.00	0.0000	0.0000	0.000	0.898	0.00	35.00	0.00
DE	Kent	10001	1000100006	001	1	30500259	4.3645	0.0282	0.028	42.0	25.0	0.00	4.3645	0.0282	0.028	1.000	0.00	35.00	2.84
DE	Kent	10001	1000100006	001	2	30500256	0.8842	0.0057	0.006	42.0	25.0	0.00	0.8842	0.0057	0.006	1.000	0.00	35.00	0.57
DE	Kent	10001	1000100006	001	4	30500208	0.0000	0.0000	0.000	42.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
DE	Kent	10001	1000100006	011	1	20200102	8.7852	0.0378	0.038	28.0	25.8	0.00	7.6654	0.0397	0.040	1.051	0.00	35.00	4.98
DE	Kent	10001	1000100006	011	2	20200102	0.0000	0.0000	0.000	28.0	25.8	0.00	0.0000	0.0000	0.000	1.051	0.00	35.00	0.00
DE	Kent	10001	1000100014	001	1	30500252	7.2628	0.0358	0.036	32.0	25.0	0.00	7.2628	0.0358	0.036	1.000	0.00	35.00	4.72
DE	Kent	10001	1000100014	001	2	30500251	0.5596	0.0028	0.003	32.0	25.0	0.00	0.5596	0.0028	0.003	1.000	0.00	35.00	0.36
DE	Kent	10001	1000100014	001	3	30500206	0.0000	0.0000	0.000	32.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
DE	Kent	10001	1000100014	002	1	30590001	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.057	0.00	35.00	0.00
DE	Kent	10001	1000100014	003	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.051	0.00	35.00	0.00
DE	Kent	10001	1000100014	004	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.051	0.00	35.00	0.00
DE	New Castle	10003	1000300040	001	1	30500255	2.0567	0.0118	0.012	35.0	25.0	0.00	2.0567	0.0118	0.012	1.000	0.00	35.00	1.34
DE	New Castle	10003	1000300040	001	2	30500206	0.0000	0.0000	0.000	35.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
DE	New Castle	10003	1000300040	002	1	30500206	0.0000	0.0000	0.000	0.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
DE	New Castle	10003	1000300048	001	1	30500260	3.4181	0.0179	0.018	34.0	25.0	0.00	3.4181	0.0179	0.018	1.000	0.00	35.00	2.22
DE	New Castle	10003	1000300048	001	2	30500257	0.9089	0.0048	0.005	34.0	25.0	0.00	0.9089	0.0048	0.005	1.000	0.00	35.00	0.59
DE	New Castle	10003	1000300066	002	1	30500256	1.8740	0.0141	0.014	49.0	25.0	0.00	1.8740	0.0141	0.014	1.000	0.00	35.00	1.22
DE	New Castle	10003	1000300068	001	1	30500260	0.0428	0.0002	0.000	33.0	25.0	0.00	0.0428	0.0002	0.000	1.000	0.00	35.00	0.03
DE	New Castle	10003	1000300068	001	2	30500257	1.9243	0.0106	0.011	33.0	25.0	0.00	1.9243	0.0106	0.011	1.000	0.00	35.00	1.25
DE	New Castle	10003	1000300068	002	1	20200102	1.3527	0.0173	0.017	37.0	25.8	0.00	1.1803	0.0182	0.018	1.051	0.00	35.00	0.77
DE	New Castle	10003	1000300069	001	1	30500256	3.2219	0.0166	0.017	35.0	25.0	0.00	3.2219	0.0166	0.017	1.000	0.00	35.00	2.09
DE	New Castle	10003	1000300069	001	2	30500259	0.0000	0.0000	0.000	35.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
DE	New Castle	10003	1000300069	002	1	20200102	0.6988	0.0000	0.002	0.0	25.8	0.00	0.6097	0.0021	0.002	1.051	0.00	35.00	0.40
DE	New Castle	10003	1000300069	002	2	30500205	0.0000	0.0000	0.000	0.0	25.2	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
DE	New Castle	10003	1000300069	002	3	30500205	0.0000	0.0000	0.000	0.0	25.2	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
DE	New Castle	10003	1000300069	003	1	30500206	0.0000	0.0000	0.000	0.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
DE	New Castle	10003	1000300463	001	1	30500201	0.4960	0.0022	0.002	29.0	26.4	0.00	0.4960	0.0022	0.002	1.000	0.00	35.00	0.32
DE	New Castle	10003	1000300463	001	2	30500202	0.0000	0.0000	0.000	29.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions: Annual (tpy)	2002 NOx Emissions: Summer Day from Inventory (tpd)	2002 NOx Emissions: Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions: Annual (tpy)	2009 NOx OTB/OTW Emissions: Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions: Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
DE	New Castle	10003	1000300463	002	1	20200102	0.2868	0.0358	0.036	25.0	25.8	0.00	0.2502	0.0376	0.038	1.051	0.00	35.00	0.16
DE	New Castle	10003	1000300463	003	1	30500208	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
DE	Sussex	10005	1000500026	001	1	30500257	3.2688	0.0156	0.016	30.0	25.0	0.00	3.2688	0.0156	0.016	1.000	0.00	35.00	2.12
DE	Sussex	10005	1000500120	001	1	30500252	6.8809	0.0381	0.038	36.0	25.0	0.00	6.8809	0.0381	0.038	1.000	0.00	35.00	4.47
DE	Sussex	10005	1000500120	002	1	20200102	0.4530	0.2854	0.285	63.0	25.8	0.00	0.3953	0.3000	0.300	1.051	0.00	35.00	0.26
DE	Sussex	10005	1000500130	001	1	30500260	5.8851	0.0263	0.026	29.0	25.0	0.00	5.8851	0.0263	0.026	1.000	0.00	35.00	3.83
ME	Androscoggin	23001	2300100056	001	1	30500201	9.6316	0.0466	0.047	44.0	26.4	0.00	11.5287	0.0558	0.056	1.197	0.00	35.00	7.49
ME	Androscoggin	23001	2300100083	001	1	30500201	12.5792	0.0608	0.061	44.0	26.4	0.00	15.0569	0.0728	0.073	1.197	0.00	35.00	9.79
ME	Androscoggin	23001	2300100083	002	2	20200102	5.0465	0.0244	0.024	44.0	25.8	0.00	4.4567	0.0260	0.026	1.064	0.00	35.00	2.90
ME	Androscoggin	23001	2300100083	002	3	20200102	6.2611	0.0303	0.030	44.0	25.8	0.00	5.5294	0.0322	0.032	1.064	0.00	35.00	3.59
ME	Androscoggin	23001	2300100083	002	4	20200102	8.6286	0.0417	0.042	44.0	25.8	0.00	7.6202	0.0444	0.044	1.064	0.00	35.00	4.95
ME	Aroostook	23003	2300300036	001	1	30500252	0.3835	0.0000	0.004	84.0	25.0	0.00	0.4590	0.0042	0.004	1.197	0.00	35.00	0.30
ME	Aroostook	23003	2300300036	004	1	20200102	0.5019	0.0000	0.004	77.0	25.8	0.00	0.4432	0.0045	0.005	1.064	0.00	35.00	0.29
ME	Aroostook	23003	2300300036	005	1	20200102	0.2199	0.0000	0.002	65.0	25.8	0.00	0.1942	0.0017	0.002	1.064	0.00	35.00	0.13
ME	Aroostook	23003	2300300036	006	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Aroostook	23003	2300300040	001	1	30500252	6.5136	0.0000	0.044	62.0	25.0	0.00	7.7966	0.0531	0.053	1.197	0.00	35.00	5.07
ME	Aroostook	23003	2300300040	002	4	10200503	0.0084	0.0000	0.000	49.0	25.0	0.00	0.0089	0.0000	0.000	1.064	0.00	35.00	0.01
ME	Aroostook	23003	2300300040	004	1	20200102	0.4267	0.0000	0.002	51.0	25.8	0.00	0.3768	0.0025	0.003	1.064	0.00	35.00	0.24
ME	Aroostook	23003	2300300067	001	1	30500252	0.0000	0.0000	0.000	53.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Aroostook	23003	2300300067	001	2	30500208	0.0000	0.0000	0.000	53.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
ME	Aroostook	23003	2300300071	001	1	30500252	1.0710	0.0000	0.003	25.0	25.0	0.00	1.2820	0.0035	0.004	1.197	0.00	35.00	0.83
ME	Cumberland	23005	2300500148	001	1	30500201	16.6524	0.0805	0.081	44.0	26.4	0.00	19.9324	0.0964	0.096	1.197	0.00	35.00	12.96
ME	Cumberland	23005	2300500151	001	1	30500252	1.1655	0.0050	0.005	39.0	25.0	0.00	1.3951	0.0060	0.006	1.197	0.00	35.00	0.91
ME	Cumberland	23005	2300500151	001	2	30500208	0.2848	0.0012	0.001	39.0	25.0	0.00	0.2848	0.0012	0.001	1.000	0.00	35.00	0.19
ME	Cumberland	23005	2300500151	003	1	20200102	26.2920	0.0982	0.098	34.0	25.8	0.00	23.2194	0.1045	0.104	1.064	0.00	35.00	15.09
ME	Franklin	23007	2300700034	001	1	30500201	2.4475	0.0000	0.007	25.0	26.4	0.00	2.9296	0.0080	0.008	1.197	0.00	35.00	1.90
ME	Franklin	23007	2300700034	002	2	20200101	11.9151	0.0000	0.033	25.0	25.5	0.00	12.6779	0.0348	0.035	1.064	0.00	35.00	8.24
ME	Franklin	23007	2300700037	001	1	30500201	11.4493	0.0000	0.065	52.0	26.4	0.00	13.7045	0.0783	0.078	1.197	0.00	35.00	8.91
ME	Franklin	23007	2300700037	001	2	30500208	0.2600	0.0000	0.001	52.0	25.0	0.00	0.2600	0.0015	0.001	1.000	0.00	35.00	0.17
ME	Hancock	23009	2300900015	001	1	30500252	0.0000	0.0000	0.000	46.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Hancock	23009	2300900015	001	4	10200503	0.0535	0.0000	0.000	46.0	25.0	0.00	0.0569	0.0003	0.000	1.064	0.00	35.00	0.04
ME	Kennebec	23011	2301100069	001	1	30500201	12.0500	0.0768	0.077	58.0	26.4	0.00	14.4235	0.0919	0.092	1.197	0.00	35.00	9.38
ME	Kennebec	23011	2301100069	002	2	30590001	14.0800	0.0696	0.070	45.0	25.0	0.00	14.8856	0.0736	0.074	1.057	0.00	35.00	9.68
ME	Oxford	23017	2301700043	001	1	30500201	6.2737	0.0000	0.041	59.0	26.4	0.00	7.5094	0.0487	0.049	1.197	0.00	35.00	4.88
ME	Penobscot	23019	2301900064	001	1	30500258	1.7890	0.0000	0.012	62.0	25.0	0.00	2.1414	0.0146	0.015	1.197	0.00	35.00	1.39
ME	Penobscot	23019	2301900064	002	1	20200102	3.4044	0.0000	0.023	62.0	25.8	0.00	3.0065	0.0247	0.025	1.064	0.00	35.00	1.95
ME	Penobscot	23019	2301900064	003	1	20200102	0.0000	0.0000	0.000	14.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900064	004	1	20200102	0.0000	0.0000	0.000	61.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900084	001	1	30500252	4.4066	0.0000	0.022	46.0	25.0	0.00	5.2746	0.0267	0.027	1.197	0.00	35.00	3.43
ME	Penobscot	23019	2301900084	002	4	10300502	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	1.089	0.00	35.00	0.00
ME	Penobscot	23019	2301900084	004	1	20200102	0.1201	0.0000	0.001	72.0	25.8	0.00	0.1061	0.0010	0.001	1.064	0.00	35.00	0.07
ME	Penobscot	23019	2301900085	001	1	30500252	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Penobscot	23019	2301900085	001	2	30500208	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
ME	Penobscot	23019	2301900085	002	1	30500252	0.0000	0.0000	0.000	43.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Penobscot	23019	2301900085	002	4	10200503	0.0000	0.0000	0.000	43.0	25.0	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900085	011	1	20200102	0.0000	0.0000	0.000	46.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900085	013	1	20200102	0.0000	0.0000	0.000	46.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900102	001	1	30500258	6.3076	0.0000	0.034	49.0	25.0	0.00	7.5500	0.0407	0.041	1.197	0.00	35.00	4.91
ME	Penobscot	23019	2301900102	002	1	20200102	5.3902	0.0000	0.032	54.0	25.8	0.00	4.7603	0.0340	0.034	1.064	0.00	35.00	3.09
ME	Penobscot	23019	2301900102	003	1	20200102	1.1870	0.0000	0.009	69.0	25.8	0.00	1.0483	0.0096	0.010	1.064	0.00	35.00	0.68
ME	Penobscot	23019	2301900104	001	1	30500258	1.5005	0.0000	0.010	58.0	25.0	0.00	1.7961	0.0114	0.011	1.197	0.00	35.00	1.17
ME	Penobscot	23019	2301900104	003	1	20200102	1.0954	0.0000	0.004	32.0	25.8	0.00	0.9674	0.0041	0.004	1.064	0.00	35.00	0.63

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
ME	Penobscot	23019	2301900104	004	1	20200102	9.6175	0.0000	0.047	44.0	25.8	0.00	8.4936	0.0495	0.049	1.064	0.00	35.00	5.52
ME	Penobscot	23019	2301900104	005	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Penobscot	23019	2301900105	001	1	30500258	2.9555	0.0000	0.023	70.0	25.0	0.00	3.5376	0.0272	0.027	1.197	0.00	35.00	2.30
ME	Penobscot	23019	2301900105	001	3	30500208	0.0262	0.0000	0.000	70.0	25.0	0.00	0.0262	0.0002	0.000	1.000	0.00	35.00	0.02
ME	Penobscot	23019	2301900105	002	1	20200102	3.1436	0.0000	0.010	30.0	25.8	0.00	2.7762	0.0110	0.011	1.064	0.00	35.00	1.80
ME	Penobscot	23019	2301900105	003	1	20200102	0.3360	0.0000	0.003	78.0	25.8	0.00	0.2967	0.0031	0.003	1.064	0.00	35.00	0.19
ME	Penobscot	23019	2301900114	001	1	30500258	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Penobscot	23019	2301900114	002	1	20200102	2.5120	0.0000	0.017	60.0	25.8	0.00	2.2184	0.0176	0.018	1.064	0.00	35.00	1.44
ME	Penobscot	23019	2301900114	003	1	20200102	3.2063	0.0000	0.032	92.0	25.8	0.00	2.8316	0.0345	0.034	1.064	0.00	35.00	1.84
ME	Piscataquis	23021	2302100016	001	1	30500252	8.7760	0.0000	0.061	63.0	25.0	0.00	10.5046	0.0727	0.073	1.197	0.00	35.00	6.83
ME	Piscataquis	23021	2302100016	001	2	20200102	8.0332	0.0000	0.056	63.0	25.8	0.00	7.0944	0.0592	0.059	1.064	0.00	35.00	4.61
ME	Piscataquis	23021	2302100016	001	3	30500208	0.0940	0.0000	0.001	63.0	25.0	0.00	0.0940	0.0007	0.001	1.000	0.00	35.00	0.06
ME	Piscataquis	23021	2302100016	002	1	30500258	1.0664	0.0000	0.010	87.0	25.0	0.00	1.2764	0.0122	0.012	1.197	0.00	35.00	0.83
ME	Piscataquis	23021	2302100016	002	2	20200102	2.2650	0.0000	0.022	87.0	25.8	0.00	2.0003	0.0230	0.023	1.064	0.00	35.00	1.30
ME	Piscataquis	23021	2302100016	002	3	30500208	0.0290	0.0000	0.000	87.0	25.0	0.00	0.0290	0.0003	0.000	1.000	0.00	35.00	0.02
ME	Piscataquis	23021	2302100016	003	4	20200102	6.9158	0.0000	0.037	49.0	25.8	0.00	6.1076	0.0396	0.040	1.064	0.00	35.00	3.97
ME	Piscataquis	23021	2302100016	003	5	20200102	0.6342	0.0000	0.003	49.0	25.8	0.00	0.5601	0.0036	0.004	1.064	0.00	35.00	0.36
ME	Piscataquis	23021	2302100016	003	6	20200102	1.7456	0.0000	0.009	49.0	25.8	0.00	1.5416	0.0100	0.010	1.064	0.00	35.00	1.00
ME	Sagadahoc	23023	2302300011	001	3	30500252	2.3261	0.0230	0.023	90.0	25.0	0.00	2.7843	0.0275	0.028	1.197	0.00	35.00	1.81
ME	Sagadahoc	23023	2302300011	002	1	30500208	0.0480	0.0000	0.000	1.0	25.0	0.00	0.0480	0.0000	0.000	1.000	0.00	35.00	0.03
ME	Sagadahoc	23023	2302300011	003	1	30500208	0.0719	0.0000	0.000	1.0	25.0	0.00	0.0719	0.0000	0.000	1.000	0.00	35.00	0.05
ME	Somerset	23025	2302500023	001	1	30500201	14.7945	0.0000	0.073	45.0	26.4	0.00	17.7086	0.0876	0.088	1.197	0.00	35.00	11.51
ME	Somerset	23025	2302500023	002	2	30590001	0.7600	0.0000	0.003	36.0	25.0	0.00	0.8035	0.0032	0.003	1.057	0.00	35.00	0.52
ME	Somerset	23025	2302500031	001	1	30500201	8.4502	0.0000	0.048	52.0	26.4	0.00	10.1146	0.0578	0.058	1.197	0.00	35.00	6.57
ME	Somerset	23025	2302500032	001	1	30500201	1.5404	0.0000	0.004	25.0	26.4	0.00	1.8438	0.0051	0.005	1.197	0.00	35.00	1.20
ME	Somerset	23025	2302500032	004	1	20200102	2.9596	0.0000	0.008	25.0	25.8	0.00	2.6137	0.0087	0.009	1.064	0.00	35.00	1.70
ME	Waldo	23027	2302700016	001	1	30500252	0.0000	0.0000	0.000	0.0	25.0	0.00	0.0000	0.0000	0.000	1.197	0.00	35.00	0.00
ME	Waldo	23027	2302700016	005	1	20200102	1.6320	0.0000	0.008	46.0	25.8	0.00	1.4413	0.0088	0.009	1.064	0.00	35.00	0.94
ME	Waldo	23027	2302700016	006	1	20200102	0.7541	0.0000	0.004	54.0	25.8	0.00	0.6660	0.0048	0.005	1.064	0.00	35.00	0.43
ME	Waldo	23027	2302700021	001	1	30500252	8.9921	0.0000	0.039	39.0	25.0	0.00	10.7633	0.0461	0.046	1.197	0.00	35.00	7.00
ME	Waldo	23027	2302700021	004	1	20200102	0.8456	0.0000	0.004	46.0	25.8	0.00	0.7468	0.0045	0.005	1.064	0.00	35.00	0.49
ME	Waldo	23027	2302700021	005	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	Washington	23029	2302900015	001	1	30500252	0.6697	0.0000	0.005	63.0	25.0	0.00	0.8016	0.0055	0.006	1.197	0.00	35.00	0.52
ME	Washington	23029	2302900015	003	1	20200102	1.2778	0.0000	0.007	52.0	25.8	0.00	1.1285	0.0078	0.008	1.064	0.00	35.00	0.73
ME	Washington	23029	2302900015	004	1	20200102	0.0562	0.0000	0.001	99.0	25.8	0.00	0.0496	0.0007	0.001	1.064	0.00	35.00	0.03
ME	Washington	23029	2302900015	005	1	20200102	0.0873	0.0000	0.001	99.0	25.8	0.00	0.0771	0.0010	0.001	1.064	0.00	35.00	0.05
ME	Washington	23029	2302900015	006	1	20200102	0.0000	0.0000	0.000	0.0	25.8	0.00	0.0000	0.0000	0.000	1.064	0.00	35.00	0.00
ME	York	23031	2303100040	001	1	30500201	15.4097	0.0508	0.051	30.0	26.4	0.00	18.4449	0.0608	0.061	1.197	0.00	35.00	11.99
ME	York	23031	2303100041	001	1	30500252	10.4285	0.0539	0.054	47.0	25.0	0.00	12.4826	0.0645	0.065	1.197	0.00	35.00	8.11
ME	York	23031	2303100041	004	1	10200503	0.1551	0.0000	0.000	0.0	25.0	0.00	0.1650	0.0005	0.000	1.064	0.00	35.00	0.11
ME	York	23031	2303100041	005	1	20200102	16.5396	0.0782	0.078	43.0	25.8	0.00	14.6067	0.0832	0.083	1.064	0.00	35.00	9.49
ME	York	23031	2303100046	001	1	30500252	11.0637	0.0504	0.050	41.0	25.0	0.00	13.2429	0.0603	0.060	1.197	0.00	35.00	8.61
ME	York	23031	2303100046	001	2	10200503	5.9010	0.0269	0.027	41.0	25.0	0.00	6.2788	0.0286	0.029	1.064	0.00	35.00	4.08
ME	York	23031	2303100046	003	5	20200102	2.2348	0.0079	0.008	32.0	25.8	0.00	1.9736	0.0084	0.008	1.064	0.00	35.00	1.28
ME	York	23031	2303100046	004	1	10200501	0.1560	0.0000	0.000	0.0	23.4	0.00	0.1660	0.0004	0.000	1.064	0.00	35.00	0.11
ME	York	23031	2303100087	001	2	30500208	1.5816	0.0088	0.009	40.0	25.0	0.00	1.5816	0.0088	0.009	1.000	0.00	35.00	1.03
MD	Anne Arundel	24003	003-0043	3	01F3	30500201	0.0000	0.0000	0.000	34.0	26.4	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Anne Arundel	24003	003-0043	3	01S3	30500201	1.3370	0.0045	0.005	34.0	26.4	0.00	1.6599	0.0056	0.006	1.242	0.00	35.00	1.08
MD	Anne Arundel	24003	003-0043	4	01F4	30500205	0.0000	0.0000	0.000	38.0	25.2	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Anne Arundel	24003	003-0043	4	01S4	30500205	5.1700	0.0191	0.019	38.0	25.2	0.00	6.4186	0.0237	0.024	1.242	0.00	35.00	4.17
MD	Frederick	24021	021-0037	2	01F2	30500201	0.0000	0.0000	0.000	60.0	26.4	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Frederick	24021	021-0037	2	01S2	30500201	5.4275	0.0260	0.026	60.0	26.4	0.00	6.7382	0.0323	0.032	1.242	0.00	35.00	4.38

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
MD	Frederick	24021	021-0037	3	01F3	40600403	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.002	0.00	35.00	0.00
MD	Frederick	24021	021-0037	3	01S3	40600403	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.002	0.00	35.00	0.00
MD	Frederick	24021	021-0172	3	01F3	30500108	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Frederick	24021	021-0172	3	01S3	30500108	1.4520	0.0040	0.004	25.0	25.0	0.00	1.8027	0.0050	0.005	1.242	0.00	35.00	1.17
MD	Frederick	24021	021-0172	4	01F4	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Frederick	24021	021-0172	4	01S4	30500103	2.1450	0.0058	0.006	25.0	27.5	0.00	2.6630	0.0072	0.007	1.242	0.00	35.00	1.73
MD	Frederick	24021	021-0172	5	01F5	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Frederick	24021	021-0172	5	01S5	30500103	1.1250	0.0031	0.003	25.0	27.5	0.00	1.3967	0.0038	0.004	1.242	0.00	35.00	0.91
MD	Frederick	24021	021-0172	8	01F8	30500108	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Frederick	24021	021-0172	8	01S8	30500108	2.9370	0.0080	0.008	25.0	25.0	0.00	3.6463	0.0099	0.010	1.242	0.00	35.00	2.37
MD	Howard	24027	027-0055	15	01F15	30500135	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	15	01S15	30500135	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	16	01F16	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	16	01S16	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	3	01F3	30500102	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	3	01S3	30500102	3.2047	0.0098	0.010	30.0	25.0	0.00	3.9786	0.0122	0.012	1.242	0.00	35.00	2.59
MD	Howard	24027	027-0055	8	01F8	30500102	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	8	01S8	30500102	5.9805	0.0182	0.018	30.0	25.0	0.00	7.4248	0.0226	0.023	1.242	0.00	35.00	4.83
MD	Howard	24027	027-0055	9	01F9	30500102	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Howard	24027	027-0055	9	01S9	30500102	4.5607	0.0139	0.014	30.0	25.0	0.00	5.6621	0.0173	0.017	1.242	0.00	35.00	3.68
MD	Montgomery	24031	031-1361	1	01F1	30500261	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Montgomery	24031	031-1361	1	01S1	30500261	8.3000	0.0344	0.034	50.0	25.0	0.00	10.3045	0.0427	0.043	1.242	0.00	35.00	6.70
MD	Baltimore City	24510	510-0071	15	01F15	30500198	0.0000	0.0000	0.000	25.0	28.2	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	15	01S15	30500198	2.1750	0.0059	0.006	25.0	28.2	0.00	2.7003	0.0073	0.007	1.242	0.00	35.00	1.76
MD	Baltimore City	24510	510-0071	22	01F22	30500102	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	22	01S22	30500102	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	25	01F25	30500102	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	25	01S25	30500102	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	5	01F5	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.242	0.00	35.00	0.00
MD	Baltimore City	24510	510-0071	5	01S5	30500103	1.1200	0.0031	0.003	25.0	27.5	0.00	1.3905	0.0038	0.004	1.242	0.00	35.00	0.90
MA	Barnstable	25001	1200201	01	0101	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Barnstable	25001	1200201	01	0301	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Barnstable	25001	1200211	01	0101	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Barnstable	25001	1200211	01	0201	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Barnstable	25001	1200249	01	0101	30500201	0.0000	0.0000	0.000	30.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Barnstable	25001	1200249	01	0201	30500208	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Barnstable	25001	1200249	01	0301	30500206	2.0000	0.0000	0.007	30.0	27.0	0.00	2.1360	0.0070	0.007	1.068	0.00	35.00	1.39
MA	Berkshire	25003	1170090	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170090	01	0201	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Berkshire	25003	1170090	02	0102	30500211	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170090	02	0202	30500208	1.0000	0.0000	0.005	50.0	25.0	0.00	1.0000	0.0055	0.005	1.000	0.00	35.00	0.65
MA	Berkshire	25003	1170090	03	0103	30500202	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170090	03	0203	30500203	0.0000	0.0000	0.000	34.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170090	03	0303	30500204	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170090	05	0105	30500208	0.1500	0.0000	0.001	50.0	25.0	0.00	0.1500	0.0008	0.001	1.000	0.00	35.00	0.10
MA	Berkshire	25003	1170090	06	0106	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Berkshire	25003	1170092	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170092	01	0201	30500208	3.0000	0.0000	0.016	50.0	25.0	0.00	3.0000	0.0165	0.016	1.000	0.00	35.00	1.95
MA	Berkshire	25003	1170092	02	0102	30500202	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170092	02	0202	30500203	0.0000	0.0000	0.000	34.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170092	02	0302	30500204	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170102	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions: Annual (tpy)	2002 NOx Emissions: Summer Day from Inventory (tpd)	2002 NOx Emissions: Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions: Annual (tpy)	2009 NOx OTB/OTW Emissions: Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions: Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
MA	Berkshire	25003	1170102	01	0201	30500208	2.0000	0.0000	0.011	50.0	25.0	0.00	2.0000	0.0110	0.011	1.000	0.00	35.00	1.30
MA	Berkshire	25003	1170102	02	0102	30500202	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170102	02	0202	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Berkshire	25003	1170102	02	0302	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Bristol	25005	1200182	01	0101	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Bristol	25005	1200182	01	0201	30500206	0.0000	0.0000	0.000	40.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Bristol	25005	1200182	01	0301	30500208	15.0000	0.0000	0.066	40.0	25.0	0.00	15.0000	0.0659	0.066	1.000	0.00	35.00	9.75
MA	Bristol	25005	1200367	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Bristol	25005	1200367	01	0201	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Bristol	25005	1200367	01	0301	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Bristol	25005	1200367	01	0401	30500207	7.0000	0.0000	0.038	50.0	25.0	0.00	17.0663	0.0938	0.094	2.438	0.00	35.00	11.09
MA	Bristol	25005	1200845	10	0109	30500299	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Dukes	25007	1200348	01	0101	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Dukes	25007	1200348	02	0102	30500208	0.0570	0.0000	0.000	33.0	25.0	0.00	0.0570	0.0002	0.000	1.000	0.00	35.00	0.04
MA	Essex	25009	1190266	01	0101	30500206	0.0000	0.0000	0.000	34.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Essex	25009	1190266	01	0201	30500208	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Essex	25009	1190266	02	0101	30500205	0.0000	0.0000	0.000	33.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1190282	01	0101	30500205	0.0000	0.0000	0.000	33.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1190282	03	0102	30500203	0.0000	0.0000	0.000	33.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1190344	01	0101	30500208	1.0000	0.0000	0.003	25.0	25.0	0.00	1.0000	0.0027	0.003	1.000	0.00	35.00	0.65
MA	Essex	25009	1190344	01	0201	30500207	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Essex	25009	1190344	02	0101	30500205	0.0000	0.0000	0.000	25.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1190344	03	0102	30500208	4.0000	0.0000	0.011	25.0	25.0	0.00	4.0000	0.0110	0.011	1.000	0.00	35.00	2.60
MA	Essex	25009	1190344	03	0202	30500207	14.0000	0.0000	0.038	25.0	25.0	0.00	34.1325	0.0938	0.094	2.438	0.00	35.00	22.19
MA	Essex	25009	1190344	04	0102	30500205	0.0000	0.0000	0.000	25.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1190344	12	0104	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Essex	25009	1191319	01	0101	30500208	2.0000	0.0000	0.005	25.0	25.0	0.00	2.0000	0.0055	0.005	1.000	0.00	35.00	1.30
MA	Essex	25009	1191319	01	0201	30500207	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Essex	25009	1191319	02	0101	30500205	0.0000	0.0000	0.000	25.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1210016	01	0101	30500208	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Essex	25009	1210016	01	0201	30500207	3.0000	0.0000	0.011	34.0	25.0	0.00	7.3141	0.0273	0.027	2.438	0.00	35.00	4.75
MA	Essex	25009	1210016	02	0101	30500205	0.0000	0.0000	0.000	33.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1210282	01	0101	30500205	0.0000	0.0000	0.000	35.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Essex	25009	1210282	01	0201	30500206	1.0000	0.0000	0.004	35.0	27.0	0.00	1.0680	0.0041	0.004	1.068	0.00	35.00	0.69
MA	Essex	25009	1210282	03	0102	30500204	0.0000	0.0000	0.000	35.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420475	04	0104	30500201	0.0000	0.0000	0.000	55.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420475	04	0204	30500208	2.0000	0.0000	0.012	55.0	25.0	0.00	2.0000	0.0121	0.012	1.000	0.00	35.00	1.30
MA	Franklin	25011	0420475	05	0105	30500208	0.2500	0.0000	0.002	55.0	25.0	0.00	0.2500	0.0015	0.002	1.000	0.00	35.00	0.16
MA	Franklin	25011	0420475	18	0115	30500202	0.0000	0.0000	0.000	55.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420475	18	0215	30500203	0.0000	0.0000	0.000	55.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420475	18	0315	30500204	0.0000	0.0000	0.000	55.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	01	0201	30500208	2.0000	0.0000	0.011	50.0	25.0	0.00	2.0000	0.0110	0.011	1.000	0.00	35.00	1.30
MA	Franklin	25011	0420720	02	0102	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	02	0202	30500208	7.0000	0.0000	0.038	50.0	25.0	0.00	7.0000	0.0385	0.038	1.000	0.00	35.00	4.55
MA	Franklin	25011	0420720	03	0103	30500208	0.0400	0.0000	0.000	50.0	25.0	0.00	0.0400	0.0002	0.000	1.000	0.00	35.00	0.03
MA	Franklin	25011	0420720	06	0105	30500201	0.0000	0.0000	0.000	34.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	06	0205	30500202	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	07	0106	30500202	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	07	0206	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420720	07	0306	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420741	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
MA	Franklin	25011	0420741	01	0201	30500208	5.0000	0.0000	0.027	50.0	25.0	0.00	5.0000	0.0275	0.027	1.000	0.00	35.00	3.25
MA	Franklin	25011	0420741	03	0103	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420741	03	0203	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Franklin	25011	0420741	03	0303	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420063	01	0101	30500201	1.0000	0.0000	0.005	50.0	26.4	0.00	1.2095	0.0066	0.007	1.209	0.00	35.00	0.79
MA	Hampden	25013	0420063	01	0201	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampden	25013	0420063	01	0301	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Hampden	25013	0420063	02	0102	30500202	3.0000	0.0000	0.016	50.0	25.0	0.00	3.6284	0.0199	0.020	1.209	0.00	35.00	2.36
MA	Hampden	25013	0420063	02	0202	30500207	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Hampden	25013	0420063	02	0302	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Hampden	25013	0420077	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420077	01	0201	30500208	1.0000	0.0000	0.005	50.0	25.0	0.00	1.0000	0.0055	0.005	1.000	0.00	35.00	0.65
MA	Hampden	25013	0420077	02	0102	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampden	25013	0420077	03	0103	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420077	03	0203	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	01	0101	30500208	6.0000	0.0000	0.033	50.0	25.0	0.00	6.0000	0.0330	0.033	1.000	0.00	35.00	3.90
MA	Hampden	25013	0420078	01	0201	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Hampden	25013	0420078	01	0301	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	01	0401	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampden	25013	0420078	02	0102	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	02	0202	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampden	25013	0420078	02	0302	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Hampden	25013	0420078	02	0402	30500205	0.0000	0.0000	0.000	50.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	03	0103	30500202	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	03	0203	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	03	0303	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420078	03	0403	30500208	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampden	25013	0420478	01	0101	30500211	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420478	03	0102	30500208	0.2900	0.0000	0.002	50.0	25.0	0.00	0.2900	0.0016	0.002	1.000	0.00	35.00	0.19
MA	Hampden	25013	0420478	03	0202	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420478	03	0302	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420478	04	0103	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420478	05	0104	30500206	0.0000	0.0000	0.000	30.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Hampden	25013	0420565	01	0101	30500201	3.0000	0.0000	0.007	20.0	26.4	0.00	3.6284	0.0080	0.008	1.209	0.00	35.00	2.36
MA	Hampden	25013	0420565	01	0201	30500201	0.0000	0.0000	0.000	20.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420565	02	0102	30500202	0.0000	0.0000	0.000	20.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420565	02	0202	30500203	0.0000	0.0000	0.000	20.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampden	25013	0420565	02	0302	30500204	0.0000	0.0000	0.000	20.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420055	01	0101	30500211	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420055	01	0201	30500208	2.0000	0.0000	0.011	50.0	25.0	0.00	2.0000	0.0110	0.011	1.000	0.00	35.00	1.30
MA	Hampshire	25015	0420055	02	0102	30500202	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420055	02	0202	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420055	02	0302	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420224	01	0101	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420224	01	0201	30500208	2.0000	0.0000	0.007	33.0	25.0	0.00	2.0000	0.0073	0.007	1.000	0.00	35.00	1.30
MA	Hampshire	25015	0420224	02	0102	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Hampshire	25015	0420477	01	0101	30500211	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420477	02	0102	30500202	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420477	02	0202	30500203	0.0000	0.0000	0.000	50.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420477	02	0302	30500204	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Hampshire	25015	0420477	03	0103	30500208	0.0700	0.0000	0.000	25.0	25.0	0.00	0.0700	0.0002	0.000	1.000	0.00	35.00	0.05
MA	Middlesex	25017	1190062	01	0101	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
MA	Middlesex	25017	1190062	01	0201	30500206	5.0000	0.0000	0.018	33.0	27.0	0.00	5.3400	0.0194	0.019	1.068	0.00	35.00	3.47
MA	Middlesex	25017	1190062	01	0301	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190062	01	0401	30500202	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190062	02	0102	30500203	0.0000	0.0000	0.000	33.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190623	01	0101	30500112	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190639	03	0103	30500208	1.0000	0.0000	0.003	25.0	25.0	0.00	1.0000	0.0027	0.003	1.000	0.00	35.00	0.65
MA	Middlesex	25017	1190727	01	0101	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1190727	01	0201	30500207	6.0000	0.0000	0.022	33.0	25.0	0.00	14.6282	0.0530	0.053	2.438	0.00	35.00	9.51
MA	Middlesex	25017	1190727	02	0101	30500205	0.0000	0.0000	0.000	33.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190727	10	0103	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190971	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190971	01	0201	30500207	3.0000	0.0000	0.016	50.0	25.0	0.00	7.3141	0.0402	0.040	2.438	0.00	35.00	4.75
MA	Middlesex	25017	1190971	01	0301	30500208	1.0000	0.0000	0.005	50.0	25.0	0.00	1.0000	0.0055	0.005	1.000	0.00	35.00	0.65
MA	Middlesex	25017	1190972	01	0101	30500201	0.0000	0.0000	0.000	35.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1190972	01	0201	30500206	1.0000	0.0000	0.004	35.0	27.0	0.00	1.0680	0.0041	0.004	1.068	0.00	35.00	0.69
MA	Middlesex	25017	1190972	01	0301	30500208	0.0000	0.0000	0.000	35.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1190972	01	0401	30500204	0.0000	0.0000	0.000	35.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1191596	01	0101	30500211	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1191596	02	0101	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1191704	01	0101	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1191704	01	0201	30500206	3.0000	0.0000	0.011	33.0	27.0	0.00	3.2040	0.0116	0.012	1.068	0.00	35.00	2.08
MA	Middlesex	25017	1191704	01	0301	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1191704	07	0103	30500206	0.0400	0.0000	0.000	25.0	27.0	0.00	0.0427	0.0001	0.000	1.068	0.00	35.00	0.03
MA	Middlesex	25017	1191704	07	0203	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1191860	01	0101	30500206	0.0000	0.0000	0.000	25.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Middlesex	25017	1210018	01	0101	30500201	0.0000	0.0000	0.000	34.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1210018	01	0201	30500207	17.0000	0.0000	0.064	34.0	25.0	0.00	41.4466	0.1549	0.155	2.438	0.00	35.00	26.94
MA	Middlesex	25017	1210018	01	0301	30500206	0.0000	0.0000	0.000	34.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Middlesex	25017	1210018	01	0401	30500208	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1210018	02	0102	30500208	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1210018	02	0202	30500206	0.1895	0.0000	0.001	34.0	27.0	0.00	0.2024	0.0008	0.001	1.068	0.00	35.00	0.13
MA	Middlesex	25017	1210258	01	0101	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1210259	01	0101	30500201	0.0000	0.0000	0.000	36.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1210259	01	0201	30500208	0.0000	0.0000	0.000	36.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1210259	01	0301	30500206	3.0000	0.0000	0.012	36.0	27.0	0.00	3.2040	0.0127	0.013	1.068	0.00	35.00	2.08
MA	Middlesex	25017	1210259	02	0102	30500201	0.0000	0.0000	0.000	38.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Middlesex	25017	1210259	02	0202	30500208	0.0000	0.0000	0.000	38.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1210259	02	0302	30500206	4.0000	0.0000	0.017	38.0	27.0	0.00	4.2720	0.0178	0.018	1.068	0.00	35.00	2.78
MA	Middlesex	25017	1210259	05	0105	30500208	0.0000	0.0000	0.000	13.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Middlesex	25017	1210259	05	0205	30500206	0.1645	0.0000	0.000	13.0	27.0	0.00	0.1757	0.0003	0.000	1.068	0.00	35.00	0.11
MA	Nantucket	25019	1200050	01	0101	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Nantucket	25019	1200050	01	0201	30500205	0.0000	0.0000	0.000	33.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Nantucket	25019	1200285	01	0101	30500201	0.0000	0.0000	0.000	30.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Nantucket	25019	1200285	01	0201	30500208	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Nantucket	25019	1200285	02	0102	30500204	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Nantucket	25019	1200620	01	0101	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Nantucket	25019	1200620	02	0102	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Nantucket	25019	1200620	03	0103	30500201	0.2400	0.0000	0.001	25.0	26.4	0.00	0.2903	0.0008	0.001	1.209	0.00	35.00	0.19
MA	Norfolk	25021	1180359	01	0101	30500201	0.0000	0.0000	0.000	25.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1180359	02	0101	30500206	0.0000	0.0000	0.000	25.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Norfolk	25021	1180359	03	0101	30500202	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190730	01	0101	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
MA	Norfolk	25021	1190797	16	0108	30500111	0.0000	0.0000	0.000	27.0	22.5	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190797	17	0108	30500111	0.0000	0.0000	0.000	28.0	22.5	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190797	19	0108	30500113	0.0000	0.0000	0.000	27.0	20.1	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190797	20	0108	30500113	0.0000	0.0000	0.000	28.0	20.1	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190797	26	0108	30500102	0.0000	0.0000	0.000	28.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1190797	37	0114	30500113	0.0000	0.0000	0.000	28.0	20.1	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191170	03	0303	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191170	04	0104	30500103	0.0000	0.0000	0.000	25.0	27.5	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191851	01	0101	30500208	4.0000	0.0000	0.018	40.0	25.0	0.00	4.0000	0.0176	0.018	1.000	0.00	35.00	2.60
MA	Norfolk	25021	1191851	01	0201	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191851	01	0301	30500204	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191851	02	0102	30500203	0.0000	0.0000	0.000	40.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1191851	07	0104	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1192129	01	0101	30500208	1.0000	0.0000	0.004	33.0	25.0	0.00	1.0000	0.0036	0.004	1.000	0.00	35.00	0.65
MA	Norfolk	25021	1192129	01	0201	30500206	2.0000	0.0000	0.007	33.0	27.0	0.00	2.1360	0.0077	0.008	1.068	0.00	35.00	1.39
MA	Norfolk	25021	1192129	01	0301	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1192129	01	0401	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1192129	02	0102	30500208	1.0000	0.0000	0.004	33.0	25.0	0.00	1.0000	0.0036	0.004	1.000	0.00	35.00	0.65
MA	Norfolk	25021	1192129	02	0202	30500206	2.0000	0.0000	0.007	33.0	27.0	0.00	2.1360	0.0077	0.008	1.068	0.00	35.00	1.39
MA	Norfolk	25021	1192129	02	0302	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1192129	02	0402	30500208	0.0000	0.0000	0.000	33.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1192502	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1192502	01	0201	30500208	1.0000	0.0000	0.005	50.0	25.0	0.00	1.0000	0.0055	0.005	1.000	0.00	35.00	0.65
MA	Norfolk	25021	1192502	01	0301	30500207	4.0000	0.0000	0.022	50.0	25.0	0.00	9.7521	0.0536	0.054	2.438	0.00	35.00	6.34
MA	Norfolk	25021	1192502	02	0102	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1192502	02	0202	30500208	2.0000	0.0000	0.011	50.0	25.0	0.00	2.0000	0.0110	0.011	1.000	0.00	35.00	1.30
MA	Norfolk	25021	1192502	02	0302	30500206	0.0000	0.0000	0.000	50.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Norfolk	25021	1192502	02	0402	30500208	10.0000	0.0000	0.055	50.0	25.0	0.00	10.0000	0.0549	0.055	1.000	0.00	35.00	6.50
MA	Norfolk	25021	1200350	01	0101	30500201	0.0000	0.0000	0.000	34.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1200350	01	0201	30500208	1.0000	0.0000	0.004	34.0	25.0	0.00	1.0000	0.0037	0.004	1.000	0.00	35.00	0.65
MA	Norfolk	25021	1200350	01	0301	30500207	0.0000	0.0000	0.000	34.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Norfolk	25021	1200350	02	0102	30500205	0.0000	0.0000	0.000	38.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1200350	02	0202	30500208	0.0000	0.0000	0.000	38.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1200350	02	0302	30500207	0.0000	0.0000	0.000	38.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Norfolk	25021	1200350	03	0103	30500208	0.0000	0.0000	0.000	30.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1200404	01	0101	30500201	0.0000	0.0000	0.000	25.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1200404	01	0201	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Norfolk	25021	1200404	01	0301	30500207	9.0000	0.0000	0.025	25.0	25.0	0.00	21.9423	0.0603	0.060	2.438	0.00	35.00	14.26
MA	Norfolk	25021	1200404	02	0102	30500205	0.0000	0.0000	0.000	50.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Norfolk	25021	1200404	02	0202	30500208	3.0000	0.0000	0.016	50.0	25.0	0.00	3.0000	0.0165	0.016	1.000	0.00	35.00	1.95
MA	Norfolk	25021	1200404	02	0302	30500207	22.0000	0.0000	0.121	50.0	25.0	0.00	53.6368	0.2947	0.295	2.438	0.00	35.00	34.86
MA	Plymouth	25023	1200049	01	0101	30500205	0.0000	0.0000	0.000	35.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Plymouth	25023	1200049	01	0201	30500208	4.0000	0.0000	0.015	35.0	25.0	0.00	4.0000	0.0154	0.015	1.000	0.00	35.00	2.60
MA	Plymouth	25023	1200049	01	0301	30500206	0.0000	0.0000	0.000	35.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Plymouth	25023	1200049	02	0101	30500202	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Plymouth	25023	1200208	01	0101	30500201	0.0000	0.0000	0.000	50.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Plymouth	25023	1200208	01	0201	30500208	1.0000	0.0000	0.005	50.0	25.0	0.00	1.0000	0.0055	0.005	1.000	0.00	35.00	0.65
MA	Plymouth	25023	1200208	01	0301	30500207	0.0000	0.0000	0.000	50.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Plymouth	25023	1200370	01	0101	30500201	0.0000	0.0000	0.000	35.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Plymouth	25023	1200370	01	0201	30500207	6.0000	0.0000	0.023	35.0	25.0	0.00	14.6282	0.0563	0.056	2.438	0.00	35.00	9.51
MA	Plymouth	25023	1200370	01	0301	30500206	0.0000	0.0000	0.000	35.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Plymouth	25023	1200370	02	0102	30500208	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
MA	Plymouth	25023	1200370	02	0202	30500206	0.0000	0.0000	0.000	25.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Suffolk	25025	1190316	01	0101	30500206	4.0000	0.0000	0.012	27.0	27.0	0.00	4.2720	0.0127	0.013	1.068	0.00	35.00	2.78
MA	Suffolk	25025	1190316	01	0201	30500208	0.0000	0.0000	0.000	27.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Suffolk	25025	1190316	01	0301	30500204	0.0000	0.0000	0.000	27.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	01	0401	30500201	0.0000	0.0000	0.000	27.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	01	0501	30500202	0.0000	0.0000	0.000	27.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	02	0202	30500201	0.0000	0.0000	0.000	25.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	02	0302	30500202	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	02	0402	30500202	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Suffolk	25025	1190316	02	0502	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180012	01	0101	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180012	01	0201	30500208	1.0000	0.0000	0.004	40.0	25.0	0.00	1.0000	0.0044	0.004	1.000	0.00	35.00	0.65
MA	Worcester	25027	1180057	01	0101	30500205	0.0000	0.0000	0.000	40.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	01	0201	30500208	2.0000	0.0000	0.009	40.0	25.0	0.00	2.0000	0.0088	0.009	1.000	0.00	35.00	1.30
MA	Worcester	25027	1180057	01	0301	30500206	0.0000	0.0000	0.000	40.0	27.0	0.00	0.0000	0.0000	0.000	1.068	0.00	35.00	0.00
MA	Worcester	25027	1180057	02	0102	30500205	0.0000	0.0000	0.000	30.0	25.2	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	02	0202	30500208	2.0000	0.0000	0.007	30.0	25.0	0.00	2.0000	0.0066	0.007	1.000	0.00	35.00	1.30
MA	Worcester	25027	1180057	02	0302	30500206	1.0000	0.0000	0.003	30.0	27.0	0.00	1.0680	0.0035	0.004	1.068	0.00	35.00	0.69
MA	Worcester	25027	1180057	05	0103	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	06	0103	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	07	0103	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	08	0103	30500203	0.0000	0.0000	0.000	25.0	27.9	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180057	09	0103	30500208	0.2710	0.0000	0.001	30.0	25.0	0.00	0.2710	0.0009	0.001	1.000	0.00	35.00	0.18
MA	Worcester	25027	1180067	01	0101	30500201	0.0000	0.0000	0.000	30.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180067	01	0201	30500207	2.0000	0.0000	0.007	30.0	25.0	0.00	4.8761	0.0161	0.016	2.438	0.00	35.00	3.17
MA	Worcester	25027	1180136	01	0201	30500201	0.0000	0.0000	0.000	30.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180140	01	0201	30500201	0.0000	0.0000	0.000	30.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180140	02	0102	30500199	0.0000	0.0000	0.000	25.0	26.3	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180159	01	0101	30500201	0.0000	0.0000	0.000	33.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180161	01	0101	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180161	01	0201	30500208	3.0000	0.0000	0.013	40.0	25.0	0.00	3.0000	0.0132	0.013	1.000	0.00	35.00	1.95
MA	Worcester	25027	1180213	02	0102	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180213	03	0102	30500205	2.0000	0.0000	0.009	40.0	25.2	0.00	2.4189	0.0106	0.011	1.209	0.00	35.00	1.57
MA	Worcester	25027	1180213	03	0202	30500205	0.0900	0.0000	0.000	40.0	25.2	0.00	0.1089	0.0005	0.000	1.209	0.00	35.00	0.07
MA	Worcester	25027	1180213	04	0103	30500208	0.2360	0.0000	0.001	40.0	25.0	0.00	0.2360	0.0010	0.001	1.000	0.00	35.00	0.15
MA	Worcester	25027	1180296	01	0101	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180296	01	0201	30500207	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Worcester	25027	1180296	01	0301	30500208	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Worcester	25027	1180296	01	0401	30500207	18.0000	0.0000	0.079	40.0	25.0	0.00	43.8847	0.1929	0.193	2.438	0.00	35.00	28.53
MA	Worcester	25027	1180296	02	0102	30500201	0.0000	0.0000	0.000	40.0	26.4	0.00	0.0000	0.0000	0.000	1.209	0.00	35.00	0.00
MA	Worcester	25027	1180296	02	0202	30500207	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	2.438	0.00	35.00	0.00
MA	Worcester	25027	1180296	02	0302	30500208	0.0000	0.0000	0.000	40.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
MA	Worcester	25027	1180306	01	0101	30500201	5.0000	0.0000	0.033	60.0	26.4	0.00	6.0474	0.0399	0.040	1.209	0.00	35.00	3.93
MA	Worcester	25027	1180306	01	0201	30500208	0.0000	0.0000	0.000	60.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	35.00	0.00
NJ	Atlantic	34001	70003	U101	OS1	30500207	0.8700	0.0033	0.003	32.0	25.0	0.00	2.1211	0.0080	0.008	2.438	0.00	35.00	1.38
NJ	Atlantic	34001	70003	U101	OS2	30500207	0.7900	0.0120	0.012	32.0	25.0	0.00	1.9260	0.0293	0.029	2.438	0.00	35.00	1.25
NJ	Atlantic	34001	70003	U12	OS0	30500207	0.1200	0.0005	0.001		25.0	0.00	0.2926	0.0012	0.001	2.438	0.00	35.00	0.19
NJ	Atlantic	34001	70003	U13	OS0	30500207	0.2900	0.0007	0.001		25.0	0.00	0.7070	0.0017	0.002	2.438	0.00	35.00	0.46
NJ	Atlantic	34001	70003	U6	OS1	30500207	1.4600	0.0093	0.009	34.0	25.0	0.00	3.5595	0.0227	0.023	2.438	0.00	35.00	2.31
NJ	Atlantic	34001	70003	U901	OS1	27000320	0.7100	0.0033	0.003	31.0	25.0	0.00	0.7175	0.0033	0.003	1.011	0.00	35.00	0.47
NJ	Atlantic	34001	70015	IS1	OS0	39999991	0.0900	0.0002	0.000	15.0	25.0	0.00	0.1303	0.0003	0.000	1.448	0.00	35.00	0.08
NJ	Atlantic	34001	70015	U22	OS2	20200101	0.7200	0.0090	0.009	30.0	25.5	0.00	0.7276	0.0091	0.009	1.011	0.00	35.00	0.47

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
NJ	Atlantic	34001	70015	U22	OS4	20200101	0.2400	0.0041	0.004	30.0	25.5	0.00	0.2425	0.0041	0.004	1.011	0.00	35.00	0.16
NJ	Atlantic	34001	70015	U401	OS1601	30500207	7.3400	0.0367	0.037	29.0	25.0	0.00	17.8952	0.0895	0.089	2.438	0.00	35.00	11.63
NJ	Atlantic	34001	70015	U401	OS2101	30500207	0.1000	0.0004	0.000	29.0	25.0	0.00	0.2438	0.0010	0.001	2.438	0.00	35.00	0.16
NJ	Atlantic	34001	70015	U401	OS401	30500207	0.3300	0.0165	0.017	15.0	25.0	0.00	0.8046	0.0402	0.040	2.438	0.00	35.00	0.52
NJ	Camden	34007	50373	IS1	OS0	39999991	0.3700	0.0022	0.002	25.0	25.0	0.00	0.5358	0.0032	0.003	1.448	0.00	35.00	0.35
NJ	Camden	34007	50373	IS2	OS0	39999991	0.2400	0.0014	0.001	25.0	25.0	0.00	0.3475	0.0020	0.002	1.448	0.00	35.00	0.23
NJ	Camden	34007	50373	U11	OS1	30500207	1.0000	0.0222	0.022	6.0	25.0	0.00	2.4380	0.0541	0.054	2.438	0.00	35.00	1.58
NJ	Camden	34007	50373	U13	OS8	30502501	0.1300	0.0000	0.000	0.0	25.0	0.00	0.1562	0.0004	0.000	1.201	0.00	35.00	0.10
NJ	Camden	34007	50373	U6	OS1	30500207	9.1200	0.0647	0.065	30.0	25.0	0.00	22.2349	0.1577	0.158	2.438	0.00	35.00	14.45
NJ	Camden	34007	50580	U8	OS1	10200502	0.3200	0.0012	0.001	33.0	25.0	0.00	0.3234	0.0012	0.001	1.011	0.00	35.00	0.21
NJ	Camden	34007	50580	U8	OS2	10200502	0.4200	0.0012	0.001	25.0	25.0	0.00	0.4244	0.0012	0.001	1.011	0.00	35.00	0.28
NJ	Camden	34007	50580	U8	OS5	10200502	1.6800	0.0062	0.006	33.0	25.0	0.00	1.6977	0.0063	0.006	1.011	0.00	35.00	1.10
NJ	Camden	34007	50580	U8	OS6	10200502	0.1100	0.0003	0.000	25.0	25.0	0.00	0.1112	0.0003	0.000	1.011	0.00	35.00	0.07
NJ	Camden	34007	50580	U8	OS7	10200502	1.6800	0.0062	0.006	33.0	25.0	0.00	1.6977	0.0063	0.006	1.011	0.00	35.00	1.10
NJ	Cape May	34009	73014	U9	OS3	30500207	1.0100	0.0100	0.010	29.0	25.0	0.00	2.4624	0.0244	0.024	2.438	0.00	35.00	1.60
NJ	Cape May	34009	73014	U9	OS7	30500207	0.5800	0.0100	0.010	29.0	25.0	0.00	1.4141	0.0244	0.024	2.438	0.00	35.00	0.92
NJ	Essex	34013	05005	IS1	OS0	39999991	0.0700	0.0000	0.000	10.0	25.0	0.00	0.1014	0.0001	0.000	1.448	0.00	35.00	0.07
NJ	Essex	34013	05005	IS2	OS0	39999991	0.2000	0.0000	0.000	10.0	25.0	0.00	0.2896	0.0003	0.000	1.448	0.00	35.00	0.19
NJ	Essex	34013	05005	U2	OS1	30500207	2.8200	0.0170	0.017	30.0	25.0	0.00	6.8753	0.0414	0.041	2.438	0.00	35.00	4.47
NJ	Gloucester	34015	55261	U4	OS1	30500207	7.8400	0.0475	0.048	34.0	25.0	0.00	19.1142	0.1158	0.116	2.438	0.00	35.00	12.42
NJ	Hudson	34017	11171	U1	OS2	39999991	0.1600	0.0008	0.001	33.0	25.0	0.00	0.2317	0.0012	0.001	1.448	0.00	35.00	0.15
NJ	Hudson	34017	11171	U2	OS1	30500207	4.7800	0.0179	0.018	33.0	25.0	0.00	11.6538	0.0436	0.044	2.438	0.00	35.00	7.57
NJ	Hudson	34017	11171	U6	OS1	10300602	0.1200	0.0004	0.000	33.0	22.5	0.00	0.1213	0.0004	0.000	1.011	0.00	35.00	0.08
NJ	Hudson	34017	12197	U17	OS1	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS10	30500107	0.5000	0.0002	0.000	25.0	25.0	0.00	0.5557	0.0002	0.000	1.111	0.00	35.00	0.36
NJ	Hudson	34017	12197	U17	OS2	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS3	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS5	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS6	30500107	0.5000	0.0002	0.000	25.0	25.0	0.00	0.5557	0.0002	0.000	1.111	0.00	35.00	0.36
NJ	Hudson	34017	12197	U17	OS7	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS8	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U17	OS9	30500107	0.0500	0.0002	0.000	25.0	25.0	0.00	0.0556	0.0002	0.000	1.111	0.00	35.00	0.04
NJ	Hudson	34017	12197	U32	OS1	30500107	0.4100	0.0012	0.001	25.0	25.0	0.00	0.4557	0.0013	0.001	1.111	0.00	35.00	0.30
NJ	Hudson	34017	12197	U33	OS1	30500107	0.4100	0.0012	0.001	25.0	25.0	0.00	0.4557	0.0013	0.001	1.111	0.00	35.00	0.30
NJ	Hudson	34017	12197	U33	OS2	30500107	0.4100	0.0012	0.001	25.0	25.0	0.00	0.4557	0.0013	0.001	1.111	0.00	35.00	0.30
NJ	Hudson	34017	12197	U36	OS1	30500107	0.3500	0.0010	0.001	25.0	25.0	0.00	0.3890	0.0011	0.001	1.111	0.00	35.00	0.25
NJ	Hudson	34017	12197	U37	OS2	30500107	0.4100	0.0012	0.001	25.0	25.0	0.00	0.4557	0.0013	0.001	1.111	0.00	35.00	0.30
NJ	Hudson	34017	12197	U39	OS1	30500107	0.3500	0.0010	0.001	25.0	25.0	0.00	0.3890	0.0011	0.001	1.111	0.00	35.00	0.25
NJ	Hudson	34017	12197	U40	OS1	30500107	0.3500	0.0010	0.001	25.0	25.0	0.00	0.3890	0.0011	0.001	1.111	0.00	35.00	0.25
NJ	Hudson	34017	12197	U41	OS1	30500107	0.3500	0.0010	0.001	25.0	25.0	0.00	0.3890	0.0011	0.001	1.111	0.00	35.00	0.25
NJ	Hudson	34017	12197	U84	OS1	30500107	0.6000	0.0018	0.002	25.0	25.0	0.00	0.6668	0.0020	0.002	1.111	0.00	35.00	0.43
NJ	Mercer	34021	60031	U6	OS1	30500207	3.7300	0.0206	0.021	27.0	25.0	0.00	9.0939	0.0502	0.050	2.438	0.00	35.00	5.91
NJ	Middlesex	34023	15129	IS3	OS0	39999991	0.0300	0.0001	0.000	30.0	25.0	0.00	0.0434	0.0001	0.000	1.448	0.00	35.00	0.03
NJ	Middlesex	34023	15129	U7	OS1	30500207	2.0600	0.0118	0.012	30.0	25.0	0.00	5.0224	0.0288	0.029	2.438	0.00	35.00	3.26
NJ	Middlesex	34023	15524	IS1	OS0	39999991	0.0800	0.0002	0.000	24.0	25.0	0.00	0.1158	0.0003	0.000	1.448	0.00	35.00	0.08
NJ	Middlesex	34023	15524	IS2	OS0	39999991	0.2600	0.0010	0.001	22.0	25.0	0.00	0.3765	0.0014	0.001	1.448	0.00	35.00	0.24
NJ	Middlesex	34023	15524	U21	OS1	10300602	0.0800	0.0002	0.000	24.0	22.5	0.00	0.0808	0.0002	0.000	1.011	0.00	35.00	0.05
NJ	Middlesex	34023	15524	U23	OS1	30590003	0.1600	0.0004	0.000	24.0	25.0	0.00	0.1750	0.0004	0.000	1.094	0.00	35.00	0.11
NJ	Middlesex	34023	15524	U25	OS1	30590001	0.2100	0.0007	0.001	22.0	25.0	0.00	0.2220	0.0007	0.001	1.057	0.00	35.00	0.14
NJ	Middlesex	34023	15524	U25	OS2	30590001	0.2100	0.0007	0.001	22.0	25.0	0.00	0.2220	0.0007	0.001	1.057	0.00	35.00	0.14
NJ	Middlesex	34023	15524	U3	OS62	30590013	1.3100	0.0034	0.003	24.0	25.0	0.00	1.4327	0.0037	0.004	1.094	0.00	35.00	0.93
NJ	Monmouth	34025	20022	U1	OS1	30500207	14.2700	0.0671	0.067	27.0	25.0	0.00	34.7908	0.1636	0.164	2.438	0.00	35.00	22.61

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
NJ	Monmouth	34025	20023	IS100	OS0	39999991	0.0700	0.0002	0.000	25.0	25.0	0.00	0.1014	0.0003	0.000	1.448	0.00	35.00	0.07
NJ	Monmouth	34025	20023	U1800	OS0	39999991	1.8500	0.0158	0.016	32.0	25.0	0.00	2.6790	0.0229	0.023	1.448	0.00	35.00	1.74
NJ	Monmouth	34025	20023	U2	OS1	30500207	2.6400	0.0146	0.015	32.0	25.0	0.00	6.4364	0.0356	0.036	2.438	0.00	35.00	4.18
NJ	Monmouth	34025	20025	U20	OS1	10200602	0.1700	0.0008	0.001	33.0	24.6	0.00	0.1793	0.0008	0.001	1.055	0.00	35.00	0.12
NJ	Monmouth	34025	20025	U21	OS1	10200602	0.1700	0.0008	0.001	27.0	24.6	0.00	0.1793	0.0008	0.001	1.055	0.00	35.00	0.12
NJ	Monmouth	34025	20025	U26	OS1	30500207	4.3300	0.0204	0.020	33.0	25.0	0.00	10.5567	0.0497	0.050	2.438	0.00	35.00	6.86
NJ	Monmouth	34025	20025	U3	OS2	30500207	4.1500	0.0195	0.020	27.0	25.0	0.00	10.1179	0.0475	0.048	2.438	0.00	35.00	6.58
NJ	Morris	34027	25009	IS1	OS0	39999991	0.0200	0.0001	0.000	25.0	25.0	0.00	0.0290	0.0001	0.000	1.448	0.00	35.00	0.02
NJ	Morris	34027	25009	IS2	OS0	39999991	0.1000	0.0000	0.000	10.0	25.0	0.00	0.1448	0.0002	0.000	1.448	0.00	35.00	0.09
NJ	Morris	34027	25009	U13	OS1	30500207	2.2000	0.0177	0.018	30.0	25.0	0.00	5.3637	0.0432	0.043	2.438	0.00	35.00	3.49
NJ	Morris	34027	25009	U2	OS1	30500207	2.1200	0.0077	0.008	30.0	25.0	0.00	5.1686	0.0188	0.019	2.438	0.00	35.00	3.36
NJ	Morris	34027	25268	U100	OS101	30500207	2.5800	0.0130	0.013	28.0	25.0	0.00	6.2901	0.0317	0.032	2.438	0.00	35.00	4.09
NJ	Morris	34027	25268	U1601	OS1601	30500207	2.7000	0.0244	0.024	35.0	25.0	0.00	6.5827	0.0595	0.059	2.438	0.00	35.00	4.28
NJ	Morris	34027	25268	U1601	OS1602	30500207	2.6600	0.0244	0.024	35.0	25.0	0.00	6.4852	0.0595	0.059	2.438	0.00	35.00	4.22
NJ	Ocean	34029	78010	IS1	OS0	39999991	0.0100	0.0000	0.000	25.0	25.0	0.00	0.0145	0.0000	0.000	1.448	0.00	35.00	0.01
NJ	Ocean	34029	78010	U1500	OS1501	30500207	0.0400	0.0001	0.000	25.0	25.0	0.00	0.0975	0.0002	0.000	2.438	0.00	35.00	0.06
NJ	Ocean	34029	78010	U1500	OS1502	30500207	0.0400	0.0001	0.000	25.0	25.0	0.00	0.0975	0.0002	0.000	2.438	0.00	35.00	0.06
NJ	Ocean	34029	78010	U1601	OS1601	30500207	5.7100	0.0326	0.033	34.0	25.0	0.00	13.9212	0.0795	0.079	2.438	0.00	35.00	9.05
NJ	Ocean	34029	78010	U1700	OS0	39999991	0.2700	0.0043	0.004	28.0	25.0	0.00	0.3910	0.0062	0.006	1.448	0.00	35.00	0.25
NJ	Ocean	34029	78010	U900	OS1	30500207	1.4000	0.0175	0.018	31.0	25.0	0.00	3.4133	0.0427	0.043	2.438	0.00	35.00	2.22
NJ	Ocean	34029	78012	U101	OS1	30500207	1.3600	0.0064	0.006	27.0	25.0	0.00	3.3157	0.0156	0.016	2.438	0.00	35.00	2.16
NJ	Ocean	34029	78014	IS2	OS0	10500205	0.0400	0.0001	0.000		25.0	0.00	0.0429	0.0001	0.000	1.073	0.00	35.00	0.03
NJ	Ocean	34029	78014	U2	OS1	30500207	2.8200	0.0186	0.019		25.0	0.00	6.8753	0.0453	0.045	2.438	0.00	35.00	4.47
NJ	Passaic	34031	30005	U100	OS113	30500207	2.7600	0.0142	0.014	28.0	25.0	0.00	6.7290	0.0346	0.035	2.438	0.00	35.00	4.37
NJ	Passaic	34031	30005	U2300	OS2301	30500207	4.6000	0.0456	0.046	32.0	25.0	0.00	11.2150	0.1112	0.111	2.438	0.00	35.00	7.29
NJ	Passaic	34031	30005	U2300	OS2332	30500207	3.3500	0.0456	0.046	32.0	25.0	0.00	8.1674	0.1112	0.111	2.438	0.00	35.00	5.31
NJ	Passaic	34031	30085	IS1	OS0	39999991	0.0700	0.0001	0.000	15.0	25.0	0.00	0.1014	0.0001	0.000	1.448	0.00	35.00	0.07
NJ	Passaic	34031	30085	U100	OS201	30500207	1.1800	0.0084	0.008	30.0	25.0	0.00	2.8769	0.0205	0.020	2.438	0.00	35.00	1.87
NJ	Passaic	34031	30085	U100	OS203	39999991	0.6600	0.0084	0.008	30.0	25.0	0.00	0.9557	0.0122	0.012	1.448	0.00	35.00	0.62
NJ	Passaic	34031	30085	U100	OS901	30500207	0.2400	0.0224	0.022	31.0	25.0	0.00	0.5851	0.0546	0.055	2.438	0.00	35.00	0.38
NJ	Passaic	34031	30085	U100	OS903	30500207	3.1100	0.0224	0.022	31.0	25.0	0.00	7.5823	0.0546	0.055	2.438	0.00	35.00	4.93
NJ	Passaic	34031	30085	U2000	OS2008	20200101	0.1000	0.0010	0.001	32.0	25.5	0.00	0.1011	0.0010	0.001	1.011	0.00	35.00	0.07
NJ	Somerset	34035	35014	U100	OS113	30500207	10.2800	0.1379	0.138	27.0	25.0	0.00	25.0630	0.3362	0.336	2.438	0.00	35.00	16.29
NJ	Somerset	34035	35014	U100	OS2301	30500207	10.4600	0.0863	0.086	32.0	25.0	0.00	25.5019	0.2104	0.210	2.438	0.00	35.00	16.58
NJ	Somerset	34035	35327	U9	OS13	30500107	1.6000	0.0079	0.008	32.0	25.0	0.00	1.7782	0.0088	0.009	1.111	0.00	35.00	1.16
NJ	Somerset	34035	35884	U105	OS163	30500107	0.6200	0.0028	0.003	25.0	25.0	0.00	0.6890	0.0031	0.003	1.111	0.00	35.00	0.45
NJ	Somerset	34035	35884	U108	OS1081	30500107	0.1000	0.0123	0.012	25.0	25.0	0.00	0.1111	0.0137	0.014	1.111	0.00	35.00	0.07
NJ	Somerset	34035	35884	U109	OS1091	30500107	8.6700	0.0397	0.040	25.0	25.0	0.00	9.6355	0.0441	0.044	1.111	0.00	35.00	6.26
NJ	Somerset	34035	35884	U132	OS132	30500107	0.0800	0.0072	0.007	28.0	25.0	0.00	0.0889	0.0080	0.008	1.111	0.00	35.00	0.06
NJ	Somerset	34035	35884	U34	OS341	30500107	1.9200	0.0075	0.008	25.0	25.0	0.00	2.1338	0.0083	0.008	1.111	0.00	35.00	1.39
NJ	Somerset	34035	35884	U78	OS78	30500107	3.6800	0.0202	0.020	25.0	25.0	0.00	4.0898	0.0224	0.022	1.111	0.00	35.00	2.66
NJ	Somerset	34035	35884	U78	OS781	30500107	3.9400	0.0216	0.022	25.0	25.0	0.00	4.3788	0.0240	0.024	1.111	0.00	35.00	2.85
NJ	Somerset	34035	35884	U79	OS79	30500107	0.3100	0.0017	0.002	25.0	25.0	0.00	0.3445	0.0019	0.002	1.111	0.00	35.00	0.22
NJ	Somerset	34035	35884	U79	OS791	30500107	0.0000	0.0000	0.000	25.0	25.0	0.00	0.0000	0.0000	0.000	1.111	0.00	35.00	0.00
NJ	Somerset	34035	36009	U1000	OS1201	30500207	2.6700	0.0149	0.015	30.0	25.0	0.00	6.5096	0.0363	0.036	2.438	0.00	35.00	4.23
NJ	Somerset	34035	36009	U1000	OS1202	30500207	0.3000	0.0149	0.015	30.0	25.0	0.00	0.7314	0.0363	0.036	2.438	0.00	35.00	0.48
NJ	Somerset	34035	36009	U1000	OS1301	30500207	8.9200	0.0396	0.040	30.0	25.0	0.00	21.7473	0.0965	0.097	2.438	0.00	35.00	14.14
NJ	Somerset	34035	36009	U1000	OS1401	30500207	2.6100	0.0116	0.012	30.0	25.0	0.00	6.3633	0.0283	0.028	2.438	0.00	35.00	4.14
NJ	Sussex	34037	83008	U4	OS1	30500207	3.2800	0.0158	0.016	30.0	25.0	0.00	7.9968	0.0385	0.039	2.438	0.00	35.00	5.20
NY	Queens	36081	2630200138	D00001	P01FP	30500251	4.1505	0.0000	0.011		25.0	0.00	5.1271	0.0141	0.014	1.235	0.00	35.00	3.33
NY	Richmond	36085	2640300031	3ADRYR	302FP	30500251	6.9500	0.0000	0.019		25.0	0.00	8.5853	0.0236	0.024	1.235	0.00	35.00	5.58
NY	Westchester	36119	3550800247	1ENGIN	006FP	20200102	0.4516	0.0000	0.001		25.8	0.00	0.3788	0.0013	0.001	1.011	0.00	35.00	0.25

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)
NY	Westchester	36119	3550800247	1MIXER	001FP	30500205	3.3930	0.0000	0.009		25.2	0.00	4.1914	0.0116	0.012	1.235	0.00	35.00	2.72
PA	Allegheny	42003	4200300002	002	1	10100602	0.9140	0.0000	0.004	36.0	24.0	0.00	1.0149	0.0040	0.004	1.110	0.00	35.00	0.66
PA	Allegheny	42003	4200300002	003	1	10200104	21.9621	0.0011	0.001	36.0	25.0	0.00	23.0985	0.0012	0.001	1.052	0.00	35.00	15.01
PA	Allegheny	42003	4200300002	004	1	30500202	2.6036	0.0003	0.000	36.0	25.0	0.00	2.9128	0.0003	0.000	1.119	0.00	35.00	1.89
PA	Allegheny	42003	4200300079	001	2	30500255	0.6606	0.0036	0.004	35.0	25.0	0.00	0.7391	0.0040	0.004	1.119	0.00	35.00	0.48
PA	Allegheny	42003	4200300079	001	4	30500206	0.1565	0.0008	0.001	35.0	27.0	0.00	0.1671	0.0009	0.001	1.068	0.00	35.00	0.11
PA	Allegheny	42003	4200300079	016	1	20300101	16.6880	0.0770	0.077	30.0	25.0	0.00	14.8631	0.0826	0.083	1.073	0.00	35.00	9.66
PA	Allegheny	42003	4200300139	001	1	30500201	4.4996	0.0259	0.026	53.0	26.4	0.00	5.0340	0.0290	0.029	1.119	0.00	35.00	3.27
PA	Allegheny	42003	4200300139	009	1	27000320	3.2228	0.0119	0.012	34.0	25.0	0.00	3.2567	0.0120	0.012	1.011	0.00	35.00	2.12
PA	Allegheny	42003	4200300139	012	1	10100602	0.0252	0.0001	0.000	25.0	24.0	0.00	0.0280	0.0001	0.000	1.110	0.00	35.00	0.02
PA	Allegheny	42003	4200300163	001	2	30500201	0.5785	0.0039	0.004	44.0	26.4	0.00	0.6472	0.0044	0.004	1.119	0.00	35.00	0.42
PA	Allegheny	42003	4200300163	002	1	30590001	0.0100	0.0000	0.000	40.0	25.0	0.00	0.0106	0.0000	0.000	1.057	0.00	35.00	0.01
PA	Allegheny	42003	4200300163	003	1	20100102	0.9750	0.0066	0.007	44.0	24.1	0.00	1.7440	0.0142	0.014	2.155	0.00	35.00	1.13
PA	Allegheny	42003	4200300163	004	2	20300101	1.5100	0.0102	0.010	44.0	25.0	0.00	1.3449	0.0109	0.011	1.073	0.00	35.00	0.87
PA	Allegheny	42003	4200300180	001	1	30500201	1.0350	0.0001	0.000	63.0	26.4	0.00	1.1579	0.0001	0.000	1.119	0.00	35.00	0.75
PA	Allegheny	42003	4200300180	002	1	30500208	0.1843	0.0013	0.001	63.0	25.0	0.00	0.1843	0.0013	0.001	1.000	0.00	35.00	0.12
PA	Allegheny	42003	4200300180	002	2	30500208	0.1238	0.0008	0.001	63.0	25.0	0.00	0.1238	0.0008	0.001	1.000	0.00	35.00	0.08
PA	Allegheny	42003	4200300180	009	1	27000320	1.0553	0.0102	0.010	63.0	25.0	0.00	1.0664	0.0103	0.010	1.011	0.00	35.00	0.69
PA	Allegheny	42003	4200300196	001	1	10200603	1.1601	0.0082	0.008	49.0	23.4	0.00	1.2234	0.0086	0.009	1.055	0.00	35.00	0.80
PA	Allegheny	42003	4200300196	002	1	10200104	26.4070	0.0019	0.002	49.0	25.0	0.00	27.7734	0.0020	0.002	1.052	0.00	35.00	18.05
PA	Allegheny	42003	4200300196	005	1	10200603	0.0000	0.0000	0.000	49.0	23.4	0.00	0.0000	0.0000	0.000	1.055	0.00	35.00	0.00
PA	Allegheny	42003	4200300199	008	1	30500255	3.9794	0.0160	0.016	37.0	25.0	0.00	4.4520	0.0179	0.018	1.119	0.00	35.00	2.89
PA	Allegheny	42003	4200300199	011	1	10100602	0.0250	0.0000	0.000	32.0	24.0	0.00	0.0278	0.0001	0.000	1.110	0.00	35.00	0.02
PA	Allegheny	42003	4200300199	013	1	27000320	4.9052	0.0176	0.018	33.0	25.0	0.00	4.9567	0.0178	0.018	1.011	0.00	35.00	3.22
PA	Allegheny	42003	4200300339	001	1	10200602	0.0000	0.0000	0.000	25.0	24.6	0.00	0.0000	0.0000	0.000	1.055	0.00	35.00	0.00
PA	Allegheny	42003	4200300339	001	2	10200501	0.0000	0.0000	0.000	25.0	23.4	0.00	0.0000	0.0000	0.000	1.011	0.00	35.00	0.00
PA	Allegheny	42003	4200300339	002	1	10100602	0.7000	0.0030	0.003	40.0	24.0	0.00	0.7773	0.0033	0.003	1.110	0.00	35.00	0.51
PA	Allegheny	42003	4200300339	002	2	10200501	0.0000	0.0000	0.000	40.0	23.4	0.00	0.0000	0.0000	0.000	1.011	0.00	35.00	0.00
PA	Berks	42011	420110355	101	1	30500201	6.9800	0.0000	0.027	35.0	26.4	0.00	7.8090	0.0300	0.030	1.119	0.00	35.00	5.08
PA	Berks	42011	420110355	102	1	30500205	2.1100	0.0000	0.012	50.0	25.2	0.00	2.3606	0.0130	0.013	1.119	0.00	35.00	1.53
PA	Berks	42011	420110355	102	2	39000689	2.1100	0.0000	0.006	0.0	25.0	0.00	2.2252	0.0061	0.006	1.055	0.00	35.00	1.45
PA	Berks	42011	420110355	102	3	39000599	2.1100	0.0000	0.006	25.0	25.0	0.00	2.1322	0.0059	0.006	1.011	0.00	35.00	1.39
PA	Berks	42011	420110355	102	4	39001399	2.1100	0.0000	0.010	43.0	25.0	0.00	2.4249	0.0115	0.011	1.149	0.00	35.00	1.58
PA	Bucks	42017	420170014	105	1	30500201	16.8700	0.0000	0.059	32.0	26.4	0.00	18.8736	0.0664	0.066	1.119	0.00	35.00	12.27
PA	Bucks	42017	420170023	106	2	30500201	5.5100	0.0000	0.012	19.0	26.4	0.00	6.1644	0.0129	0.013	1.119	0.00	35.00	4.01
PA	Bucks	42017	420170023	118	2	30500205	0.8100	0.0000	0.002	22.0	25.2	0.00	0.9062	0.0022	0.002	1.119	0.00	35.00	0.59
PA	Bucks	42017	420170024	101	1	30500201	4.2700	0.0000	0.013	28.0	26.4	0.00	4.7771	0.0147	0.015	1.119	0.00	35.00	3.11
PA	Bucks	42017	420170026	100	1	30500201	1.9900	0.0000	0.010	44.0	26.4	0.00	2.2263	0.0108	0.011	1.119	0.00	35.00	1.45
PA	Bucks	42017	420170030	113	1	30500205	0.6050	0.0000	0.002	34.0	25.2	0.00	0.6769	0.0025	0.003	1.119	0.00	35.00	0.44
PA	Bucks	42017	420170030	401	1	30500201	1.2600	0.0000	0.005	34.0	26.4	0.00	1.4096	0.0053	0.005	1.119	0.00	35.00	0.92
PA	Bucks	42017	420170030	402	1	30500201	1.2600	0.0000	0.005	34.0	26.4	0.00	1.4096	0.0053	0.005	1.119	0.00	35.00	0.92
PA	Bucks	42017	420170052	107	1	30500201	1.6400	0.0000	0.006	31.0	26.4	0.00	1.8348	0.0063	0.006	1.119	0.00	35.00	1.19
PA	Bucks	42017	420170052	108	1	30500201	1.6400	0.0000	0.006	31.0	26.4	0.00	1.8348	0.0063	0.006	1.119	0.00	35.00	1.19
PA	Chester	42029	420290049	120	1	30500205	1.8700	0.0000	0.010	48.0	25.2	0.00	2.0921	0.0110	0.011	1.119	0.00	35.00	1.36
PA	Chester	42029	420290872	101	1	30500201	1.9100	0.0000	0.006	28.0	26.4	0.00	2.1368	0.0066	0.007	1.119	0.00	35.00	1.39
PA	Chester	42029	420290873	101	1	30500201	3.5300	0.0000	0.013	34.0	26.4	0.00	3.9493	0.0148	0.015	1.119	0.00	35.00	2.57
PA	Delaware	42045	420450028	127	1	30500201	6.0310	0.0000	0.022	33.0	26.4	0.00	6.7473	0.0245	0.024	1.119	0.00	35.00	4.39
PA	Delaware	42045	420450848	101	1	30500205	0.5400	0.0000	0.003	44.0	25.2	0.00	0.6041	0.0029	0.003	1.119	0.00	35.00	0.39
PA	Erie	42049	420490002	101A	1	30500201	0.0002	0.0000	0.000	22.0	26.4	0.00	0.0002	0.0000	0.000	1.119	0.00	35.00	0.00
PA	Lackawanna	42069	420690676	301	2	30500201	0.3283	0.0000	0.002	54.0	26.4	0.00	0.3673	0.0022	0.002	1.119	0.00	35.00	0.24
PA	Lawrence	42073	420730034	101	1	30500201	0.7380	0.0000	0.003	41.0	26.4	0.00	0.8257	0.0037	0.004	1.119	0.00	35.00	0.54
PA	Lawrence	42073	420730034	101	2	30500201	0.0820	0.0000	0.000	41.0	26.4	0.00	0.0917	0.0004	0.000	1.119	0.00	35.00	0.06

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	2009 NOx OTB/OTW Emissions Annual (tpy)	2009 NOx OTB/OTW Emissions Summer Day from Inventory (tpd)	2009 NOx OTB/OTW Emissions Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	2009 BOTW Annual (tpy)
PA	Mercer	42085	420850001	201	1	30500252	0.1950	0.0000	0.001	55.0	25.0	0.00	0.2182	0.0013	0.001	1.119	0.00	35.00	0.14
PA	Mercer	42085	420850001	201	2	30500252	0.1950	0.0000	0.001	55.0	25.0	0.00	0.2182	0.0013	0.001	1.119	0.00	35.00	0.14
PA	Mercer	42085	420850001	202	1	30500252	0.5550	0.0000	0.003	42.0	25.0	0.00	0.6209	0.0029	0.003	1.119	0.00	35.00	0.40
PA	Mercer	42085	420850001	202	2	30500252	0.5550	0.0000	0.003	42.0	25.0	0.00	0.6209	0.0029	0.003	1.119	0.00	35.00	0.40
PA	Monroe	42089	420890013	101	1	30500201	2.4500	0.0000	0.012	44.0	26.4	0.00	2.7410	0.0133	0.013	1.119	0.00	35.00	1.78
PA	Montgomery	42091	420910013	110	1	30500201	9.5700	0.0000	0.028	0.0	26.4	0.00	10.7066	0.0311	0.031	1.119	0.00	35.00	6.96
PA	Montgomery	42091	420910023	101	1	30500201	1.2300	0.0000	0.004	31.0	26.4	0.00	1.3761	0.0047	0.005	1.119	0.00	35.00	0.89
PA	Montgomery	42091	420910023	102	1	30500201	0.2100	0.0000	0.002	68.0	26.4	0.00	0.2349	0.0018	0.002	1.119	0.00	35.00	0.15
PA	Montgomery	42091	420910681	201	1	30500201	3.3700	0.0000	0.013	34.0	26.4	0.00	3.7702	0.0141	0.014	1.119	0.00	35.00	2.45
PA	Montgomery	42091	420910749	101	1	10300601	1.8400	0.0000	0.007	34.0	24.6	0.00	0.9297	0.0069	0.007	1.011	0.00	35.00	0.60
PA	Montgomery	42091	420910749	103	1	30500204	0.1350	0.0000	0.000	0.0	25.0	0.00	0.1510	0.0004	0.000	1.119	0.00	35.00	0.10
PA	Montgomery	42091	420910749	103	2	39000599	0.1350	0.0000	0.000	0.0	25.0	0.00	0.1364	0.0004	0.000	1.011	0.00	35.00	0.09
PA	Montgomery	42091	420910862	101	1	30500201	0.9460	0.0000	0.004	43.0	26.4	0.00	1.0584	0.0050	0.005	1.119	0.00	35.00	0.69
PA	Montgomery	42091	420910862	101	2	30500206	1.0240	0.0000	0.004	34.0	27.0	0.00	1.0936	0.0041	0.004	1.068	0.00	35.00	0.71
PA	Montgomery	42091	420910868	701	1	30500201	6.8700	0.0000	0.030	40.0	26.4	0.00	7.6859	0.0338	0.034	1.119	0.00	35.00	5.00
PA	Philadelphia	42101	4210101416	001	1	30500205	1.6800	0.0083	0.008		25.2	0.00	1.8795	0.0093	0.009	1.119	0.00	35.00	1.22
PA	Philadelphia	42101	4210101416	002	1	30500205	1.6800	0.0062	0.006		25.2	0.00	1.8795	0.0069	0.007	1.119	0.00	35.00	1.22
PA	Philadelphia	42101	4210101421	001	1	30500205	7.7900	0.0541	0.054		25.2	0.00	8.7152	0.0605	0.061	1.119	0.00	35.00	5.66
PA	Philadelphia	42101	4210101421	001	2	30505020	0.2376	0.0017	0.002		25.0	0.00	0.2538	0.0018	0.002	1.068	0.00	35.00	0.16
PA	Wyoming	42131	421310724	101	2	30500201	1.3000	0.0000	0.011	77.0	26.4	0.00	1.4544	0.0123	0.012	1.119	0.00	35.00	0.95
RI	Kent	44003	AIR223	1	1	30500255	3.2500	0.0000	0.009		25.0	0.00	2.4036	0.0066	0.007	0.740	0.00	35.00	1.56
RI	Kent	44003	AIR3248	1	1	30500252	1.0580	0.0000	0.003		25.0	0.00	0.7825	0.0021	0.002	0.740	0.00	35.00	0.51
RI	Kent	44003	AIR347	1	1	30500255	2.0365	0.0000	0.006		25.0	0.00	1.5061	0.0041	0.004	0.740	0.00	35.00	0.98
RI	Kent	44003	AIR347	2	2	30500258	0.0765	0.0000	0.000		25.0	0.00	0.0566	0.0002	0.000	0.740	0.00	35.00	0.04
RI	Providence	44007	AIR1033	1	1	30500247	9.4275	0.0460	0.046			0.00	6.9723	0.0340	0.034	0.740	0.00	35.00	4.53
RI	Providence	44007	AIR1033	2	2	30500298	0.3195	0.0000	0.001		25.0	0.00	0.2363	0.0006	0.001	0.740	0.00	35.00	0.15
RI	Providence	44007	AIR1524	1	1	30500261	5.7520	0.0000	0.016		25.0	0.00	4.2540	0.0117	0.012	0.740	0.00	35.00	2.77
RI	Providence	44007	AIR1524	2	2	30500298	0.3195	0.0000	0.001		25.0	0.00	0.2363	0.0006	0.001	0.740	0.00	35.00	0.15
RI	Providence	44007	AIR1531	1	1	30500252	1.6445	0.0000	0.005		25.0	0.00	1.2162	0.0033	0.003	0.740	0.00	35.00	0.79
RI	Providence	44007	AIR1531	2	2	30500298	0.0650	0.0000	0.000		25.0	0.00	0.0481	0.0001	0.000	0.740	0.00	35.00	0.03
RI	Providence	44007	AIR200	2	2	30500298	0.4105	0.0000	0.001		25.0	0.00	0.3036	0.0008	0.001	0.740	0.00	35.00	0.20
RI	Providence	44007	AIR759	1	1	30500255	1.5030	0.0000	0.004		25.0	0.00	1.1116	0.0031	0.003	0.740	0.00	35.00	0.72
RI	Providence	44007	AIR759	2	2	30500258	5.7225	0.0000	0.016		25.0	0.00	4.2322	0.0116	0.012	0.740	0.00	35.00	2.75
RI	Providence	44007	AIR759	3	3	30500298	0.6065	0.0000	0.002		25.0	0.00	0.4485	0.0012	0.001	0.740	0.00	35.00	0.29
RI	Washington	44009	AIR2903	1	1	30500252	6.3455	0.0415	0.042		25.0	0.00	4.6929	0.0307	0.031	0.740	0.00	35.00	3.05
RI	Washington	44009	AIR2903	2	2	30500298	0.2700	0.0000	0.001		25.0	0.00	0.1997	0.0005	0.001	0.740	0.00	35.00	0.13
VA	Fairfax	51059	00344	20	1	30500205	7.7500	0.0000	0.030	35.0	25.2	0.00	8.9900	0.0000	0.035		0.00	35.00	5.84
VA	Loudoun	51107	00056	1	1	30500205	7.8100	0.0000	0.034	40.0	25.2	0.00	7.6900	0.0000	0.034		0.00	35.00	5.00
VA	Loudoun	51107	00056	20	1	30500208	0.1900	0.0000	0.001	32.0	25.0	0.00	0.1900	0.0000	0.001		0.00	35.00	0.12
VA	Loudoun	51107	00139	20	1	30500205	7.4900	0.0000	0.038	46.0	25.2	0.00	8.6900	0.0000	0.044		0.00	35.00	5.65
VA	Loudoun	51107	00139	20	2	39000589	1.7600	0.0000	0.009	46.0	25.0	0.00	1.8800	0.0000	0.010		0.00	35.00	1.22
VA	Prince William	51153	00012	1	1	30500201	4.2600	0.0000	0.013	28.0	26.4	0.00	4.2000	0.0000	0.013		0.00	35.00	2.73
VA	Prince William	51153	00012	1	2	30500206	16.1000	0.0000	0.050	28.0	27.0	0.00	18.9800	0.0000	0.058		0.00	35.00	12.34
VA	Stafford	51179	00036	1	2	30500207	7.7700	0.0000	0.026	30.0	25.0	0.00	6.3600	0.0000	0.021		0.00	35.00	4.13
VA	Alexandria	51510	00001	20	1	30500205	15.3600	0.0000	0.061	36.0	25.2	0.00	17.8200	0.0000	0.070		0.00	35.00	11.58
VA	Alexandria	51510	00001	20	2	30500210	0.7500	0.0000	0.003	36.0	25.0	0.00	2.2726	0.0000	0.009		0.00	35.00	1.48
VA	Alexandria	51510	00001	21	1	30500205	2.5100	0.0000	0.004	13.0	25.2	0.00	2.9100	0.0000	0.004		0.00	35.00	1.89
VA	Alexandria	51510	00001	21	2	30500207	0.1200	0.0000	0.000	13.0	25.0	0.00	0.0982	0.0000	0.000		0.00	35.00	0.06
						MANEVU	1,128.60		5.68				1,550.14		8.27				1,007.59
						NOVA	71.87		0.27				80.08		0.30				52.05
						OTR	1,200.47		5.95				1,630.23		8.57				1,059.65

aseG Inventories

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or/100)

/ Emissions **2009 BOTW Reductions**

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.00	0.000	FIRESTONE BUILDING PRODUCTS CO
0.018	1.53	0.010	TILCON DELAWARE - BAY ROAD
0.004	0.31	0.002	TILCON DELAWARE - BAY ROAD
0.000	0.00	0.000	TILCON DELAWARE - BAY ROAD
0.026	2.68	0.014	TILCON DELAWARE - BAY ROAD
0.000	0.00	0.000	TILCON DELAWARE - BAY ROAD
0.023	2.54	0.013	TILCON DELAWARE - HORSEPOND ROAD
0.002	0.20	0.001	TILCON DELAWARE - HORSEPOND ROAD
0.000	0.00	0.000	TILCON DELAWARE - HORSEPOND ROAD
0.000	0.00	0.000	TILCON DELAWARE - HORSEPOND ROAD
0.000	0.00	0.000	TILCON DELAWARE - HORSEPOND ROAD
0.000	0.00	0.000	TILCON DELAWARE - HORSEPOND ROAD
0.008	0.72	0.004	EDGEMOOR MATERIALS INC
0.000	0.00	0.000	EDGEMOOR MATERIALS INC
0.000	0.00	0.000	EDGEMOOR MATERIALS INC
0.012	1.20	0.006	TILCON DELAWARE - TERMINAL AVENUE
0.003	0.32	0.002	TILCON DELAWARE - TERMINAL AVENUE
0.009	0.66	0.005	CONTRACTORS MATERIALS LLC HOT MIX PLT
0.000	0.01	0.000	CHRISTIANA MATERIALS
0.007	0.67	0.004	CHRISTIANA MATERIALS
0.012	0.41	0.006	CHRISTIANA MATERIALS
0.011	1.13	0.006	DIAMOND MATERIALS LLC
0.000	0.00	0.000	DIAMOND MATERIALS LLC
0.001	0.21	0.001	DIAMOND MATERIALS LLC
0.000	0.00	0.000	DIAMOND MATERIALS LLC
0.000	0.00	0.000	DIAMOND MATERIALS LLC
0.000	0.00	0.000	DIAMOND MATERIALS LLC
0.001	0.17	0.001	PURE GREEN INDUSTRIES INC
0.000	0.00	0.000	PURE GREEN INDUSTRIES INC

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.024	0.09	0.013	PURE GREEN INDUSTRIES INC
0.000	0.00	0.000	PURE GREEN INDUSTRIES INC
0.010	1.14	0.005	TILCON DELAWARE GUMBORO
0.025	2.41	0.013	EDWARD J. KAYE CONSTRUCTION
0.195	0.14	0.105	EDWARD J. KAYE CONSTRUCTION
0.017	2.06	0.009	TILCON DELAWARE - GEORGETOWN
0.036	4.04	0.020	PIKE INDUSTRIES INC - LEWISTON
0.047	5.27	0.025	PIKE INDUSTRIES INC - POLAND
0.017	1.56	0.009	PIKE INDUSTRIES INC - POLAND
0.021	1.94	0.011	PIKE INDUSTRIES INC - POLAND
0.029	2.67	0.016	PIKE INDUSTRIES INC - POLAND
0.003	0.16	0.001	LANE CONSTRUCTION CORP (22)
0.003	0.16	0.002	LANE CONSTRUCTION CORP (22)
0.001	0.07	0.001	LANE CONSTRUCTION CORP (22)
0.000	0.00	0.000	LANE CONSTRUCTION CORP (22)
0.035	2.73	0.019	LANE CONSTRUCTION CORP (23)
0.000	0.00	0.000	LANE CONSTRUCTION CORP (23)
0.002	0.13	0.001	LANE CONSTRUCTION CORP (23)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - PI (43)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - PI (43)
0.002	0.45	0.001	TROMBLEY INDUSTRIES INC
0.063	6.98	0.034	PIKE INDUSTRIES INC - PORTLAND
0.004	0.49	0.002	COMMERCIAL PAVING CO INC
0.001	0.10	0.000	COMMERCIAL PAVING CO INC
0.068	8.13	0.037	COMMERCIAL PAVING CO INC
0.005	1.03	0.003	BRUCE A MANZER INC
0.023	4.44	0.012	BRUCE A MANZER INC
0.051	4.80	0.027	PIKE INDUSTRIES INC - FARMINGTON
0.001	0.09	0.001	PIKE INDUSTRIES INC - FARMINGTON
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HANCOCK (42)
0.000	0.02	0.000	LANE CONSTRUCTION CORP - HANCOCK (42)
0.060	5.05	0.032	PIKE INDUSTRIES INC - AUGUSTA 712
0.048	5.21	0.026	PIKE INDUSTRIES INC - AUGUSTA 712
0.032	2.63	0.017	PIKE INDUSTRIES INC - N WATERFORD
0.009	0.75	0.005	LANE CONSTRUCTION CORP - HERMON (32)
0.016	1.05	0.009	LANE CONSTRUCTION CORP - HERMON (32)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (32)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (32)
0.017	1.85	0.009	LANE CONST CORP DBA SUNRISE MATLS (35)
0.000	0.00	0.000	LANE CONST CORP DBA SUNRISE MATLS (35)
0.001	0.04	0.000	LANE CONST CORP DBA SUNRISE MATLS (35)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (12&26)
0.026	2.64	0.014	LANE CONSTRUCTION CORP - HERMON (38)
0.022	1.67	0.012	LANE CONSTRUCTION CORP - HERMON (38)
0.006	0.37	0.003	LANE CONSTRUCTION CORP - HERMON (38)
0.007	0.63	0.004	LANE CONST CORP DBA SUNRISE MATLS (47)
0.003	0.34	0.001	LANE CONST CORP DBA SUNRISE MATLS (47)

' Emissions	2009 BOTW Reductions		
Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.032	2.97	0.017	LANE CONST CORP DBA SUNRISE MATLS (47)
0.000	0.00	0.000	LANE CONST CORP DBA SUNRISE MATLS (47)
0.018	1.24	0.010	LANE CONSTRUCTION CORP - HERMON (37)
0.000	0.01	0.000	LANE CONSTRUCTION CORP - HERMON (37)
0.007	0.97	0.004	LANE CONSTRUCTION CORP - HERMON (37)
0.002	0.10	0.001	LANE CONSTRUCTION CORP - HERMON (37)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - HERMON (41)
0.011	0.78	0.006	LANE CONSTRUCTION CORP - HERMON (41)
0.022	0.99	0.012	LANE CONSTRUCTION CORP - HERMON (41)
0.047	3.68	0.025	BARRETT PAVING MATERIALS INC
0.038	2.48	0.021	BARRETT PAVING MATERIALS INC
0.000	0.03	0.000	BARRETT PAVING MATERIALS INC
0.008	0.45	0.004	BARRETT PAVING MATERIALS INC
0.015	0.70	0.008	BARRETT PAVING MATERIALS INC
0.000	0.01	0.000	BARRETT PAVING MATERIALS INC
0.026	2.14	0.014	BARRETT PAVING MATERIALS INC
0.002	0.20	0.001	BARRETT PAVING MATERIALS INC
0.007	0.54	0.004	BARRETT PAVING MATERIALS INC
0.018	0.97	0.010	HARRY C CROOKER & SONS INC - TOPSHAM
0.000	0.02	0.000	HARRY C CROOKER & SONS INC - TOPSHAM
0.000	0.03	0.000	HARRY C CROOKER & SONS INC - TOPSHAM
0.057	6.20	0.031	PIKE INDUSTRIES INC - FAIRFIELD
0.002	0.28	0.001	PIKE INDUSTRIES INC - FAIRFIELD
0.038	3.54	0.020	PIKE INDUSTRIES INC - ANSON
0.003	0.65	0.002	MATTINGLY PRODUCTS CO INC
0.006	0.91	0.003	MATTINGLY PRODUCTS CO INC
0.000	0.00	0.000	LANE CONSTRUCTION CORP - PROSPECT (16)
0.006	0.50	0.003	LANE CONSTRUCTION CORP - PROSPECT (16)
0.003	0.23	0.002	LANE CONSTRUCTION CORP - PROSPECT (16)
0.030	3.77	0.016	LANE CONSTRUCTION CORP - PROSPECT (28)
0.003	0.26	0.002	LANE CONSTRUCTION CORP - PROSPECT (28)
0.000	0.00	0.000	LANE CONSTRUCTION CORP - PROSPECT (28)
0.004	0.28	0.002	LANE CONST CORP - CALAIS (24)
0.005	0.39	0.003	LANE CONST CORP - CALAIS (24)
0.000	0.02	0.000	LANE CONST CORP - CALAIS (24)
0.001	0.03	0.000	LANE CONST CORP - CALAIS (24)
0.000	0.00	0.000	LANE CONST CORP - CALAIS (24)
0.040	6.46	0.021	PIKE INDUSTRIES INC - WELLS
0.042	4.37	0.023	F R CARROLL INC
0.000	0.06	0.000	F R CARROLL INC
0.054	5.11	0.029	F R CARROLL INC
0.039	4.64	0.021	DAYTON SAND AND GRAVEL CO INC
0.019	2.20	0.010	DAYTON SAND AND GRAVEL CO INC
0.005	0.69	0.003	DAYTON SAND AND GRAVEL CO INC
0.000	0.06	0.000	DAYTON SAND AND GRAVEL CO INC
0.006	0.55	0.003	PIKE INDUSTRIES INC -SOUTH BERWICK (IBM)
0.000	0.00	0.000	RELIABLE CONTRACTING
0.004	0.58	0.002	RELIABLE CONTRACTING
0.000	0.00	0.000	RELIABLE CONTRACTING
0.015	2.25	0.008	RELIABLE CONTRACTING
0.000	0.00	0.000	KLINE, RICHARD F., INCORPORATED
0.021	2.36	0.011	KLINE, RICHARD F., INCORPORATED

' Emissions | 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.00	0.000	KLINE, RICHARD F., INCORPORATED
0.000	0.00	0.000	KLINE, RICHARD F., INCORPORATED
0.000	0.00	0.000	TAMKO ROOFING PRODUCTS
0.003	0.63	0.002	TAMKO ROOFING PRODUCTS
0.000	0.00	0.000	TAMKO ROOFING PRODUCTS
0.005	0.93	0.003	TAMKO ROOFING PRODUCTS
0.000	0.00	0.000	TAMKO ROOFING PRODUCTS
0.003	0.49	0.001	TAMKO ROOFING PRODUCTS
0.000	0.00	0.000	TAMKO ROOFING PRODUCTS
0.006	1.28	0.003	TAMKO ROOFING PRODUCTS
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.008	1.39	0.004	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.015	2.60	0.008	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.011	1.98	0.006	OWENS CORNING - JESUP ROOFING AND ASPHALT PLANT
0.000	0.00	0.000	DAY, F.O. BITUMINOUS - PINEY MTG
0.028	3.61	0.015	DAY, F.O. BITUMINOUS - PINEY MTG
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.005	0.95	0.003	GAF BUILDING PRODUCTS
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.000	0.00	0.000	GAF BUILDING PRODUCTS
0.003	0.49	0.001	GAF BUILDING PRODUCTS
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	LAWRENCE LYNCH CORP
0.000	0.00	0.000	LAWRENCE LYNCH CORP
0.005	0.75	0.002	LAWRENCE LYNCH CORP
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.004	0.35	0.002	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.001	0.05	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.011	1.05	0.006	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.007	0.70	0.004	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	PJ KEATING CO
0.000	0.00	0.000	PJ KEATING CO
0.043	5.25	0.023	PJ KEATING CO
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.061	5.97	0.033	AGGREGATE INDUSTRIES
0.000	0.00	0.000	BORDEN & REMINGTON
0.000	0.00	0.000	WHITE BROS LYNCH
0.000	0.02	0.000	WHITE BROS LYNCH
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.002	0.35	0.001	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.007	1.40	0.004	AGGREGATE INDUSTRIES
0.061	11.95	0.033	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.004	0.70	0.002	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.018	2.56	0.010	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	BROX INDUSTRIES INC
0.003	0.37	0.001	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	LANE CONSTRUCTION COMPANY
0.008	0.70	0.004	LANE CONSTRUCTION COMPANY
0.001	0.09	0.001	LANE CONSTRUCTION COMPANY
0.000	0.00	0.000	LANE CONSTRUCTION COMPANY
0.000	0.00	0.000	LANE CONSTRUCTION COMPANY
0.000	0.00	0.000	LANE CONSTRUCTION COMPANY
0.000	0.00	0.000	TREW CORPORATION
0.007	0.70	0.004	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.025	2.45	0.013	TREW CORPORATION
0.000	0.01	0.000	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.000	0.00	0.000	TREW CORPORATION
0.000	0.00	0.000	WARNER BROTHERS INC

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.018	1.75	0.010	WARNER BROTHERS INC
0.000	0.00	0.000	WARNER BROTHERS INC
0.000	0.00	0.000	WARNER BROTHERS INC
0.000	0.00	0.000	WARNER BROTHERS INC
0.004	0.42	0.002	PALMER PAVING CORP
0.000	0.00	0.000	PALMER PAVING CORP
0.000	0.00	0.000	PALMER PAVING CORP
0.013	1.27	0.007	PALMER PAVING CORP
0.000	0.00	0.000	PALMER PAVING CORP
0.000	0.00	0.000	PALMER PAVING CORP
0.000	0.00	0.000	BERKSHIRE ASPHALT CO
0.004	0.35	0.002	BERKSHIRE ASPHALT CO
0.000	0.00	0.000	BERKSHIRE ASPHALT CO
0.000	0.00	0.000	BERKSHIRE ASPHALT CO
0.000	0.00	0.000	BERKSHIRE ASPHALT CO
0.021	2.10	0.012	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.001	0.10	0.001	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.005	1.27	0.003	TED ONDRICK COMPANY LLC
0.000	0.00	0.000	TED ONDRICK COMPANY LLC
0.000	0.00	0.000	TED ONDRICK COMPANY LLC
0.000	0.00	0.000	TED ONDRICK COMPANY LLC
0.000	0.00	0.000	TED ONDRICK COMPANY LLC
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.007	0.70	0.004	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.005	0.70	0.003	PALMER PAVING CORPORATION
0.000	0.00	0.000	PALMER PAVING CORPORATION
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	LANE CONSTRUCTION CO
0.000	0.02	0.000	LANE CONSTRUCTION CO
0.000	0.00	0.000	BENEVENTO ASPHALT CORP

Emissions **2009 BOTW Reductions**

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.013	1.87	0.007	BENEVENTO ASPHALT CORP
0.000	0.00	0.000	BENEVENTO ASPHALT CORP
0.000	0.00	0.000	BENEVENTO ASPHALT CORP
0.000	0.00	0.000	BENEVENTO ASPHALT CORP
0.000	0.00	0.000	COLEMAN MANUFACTURING
0.002	0.35	0.001	TRIRAM CORPORATION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.034	5.12	0.019	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.026	2.56	0.014	AGGREGATE INDUSTRIES
0.004	0.35	0.002	AGGREGATE INDUSTRIES
0.000	0.00	0.000	BROX INDUSTRIES INC
0.003	0.37	0.001	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	ROWE CONTRACTING COMPANY
0.000	0.00	0.000	ROWE CONTRACTING COMPANY
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.008	1.12	0.004	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.01	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.101	14.51	0.054	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.07	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	PJ KEATING COMPANY
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.008	1.12	0.004	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.012	1.50	0.006	BROX INDUSTRIES INC
0.000	0.00	0.000	BROX INDUSTRIES INC
0.000	0.06	0.000	BROX INDUSTRIES INC
0.000	0.00	0.000	NANTUCKET ASPHALT IN
0.000	0.00	0.000	NANTUCKET ASPHALT IN
0.000	0.00	0.000	WJ GLOWACKI & SONS
0.000	0.00	0.000	WJ GLOWACKI & SONS
0.000	0.00	0.000	WJ GLOWACKI & SONS
0.000	0.00	0.000	ISLAND ROAD MATERIALS INC
0.000	0.00	0.000	ISLAND ROAD MATERIALS INC
0.001	0.10	0.000	ISLAND ROAD MATERIALS INC
0.000	0.00	0.000	BEVILACQUA PAVING COMPANY
0.000	0.00	0.000	BEVILACQUA PAVING COMPANY
0.000	0.00	0.000	BEVILACQUA PAVING COMPANY
0.000	0.00	0.000	NORFOLK ASPHALT COMPANY

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	GAF MATERIALS CORP
0.000	0.00	0.000	BIRD INCORPORATED ROOFING
0.000	0.00	0.000	BIRD INCORPORATED ROOFING
0.011	1.40	0.006	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.002	0.35	0.001	TL EDWARDS INC
0.005	0.75	0.003	TL EDWARDS INC
0.000	0.00	0.000	TL EDWARDS INC
0.000	0.00	0.000	TL EDWARDS INC
0.002	0.35	0.001	TL EDWARDS INC
0.005	0.75	0.003	TL EDWARDS INC
0.000	0.00	0.000	TL EDWARDS INC
0.000	0.00	0.000	TL EDWARDS INC
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.004	0.35	0.002	AGGREGATE INDUSTRIES
0.035	3.41	0.019	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.007	0.70	0.004	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.036	3.50	0.019	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.002	0.35	0.001	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES N.E. REGION
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.039	7.68	0.021	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.011	1.05	0.006	AGGREGATE INDUSTRIES
0.192	18.77	0.103	AGGREGATE INDUSTRIES
0.000	0.00	0.000	ROCHESTER BITUMINOUS
0.010	1.40	0.005	ROCHESTER BITUMINOUS
0.000	0.00	0.000	ROCHESTER BITUMINOUS
0.000	0.00	0.000	ROCHESTER BITUMINOUS
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.004	0.35	0.002	AGGREGATE INDUSTRIES
0.000	0.00	0.000	AGGREGATE INDUSTRIES
0.000	0.00	0.000	PA LANDERS INC
0.037	5.12	0.020	PA LANDERS INC
0.000	0.00	0.000	PA LANDERS INC
0.000	0.00	0.000	PA LANDERS INC

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.00	0.000	PA LANDERS INC
0.008	1.50	0.004	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	AGGREGATE INDUSTRIES NORTHEAST
0.000	0.00	0.000	BOND CONSTRUCTION CO
0.003	0.35	0.002	BOND CONSTRUCTION CO
0.000	0.00	0.000	GRANGER LYNCH CORP
0.006	0.70	0.003	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.004	0.70	0.002	GRANGER LYNCH CORP
0.002	0.37	0.001	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.000	0.00	0.000	GRANGER LYNCH CORP
0.001	0.09	0.000	GRANGER LYNCH CORP
0.000	0.00	0.000	AGGREGATE INDUSTRIES-NORTHEAST REGION
0.010	1.71	0.006	AGGREGATE INDUSTRIES-NORTHEAST REGION
0.000	0.00	0.000	OXFORD ASPHALT & PAVING
0.000	0.00	0.000	AMERICAN STONE MIX INCORPORATED
0.000	0.00	0.000	AMERICAN STONE MIX INCORPORATED
0.000	0.00	0.000	JOHN S LANE & SONS - ASPHALT
0.000	0.00	0.000	HOLDEN TRAP ROCK CO
0.009	1.05	0.005	HOLDEN TRAP ROCK CO
0.000	0.00	0.000	HOLDEN TRAP ROCK CO
0.007	0.85	0.004	HOLDEN TRAP ROCK CO
0.000	0.04	0.000	HOLDEN TRAP ROCK CO
0.001	0.08	0.000	HOLDEN TRAP ROCK CO
0.000	0.00	0.000	PJ KEATING COMPANY
0.000	0.00	0.000	PJ KEATING COMPANY
0.000	0.00	0.000	PJ KEATING COMPANY
0.125	15.36	0.068	PJ KEATING COMPANY
0.000	0.00	0.000	PJ KEATING COMPANY
0.000	0.00	0.000	PJ KEATING COMPANY
0.000	0.00	0.000	PJ KEATING COMPANY
0.026	2.12	0.014	PANDOLF PERKINS COMP
0.000	0.00	0.000	PANDOLF PERKINS COMP
0.005	0.74	0.003	A.E. Stone, Inc.
0.019	0.67	0.010	A.E. Stone, Inc.
0.001	0.10	0.000	A.E. Stone, Inc.
0.001	0.25	0.001	A.E. Stone, Inc.
0.015	1.25	0.008	A.E. Stone, Inc.
0.002	0.25	0.001	A.E. Stone, Inc.
0.000	0.05	0.000	BARRETT ASPHALT CO., INC.
0.006	0.25	0.003	BARRETT ASPHALT CO., INC.

' Emissions **2009 BOTW Reductions**

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.003	0.08	0.001	BARRETT ASPHALT CO., INC.
0.058	6.26	0.031	BARRETT ASPHALT CO., INC.
0.001	0.09	0.000	BARRETT ASPHALT CO., INC.
0.026	0.28	0.014	BARRETT ASPHALT CO., INC.
0.002	0.19	0.001	National Paving Co., Inc.
0.001	0.12	0.001	National Paving Co., Inc.
0.035	0.85	0.019	National Paving Co., Inc.
0.000	0.05	0.000	National Paving Co., Inc.
0.103	7.78	0.055	National Paving Co., Inc.
0.001	0.11	0.000	KOCH MATERIALS COMPANY
0.001	0.15	0.000	KOCH MATERIALS COMPANY
0.004	0.59	0.002	KOCH MATERIALS COMPANY
0.000	0.04	0.000	KOCH MATERIALS COMPANY
0.004	0.59	0.002	KOCH MATERIALS COMPANY
0.016	0.86	0.009	Gerald A. Barrett, Inc. - Woodbine
0.016	0.49	0.009	Gerald A. Barrett, Inc. - Woodbine
0.000	0.04	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.000	0.10	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.027	2.41	0.015	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.075	6.69	0.041	R. E. Pierson Construction Company
0.001	0.08	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.028	4.08	0.015	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.000	0.04	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.19	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.19	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.000	0.02	0.000	Owens Corning Kearny Plant
0.001	0.16	0.000	Owens Corning Kearny Plant
0.001	0.16	0.000	Owens Corning Kearny Plant
0.001	0.16	0.000	Owens Corning Kearny Plant
0.001	0.14	0.000	Owens Corning Kearny Plant
0.001	0.16	0.000	Owens Corning Kearny Plant
0.001	0.14	0.000	Owens Corning Kearny Plant
0.001	0.14	0.000	Owens Corning Kearny Plant
0.001	0.14	0.000	Owens Corning Kearny Plant
0.001	0.23	0.001	Owens Corning Kearny Plant
0.033	3.18	0.018	TRAP ROCK INDUSTRIES INC
0.000	0.02	0.000	STA-SEAL INDUSTRIES INC- EDISON
0.019	1.76	0.010	STA-SEAL INDUSTRIES INC- EDISON
0.000	0.04	0.000	ZIEGLER CHEMICAL & MINERAL CORP
0.001	0.13	0.001	ZIEGLER CHEMICAL & MINERAL CORP
0.000	0.03	0.000	ZIEGLER CHEMICAL & MINERAL CORP
0.000	0.06	0.000	ZIEGLER CHEMICAL & MINERAL CORP
0.000	0.08	0.000	ZIEGLER CHEMICAL & MINERAL CORP
0.000	0.08	0.000	ZIEGLER CHEMICAL & MINERAL CORP
0.002	0.50	0.001	ZIEGLER CHEMICAL & MINERAL CORP
0.106	12.18	0.057	Stavola Asphalt - Howell

' Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.000	0.04	0.000	Rosano Asphalt LLC
0.015	0.94	0.008	Rosano Asphalt LLC
0.023	2.25	0.012	Rosano Asphalt LLC
0.001	0.06	0.000	STAVOLA ASPHALT CO INC
0.001	0.06	0.000	STAVOLA ASPHALT CO INC
0.032	3.69	0.017	STAVOLA ASPHALT CO INC
0.031	3.54	0.017	STAVOLA ASPHALT CO INC
0.000	0.01	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.000	0.05	0.000	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.028	1.88	0.015	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.012	1.81	0.007	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
0.021	2.20	0.011	Tilcon NY-Riverdale Quarry
0.039	2.30	0.021	Tilcon NY-Riverdale Quarry
0.039	2.27	0.021	Tilcon NY-Riverdale Quarry
0.000	0.01	0.000	Walter R. Earle Corp. - facility
0.000	0.03	0.000	Walter R. Earle Corp. - facility
0.000	0.03	0.000	Walter R. Earle Corp. - facility
0.052	4.87	0.028	Walter R. Earle Corp. - facility
0.004	0.14	0.002	Walter R. Earle Corp. - facility
0.028	1.19	0.015	Walter R. Earle Corp. - facility
0.010	1.16	0.005	Stavola Asphalt - Brick
0.000	0.02	0.000	Jackson Asphalt LP
0.029	2.41	0.016	Jackson Asphalt LP
0.023	2.36	0.012	Stone Industries Inc. - Asphalt Plants
0.072	3.93	0.039	Stone Industries Inc. - Asphalt Plants
0.072	2.86	0.039	Stone Industries Inc. - Asphalt Plants
0.000	0.04	0.000	Tilcon-Totowa HMA Plants
0.013	1.01	0.007	Tilcon-Totowa HMA Plants
0.008	0.33	0.004	Tilcon-Totowa HMA Plants
0.035	0.20	0.019	Tilcon-Totowa HMA Plants
0.035	2.65	0.019	Tilcon-Totowa HMA Plants
0.001	0.04	0.000	Tilcon-Totowa HMA Plants
0.219	8.77	0.118	Stavola Asphalt LLC - Bound Brook HMA Plants
0.137	8.93	0.074	Stavola Asphalt LLC - Bound Brook HMA Plants
0.006	0.62	0.003	US INTEC INC
0.002	0.24	0.001	Minnesota Mining & Manufacturing, IMP Div.
0.009	0.04	0.005	Minnesota Mining & Manufacturing, IMP Div.
0.029	3.37	0.015	Minnesota Mining & Manufacturing, IMP Div.
0.005	0.03	0.003	Minnesota Mining & Manufacturing, IMP Div.
0.005	0.75	0.003	Minnesota Mining & Manufacturing, IMP Div.
0.015	1.43	0.008	Minnesota Mining & Manufacturing, IMP Div.
0.016	1.53	0.008	Minnesota Mining & Manufacturing, IMP Div.
0.001	0.12	0.001	Minnesota Mining & Manufacturing, IMP Div.
0.000	0.00	0.000	Minnesota Mining & Manufacturing, IMP Div.
0.024	2.28	0.013	Weldon Watchung Title V
0.024	0.26	0.013	Weldon Watchung Title V
0.063	7.61	0.034	Weldon Watchung Title V
0.018	2.23	0.010	Weldon Watchung Title V
0.025	2.80	0.013	WELDON QUARRY CO., LLC & WELDON ASPHALT CO.
0.009	1.79	0.005	GRACE ASPHALT DIV OF GRACE INDUSTRIES
0.015	3.00	0.008	VANBRO CORPORATION
0.001	0.13	0.000	CANAL ASPHALT INC

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.008	1.47	0.004	CANAL ASPHALT INC
0.003	0.36	0.001	THE LANE CONSTRUCTION BRIDGEVILLE
0.001	8.08	0.000	THE LANE CONSTRUCTION BRIDGEVILLE
0.000	1.02	0.000	THE LANE CONSTRUCTION BRIDGEVILLE
0.003	0.26	0.001	CLAIRTON SLAG, INC.
0.001	0.06	0.000	CLAIRTON SLAG, INC.
0.054	5.20	0.029	CLAIRTON SLAG, INC.
0.019	1.76	0.010	ALLEGHENY ASPHALT MFG. INC.
0.008	1.14	0.004	ALLEGHENY ASPHALT MFG. INC.
0.000	0.01	0.000	ALLEGHENY ASPHALT MFG. INC.
0.003	0.23	0.002	MARSH ASPHALT, INC. - DRAVOSBURG PLANT
0.000	0.00	0.000	MARSH ASPHALT, INC. - DRAVOSBURG PLANT
0.009	0.61	0.005	MARSH ASPHALT, INC. - DRAVOSBURG PLANT
0.007	0.47	0.004	MARSH ASPHALT, INC. - DRAVOSBURG PLANT
0.000	0.41	0.000	IA CONSTRUCTION GIBSONIA
0.001	0.06	0.000	IA CONSTRUCTION GIBSONIA
0.001	0.04	0.000	IA CONSTRUCTION GIBSONIA
0.007	0.37	0.004	IA CONSTRUCTION GIBSONIA
0.006	0.43	0.003	THE LANE MCKEES ROCK ASPHALT PLANT
0.001	9.72	0.001	THE LANE MCKEES ROCK ASPHALT PLANT
0.000	0.00	0.000	THE LANE MCKEES ROCK ASPHALT PLANT
0.012	1.56	0.006	TRUMBULL CORPORATION
0.000	0.01	0.000	TRUMBULL CORPORATION
0.012	1.73	0.006	TRUMBULL CORPORATION
0.000	0.00	0.000	UNITED REFINING CO.SPRINGDALE ASPHALT TE
0.000	0.00	0.000	UNITED REFINING CO.SPRINGDALE ASPHALT TE
0.002	0.27	0.001	UNITED REFINING CO.SPRINGDALE ASPHALT TE
0.000	0.00	0.000	UNITED REFINING CO.SPRINGDALE ASPHALT TE
0.020	2.73	0.011	EJB PAVING & MATERIALS/ONTELAUNEE
0.008	0.83	0.005	EJB PAVING & MATERIALS/ONTELAUNEE
0.004	0.78	0.002	EJB PAVING & MATERIALS/ONTELAUNEE
0.004	0.75	0.002	EJB PAVING & MATERIALS/ONTELAUNEE
0.007	0.85	0.004	EJB PAVING & MATERIALS/ONTELAUNEE
0.043	6.61	0.023	H & K MATERIALS INC/CHALFONT
0.008	2.16	0.005	BETTER MATERIALS CORP/PENNS PARK
0.001	0.32	0.001	BETTER MATERIALS CORP/PENNS PARK
0.010	1.67	0.005	MILLER & SON PAVING /RUSHLAND
0.007	0.78	0.004	BETTER MATERIALS CORP/OTTSVILLE QUARRY ASPHALT PLTS
0.002	0.24	0.001	EUREKA STONE QUARRY /RUSH VALLEY 1
0.003	0.49	0.002	EUREKA STONE QUARRY /RUSH VALLEY 1
0.003	0.49	0.002	EUREKA STONE QUARRY /RUSH VALLEY 1
0.004	0.64	0.002	EUREKA STONE QUARRY /WARRINGTON ASPHALT & QUARRY PL
0.004	0.64	0.002	EUREKA STONE QUARRY /WARRINGTON ASPHALT & QUARRY PL
0.007	0.73	0.004	GLASGOW INC/CATANACH QUARRY
0.004	0.75	0.002	HIGHWAY MATERIALS INC/MALVERN PLANT 13
0.010	1.38	0.005	HIGHWAY MATERIALS INC/DOWNINGTOWN
0.016	2.36	0.009	HANSON AGGREGATES PA/GLEN MILLS HMA MIDDLETOWN PLT
0.002	0.21	0.001	GLASGOW INC/FREEBORN ASPHALT PLT
0.000	0.00	0.000	BLDG MATERIALS MFG CORP/ERIE
0.001	0.13	0.001	EUREKA STONE QUARRY /DALEVILLE PLT
0.002	0.29	0.001	DUNBAR ASPHALT PROD INC/MAHONING TWP
0.000	0.03	0.000	DUNBAR ASPHALT PROD INC/MAHONING TWP

' Emissions **2009 BOTW Reductions**

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name
0.001	0.08	0.000	DUNBAR ASPHALT PROD INC/WHEATLAND
0.001	0.08	0.000	DUNBAR ASPHALT PROD INC/WHEATLAND
0.002	0.22	0.001	DUNBAR ASPHALT PROD INC/WHEATLAND
0.002	0.22	0.001	DUNBAR ASPHALT PROD INC/WHEATLAND
0.009	0.96	0.005	HAINES & KIBBLEHOUSE/LOCUST RIDGE
0.020	3.75	0.011	READING MATERIALS/SANATOGA QUARRY
0.003	0.48	0.002	GLASGOW INC/IVY ROCK
0.001	0.08	0.001	GLASGOW INC/IVY ROCK
0.009	1.32	0.005	GLASGOW INC/MCCOY QUARRY ASPHALT PLTS
0.005	0.33	0.002	GLASGOW INC/SPRINGHOUSE ASPHALT PLANT/OLD
0.000	0.05	0.000	GLASGOW INC/SPRINGHOUSE ASPHALT PLANT/OLD
0.000	0.05	0.000	GLASGOW INC/SPRINGHOUSE ASPHALT PLANT/OLD
0.003	0.37	0.002	HIGHWAY MATERIALS INC/PLYMOUTH
0.003	0.38	0.001	HIGHWAY MATERIALS INC/PLYMOUTH
0.022	2.69	0.012	HIGHWAY MATERIALS INC/PERKIOMENVILLE
0.006	0.66	0.003	T.D.P.S. MATERIALS, INC.
0.005	0.66	0.002	T.D.P.S. MATERIALS, INC.
0.039	3.05	0.021	RIVERSIDE MATERIALS, INC.
0.001	0.09	0.001	RIVERSIDE MATERIALS, INC.
0.008	0.51	0.004	AMER ASPHALT PAVING CO/EAST FALLS PLT
0.004	0.84	0.002	CARDI CORPORATION
0.001	0.27	0.001	CLIFFORD ASPHALT
0.003	0.53	0.001	D'AMBRA CONSTRUCTION
0.000	0.02	0.000	D'AMBRA CONSTRUCTION
0.022	2.44	0.012	NARRAGANSETT IMPROVEMENT CO.
0.000	0.08	0.000	NARRAGANSETT IMPROVEMENT CO.
0.008	1.49	0.004	P.J. KEATING CO.
0.000	0.08	0.000	P.J. KEATING CO.
0.002	0.43	0.001	JOHNSTON ASPHALT, LLC
0.000	0.02	0.000	JOHNSTON ASPHALT, LLC
0.001	0.11	0.000	C J FOX COMPANY
0.002	0.39	0.001	J.H. LYNCH & SONS, INC. (CUMBERLAND)
0.008	1.48	0.004	J.H. LYNCH & SONS, INC. (CUMBERLAND)
0.001	0.16	0.000	J.H. LYNCH & SONS, INC. (CUMBERLAND)
0.020	1.64	0.011	J.H. LYNCH & SONS, INC.
0.000	0.07	0.000	J.H. LYNCH & SONS, INC.
0.022	3.15	0.012	SUPERIOR PAVING CORP - CENTREVILLE PLT
0.022	2.69	0.012	SUPERIOR PAVING CORP - LEESBURG PLANT
0.000	0.07	0.000	SUPERIOR PAVING CORP - LEESBURG PLANT
0.029	3.04	0.015	LOUDOUN CO ASPHALT -NEWTON ASPHALT
0.006	0.66	0.003	LOUDOUN CO ASPHALT -NEWTON ASPHALT
0.008	1.47	0.005	APAC VIRGINIA INCORPORATED- MANASSAS PLA
0.038	6.64	0.020	APAC VIRGINIA INCORPORATED- MANASSAS PLA
0.014	2.23	0.007	VIRGINIA PAVING COMPANY STAFFORD PLANT
0.046	6.24	0.025	VIRGINIA PAVING COMPANY ALEXANDRIA PLANT
0.006	0.80	0.003	VIRGINIA PAVING COMPANY ALEXANDRIA PLANT
0.003	1.02	0.001	VIRGINIA PAVING COMPANY ALEXANDRIA PLANT
0.000	0.03	0.000	VIRGINIA PAVING COMPANY ALEXANDRIA PLANT
5.38	542.55	2.89	
0.19	28.03	0.10	
5.57	570.58	3.00	

COLUMN	COLUMN DESCRIPTIONS
A-F	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
G	SCC-Source Classification Code
H	NOx 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
I	NOx 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
J	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
K	Summer season percentage from NIF Emission Process (EP) file
L	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
M	Total capture/control efficiency from NIF 2002 CE file
N	Blank

							2002 NOx Emissions											Assume no Growth 2009 Emissions	
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Kiln Type	2002 Clinker Production	2002 lbs/ton Clinker	OTC Rule lbs/ton Clinker	2009 Percent Reduction	Annual (tpy)	Summer Day (tpd)
ME	Knox	23013	2301300028	001	1	30500706	1727.0000	0.0000	4.745	25.0	35.4	0.00	Dry	603,748	4.37	3.4	21.3	1727.0	4.7
MD	Carroll	24013	013-0012	39	01S39	30500606	2663.0400	0.0000	7.316	25.0	25.4	0.00	Dry				100.0	0.0	0.0
MD	Frederick	24021	021-0013	21	01S21	30500706	824.3055	0.0000	2.265	25.0	35.4	0.00	Wet	155,330	10.61	3.88	63.4	301.3	0.8
MD	Frederick	24021	021-0013	22	01S22	30500706	809.7630	0.0000	2.225	25.0	35.4	0.00	Wet	152,815	10.60	3.88	63.4	296.5	0.8
MD	Washington	24043	043-0008	24	01S24	30500606	1973.8530	0.0000	5.423	25.0	25.4	0.00	Dry	517,357	7.63	3.44	54.9	889.9	2.4
NY	Albany	36001	4012400001	041000	K12FP	30500706	5346.1000	0.0000	20.797		35.4	0.00	Wet	1,727,241	6.19	3.88	37.3	3350.8	13.0
NY	Greene	36039	4192600021	U00K18	00CEP	30500706	3151.6860	0.0000	12.260		35.4	0.00	Wet	622,091	10.13	3.88	61.7	1206.9	4.7
NY	Warren	36113	5520500013	0UKILN	G02FP	30500606	744.5860	0.0000	2.078		25.4	0.00	Dry	563,618	2.64	3.44	0.0	744.6	2.1
PA	Berks	42011	420110039	121	3	30500606	1333.8000	0.0000	3.811	26.0	25.4	0.00	Dry	426317.0	6.3	3.44	45.0	733.3	2.1
PA	Berks	42011	420110039	122	3	30500606	1257.3982	0.0000	3.454	25.0	25.4	0.00	Dry	413074.0	6.1	3.44	43.5	710.5	2.0
PA	Butler	42019	420190024	101	4	30500706	371.4200	0.0000	1.102	27.0	35.4	0.00	Wet	161108.0	4.6	3.88	15.9	312.5	0.9
PA	Butler	42019	420190024	121	4	30500706	322.3100	0.0000	1.098	31.0	35.4	0.00	Wet	139828.0	4.6	3.88	15.8	271.3	0.9
PA	Lawrence	42073	420730024	226	1	30500606	1058.2000	0.0000	2.954		25.4	0.00	Dry	679711.0	3.1	3.44	0.0	1058.2	3.0
PA	Lawrence	42073	420730024	227	1	30500606	0.0000	0.0000	0.000		25.4	0.00	Dry	0.0	0.0	3.44	0.0	0.0	0.0
PA	Lawrence	42073	420730024	228	1	30500606	0.0000	0.0000	0.000		25.4	0.00	Dry	0.0	0.0	3.44	0.0	0.0	0.0
PA	Lawrence	42073	420730026	501	1	30500706	650.0000	0.0000	2.529		35.4	0.00	Wet	259428.0	5.0	3.88	22.6	503.3	2.0
PA	Lawrence	42073	420730026	502	1	30500706	1604.5000	0.0000	6.242		35.4	0.00	Wet	363238.0	8.8	3.88	56.1	704.7	2.7
PA	Lehigh	42077	420770019	101	2	30500606	690.7526	0.0000	2.201	29.0	25.4	0.00	Preheater	410,750	3.36	2.36	29.8	484.7	1.5
PA	Lehigh	42077	420770019	114	2	30500606	409.9636	0.0000	1.306	29.0	25.4	0.00	Preheater	297,552	2.76	2.36	14.4	351.1	1.1
PA	Northampton	42095	420950006	102	1	30500606	1830.7000	0.0000	5.633	28.0	25.4	0.00	Preheater	1,010,862	3.62	2.36	34.8	1192.8	3.7
PA	Northampton	42095	420950006	122	1	30500606	0.0000	0.0000	0.000	27.0	25.4	0.00	Preheater	0	0.00	2.36	0.0	0.0	0.0
PA	Northampton	42095	420950012	101	2	30500706	370.5000	0.0000	0.896	22.0	35.4	0.00	Wet	106,040	6.99	3.88	44.5	205.7	0.5
PA	Northampton	42095	420950012	102	2	30500706	1315.6000	0.0000	3.759	26.0	35.4	0.00	Wet	510,054	5.16	3.88	24.8	989.5	2.8
PA	Northampton	42095	420950045	142	1	30500606	1548.3700	0.0000	4.322		25.4	0.00	Preheater	1262661.0	2.45	2.36	3.8	1489.9	4.2
PA	Northampton	42095	420950127	101	1	30500606	341.1396	0.0000	0.952		25.4	0.00	Dry	108670.0	6.28	3.44	45.2	186.9	0.5
PA	Northampton	42095	420950127	102	1	30500606	342.0489	0.0000	0.955		25.4	0.00	Dry	108927.0	6.28	3.44	45.2	187.4	0.5
PA	Northampton	42095	420950127	103	1	30500606	448.5699	0.0000	1.252		25.4	0.00	Dry	188529.0	4.76	3.44	27.7	324.3	0.9
PA	Northampton	42095	420950127	104	1	30500606	405.0997	0.0000	1.131		25.4	0.00	Dry	170399.0	4.75	3.44	27.7	293.1	0.8
PA	York	42133	421330060	200	4	39000602	419.6600	0.0000	1.153		25.0	0.00	Wet	123963.0	6.77	3.44	49.2	213.2	0.6
						MANEVU	31,960.37		101.86									18,729.30	59.36

							2002 NOx Emissions											2009 Emissions	
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Kiln Type	2002 Clinker Production	2002 lbs/ton Clinker	OTC Rule lbs/ton Clinker	2009 Percent Reduction	Annual (tpy)	Summer Day (tpd)
						NOVA	0.00		0.00									0.00	0.00
						OTR	31,960.37		101.86									18,729.30	59.36

2009 Reductions

Annual (tpy)	Summer Day (tpd)	Plant Name
0.0	0.00	DRAGON PRODUCTS CO INC - THOMASTON
2663.0	7.32	LEHIGH PORTLAND CEMENT Shutdown and relocate to WV in 2008
523.0	1.44	ESSROC CEMENT
513.3	1.41	ESSROC CEMENT
1084.0	2.98	INDEPENDENT CEMENT/ST. LAWERENCE
1995.3	7.76	LAFARGE BUILDING MATERIALS INC
1944.8	7.57	ST LAWRENCE CEMENT CORP-CATSKILL QUARRY
0.0	0.00	GLENS FALLS LEHIGH CEMENT COMPANY
600.5	1.72	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
546.9	1.50	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
58.9	0.17	ARMSTRONG CEMENT & SUPPLY/WINFIELD
51.0	0.17	ARMSTRONG CEMENT & SUPPLY/WINFIELD
0.0	0.00	CEMEX INC/WAMPUM CEMENT PLT
0.0	0.00	CEMEX INC/WAMPUM CEMENT PLT
0.0	0.00	CEMEX INC/WAMPUM CEMENT PLT
146.7	0.57	ESSROC/BESSEMER
899.8	3.50	ESSROC/BESSEMER
206.1	0.66	LAFARGE CORP/WHITEHALL PLT
58.9	0.19	LAFARGE CORP/WHITEHALL PLT
637.9	1.96	HERCULES CEMENT CO LP/STOCKERTOWN
0.0	0.00	HERCULES CEMENT CO LP/STOCKERTOWN
164.8	0.40	KEYSTONE PORTLAND CEMENT/EAST ALLEN
326.1	0.93	KEYSTONE PORTLAND CEMENT/EAST ALLEN
58.4	0.16	ESSROC/NAZARETH LOWER CEMENT PLT 1
154.2	0.43	ESSROC/NAZARETH CEMENT PLT 3
154.7	0.43	ESSROC/NAZARETH CEMENT PLT 3
124.3	0.35	ESSROC/NAZARETH CEMENT PLT 3
112.0	0.31	ESSROC/NAZARETH CEMENT PLT 3
206.4	0.57	LEHIGH CEMENT CO/YORK OPERATIONS
13,231.06	42.50	

2009 Reductions

Annual (tpy)	Summer Day (tpd)	Plant Name
0.00	0.00	
13,231.06	42.50	

COLUMN	COLUMN DESCRIPTIONS
A-F	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
G	SCC-Source Classification Code
H	NOx 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
I	NOx 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
J	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP
K	Summer season percentage from NIF Emission Process (EP) file
L	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
M	Total capture/control efficiency from NIF 2002 CE file
N	Blank

COLUMN	COLUMN DESCRIPTIONS
O	NOx 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS B
P	NOx 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
Q	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in invento 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 day b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
R	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
S	Total capture/control efficiency from NIF 2009 CE file
T	Incremental BOTW Control Factor (85% if uncontrolled or 0 according to state specificatior
U, V	NOx 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW incremental control facto
W, X	NOx 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)
Y	Plant Name

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Control Factor	Annual (tpy)
MD	Baltimore City	24510	510-0285	10	01S10	30501402	103.7530	0.2826	0.2826	25.0	25.0	0.00	124.9430	0.3403	0.340	1.204	0.00	85.00	18.74
MA	Worcester	25027	1200856	04	0304	30501402	246.0000	0.0000	0.6758	25.0	25.0	0.00	319.2470	0.8771	0.877	1.298	0.00	85.00	47.89
MA	Worcester	25027	1200856	05	0304	30501402	258.0000	0.0000	0.7088	25.0	25.0	0.00	334.8200	0.9198	0.920	1.298	0.00	85.00	50.22
NJ	Burlington	34005	45982	U6	OS0	39999991	569.4000	1.5600	1.5600	25.0	25.0	0.00	569.4000	1.5600	1.560	1.000	0.00	85.00	85.41
NJ	Cumberland	34011	75475	U1	OS1	30501401	125.7100	0.3444	0.3444	25.0	24.9	0.00	125.7100	0.3444	0.344	1.000	0.00	85.00	18.86
NJ	Cumberland	34011	75475	U3	OS1	30501401	7.9800	0.0219	0.0219	25.0	24.9	0.00	7.9800	0.0219	0.022	1.000	0.00	85.00	1.20
NJ	Cumberland	34011	75475	U35	OS1	30501401	101.8400	0.2790	0.2790	25.0	24.9	0.00	101.8400	0.2790	0.279	1.000	0.00	85.00	15.28
NJ	Cumberland	34011	75475	U37	OS1	30501401	3.1900	0.0087	0.0087	26.0	24.9	0.00	3.1900	0.0087	0.009	1.000	0.00	85.00	0.48
NJ	Cumberland	34011	75503	U3	OS1	30501401	43.3800	0.1216	0.1216		24.9	0.00	43.3800	0.1216	0.122	1.000	0.00	0.00	43.38
NJ	Cumberland	34011	75503	U4	OS1	30501401	30.0900	0.0845	0.0845	25.0	24.9	0.00	30.0900	0.0845	0.085	1.000	0.00	0.00	30.09
NJ	Cumberland	34011	75503	U5	OS1	30501401	477.6400	1.4989	1.4989	29.0	24.9	0.00	477.6400	1.4989	1.499	1.000	0.00	85.00	71.65
NJ	Cumberland	34011	75505	U12	OS1	30599999	40.0000	0.1100	0.1100	25.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	0.00	0.00
NJ	Cumberland	34011	75505	U143	OS1	30599999	1.5000	0.0053	0.0053	47.0	25.0	0.00	1.5000	0.0053	0.005	1.000	0.00	0.00	1.50
NJ	Cumberland	34011	75505	U144	OS1	30599999	7.4000	0.0203	0.0203	26.0	25.0	0.00	7.4000	0.0203	0.020	1.000	0.00	0.00	7.40
NJ	Cumberland	34011	75505	U146	OS1	30599999	98.2000	0.2823	0.2823	26.0	25.0	0.00	98.2000	0.2823	0.282	1.000	0.00	85.00	14.73
NJ	Cumberland	34011	75505	U150	OS1	30599999	8.2000	0.0231	0.0231	26.0	25.0	0.00	8.2000	0.0231	0.023	1.000	0.00	0.00	8.20
NJ	Cumberland	34011	75505	U151	OS1	30599999	8.2000	0.0221	0.0221	25.0	25.0	0.00	8.2000	0.0221	0.022	1.000	0.00	0.00	8.20
NJ	Cumberland	34011	75505	U6	OS1	30599999	169.5000	0.4756	0.4756	23.0	25.0	0.00	0.0000	0.0000	0.000	1.000	0.00	0.00	0.00
NJ	Cumberland	34011	75506	U1	OS1	30501401	28.1700	0.0828	0.0828		24.9	0.00	28.1700	0.0828	0.083	1.000	0.00	0.00	28.17
NJ	Cumberland	34011	75506	U1	OS3	30501401	40.1900	0.1027	0.1027	24.0	24.9	0.00	40.1900	0.1027	0.103	1.000	0.00	0.00	40.19
NJ	Middlesex	34023	18070	U1	OS1	30501401	275.1600	0.8650	0.8650	28.0	24.9	0.00	275.1600	0.8650	0.865	1.000	0.00	0.00	275.16
NJ	Salem	34033	65499	U1	OS1	30501401	170.8900	0.4224	0.4224	25.0	24.9	0.00	170.8900	0.4224	0.422	1.000	0.00	85.00	25.63
NJ	Salem	34033	65499	U2	OS1	30501401	235.9000	0.6688	0.6688	25.0	24.9	0.00	235.9000	0.6688	0.669	1.000	0.00	85.00	35.39
NJ	Salem	34033	65499	U3	OS1	30501401	246.6000	0.7114	0.7114	25.0	24.9	0.00	246.6000	0.7114	0.711	1.000	0.00	85.00	36.99
NY	Albany	36001	4012200004	EI0001	E20EI	39000689	48.6140	0.0000	0.1336		25.0	0.00	51.2680	0.1408	0.141	1.055	0.00	85.00	7.69
NY	Albany	36001	4012200004	U00002	OX1FP	30501202	31.8291	0.0000	0.0874		25.0	0.00	31.3090	0.0860	0.086	0.984	0.00	85.00	4.70
NY	Albany	36001	4012200004	U00003	FZ1FP	30501204	24.7171	0.0000	0.0665		24.5	0.00	24.3130	0.0655	0.065	0.984	0.00	85.00	3.65
NY	Albany	36001	4012200004	U00003	FZ2FP	30501204	3.0896	0.0000	0.0083		24.5	0.00	3.0390	0.0082	0.008	0.984	0.00	85.00	0.46
NY	Albany	36001	4012200004	U00003	SS1FP	30501206	2.6262	0.0000	0.0072		25.0	0.00	2.5830	0.0071	0.007	0.984	0.00	85.00	0.39
NY	Albany	36001	4012200004	U00012	OX2FP	30501202	28.1758	0.0000	0.0774		25.0	0.00	27.7150	0.0761	0.076	0.984	0.00	85.00	4.16
NY	Albany	36001	4012200004	U00013	FC2FP	30501204	40.1792	0.0000	0.1082		24.5	0.00	39.5230	0.1064	0.106	0.984	0.00	85.00	5.93

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Control Factor	Annual (tpy)
NY	Cayuga	36011	7055200004	AFURNC	FRNFP	30501402	588.9110	0.0000	1.6179		25.0	0.00	661.7840	1.8181	1.818	1.124	0.00	85.00	99.27
NY	Chemung	36015	8070400036	000001	O1AFP	30501402	545.9445	0.0000	1.4998		25.0	0.00	613.5010	1.6854	1.685	1.124	0.00	85.00	92.03
NY	Ontario	36069	8320500041	UFURNC	FURFP	30501403	773.7660	0.0000	2.1257		25.0	0.00	869.5130	2.3888	2.389	1.124	0.00	85.00	130.43
NY	St. Lawrence	36089	6403000002	U00001	101FP	30501401	88.6495	0.0000	0.2426		24.9	0.00	99.6190	0.2726	0.273	1.124	0.00	85.00	14.94
NY	St. Lawrence	36089	6403000002	U00003	300FP	30501416	2.1060	0.0000	0.0058		25.0	0.00	2.3670	0.0065	0.007	1.124	0.00	85.00	0.36
NY	Steuben	36101	8460300008	PCCTNK	GL2FP	30501416	55.2347	0.0000	0.1517		25.0	0.00	62.0700	0.1705	0.171	1.124	0.00	85.00	9.31
PA	Allegheny	42003	4200300164	003	1	30501404	86.3300	0.2534	0.2534	27.0	24.9	0.00	105.5340	0.3098	0.310	1.222	0.00	46.48	56.48
PA	Allegheny	42003	4200300164	008	1	30501404	70.9380	0.2365	0.2365	27.0	24.9	0.00	86.7180	0.2891	0.289	1.222	0.00	34.87	56.48
PA	Allegheny	42003	4200300165	P01	1	30501402	75.1350	0.2042	0.2042	25.0	25.0	0.00	91.8490	0.2496	0.250	1.222	0.00	100.00	0.00
PA	Allegheny	42003	4200300165	P02	1	30501402	90.2488	0.2354	0.2354	24.0	25.0	0.00	110.3250	0.2878	0.288	1.222	0.00	100.00	0.00
PA	Allegheny	42003	4200300165	P04	1	30501402	62.1138	0.1620	0.1620	24.0	25.0	0.00	75.9310	0.1980	0.198	1.222	0.00	100.00	0.00
PA	Allegheny	42003	4200300227	003	1	30590003	1.9640	0.0049	0.0049	23.0	25.0	0.00	2.1480	0.0054	0.005	1.094	0.00	0.00	2.15
PA	Allegheny	42003	4200300227	003	2	30590003	1.9640	0.0049	0.0049	23.0	25.0	0.00	2.1480	0.0054	0.005	1.094	0.00	0.00	2.15
PA	Allegheny	42003	4200300342	002	1	30501403	234.8600	0.6382	0.6382	25.0	25.0	0.00	287.1060	0.7802	0.780	1.222	0.00	53.18	134.41
PA	Allegheny	42003	4200300342	002	3	30501403	818.2000	2.2234	2.2234	25.0	25.0	0.00	1000.2120	2.7180	2.718	1.222	0.00	51.88	481.34
PA	Beaver	42007	420070012	103	1	30501402	90.7000	0.0000	0.2093	21.0	25.0	0.00	110.8770	0.2559	0.256	1.222	0.00	0.00	110.88
PA	Centre	42027	420270021	P101	1	30501404	101.5000	0.0000	0.2777		24.9	0.00	124.0790	0.3395	0.340	1.222	0.00	100.00	0.00
PA	Centre	42027	420270021	P102	1	30501404	125.7500	0.0000	0.3441		24.9	0.00	153.7240	0.4206	0.421	1.222	0.00	100.00	0.00
PA	Centre	42027	420270021	P102	3	30501404	125.7500	0.0000	0.3441		24.9	0.00	153.7240	0.4206	0.421	1.222	0.00	100.00	0.00
PA	Centre	42027	420270021	P103	1	30501404	430.9000	0.0000	1.1791		24.9	0.00	526.7550	1.4413	1.441	1.222	0.00	100.00	0.00
PA	Clarion	42031	420310009	102	1	30501402	212.4000	0.0000	0.6069	26.0	25.0	0.00	259.6490	0.7419	0.742	1.222	0.00	0.00	259.65
PA	Clarion	42031	420310009	S105A	1	30501402	167.2000	0.0000	0.4593	25.0	25.0	0.00	204.3940	0.5615	0.562	1.222	0.00	0.00	204.39
PA	Crawford	42039	420390012	101	1	30501403	702.1000	0.0000	1.9288		25.0	0.00	858.2850	2.3579	2.358	1.222	0.00	22.84	662.22
PA	Crawford	42039	420390012	102	1	30501403	2161.6001	0.0000	5.9385		25.0	0.00	2642.4570	7.2595	7.259	1.222	0.00	63.20	972.43
PA	Cumberland	42041	420410013	101	1	30501403	1399.0000	0.0000	3.8434		25.0	0.00	1710.2130	4.6984	4.698	1.222	0.00	30.81	1183.33
PA	Cumberland	42041	420410013	102	1	30501403	2765.0000	0.0000	7.5962		25.0	0.00	3380.0850	9.2859	9.286	1.222	0.00	64.07	1214.58
PA	Fayette	42051	420510020	101	1	30501402	162.6000	0.0000	0.4467	25.0	25.0	0.00	198.7710	0.5461	0.546	1.222	0.00	27.26	144.58
PA	Fayette	42051	420510020	102	1	30501402	266.0000	0.0000	0.7600	26.0	25.0	0.00	325.1730	0.9291	0.929	1.222	0.00	30.02	227.56
PA	Jefferson	42065	420650003	110	1	30501402	126.4000	0.0000	0.5000	36.0	25.0	0.00	154.5180	0.6113	0.611	1.222	0.00	2.45	150.74
PA	Jefferson	42065	420650007	103	1	30501402	107.4000	0.0000	0.3305	28.0	25.0	0.00	131.2920	0.4040	0.404	1.222	0.00	0.00	131.29
PA	Jefferson	42065	420650007	104	1	30501402	149.9000	0.0000	0.4118	25.0	25.0	0.00	183.2460	0.5034	0.503	1.222	0.00	0.00	183.25
PA	Luzerne	42079	420790013	101	1	30501201	23.6000	0.0000	0.0648		25.0	0.00	25.2550	0.0694	0.069	1.070	0.00	0.00	25.26
PA	Luzerne	42079	420790013	102	1	30501201	36.9000	0.0000	0.1014		25.0	0.00	39.4880	0.1085	0.108	1.070	0.00	0.00	39.49
PA	Luzerne	42079	420790013	103	1	30501204	1.0000	0.0000	0.0027		24.5	0.00	1.0700	0.0029	0.003	1.070	0.00	0.00	1.07
PA	Luzerne	42079	420790013	104	1	30501204	5.7000	0.0000	0.0153		24.5	0.00	6.1000	0.0164	0.016	1.070	0.00	0.00	6.10
PA	Luzerne	42079	420790018	101	1	30501402	136.1700	0.0000	0.3741		25.0	0.00	166.4620	0.4573	0.457	1.222	0.00	100.00	0.00
PA	Luzerne	42079	420790018	101	2	30501402	24.0300	0.0000	0.0660		25.0	0.00	29.3760	0.0807	0.081	1.222	0.00	100.00	0.00
PA	Luzerne	42079	420790018	102	1	30501402	111.5200	0.0000	0.3064		25.0	0.00	136.3280	0.3745	0.375	1.222	0.00	100.00	0.00
PA	Luzerne	42079	420790018	102	2	30501402	19.6800	0.0000	0.0541		25.0	0.00	24.0580	0.0661	0.066	1.222	0.00	100.00	0.00
PA	Luzerne	42079	420790018	103	1	30501402	455.7000	0.0000	1.2519		25.0	0.00	557.0720	1.5304	1.530	1.222	0.00	100.00	0.00
PA	McKean	42083	420830002	101	1	30501402	195.0000	0.0000	0.5143	24.0	25.0	0.00	238.3790	0.6287	0.629	1.222	0.00	67.49	77.51
PA	McKean	42083	420830002	201	1	30501402	213.0000	0.0000	0.7256	31.0	25.0	0.00	260.3830	0.8870	0.887	1.222	0.00	70.36	77.18
PA	McKean	42083	420830006	101	1	30501402	200.3000	0.0000	0.5503	25.0	25.0	0.00	244.8570	0.6727	0.673	1.222	0.00	37.02	154.21
PA	McKean	42083	420830006	102	1	30501402	26.0000	0.0000	0.0771	27.0	25.0	0.00	31.7840	0.0943	0.094	1.222	0.00	0.00	31.78
PA	McKean	42083	420830006	103	1	30501402	221.6000	0.0000	0.6331	26.0	25.0	0.00	270.8960	0.7740	0.774	1.222	0.00	29.45	191.11
PA	Tioga	42117	421170020	P109	1	30501402	210.2000	0.0000	0.5775		25.0	0.00	256.9600	0.7059	0.706	1.222	0.00	7.45	237.81
PA	Washington	42125	421250001	107	1	30501404	52.5360	0.0000	0.1559	27.0	24.9	0.00	64.2230	0.1906	0.191	1.222	0.00	0.00	64.22
PA	Washington	42125	421250001	107	3	30501404	27.0640	0.0000	0.0803	27.0	24.9	0.00	33.0840	0.0982	0.098	1.222	0.00	0.00	33.08
PA	Westmoreland	42129	421290233	101	2	30501404	372.2798	0.0000	1.0227	25.0	24.9	0.00	455.0950	1.2503	1.250	1.222	0.00	100.00	0.00
PA	Westmoreland	42129	421290233	102	2	30501404	159.8320	0.0000	0.4391	25.0	24.9	0.00	195.3870	0.5368	0.537	1.222	0.00	100.00	0.00
PA	Westmoreland	42129	421290553	101	1	30501402	20.9000	0.0000	0.0643	28.0	25.0	0.00	25.5490	0.0786	0.079	1.222	0.00	0.00	25.55
PA	York	42133	421330066	104	3	30501414	21.3010	0.0000	0.0468	20.0	24.9	0.00	26.0400	0.0572	0.057	1.222	0.00	52.94	12.25

							2002 NOx Emissions						2009 NOx OTB/OTW Emissions						2009 BOTW
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	2002 Control Efficiency	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Control Factor TOTAL_EFF	2009 BOTW Control Factor	Annual (tpy)
RI	Providence	44007	AIR572	3	3	30501401	231.3035	0.7010	0.7010		24.9	0.00	171.0650	0.5184	0.518	0.740	0.00	85.00	25.66
RI	Providence	44007	AIR572	5	5	39000689	7.9035	0.0000	0.0217		25.0	0.00	7.9000	0.0217	0.022	1.000	0.00	85.00	1.19
						MANEVU	18,840.2		52.5				21,893.3		60.9				8,419.4
						NOVA	0.0		0.0				0.0		0.0				0.0
						OTR	18,840.2		52.5				21,893.3		60.9				8,419.4

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/ Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name		Glass Type	2002 Throughput	2002 lbs/ton	OTC Rule lbs/ton glass pulled	2009 Percent Reduction
0.05	106.20	0.29	CARR-LOWREY GLASS						
0.13	271.36	0.75	ST GOBAIN CONTAINERS						
0.14	284.60	0.78	ST GOBAIN CONTAINERS						
0.23	483.99	1.33	AFG Industries Inc.; Cinnaminso	Closed 2006, facility requested Banking of Emissions					
0.05	106.85	0.29	Durand Glass Manufacturing Cor	Apply 85% control, per NJDEP					
0.00	6.78	0.02	Durand Glass Manufacturing Cor	Apply 85% control, per NJDEP					
0.04	86.56	0.24	Durand Glass Manufacturing Cor	Apply 85% control, per NJDEP					
0.00	2.71	0.01	Durand Glass Manufacturing Cor	Apply 85% control, per NJDEP					
0.12	0.00	0.00	Kimble Glass Inc.	Apply 0% control, per NJDEP					
0.08	0.00	0.00	Kimble Glass Inc.	Apply 0% control, per NJDEP					
0.22	405.99	1.27	Kimble Glass Inc.	Apply 85% control, per NJDEP					
0.00	0.00	0.00	Wheaton, Inc.	Shutdown, set 2009 emissions to 0 per NJDEP					
0.01	0.00	0.00	Wheaton, Inc.	Apply 0% control, per NJDEP					
0.02	0.00	0.00	Wheaton, Inc.	Apply 0% control, per NJDEP					
0.04	83.47	0.24	Wheaton, Inc.	Apply 85% control, per NJDEP					
0.02	0.00	0.00	Wheaton, Inc.	Apply 0% control, per NJDEP					
0.02	0.00	0.00	Wheaton, Inc.	Apply 0% control, per NJDEP					
0.00	0.00	0.00	Wheaton, Inc.	Shutdown, set 2009 emissions to 0 per NJDEP					
0.08	0.00	0.00	Leone Industries, Inc.	Already has Oxyfuel, apply 0% control, per NJDEP					
0.10	0.00	0.00	Leone Industries, Inc.	Already has Oxyfuel, apply 0% control, per NJDEP					
0.87	0.00	0.00	Saint-Gobain Containers, Inc.	Shutdown, leave 2009 emissions alone per per NJDEP					
0.06	145.26	0.36	Anchor Glass Container Corpora	Apply 85% control, per NJDEP					
0.10	200.52	0.57	Anchor Glass Container Corpora	Apply 85% control, per NJDEP					
0.11	209.61	0.60	Anchor Glass Container Corpora	Apply 85% control, per NJDEP					
0.02	43.58	0.12	OWENS-CORNING DELMAR PLANT						
0.01	26.61	0.07	OWENS-CORNING DELMAR PLANT						
0.01	20.67	0.06	OWENS-CORNING DELMAR PLANT						
0.00	2.58	0.01	OWENS-CORNING DELMAR PLANT						
0.00	2.20	0.01	OWENS-CORNING DELMAR PLANT						
0.01	23.56	0.06	OWENS-CORNING DELMAR PLANT						
0.02	33.59	0.09	OWENS-CORNING DELMAR PLANT						

/ Emissions 2009 BOTW Reductions

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name		Glass Type	2002 Throughput	2002 lbs/ton	OTC Rule lbs/ton glass pulled	2009 Percent Reduction
0.27	562.52	1.55	OWENS-BROCKWAY AUBURN PLANT 35						
0.25	521.48	1.43	ANCHOR GLASS CONTAINER CORP						
0.36	739.09	2.03	GUARDIAN GENEVA FLOAT GLASS FACILITY						
0.04	84.68	0.23	CORNING INC CANTON PLANT						
0.00	2.01	0.01	CORNING INC CANTON PLANT						
0.03	52.76	0.14	CORNING INC - FALLBROOK PLANT						
0.17	49.05	0.14	GE CONSUMER PRODUCTS, LIGHTING		Pressed	23,102	7.474	4.0	46.5
0.19	30.24	0.10	GE CONSUMER PRODUCTS, LIGHTING		Pressed	23,102	6.141	4.0	34.9
0.00	91.85	0.25	GLENSHAW GLASS COMPANY	Shutdown in 2002-2004 timeframe					100.0
0.00	110.33	0.29	GLENSHAW GLASS COMPANY	Shutdown in 2002-2004 timeframe					100.0
0.00	75.93	0.20	GLENSHAW GLASS COMPANY	Shutdown in 2002-2004 timeframe					100.0
0.01	0.00	0.00	KOPP GLASS, INCORPORATEI	Not Lkely to be covered by requirements					0.0
0.01	0.00	0.00	KOPP GLASS, INCORPORATEI	Not Lkely to be covered by requirements					0.0
0.37	152.69	0.41	GUARDIAN INDUSTRIES CORP. FLOREFFE		Flat	23,903	19.651	9.2	53.2
1.31	518.87	1.41	GUARDIAN INDUSTRIES CORP. FLOREFFE		Flat	85,598	19.117	9.2	51.9
0.26	0.00	0.00	ANCHOR HOCKING CORP/PHOENIX GLASS		Container	55,127	3.291	4.0	0.0
0.00	124.08	0.34	CORNING ASAHI VIDEO PROD	Shutdown in 2002-2004 timeframe					100.0
0.00	153.72	0.42	CORNING ASAHI VIDEO PROD	Shutdown in 2002-2004 timeframe					100.0
0.00	153.72	0.42	CORNING ASAHI VIDEO PROD	Shutdown in 2002-2004 timeframe					100.0
0.00	526.76	1.44	CORNING ASAHI VIDEO PROD	Shutdown in 2002-2004 timeframe					100.0
0.74	0.00	0.00	OWENS-BROCKWAY GLASS/CLARION		Container	137,044	3.100	4.0	0.0
0.56	0.00	0.00	OWENS-BROCKWAY GLASS/CLARION		Container	90,625	3.690	4.0	0.0
1.82	196.07	0.54	PPG IND INC/WORKS 8		Flat	117,763	11.924	9.2	22.8
2.67	1670.03	4.59	PPG IND INC/WORKS 8		Flat	172,929	25.000	9.2	63.2
3.25	526.89	1.45	PPG IND INC/WORKS NO 6		Flat	210,433	13.296	9.2	30.8
3.34	2165.51	5.95	PPG IND INC/WORKS NO 6		Flat	215,991	25.603	9.2	64.1
0.40	54.19	0.15	ANCHOR GLASS CONTAINER/PLT 5		Container	59,135	5.499	4.0	27.3
0.65	97.61	0.28	ANCHOR GLASS CONTAINER/PLT 5		Container	93,076	5.716	4.0	30.0
0.60	3.78	0.01	OWENS-BROCKWAY GLASS/BROCKWAY		Container	61,654	4.100	4.0	2.4
0.40	0.00	0.00	OWENS BROCKWAY GLASS/CRENSHAW		Container	97,163	2.211	4.0	0.0
0.50	0.00	0.00	OWENS BROCKWAY GLASS/CRENSHAW		Container	131,450	2.281	4.0	0.0
0.07	0.00	0.00	CERTAIN TEED PROD CO/MOU	Not Lkely to be covered by requirements					0.0
0.11	0.00	0.00	CERTAIN TEED PROD CO/MOU	Not Lkely to be covered by requirements					0.0
0.00	0.00	0.00	CERTAIN TEED PROD CO/MOU	Not Lkely to be covered by requirements					0.0
0.02	0.00	0.00	CERTAIN TEED PROD CO/MOU	Not Lkely to be covered by requirements					0.0
0.00	166.46	0.46	TECHNEGLAS INC/PITTSTON	Shutdown in 2002-2004 timeframe					100.0
0.00	29.38	0.08	TECHNEGLAS INC/PITTSTON	Shutdown in 2002-2004 timeframe					100.0
0.00	136.33	0.37	TECHNEGLAS INC/PITTSTON	Shutdown in 2002-2004 timeframe					100.0
0.00	24.06	0.07	TECHNEGLAS INC/PITTSTON	Shutdown in 2002-2004 timeframe					100.0
0.00	557.07	1.53	TECHNEGLAS INC/PITTSTON	Shutdown in 2002-2004 timeframe					100.0
0.20	160.87	0.42	PGH CORNING CORP/PORT ALLEGANY		Pressed	31,701	12.302	4.0	67.5
0.26	183.21	0.62	PGH CORNING CORP/PORT ALLEGANY		Pressed	31,566	13.496	4.0	70.4
0.42	90.64	0.25	SAINT GOBAIN CONTAINERS/PORT ALLEGANY BORO		Container	63,076	6.351	4.0	37.0
0.09	0.00	0.00	SAINT GOBAIN CONTAINERS/PORT ALLEGANY BORO		Container	26,097	1.993	4.0	0.0
0.55	79.78	0.23	SAINT GOBAIN CONTAINERS/PORT ALLEGANY BORO		Container	78,167	5.670	4.0	29.5
0.65	19.15	0.05	OSRAM SYLVANIA PROD /WELLSBORO PLT		Pressed	97,266	4.322	4.0	7.5
0.19	0.00	0.00	WORLD KITCHEN INC/CHARLEROI		Pressed	37,142	2.829	4.0	0.0
0.10	0.00	0.00	WORLD KITCHEN INC/CHARLEROI		Pressed	19,134	2.829	4.0	0.0
0.00	455.10	1.25	AMERICAN VIDEO GLASS CO I	Shutdown in 2002-2004 timeframe					100.0
0.00	195.39	0.54	AMERICAN VIDEO GLASS CO I	Shutdown in 2002-2004 timeframe					100.0
0.08	0.00	0.00	ST GEORGE CRYSTAL LTD/JE	Not Lkely to be covered by requirements					0.0
0.03	13.79	0.03	OSRAM SYLVANIA PROD /YORK BASE PROD PLT		Pressed	5,012.00	8.500	4.0	52.9

' Emissions **2009 BOTW Reductions**

Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	Plant Name	Glass Type	2002 Throughput	2002 lbs/ton	OTC Rule lbs/ton glass pulled	2009 Percent Reduction
0.08	145.41	0.44	OSRAM SYLVANIA PRODUCTS INC.					#DIV/0!
0.00	6.72	0.02	OSRAM SYLVANIA PRODUCTS INC.					#DIV/0!
23.6	13,473.9	37.3						
0.0	0.0	0.0						
23.6	13,473.9	37.3						

COLUMN	COLUMN DESCRIPTIONS
A,B,C	State abbreviation, County Name, FIPS state/county code
D	SCC-Source Classification Code
E	NOx 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
F	NOx 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
G	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
H	Summer season percentage from NIF Emission Process (EP) file
I	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
J	Blank

SCC: 21-02-xxx-xxx, 21-03-xxx-xxx

COLUMN	COLUMN DESCRIPTIONS
K	NOx 2009 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
L	NOx 2009 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
M	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP file not=blank, multiply annual by NIF EP summer PCT/91 days b) if summer PCT in NIF EP file = blank, multiply annual by SMOKE summer PCT/91 days
N	Growth Factor 2002 to 2009 (used in MANEVU/VISTAS Emission Projections)
O	Incremental Control Factor for 2009 (used in MANEVU/VISTAS Emission Projections)
P	Incremental BOTW Control Factor (see tab Area Percent Reduction)
Q, R	NOx 2009 BOTW Emissions (2009 OTB/OTW x (1 - 2009 BOTW control factor/100)
S, T	NOx 2009 Emission Reduction (2009 OTB/OTW Emissions - 2009 BOTW Emissions)

ICI Boilers Area Source

				2002 NOx Emissions					2009 NOx OTB/OTW Emissions						2009 BOTW Emissions		2009 BOTW Reductions		
State	County	FIPS	SCC	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Summer Season Percent NIF EP	Summer Season Percent SMOKE	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Growth Factor 02 to 09	2009 OTB/OTW Incremental Control Factor TOTAL_EFF	2009 BOTW Incremental Control Factor	Annual (tpy)	Summer Day Calculated (tpd)	Annual (tpy)	Summer Day (tpd)	SCC Description

COLUMN	COLUMN DESCRIPTIONS
A-F	State abbreviation, County Name, FIPS state/county code, Site ID, Emission Unit ID, Process ID
G	SCC-Source Classification Code
H	Boiler Capacity (mmBtu/hr)
I	Source of Boiler Size Data (i.e., MANEVU Design Capacity field, EP/EU Description, Title V Permit, State provided data, SCC desc)
J	NOx 2002 Annual Emissions (tons/year) as reported in MANEVU Version 3 and VISTAS BaseG Inventories
K	NOx 2002 Summer Day (tons/day) from MANEVU Version 3 and VISTAS BaseG (Note: Missing indicates that summer day emissions are not reported in MANEVU/VISTAS)
L	NOx 2002 Summer Day Emissions (tons/day) calculated using the following hierarchy: 1. If summer day emissions in inventory, use summer day emissions as reported in inventory (Column F) 2. If summer day emission not in inventory: a) if summer PCT in NIF EP
M	Summer season percentage from NIF Emission Process (EP) file - 999 indicated missing thruput; 0 indicates 0 summer thruput
N	Summer season percentage from SMOKE ((June_PCT+July_PCT+Aug_PCT)/Total_PCT)
O	Total capture/control efficiency from NIF 2002 CE file

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
CT	Fairfield	09001	0258	R0457	01	10300504	11.00	MANEVU2002	0.7600	0.0025	0.0025	BRIDGEPORT MUTUAL MGMT CORP
CT	Fairfield	09001	0258	R0458	01	10300504	11.00	MANEVU2002	0.4000	0.0000	0.0000	BRIDGEPORT MUTUAL MGMT CORP
CT	Fairfield	09001	0258	R0459	01	10300504	11.00	MANEVU2002	0.4700	0.0000	0.0000	BRIDGEPORT MUTUAL MGMT CORP
CT	Fairfield	09001	0742	P0120	01	10300501	10.00	MANEVU2002	1.8920	0.0056	0.0056	PEOPLE'S BANK
CT	Fairfield	09001	0742	P0120	02	10300602	10.00	MANEVU2002	0.4500	0.0013	0.0013	PEOPLE'S BANK
CT	Fairfield	09001	0742	P0121	01	10300501	10.00	MANEVU2002	1.8920	0.0056	0.0056	PEOPLE'S BANK
CT	Fairfield	09001	0742	P0121	02	10300602	10.00	MANEVU2002	0.4500	0.0013	0.0013	PEOPLE'S BANK
CT	Fairfield	09001	0875	R0813	01	10300501	15.00	MANEVU2002	0.8880	0.0024	0.0024	INTERCHURCH RESIDENCES
CT	Fairfield	09001	0881	P0031	02	10200603	5.00	MANEVU2002	0.2600	0.0035	0.0035	CASCO PRODUCTS CORPORATION
CT	Fairfield	09001	2259	R0011	01	10200603	8.00	MANEVU2002	0.3700	0.0002	0.0002	RISDON-AMS COSMETIC CONT DIV
CT	Fairfield	09001	2259	R0012	01	10200603	4.00	MANEVU2002	0.1850	0.0007	0.0007	RISDON-AMS COSMETIC CONT DIV
CT	Fairfield	09001	2259	R0013	01	10200603	4.00	MANEVU2002	0.1850	0.0007	0.0007	RISDON-AMS COSMETIC CONT DIV
CT	Fairfield	09001	2277	P0028	02	10200602	10.00	MANEVU2002	0.7810	0.0017	0.0017	BARDEN CORP
CT	Fairfield	09001	2277	R0050	02	10200602	10.00	MANEVU2002	0.7810	0.0017	0.0017	BARDEN CORP
CT	Fairfield	09001	2408	E0001	01	10300603	2.00	MANEVU2002	0.2200	0.0000	0.0000	DANBURY /DPW (LANDFILL)
CT	Fairfield	09001	2408	E0002	01	10300603	7.00	MANEVU2002	0.7200	0.0017	0.0017	DANBURY /DPW (LANDFILL)
CT	Fairfield	09001	2408	E0005	01	10300501	2.00	MANEVU2002	0.0460	0.0000	0.0000	DANBURY /DPW (LANDFILL)
CT	Fairfield	09001	2408	E0010	01	10300603	4.00	MANEVU2002	0.1800	0.0000	0.0000	DANBURY /DPW (LANDFILL)
CT	Fairfield	09001	2408	E0011	01	10300603	1.00	MANEVU2002	0.0330	0.0000	0.0000	DANBURY /DPW (LANDFILL)
CT	Fairfield	09001	2504	P0059	02	10300602	13.00	MANEVU2002	4.2450	0.0027	0.0027	DANBURY HIGH SCHOOL
CT	Fairfield	09001	2504	P0059	01	10300501	13.00	MANEVU2002	0.0280	0.0015	0.0015	DANBURY HIGH SCHOOL
CT	Fairfield	09001	2504	P0060	02	10300602	13.00	MANEVU2002	4.2450	0.0027	0.0027	DANBURY HIGH SCHOOL
CT	Fairfield	09001	2504	P0060	01	10300501	13.00	MANEVU2002	0.0280	0.0015	0.0015	DANBURY HIGH SCHOOL
CT	Fairfield	09001	2504	P0061	02	10300602	13.00	MANEVU2002	4.2450	0.0027	0.0027	DANBURY HIGH SCHOOL
CT	Fairfield	09001	2504	P0061	01	10300501	13.00	MANEVU2002	0.0280	0.0015	0.0015	DANBURY HIGH SCHOOL
CT	Fairfield	09001	3408	P0056	01	10300602	31.00	MANEVU2002	0.7330	0.0022	0.0022	ARNOLD FOODS COMPANY
CT	Fairfield	09001	3408	P0069	01	10300602	17.00	MANEVU2002	0.7100	0.0016	0.0016	ARNOLD FOODS COMPANY
CT	Fairfield	09001	4203	P0053	02	10300602	38.00	MANEVU2002	1.3840	0.0025	0.0025	NORWALK HOSPITAL ASSOCIATION

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Plant Name
CT	Fairfield	09001	4203	P0053	01	10300501	38.00	MANEVU2002	0.0170	0.0000	0.0000	NORWALK HOSPITAL ASSOCIATION
CT	Fairfield	09001	4203	P0054	02	10300602	38.00	MANEVU2002	1.3840	0.0025	0.0025	NORWALK HOSPITAL ASSOCIATION
CT	Fairfield	09001	4203	P0054	01	10300501	38.00	MANEVU2002	0.0170	0.0000	0.0000	NORWALK HOSPITAL ASSOCIATION
CT	Fairfield	09001	4214	R0033	01	10300501	14.00	MANEVU2002	1.0000	0.0011	0.0011	NRG NORWALK HARBOR OPERATIONS
CT	Fairfield	09001	4225	R0078	01	10300501	7.00	MANEVU2002	4.5000	0.0146	0.0146	PEPPERIDGE FARM INC
CT	Fairfield	09001	4225	R0079	01	10300501	7.00	MANEVU2002	4.5000	0.0144	0.0144	PEPPERIDGE FARM INC
CT	Fairfield	09001	4225	R0220	01	10300603	5.00	MANEVU2002	0.0360	0.0001	0.0001	PEPPERIDGE FARM INC
CT	Fairfield	09001	5486	P0086	01	10200501	21.00	MANEVU2002	0.2040	0.0000	0.0006	SPONGEX CORPORATION
CT	Fairfield	09001	5486	P0086	02	10200602	21.00	MANEVU2002	2.9500	0.0080	0.0080	SPONGEX CORPORATION
CT	Fairfield	09001	5994	P0081	01	10300603	3.00	MANEVU2002	0.9660	0.0029	0.0029	GENERAL ELECTRIC CAPITAL CORP
CT	Fairfield	09001	5994	P0082	01	10300603	3.00	MANEVU2002	0.9660	0.0029	0.0029	GENERAL ELECTRIC CAPITAL CORP
CT	Fairfield	09001	5994	P0083	01	10300603	3.00	MANEVU2002	0.9660	0.0029	0.0029	GENERAL ELECTRIC CAPITAL CORP
CT	Fairfield	09001	5994	P0084	01	10300603	1.00	MANEVU2002	0.9660	0.0029	0.0029	GENERAL ELECTRIC CAPITAL CORP
CT	Fairfield	09001	5994	P0085	01	10300603	3.00	MANEVU2002	0.9660	0.0029	0.0029	GENERAL ELECTRIC CAPITAL CORP
CT	Fairfield	09001	6001	P0018	01	10200504	29.00	MANEVU2002	2.3350	0.0000	0.0000	PITNEY BOWES INC
CT	Fairfield	09001	6001	P0018	02	10200602	29.00	MANEVU2002	0.3750	0.0000	0.0000	PITNEY BOWES INC
CT	Fairfield	09001	6001	P0026	01	10200602	13.00	MANEVU2002	0.5600	0.0033	0.0033	PITNEY BOWES INC
CT	Fairfield	09001	6001	P0035	01	10200504	29.00	MANEVU2002	1.2530	0.0000	0.0000	PITNEY BOWES INC
CT	Fairfield	09001	6001	P0035	02	10200602	29.00	MANEVU2002	0.3750	0.0000	0.0000	PITNEY BOWES INC
CT	Fairfield	09001	6009	P0089	02	10300602	15.00	MANEVU2002	0.1770	0.0012	0.0012	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0089	01	10300501	15.00	MANEVU2002	1.0960	0.0005	0.0005	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0090	02	10300602	15.00	MANEVU2002	0.1700	0.0011	0.0011	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0090	01	10300501	15.00	MANEVU2002	0.9290	0.0003	0.0003	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0091	01	10300501	15.00	MANEVU2002	1.3680	0.0025	0.0025	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0091	02	10300602	15.00	MANEVU2002	0.0790	0.0023	0.0023	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0092	01	10300501	15.00	MANEVU2002	1.3150	0.0025	0.0025	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0092	02	10300602	15.00	MANEVU2002	0.0880	0.0003	0.0003	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0197	01	10200501	15.00	MANEVU2002	0.4640	0.0015	0.0015	STAMFORD HOSPITAL
CT	Fairfield	09001	6009	P0197	02	10200602	15.00	MANEVU2002	0.0850	0.0013	0.0013	STAMFORD HOSPITAL
CT	Fairfield	09001	6041	E0003	01	10200603	16.00	MANEVU2002	1.4300	0.0032	0.0032	SPARTECH POLYCAST, INC
CT	Fairfield	09001	6041	E0004	01	10200603	16.00	MANEVU2002	1.4800	0.0043	0.0043	SPARTECH POLYCAST, INC
CT	Fairfield	09001	6375	R0333	02	10300602	15.00	MANEVU2002	0.2480	0.0020	0.0020	HAYES HOUSE % CONSOLIDATED MGT
CT	Fairfield	09001	6375	R0333	01	10300501	15.00	MANEVU2002	0.5590	0.0000	0.0018	HAYES HOUSE % CONSOLIDATED MGT
CT	Fairfield	09001	6375	R0334	02	10300602	15.00	MANEVU2002	0.2480	0.0020	0.0020	HAYES HOUSE % CONSOLIDATED MGT
CT	Fairfield	09001	6375	R0334	01	10300501	15.00	MANEVU2002	0.5590	0.0000	0.0018	HAYES HOUSE % CONSOLIDATED MGT
CT	Fairfield	09001	6617	P0002	01	10200504	11.00	MANEVU2002	0.4980	0.0009	0.0009	PITNEY BOWES INC
CT	Fairfield	09001	6617	P0002	02	10200602	11.00	MANEVU2002	0.6300	0.0014	0.0014	PITNEY BOWES INC
CT	Fairfield	09001	6617	R0174	02	10200602	17.00	MANEVU2002	0.1160	0.0008	0.0008	PITNEY BOWES INC
CT	Fairfield	09001	7955	P0039	01	10200401	50.00	MANEVU2002	0.0080	0.0000	0.0000	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	P0039	02	10200602	50.00	MANEVU2002	13.9140	0.0474	0.0474	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0016	02	10200401	48.00	MANEVU2002	0.0120	0.0000	0.0001	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0016	03	10200602	48.00	MANEVU2002	13.1480	0.0779	0.0779	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0017	02	10200401	48.00	MANEVU2002	0.0130	0.0000	0.0000	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0017	03	10200602	48.00	MANEVU2002	8.0080	0.0436	0.0436	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0017	01	10200401	48.00	MANEVU2002	3.0400	0.1120	0.1120	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0018	02	10200401	48.00	MANEVU2002	3.3580	0.0000	0.0092	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0018	03	10200602	48.00	MANEVU2002	6.1900	0.0733	0.0733	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0019	02	10200401	48.00	MANEVU2002	4.0130	0.0000	0.0123	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7955	R0019	03	10200602	48.00	MANEVU2002	3.8880	0.0536	0.0536	SIKORSKY AIRCRAFT
CT	Fairfield	09001	7958	R0039	01	10200401	32.00	MANEVU2002	2.1290	0.0000	0.0058	ROSS & ROBERTS INC
CT	Fairfield	09001	7958	R0039	02	10200602	32.00	MANEVU2002	2.3450	0.0105	0.0105	ROSS & ROBERTS INC
CT	Fairfield	09001	8117	E0001	01	10200603	3.00	MANEVU2002	0.3500	0.0007	0.0007	SARTOMER CO INC

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
CT	Fairfield	09001	8173	P0089	01	10200501	4.00	MANEVU2002	0.2900	0.0006	0.0006	HAMPFORD RESEARCH INC
CT	Fairfield	09001	8173	P0121	01	10300501	4.00	MANEVU2002	0.2900	0.0006	0.0006	HAMPFORD RESEARCH INC
CT	Fairfield	09001	8455	P0010	01	10300501	6.00	MANEVU2002	0.1200	0.0000	0.0003	ST JOSEPHS MANOR
CT	Fairfield	09001	8455	P0010	02	10300603	6.00	MANEVU2002	0.2300	0.0002	0.0002	ST JOSEPHS MANOR
CT	Fairfield	09001	8455	P0011	02	10300603	6.00	MANEVU2002	0.2300	0.0004	0.0004	ST JOSEPHS MANOR
CT	Fairfield	09001	8455	P0011	01	10300501	6.00	MANEVU2002	0.1190	0.0000	0.0003	ST JOSEPHS MANOR
CT	Fairfield	09001	8455	P0012	01	10300501	6.00	MANEVU2002	0.1260	0.0000	0.0003	ST JOSEPHS MANOR
CT	Fairfield	09001	8455	P0012	02	10300603	6.00	MANEVU2002	0.2400	0.0001	0.0001	ST JOSEPHS MANOR
CT	Fairfield	09001	8820	P0013	01	10200501	11.00	MANEVU2002	0.2830	0.0000	0.0008	ASML, US INCORPORATED
CT	Fairfield	09001	8820	P0013	02	10200603	11.00	MANEVU2002	1.7080	0.0044	0.0044	ASML, US INCORPORATED
CT	Fairfield	09001	8820	P0016	01	10200501	17.00	MANEVU2002	0.2830	0.0000	0.0008	ASML, US INCORPORATED
CT	Fairfield	09001	8820	P0016	02	10200603	17.00	MANEVU2002	1.7080	0.0044	0.0044	ASML, US INCORPORATED
CT	Fairfield	09001	8820	R0004	01	10200501	9.00	MANEVU2002	0.0710	0.0000	0.0002	ASML, US INCORPORATED
CT	Fairfield	09001	8820	R0004	02	10200603	9.00	MANEVU2002	0.4250	0.0011	0.0011	ASML, US INCORPORATED
CT	Fairfield	09001	8820	R0005	01	10200504	9.00	MANEVU2002	0.1390	0.0000	0.0004	ASML, US INCORPORATED
CT	Fairfield	09001	8820	R0005	02	10200603	9.00	MANEVU2002	0.4250	0.1005	0.1005	ASML, US INCORPORATED
CT	Hartford	09003	0406	E0002	02	10200602	16.00	MANEVU2002	1.2600	0.0020	0.0020	JACOBS VEHICLE SYSTEMS, INC
CT	Hartford	09003	0406	R0008	01	10200401	32.00	MANEVU2002	0.0090	0.0000	0.0000	JACOBS VEHICLE SYSTEMS, INC
CT	Hartford	09003	1509	R0019	01	10200602	210.00	MANEVU2002	0.0100	0.0012	0.0012	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0020	01	10200602	210.00	MANEVU2002	0.0050	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0039	01	10200401	159.00	MANEVU2002	18.2840	0.0000	0.0100	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0039	02	10200601	159.00	MANEVU2002	5.3200	0.0727	0.0727	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0041	01	10200401	185.00	MANEVU2002	2.2710	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0041	02	10200601	185.00	MANEVU2002	1.8150	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0042	01	10200401	185.00	MANEVU2002	1.0370	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1509	R0042	02	10200601	185.00	MANEVU2002	39.4200	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0133	01	10300601	178.00	MANEVU2002	0.0510	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0149	01	10300601	210.00	MANEVU2002	0.0140	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0164	01	10200501	266.00	MANEVU2002	21.9900	0.0000	0.0000	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0166	01	10200501	266.00	MANEVU2002	5.9690	0.1457	0.1457	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0167	01	10200501	408.00	MANEVU2002	5.1400	0.1409	0.1409	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	1510	R0168	01	10200501	408.00	MANEVU2002	2.5220	0.0745	0.0745	PRATT & WHITNEY DIV UTC
CT	Hartford	09003	2064	P0007	02	10200602	11.00	MANEVU2002	0.2220	0.0015	0.0015	HAMILTON STANDARD DIV UTC
CT	Hartford	09003	2064	P0008	02	10200602	11.00	MANEVU2002	0.2220	0.0015	0.0015	HAMILTON STANDARD DIV UTC
CT	Hartford	09003	3043	R0228	02	10300602	100.00	MANEVU2002	3.8780	0.0225	0.0225	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0229	01	10200501	100.00	MANEVU2002	0.0200	0.0000	0.0001	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0229	02	10300602	100.00	MANEVU2002	5.8020	0.0344	0.0344	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0230	02	10300602	100.00	MANEVU2002	22.9060	0.0776	0.0776	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0231	02	10300602	100.00	MANEVU2002	17.6940	0.0581	0.0581	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0232	01	10200501	122.00	MANEVU2002	0.0030	0.0000	0.0000	HARTFORD STEAM COMPANY
CT	Hartford	09003	3043	R0232	02	10300601	122.00	MANEVU2002	6.5000	0.0265	0.0265	HARTFORD STEAM COMPANY
CT	Hartford	09003	3094	R0349	01	10200603	6.00	MANEVU2002	0.0010	0.0000	0.0000	M. SWIFT & SONS INC
CT	Hartford	09003	3094	R0350	01	10200504	6.00	MANEVU2002	0.4230	0.0000	0.0000	M. SWIFT & SONS INC
CT	Hartford	09003	3094	R0351	01	10200504	6.00	MANEVU2002	0.4230	0.0000	0.0000	M. SWIFT & SONS INC
CT	Hartford	09003	3405	E0005	01	10300603	1.00	MANEVU2002	0.0430	0.0000	0.0000	M D C /HARTFORD WPCF
CT	Hartford	09003	3405	E0006	01	10300603	7.00	MANEVU2002	0.4150	0.0000	0.0000	M D C /HARTFORD WPCF
CT	Hartford	09003	3405	E0007	01	10300603	1.00	MANEVU2002	0.0280	0.0000	0.0000	M D C /HARTFORD WPCF
CT	Hartford	09003	3471	P0251	02	10300601	76.00	MANEVU2002	1.9740	0.0011	0.0011	THE HARTFORD STEAM CO
CT	Hartford	09003	3666	P0065	01	10300501	189.00	MANEVU2002	0.2140	0.0000	0.0004	CAPITOL DISTRICT ENERGY CENTER
CT	Hartford	09003	3666	P0065	02	10300601	189.00	MANEVU2002	24.1810	0.0392	0.0392	CAPITOL DISTRICT ENERGY CENTER
CT	Hartford	09003	3678	P0205	02	10300603	6.00	MANEVU2002	0.3250	0.0009	0.0009	CONN DEPT CORR / HARTFORD CCC
CT	Hartford	09003	3678	P0206	02	10300603	6.00	MANEVU2002	0.3250	0.0009	0.0009	CONN DEPT CORR / HARTFORD CCC

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CT	Hartford	09003	3678	P0211	02	10300603	6.00	MANEVU2002	0.3250	0.0009	0.0009	CONN DEPT CORR / HARTFORD CCC
CT	Hartford	09003	3694	P0280	02	10300603	9.00	MANEVU2002	0.0900	0.0000	0.0000	HARTFORD COURANT CO
CT	Hartford	09003	3694	P0281	02	10300603	9.00	MANEVU2002	0.0900	0.0000	0.0000	HARTFORD COURANT CO
CT	Hartford	09003	5009	R0015	02	10200602	21.00	MANEVU2002	0.4300	0.0000	0.0000	VYNCOLIT NORTH AMERICA, INC
CT	Hartford	09003	5009	R0016	02	10200602	13.00	MANEVU2002	0.7750	0.1555	0.1555	VYNCOLIT NORTH AMERICA, INC
CT	Hartford	09003	5009	R0016	01	10200401	13.00	MANEVU2002	1.4550	0.2914	0.2914	VYNCOLIT NORTH AMERICA, INC
CT	Hartford	09003	5632	E0001	02	10200603	8.00	MANEVU2002	0.7400	0.0000	0.0000	STANLEY HARDWARE DIV
CT	Hartford	09003	5632	E0002	02	10200603	8.00	MANEVU2002	0.7400	0.0000	0.0000	STANLEY HARDWARE DIV
CT	Hartford	09003	5882	E0001	02	10200602	15.00	MANEVU2002	1.3490	0.0000	0.0000	STANLEY TOOLS DIV
CT	Hartford	09003	5882	E0002	02	10200602	15.00	MANEVU2002	0.9770	0.0000	0.0000	STANLEY TOOLS DIV
CT	Hartford	09003	6103	R0006	02	10300603	9.00	MANEVU2002	0.7500	0.0021	0.0021	HARTFORD HOSPITAL/NEWINGTON
CT	Hartford	09003	8601	P0031	02	10200601	172.00	MANEVU2002	5.2860	0.0379	0.0379	ALGONQUIN WINDSOR LOCKS LLC
CT	Hartford	09003	8601	P0032	01	10200501	172.00	MANEVU2002	0.0510	0.0000	0.0001	ALGONQUIN WINDSOR LOCKS LLC
CT	Hartford	09003	8601	P0032	02	10200601	172.00	MANEVU2002	6.1550	0.0458	0.0458	ALGONQUIN WINDSOR LOCKS LLC
CT	Hartford	09003	8602	R0052	01	10200401	62.00	MANEVU2002	2.2060	0.0000	0.0061	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0052	02	10200602	62.00	MANEVU2002	4.1310	0.0227	0.0227	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0053	01	10200401	62.00	MANEVU2002	1.7210	0.0068	0.0068	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0053	02	10200602	62.00	MANEVU2002	2.7470	0.0168	0.0168	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0054	01	10200401	62.00	MANEVU2002	2.8030	0.0000	0.0059	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0054	02	10200602	62.00	MANEVU2002	4.8450	0.0279	0.0279	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0055	01	10200401	73.00	MANEVU2002	0.1270	0.0025	0.0025	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0059	01	10200501	21.00	MANEVU2002	0.0010	0.0000	0.0000	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0059	02	10200602	21.00	MANEVU2002	0.0980	0.0000	0.0000	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0060	01	10200501	22.00	MANEVU2002	0.0010	0.0000	0.0000	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8602	R0060	02	10200602	22.00	MANEVU2002	0.1980	0.0000	0.0000	HAMILTON SUNDSTRAND CORP
CT	Hartford	09003	8609	E0001	01	10300603	6.00	MANEVU2002	0.3240	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0002	01	10300603	6.00	MANEVU2002	0.3240	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0003	01	10300603	6.00	MANEVU2002	0.4310	0.0000	0.0002	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0004	01	10300603	6.00	MANEVU2002	0.0990	0.0002	0.0002	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0005	01	10300603	1.00	MANEVU2002	0.0570	0.0002	0.0002	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0006	01	10300603	2.00	MANEVU2002	0.0260	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	E0007	01	10300603	3.00	MANEVU2002	0.1110	0.0002	0.0002	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	P0097	01	10300602	3.00	MANEVU2002	0.5350	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	P0098	01	10300602	3.00	MANEVU2002	0.5350	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Hartford	09003	8609	R0112	01	10300602	6.00	MANEVU2002	0.3970	0.0000	0.0000	CONN DEPT OF TRANSPORTATION
CT	Litchfield	09005	0606	R0017	02	10200501	86.00	MANEVU2002	0.0230	0.0000	0.0001	KIMBERLY-CLARK CORP
CT	Litchfield	09005	0606	R0017	03	10200602	86.00	MANEVU2002	11.3010	0.0265	0.0265	KIMBERLY-CLARK CORP
CT	Litchfield	09005	0606	R0018	01	10200501	59.00	MANEVU2002	0.1820	0.0005	0.0005	KIMBERLY-CLARK CORP
CT	Litchfield	09005	0606	R0019	03	10200602	79.00	MANEVU2002	11.9860	0.0162	0.0162	KIMBERLY-CLARK CORP
CT	Litchfield	09005	1202	P0019	01	10200602	13.00	MANEVU2002	0.0100	0.0003	0.0003	G L C ASSOCIATES
CT	Litchfield	09005	1202	R0002	01	10200402	17.00	MANEVU2002	3.9410	0.0098	0.0098	G L C ASSOCIATES
CT	Litchfield	09005	1202	R0003	01	10200402	17.00	MANEVU2002	4.5680	0.0107	0.0107	G L C ASSOCIATES
CT	Litchfield	09005	1202	R0004	01	10200402	8.00	MANEVU2002	1.0810	0.0037	0.0037	G L C ASSOCIATES
CT	Litchfield	09005	1205	P0002	02	10200602	13.00	MANEVU2002	1.4200	0.0035	0.0035	WHYCO FINISHING TECH,INC.
CT	Litchfield	09005	1205	R0076	01	10200603	8.00	MANEVU2002	0.6850	0.0017	0.0017	WHYCO FINISHING TECH,INC.
CT	Litchfield	09005	1407	P0017	01	10200504	15.00	MANEVU2002	0.6860	0.0008	0.0008	FM PRECISION GOLF MFG CORP
CT	Litchfield	09005	1407	P0017	02	10200602	15.00	MANEVU2002	2.8500	0.0031	0.0031	FM PRECISION GOLF MFG CORP
CT	Litchfield	09005	1407	R0011	01	10200504	16.00	MANEVU2002	0.0750	0.0000	0.0002	FM PRECISION GOLF MFG CORP
CT	Litchfield	09005	1826	E0001	01	10200603	3.00	MANEVU2002	0.3600	0.0010	0.0010	EYELEMATIC MFG CO
CT	Middlesex	09007	0857	P0024	01	10200401	167.00	MANEVU2002	21.2260	0.0214	0.0214	PRATT & WHITNEY DIV UTC
CT	Middlesex	09007	0857	P0036	01	10200401	60.00	MANEVU2002	12.5450	0.1021	0.1021	PRATT & WHITNEY DIV UTC
CT	Middlesex	09007	0857	R0015	01	10200401	156.00	MANEVU2002	15.8840	0.0021	0.0021	PRATT & WHITNEY DIV UTC

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CT	Middlesex	09007	0857	R0016	01	10200401	156.00	MANEVU2002	14.3570	0.0038	0.0038	PRATT & WHITNEY DIV UTC
CT	Middlesex	09007	0866	E0007	01	10200603	9.00	MANEVU2002	1.4470	0.0087	0.0087	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0113	03	10200602	38.00	MANEVU2002	4.5030	0.0053	0.0053	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0113	01	10200401	38.00	MANEVU2002	0.2810	0.0002	0.0002	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0114	03	10200602	38.00	MANEVU2002	2.6270	0.0038	0.0038	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0114	01	10200401	38.00	MANEVU2002	0.3800	0.0016	0.0016	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0115	01	10200401	38.00	MANEVU2002	0.0020	0.0000	0.0000	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0115	03	10200602	38.00	MANEVU2002	1.3150	0.0000	0.0000	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0116	01	10200401	38.00	MANEVU2002	0.0070	0.0000	0.0000	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0866	R0116	03	10200602	38.00	MANEVU2002	0.2520	0.0000	0.0000	CONN VALLEY HOSPITAL
CT	Middlesex	09007	0874	E0001	01	10200603	8.00	MANEVU2002	0.0820	0.0017	0.0017	NRG MIDDLETOWN OPERATIONS, INC
CT	Middlesex	09007	0874	E0002	01	10200603	3.00	MANEVU2002	0.0400	0.0009	0.0009	NRG MIDDLETOWN OPERATIONS, INC
CT	Middlesex	09007	0874	P0002	01	10200401	168.00	MANEVU2002	41.8440	0.0885	0.0885	NRG MIDDLETOWN OPERATIONS, INC
CT	Middlesex	09007	1030	P0015	01	10200501	6.00	MANEVU2002	0.4290	0.0006	0.0006	HABASIT ABT, INC
CT	Middlesex	09007	1030	P0035	01	10200501	6.00	MANEVU2002	0.6600	0.0024	0.0024	HABASIT ABT, INC
CT	Middlesex	09007	1355	R0006	01	10200602	12.00	MANEVU2002	0.3450	0.0000	0.0000	DONNELLEY & SONS CO, R R
CT	New Haven	09009	0420	R0021	01	10300504	22.00	MANEVU2002	0.0200	0.0000	0.0000	BLAKESLEE PRESTRESS INC
CT	New Haven	09009	0775	P0019	01	10300501	8.00	MANEVU2002	0.0020	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0019	02	10300603	8.00	MANEVU2002	0.4970	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0020	01	10300501	8.00	MANEVU2002	0.0010	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0020	02	10300603	8.00	MANEVU2002	0.4970	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0025	01	10300501	8.00	MANEVU2002	0.0010	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0025	02	10300603	8.00	MANEVU2002	0.4970	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0072	01	10300501	8.00	MANEVU2002	1.2000	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0072	02	10300603	8.00	MANEVU2002	0.0050	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0073	01	10300501	8.00	MANEVU2002	1.2000	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	0775	P0073	02	10300603	8.00	MANEVU2002	0.0050	0.0000	0.0000	KURT WEISS GREENHOUSES OF CT
CT	New Haven	09009	1920	P0020	01	10300602	15.00	MANEVU2002	0.6000	0.0095	0.0095	J.E.M. INC.
CT	New Haven	09009	1958	P0006	01	10200603	3.00	MANEVU2002	0.7000	0.0019	0.0019	CUNO INC
CT	New Haven	09009	2235	E0001	02	10300603	5.00	MANEVU2002	1.1800	0.0065	0.0065	MID STATE MEDICAL CENTER
CT	New Haven	09009	2235	P0053	02	10300602	20.00	MANEVU2002	0.2680	0.0004	0.0004	MID STATE MEDICAL CENTER
CT	New Haven	09009	2235	P0053	01	10300501	20.00	MANEVU2002	0.1990	0.0000	0.0003	MID STATE MEDICAL CENTER
CT	New Haven	09009	2235	P0054	02	10300602	20.00	MANEVU2002	0.2680	0.0004	0.0004	MID STATE MEDICAL CENTER
CT	New Haven	09009	2235	P0054	01	10300501	20.00	MANEVU2002	0.1990	0.0000	0.0003	MID STATE MEDICAL CENTER
CT	New Haven	09009	2514	E0001	01	10200603	4.00	MANEVU2002	0.0790	0.0003	0.0003	DEVON POWER, LLC
CT	New Haven	09009	2514	E0002	01	10200603	4.00	MANEVU2002	0.1140	0.0005	0.0005	DEVON POWER, LLC
CT	New Haven	09009	2520	P0018	01	10200504	7.00	MANEVU2002	1.9220	0.0000	0.0000	BIC CONSUMER PROD. MANU. CO.
CT	New Haven	09009	2520	P0024	02	10200603	7.00	MANEVU2002	0.0200	0.0000	0.0000	BIC CONSUMER PROD. MANU. CO.
CT	New Haven	09009	2520	R0080	01	10200504	16.00	MANEVU2002	1.0690	0.0000	0.0000	BIC CONSUMER PROD. MANU. CO.
CT	New Haven	09009	3006	R0240	01	10200401	185.00	MANEVU2002	28.8590	0.0000	0.0222	CROMPTON MANUFACTURING CO INC
CT	New Haven	09009	3006	R0240	02	10200601	185.00	MANEVU2002	1.4260	0.0085	0.0085	CROMPTON MANUFACTURING CO INC
CT	New Haven	09009	3006	R0241	02	10200602	83.00	MANEVU2002	1.9130	0.0669	0.0669	CROMPTON MANUFACTURING CO INC
CT	New Haven	09009	3006	R0241	01	10200401	83.00	MANEVU2002	5.8650	0.0000	0.0496	CROMPTON MANUFACTURING CO INC
CT	New Haven	09009	3006	R0243	01	10200401	83.00	MANEVU2002	0.0380	0.0000	0.0001	CROMPTON MANUFACTURING CO INC
CT	New Haven	09009	3349	P0105	02	10300602	81.00	MANEVU2002	7.0450	0.0384	0.0384	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	P0105	01	10300401	81.00	MANEVU2002	7.8230	0.0000	0.0232	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	P0326	01	10300401	76.00	MANEVU2002	1.8930	0.0199	0.0199	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	R0170	01	10300401	90.00	MANEVU2002	21.4000	0.0951	0.0951	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	R0170	02	10300602	90.00	MANEVU2002	1.8930	0.0308	0.0308	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	R0171	01	10300401	120.00	MANEVU2002	18.9750	0.0723	0.0723	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	R0171	02	10300601	120.00	MANEVU2002	0.9910	0.0093	0.0093	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3349	R0995	01	10300401	113.00	MANEVU2002	47.6400	0.0917	0.0917	YALE UNIV /STERLING POWER PLT

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CT	New Haven	09009	3349	R0995	02	10300602	113.00	MANEVU2002	6.2570	0.0477	0.0477	YALE UNIV /STERLING POWER PLT
CT	New Haven	09009	3371	R0256	01	10200501	7.00	MANEVU2002	0.2340	0.0000	0.0000	SAINT-GOBAIN PPL CORP
CT	New Haven	09009	3371	R0256	02	10200603	7.00	MANEVU2002	0.3850	0.0000	0.0000	SAINT-GOBAIN PPL CORP
CT	New Haven	09009	3420	E0001	01	10200603	5.00	MANEVU2002	0.0620	0.0000	0.0000	NEW HAVEN TERMINAL, INC
CT	New Haven	09009	3420	E0002	01	10200603	3.00	MANEVU2002	0.2250	0.0000	0.0000	NEW HAVEN TERMINAL, INC
CT	New Haven	09009	3764	R0673	02	10200601	163.00	MANEVU2002	1.2390	0.0000	0.0034	SIMKINS INDUSTRIES INC
CT	New Haven	09009	3764	R0673	01	10200401	163.00	MANEVU2002	85.2320	0.2791	0.2791	SIMKINS INDUSTRIES INC
CT	New Haven	09009	3811	P0006	02	10300602	99.00	MANEVU2002	0.5070	0.0155	0.0155	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3811	P0006	01	10300401	99.00	MANEVU2002	4.1500	0.0000	0.0114	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3811	P0191	02	10300602	99.00	MANEVU2002	0.5070	0.0155	0.0155	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3811	P0191	01	10300401	99.00	MANEVU2002	4.1500	0.0000	0.0114	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3811	P0192	02	10300602	99.00	MANEVU2002	0.5070	0.0155	0.0155	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3811	P0192	01	10300401	99.00	MANEVU2002	4.1500	0.0000	0.0114	ST RAPHAEL, HOSPITAL OF
CT	New Haven	09009	3819	E0011	01	10200501	2.00	MANEVU2002	0.0780	0.0000	0.0000	WILLIAMS ENERGY VENTURES, INC
CT	New Haven	09009	5403	P0064	01	10200504	16.00	MANEVU2002	0.9400	0.0013	0.0013	CONN CONTAINER CORP
CT	New Haven	09009	5403	P0064	02	10200602	16.00	MANEVU2002	2.1500	0.0022	0.0022	CONN CONTAINER CORP
CT	New Haven	09009	6505	P0036	02	10200501	25.00	MANEVU2002	0.4270	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6505	P0036	03	10200602	25.00	MANEVU2002	0.9550	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6505	P0037	02	10200501	25.00	MANEVU2002	2.1400	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6505	P0037	03	10200602	25.00	MANEVU2002	1.4050	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6505	P0038	02	10200501	25.00	MANEVU2002	0.5510	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6505	P0038	03	10200602	25.00	MANEVU2002	1.4700	0.0000	0.0000	ALLEGHENY LUDLUM CORP
CT	New Haven	09009	6527	E0002	02	10200603	4.00	MANEVU2002	0.2500	0.0007	0.0007	CYTEC INDUSTRIES INC
CT	New Haven	09009	6527	R0108	02	10200602	82.00	MANEVU2002	7.2240	0.0264	0.0264	CYTEC INDUSTRIES INC
CT	New Haven	09009	6527	R0108	01	10200401	82.00	MANEVU2002	0.2990	0.0000	0.0007	CYTEC INDUSTRIES INC
CT	New Haven	09009	6527	R0110	02	10200602	89.00	MANEVU2002	38.9990	0.1425	0.1425	CYTEC INDUSTRIES INC
CT	New Haven	09009	6527	R0110	01	10200401	89.00	MANEVU2002	0.1620	0.0000	0.0004	CYTEC INDUSTRIES INC
CT	New Haven	09009	7053	E0003	02	10200603	5.00	SCC Descriptio	0.0300	0.0004	0.0004	SOMERS THIN STRIP
CT	New Haven	09009	7053	E0004	02	10200603	5.00	SCC Descriptio	0.9400	0.0029	0.0029	SOMERS THIN STRIP
CT	New Haven	09009	7053	R0638	02	10200603	4.00	MANEVU2002	0.1100	0.0000	0.0000	SOMERS THIN STRIP
CT	New Haven	09009	7053	R0639	02	10200603	4.00	MANEVU2002	0.5050	0.0017	0.0017	SOMERS THIN STRIP
CT	New Haven	09009	7053	R0640	02	10200603	7.00	MANEVU2002	0.5850	0.0015	0.0015	SOMERS THIN STRIP
CT	New Haven	09009	7053	R0641	02	10200603	7.00	MANEVU2002	1.0100	0.0026	0.0026	SOMERS THIN STRIP
CT	New London	09011	0604	E0009	01	10201002	0.00	MANEVU2002	0.0060	0.0004	0.0004	PFIZER INC
CT	New London	09011	0604	P0001	02	10200601	267.00	MANEVU2002	39.8860	0.1938	0.1938	PFIZER INC
CT	New London	09011	0604	P0082	01	10200602	3.00	MANEVU2002	0.1200	0.0032	0.0032	PFIZER INC
CT	New London	09011	0604	R0007	01	10200401	153.00	MANEVU2002	35.9680	0.0000	0.0000	PFIZER INC
CT	New London	09011	0604	R0007	02	10200601	153.00	MANEVU2002	8.5250	0.0000	0.0000	PFIZER INC
CT	New London	09011	0604	R0008	01	10200401	153.00	MANEVU2002	25.6030	0.1253	0.1253	PFIZER INC
CT	New London	09011	0604	R0008	02	10200601	153.00	MANEVU2002	15.3250	0.0751	0.0751	PFIZER INC
CT	New London	09011	0604	R0009	02	10200601	153.00	MANEVU2002	18.0560	0.1218	0.1218	PFIZER INC
CT	New London	09011	0604	R0010	02	10200601	220.00	MANEVU2002	20.5750	0.1059	0.1059	PFIZER INC
CT	New London	09011	0604	R0010	01	10200401	220.00	MANEVU2002	6.9460	0.0357	0.0357	PFIZER INC
CT	New London	09011	0604	R0012	01	10200401	399.00	MANEVU2002	83.6150	0.3505	0.3505	PFIZER INC
CT	New London	09011	0604	R0012	02	10200601	399.00	MANEVU2002	22.2050	0.0931	0.0931	PFIZER INC
CT	New London	09011	0605	P0008	01	10200504	14.00	MANEVU2002	0.2410	0.0000	0.0004	ELECTRIC BOAT CORP
CT	New London	09011	0605	P0008	02	10200602	14.00	MANEVU2002	1.6430	0.0082	0.0082	ELECTRIC BOAT CORP
CT	New London	09011	0605	P0032	01	10200504	60.00	MANEVU2002	0.0610	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	P0032	02	10200602	60.00	MANEVU2002	0.3100	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	P0055	01	10200504	7.00	MANEVU2002	0.7390	0.0000	0.0004	ELECTRIC BOAT CORP
CT	New London	09011	0605	P0055	02	10200603	7.00	MANEVU2002	0.6660	0.0026	0.0026	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0057	01	10200504	8.00	MANEVU2002	0.0660	0.0000	0.0001	ELECTRIC BOAT CORP

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CT	New London	09011	0605	R0057	02	10200603	8.00	MANEVU2002	1.3100	0.0068	0.0068	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0066	01	10200504	91.00	MANEVU2002	0.0440	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0066	02	10200602	91.00	MANEVU2002	0.2380	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0067	01	10200504	90.00	MANEVU2002	0.0790	0.0000	0.0002	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0067	02	10200602	90.00	MANEVU2002	1.2620	0.0000	0.0035	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0068	01	10200504	14.00	MANEVU2002	0.0070	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0068	02	10200602	14.00	MANEVU2002	0.5550	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0069	01	10200501	7.00	MANEVU2002	0.1620	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0074	01	10200504	11.00	MANEVU2002	0.0490	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0605	R0074	02	10200602	11.00	MANEVU2002	1.2930	0.0000	0.0000	ELECTRIC BOAT CORP
CT	New London	09011	0628	P0074	02	10300602	98.00	MANEVU2002	0.0110	0.0000	0.0000	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	P0075	01	10300501	8.00	MANEVU2002	0.3560	0.0000	0.0000	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0196	02	10300602	101.00	MANEVU2002	9.1240	0.0438	0.0438	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0196	01	10300501	101.00	MANEVU2002	0.0410	0.0003	0.0003	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0197	02	10300602	101.00	MANEVU2002	3.0790	0.0200	0.0200	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0197	01	10300501	101.00	MANEVU2002	2.0110	0.0022	0.0022	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0198	01	10300501	101.00	MANEVU2002	0.5730	0.0000	0.0000	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0628	R0198	02	10300602	101.00	MANEVU2002	2.4710	0.0000	0.0000	U S NAVAL SUBMARINE BASE/PWR P
CT	New London	09011	0635	P0115	01	10300602	16.00	MANEVU2002	0.6300	0.0000	0.0000	UNIV OF CT / AVERY POINT
CT	New London	09011	0635	P0116	01	10300602	16.00	MANEVU2002	1.1800	0.0002	0.0002	UNIV OF CT / AVERY POINT
CT	New London	09011	0635	P0117	01	10300602	16.00	MANEVU2002	1.4850	0.0000	0.0000	UNIV OF CT / AVERY POINT
CT	New London	09011	1202	P0006	02	10200501	9.00	MANEVU2002	2.8490	0.0078	0.0078	DOW CHEMICAL CO
CT	New London	09011	1202	P0007	01	10200501	9.00	MANEVU2002	0.2080	0.0001	0.0001	DOW CHEMICAL CO
CT	New London	09011	1202	P0015	02	10200602	56.00	MANEVU2002	4.8240	0.0116	0.0116	DOW CHEMICAL CO
CT	New London	09011	1202	P0020	02	10200602	47.00	MANEVU2002	2.0670	0.0052	0.0052	DOW CHEMICAL CO
CT	New London	09011	1304	P0003	01	10200504	5.00	MANEVU2002	0.1690	0.0001	0.0001	LISBON TEXTILE PRINTS INC
CT	New London	09011	1503	P0019	02	10200601	183.00	MANEVU2002	16.2870	0.0446	0.0446	RAND-WHITNEY CONTAINERBOARD LP
CT	New London	09011	1504	P0008	01	10200401	99.00	MANEVU2002	0.0120	0.0000	0.0000	SMURFIT-STONE CONTAINER CORP
CT	New London	09011	1830	P0040	01	10300501	21.00	MANEVU2002	0.0130	0.0007	0.0007	PFIZER INC CRD
CT	New London	09011	1830	P0040	02	10300602	21.00	MANEVU2002	0.6480	0.0030	0.0030	PFIZER INC CRD
CT	New London	09011	1830	P0041	01	10300501	21.00	MANEVU2002	0.0090	0.0006	0.0006	PFIZER INC CRD
CT	New London	09011	1830	P0041	02	10300602	21.00	MANEVU2002	0.3410	0.0015	0.0015	PFIZER INC CRD
CT	New London	09011	1830	P0042	01	10300501	21.00	MANEVU2002	0.0090	0.0005	0.0005	PFIZER INC CRD
CT	New London	09011	1830	P0042	02	10300602	21.00	MANEVU2002	0.5000	0.0010	0.0010	PFIZER INC CRD
CT	New London	09011	2432	P0024	01	10200602	11.00	MANEVU2002	1.3050	0.0080	0.0080	PHELPS DODGE COPPER PROD CO
CT	New London	09011	3102	P0001	02	10200602	67.00	MANEVU2002	0.1370	0.0000	0.0000	SPRAGUE PAPERBOARD INC
CT	New London	09011	3102	R0003	02	10200601	275.00	MANEVU2002	215.2620	0.5776	0.5776	SPRAGUE PAPERBOARD INC
CT	New London	09011	3803	P0007	01	10300504	70.00	MANEVU2002	1.7090	0.0002	0.0002	DOMINION NUCLEAR CT., INC.
CT	New London	09011	3803	P0008	01	10300504	70.00	MANEVU2002	2.4340	0.0002	0.0002	DOMINION NUCLEAR CT., INC.
CT	New London	09011	3803	P0043	02	10301002	0.00	MANEVU2002	0.0310	0.0000	0.0000	DOMINION NUCLEAR CT., INC.
CT	Tolland	09013	0615	R0014	02	10300602	99.00	MANEVU2002	1.0750	0.0019	0.0019	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0014	01	10300501	99.00	MANEVU2002	0.1040	0.0000	0.0002	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0015	02	10300602	99.00	MANEVU2002	0.5890	0.0054	0.0054	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0015	01	10300501	99.00	MANEVU2002	0.0920	0.0000	0.0003	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0016	01	10300501	99.00	MANEVU2002	0.0130	0.0000	0.0000	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0016	02	10300602	99.00	MANEVU2002	21.3440	0.0000	0.0000	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0017	02	10300602	50.00	MANEVU2002	6.9500	0.0500	0.0500	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0017	01	10300501	50.00	MANEVU2002	0.1810	0.0000	0.0010	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0018	02	10300602	50.00	MANEVU2002	14.1740	0.0712	0.0712	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0018	01	10300501	50.00	MANEVU2002	2.5500	0.0194	0.0194	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0019	02	10300602	50.00	MANEVU2002	9.0590	0.0403	0.0403	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0019	01	10300501	50.00	MANEVU2002	2.4960	0.0000	0.0038	UNIV OF CT / STORRS

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CT	Tolland	09013	0615	R0020	02	10300601	152.00	MANEVU2002	7.2100	0.0300	0.0300	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0020	01	10300501	152.00	MANEVU2002	0.0220	0.0000	0.0001	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0021	01	10300501	152.00	MANEVU2002	0.0180	0.0000	0.0000	UNIV OF CT / STORRS
CT	Tolland	09013	0615	R0021	02	10300601	152.00	MANEVU2002	22.5400	0.0000	0.0000	UNIV OF CT / STORRS
CT	Tolland	09013	1205	R0008	01	10300504	21.00	MANEVU2002	0.8740	0.0036	0.0036	ROCKVILLE GENERAL HOSPITAL
CT	Tolland	09013	1205	R0009	01	10300504	21.00	MANEVU2002	0.8710	0.0031	0.0031	ROCKVILLE GENERAL HOSPITAL
CT	Tolland	09013	1215	P0009	02	10200602	50.00	MANEVU2002	0.0010	0.0004	0.0004	AMERBELLE CORP
CT	Tolland	09013	1215	P0010	02	10200602	33.00	MANEVU2002	0.1200	0.0002	0.0002	AMERBELLE CORP
CT	Windham	09015	0665	P0025	01	10200401	52.00	MANEVU2002	6.0500	0.0000	0.0166	FRITO-LAY INC
CT	Windham	09015	0665	P0025	03	10200602	52.00	MANEVU2002	6.2780	0.0250	0.0250	FRITO-LAY INC
CT	Windham	09015	0665	P0026	01	10200401	52.00	MANEVU2002	6.4000	0.0000	0.0176	FRITO-LAY INC
CT	Windham	09015	0665	P0026	03	10200602	52.00	MANEVU2002	6.4460	0.0271	0.0271	FRITO-LAY INC
CT	Windham	09015	0665	P0027	01	10200401	52.00	MANEVU2002	6.3330	0.0000	0.0174	FRITO-LAY INC
CT	Windham	09015	0665	P0027	03	10200602	52.00	MANEVU2002	5.1370	0.0195	0.0195	FRITO-LAY INC
CT	Windham	09015	1708	P0010	02	10200603	9.00	MANEVU2002	1.6400	0.0074	0.0074	TUSCARORA INCORPORATED
CT	Windham	09015	1708	P0015	02	10200603	8.00	MANEVU2002	1.1200	0.0444	0.0444	TUSCARORA INCORPORATED
CT	Windham	09015	1708	P0026	02	10200603	6.00	MANEVU2002	0.5800	0.0380	0.0380	TUSCARORA INCORPORATED
CT	Windham	09015	2906	P0017	01	10200602	11.00	MANEVU2002	0.4900	0.0012	0.0012	B I C C BRAND - REX CO
DE	Kent	10001	1000100001	001	2	10300602	49.90	MANEVU2002	4.4517	0.0057	0.0057	DOVER AIR FORCE BASE
DE	Kent	10001	1000100001	003	2	10300602	64.10	MANEVU2002	5.6169	0.0000	0.0000	DOVER AIR FORCE BASE
DE	Kent	10001	1000100001	004	2	10300602	50.00	MANEVU2002	3.6926	0.0134	0.0134	DOVER AIR FORCE BASE
DE	Kent	10001	1000100001	008	3	10300603	1.00	MANEVU2002	5.4450	0.0060	0.0060	DOVER AIR FORCE BASE
DE	Kent	10001	1000100001	203	1	10201002	0.00		0.2066	0.0002	0.0002	DOVER AIR FORCE BASE
DE	Kent	10001	1000100001	467	3	10300602	10.00	MANEVU2002	0.5864	0.0006	0.0006	DOVER AIR FORCE BASE
DE	Kent	10001	1000100002	004	2	10200602	13.40	MANEVU2002	1.5403	0.0161	0.0161	CITY OF DOVER - MCKEE RUN GENERATING STA
DE	Kent	10001	1000100002	005	1	10200602	13.40	MANEVU2002	1.5403	0.0164	0.0164	CITY OF DOVER - MCKEE RUN GENERATING STA
DE	Kent	10001	1000100004	001	1	10200401	36.70	MANEVU2002	13.7982	0.0750	0.0750	PROCTOR AND GAMBLE DOVER WIPES COMPANY
DE	Kent	10001	1000100004	002	2	10200401	38.00	MANEVU2002	2.2025	0.0359	0.0359	PROCTOR AND GAMBLE DOVER WIPES COMPANY
DE	Kent	10001	1000100004	004	2	10200501	1.00	MANEVU2002	0.0060	0.0000	0.0000	PROCTOR AND GAMBLE DOVER WIPES COMPANY
DE	Kent	10001	1000100004	006	3	10200602	25.00	MANEVU2002	2.6500	0.0072	0.0072	PROCTOR AND GAMBLE DOVER WIPES COMPANY
DE	Kent	10001	1000100007	002	2	10200602	75.00	MANEVU2002	2.1007	0.0000	0.0000	KRAFT FOODS NORTH AMERICA
DE	Kent	10001	1000100016	001	1	10200402	49.00	MANEVU2002	1.2131	0.0000	0.0000	DOW REICHHOLD SPECIALTY LATEX LLC
DE	Kent	10001	1000100016	024	1	10200603	1.60	MANEVU2002	0.0742	0.0002	0.0002	DOW REICHHOLD SPECIALTY LATEX LLC
DE	Kent	10001	1000100016	025	1	10200602	73.00	MANEVU2002	8.9578	0.0167	0.0167	DOW REICHHOLD SPECIALTY LATEX LLC
DE	Kent	10001	1000100024	001	1	10200401	33.50	MANEVU2002	8.6593	0.0029	0.0029	HANOVER FOODS CORPORATION
DE	Kent	10001	1000100024	001	2	10200602	33.50	MANEVU2002	0.5566	0.0002	0.0002	HANOVER FOODS CORPORATION
DE	Kent	10001	1000100026	001	1	10300501	10.50	MANEVU2002	1.0375	0.0007	0.0007	BAYHEALTH MED CENTER KENT GENERAL HOSP
DE	Kent	10001	1000100026	001	2	10300602	10.50	MANEVU2002	0.2112	0.0001	0.0001	BAYHEALTH MED CENTER KENT GENERAL HOSP
DE	Kent	10001	1000100066	001	3	10300602	18.00	MANEVU2002	2.9498	0.0026	0.0026	DELAWARE STATE UNIVERSITY
DE	Kent	10001	1000100066	001	1	10300501	18.00	MANEVU2002	0.8525	0.0007	0.0007	DELAWARE STATE UNIVERSITY
DE	Kent	10001	1000100075	001	1	10200404	15.00	MANEVU2002	15.3389	0.0566	0.0566	PERDUE FARMS INC - MILFORD
DE	Kent	10001	1000100121	002	1	10200603	5.00	SCC Descriptio	0.2422	0.0009	0.0009	COLOR-BOX LLC
DE	Kent	10001	1000100121	003	1	10200603	5.00	SCC Descriptio	0.2265	0.0009	0.0009	COLOR-BOX LLC
DE	New Castle	10003	1000300003	001	2	10200601	123.00	MANEVU2002	1.4682	0.0030	0.0030	CIBA SPECIALTY CHEMICALS CORP
DE	New Castle	10003	1000300003	002	2	10200602	123.00	MANEVU2002	1.4682	0.0030	0.0030	CIBA SPECIALTY CHEMICALS CORP
DE	New Castle	10003	1000300003	097	2	10200603	5.00	SCC Descriptio	2.9621	0.0080	0.0080	CIBA SPECIALTY CHEMICALS CORP
DE	New Castle	10003	1000300004	001	1	10200602	71.30	MANEVU2002	2.4632	0.0112	0.0112	WILMINGTON PIECE DYE CO
DE	New Castle	10003	1000300010	007	1	10200401	45.00	MANEVU2002	10.0435	0.0309	0.0309	DUPONT EDGEMOOR
DE	New Castle	10003	1000300010	007	2	10200602	45.00	MANEVU2002	7.6217	0.0235	0.0235	DUPONT EDGEMOOR
DE	New Castle	10003	1000300010	013	2	10200602	10.00	MANEVU2002	3.5560	0.0109	0.0109	DUPONT EDGEMOOR
DE	New Castle	10003	1000300010	023	1	10200602	30.00	MANEVU2002	6.3090	0.1983	0.1983	DUPONT EDGEMOOR
DE	New Castle	10003	1000300010	025	1	10200602	20.00	MANEVU2002	6.5640	0.0202	0.0202	DUPONT EDGEMOOR

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DE	New Castle	10003	1000300011	001	1	10200401	96.00	MANEVU2002	51.1583	0.2107	0.2107	DUPONT EXPERIMENTAL STATION
DE	New Castle	10003	1000300011	002	1	10200401	96.00	MANEVU2002	45.1423	0.1946	0.1946	DUPONT EXPERIMENTAL STATION
DE	New Castle	10003	1000300011	003	1	10200401	96.00	MANEVU2002	68.2381	0.2196	0.2196	DUPONT EXPERIMENTAL STATION
DE	New Castle	10003	1000300011	004	1	10200401	96.00	MANEVU2002	28.8528	0.0000	0.0000	DUPONT EXPERIMENTAL STATION
DE	New Castle	10003	1000300015	001	1	10200401	75.00	MANEVU2002	1.1074	0.0040	0.0040	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	001	2	10200602	75.00	MANEVU2002	5.3725	0.0192	0.0192	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	002	1	10200401	75.00	MANEVU2002	9.8705	0.0000	0.0000	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	003	1	10200401	75.00	MANEVU2002	18.2731	0.0000	0.0000	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	005	2	10200602	86.00	MANEVU2002	5.0636	0.0142	0.0142	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	005	1	10200401	86.00	MANEVU2002	0.0347	0.0001	0.0001	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	015	3	10200603	5.00	SCC Descriptio	1.2104	0.0055	0.0055	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	023	1	10300602	15.00	MANEVU2002	3.1871	0.0145	0.0145	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	024	1	10300602	15.00	MANEVU2002	2.0073	0.0091	0.0091	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	025	1	10200603	16.00	MANEVU2002	0.1820	0.0008	0.0008	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	026	1	10200602	30.00	MANEVU2002	0.0690	0.0003	0.0003	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300015	027	1	10200602	30.00	MANEVU2002	0.0965	0.0004	0.0004	GENERAL MOTORS CORPORATION
DE	New Castle	10003	1000300016	003	1	10200701	15.00	MANEVU2002	7.2100	0.0212	0.0212	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	007	1	10200701	180.00	MANEVU2002	87.6000	0.2380	0.2380	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	013	1	10200701	100.00	MANEVU2002	15.2000	0.0479	0.0479	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	027	2	10200701	0.00		4.5000	0.0127	0.0127	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	028	2	10200701	0.00		4.8000	0.0136	0.0136	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	030	1	10200701	44.50	TITLE V PERM	18.4100	0.0540	0.0540	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	031	1	10200701	44.50	TITLE V PERM	10.2900	0.0302	0.0302	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	032	1	10200701	15.10	TITLE V PERM	6.6500	0.0195	0.0195	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	034	2	10200701	337.00	TITLE V PERM	79.3000	0.2413	0.2413	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	072	1	10200601	461.00	MANEVU2002	1.5000	0.0000	0.0000	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	074	1	10200701	352.00	TITLE V PERM	82.2000	0.2144	0.2144	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	075	1	10200701	352.00	TITLE V PERM	79.2000	0.2066	0.2066	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	076	1	10200701	352.00	TITLE V PERM	34.3000	0.0895	0.0895	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	077	1	10200701	50.00	MANEVU2002	25.6000	0.0668	0.0668	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	084	1	10200602	66.00	MANEVU2002	23.5000	0.0562	0.0562	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	085	1	10200602	50.00	MANEVU2002	24.5000	0.0586	0.0586	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	090	1	10200701	14.80	MANEVU2002	21.2100	0.0599	0.0599	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	091	1	10200701	21.00	MANEVU2002	3.6400	0.0123	0.0123	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	092	1	10200701	30.00	MANEVU2002	11.0600	0.0373	0.0373	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	095	1	10200701	33.00	MANEVU2002	11.8000	0.0385	0.0385	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	096	1	10200701	34.00	MANEVU2002	10.0100	0.0326	0.0326	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	098	1	10200701	44.00	MANEVU2002	22.1000	0.0673	0.0673	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	099	1	10200701	50.00	MANEVU2002	10.7000	0.0326	0.0326	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	105	1	10200701	349.00	MANEVU2002	70.9000	0.2004	0.2004	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	105	2	10200701	349.00	MANEVU2002	2.2000	0.0062	0.0062	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	106	1	10200701	38.00	TITLE V PERM	23.0300	0.0751	0.0751	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	125	1	10200701	107.00	MANEVU2002	1.9700	0.0054	0.0054	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300016	126	2	10200701	0.00		3.2400	0.0106	0.0106	MOTIVA ENTERPRISES LLC - DELAWARE CITY
DE	New Castle	10003	1000300017	001	2	10200502	13.00	MANEVU2002	0.0061	0.0003	0.0003	HERCULES INCORPORATED RESEARCH CENTER
DE	New Castle	10003	1000300017	002	1	10200402	72.00	MANEVU2002	3.3698	0.0193	0.0193	HERCULES INCORPORATED RESEARCH CENTER
DE	New Castle	10003	1000300017	004	1	10200402	49.00	MANEVU2002	21.5050	0.0555	0.0555	HERCULES INCORPORATED RESEARCH CENTER
DE	New Castle	10003	1000300017	005	1	10200402	32.50	MANEVU2002	5.3739	0.0459	0.0459	HERCULES INCORPORATED RESEARCH CENTER
DE	New Castle	10003	1000300018	001	2	10200602	96.20	MANEVU2002	15.6060	0.0557	0.0557	NVF COMPANY INC - YORKLYN FACILITY
DE	New Castle	10003	1000300021	001	2	10200601	165.00	MANEVU2002	189.5300	0.5356	0.5356	SUNCO INC R M
DE	New Castle	10003	1000300021	002	2	10200701	165.00	MANEVU2002	95.5400	0.3372	0.3372	SUNCO INC R M
DE	New Castle	10003	1000300021	003	2	10200601	165.00	MANEVU2002	186.5200	0.6082	0.6082	SUNCO INC R M

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DE	New Castle	10003	1000300021	004	1	10300602	69.00	MANEVU2002	4.1600	0.0121	0.0121	SUNCO INC R M
DE	New Castle	10003	1000300021	014	1	10200602	25.00	MANEVU2002	15.2755	0.0382	0.0382	SUNCO INC R M
DE	New Castle	10003	1000300021	018	1	10200701	165.00	MANEVU2002	0.5501	0.0015	0.0015	SUNCO INC R M
DE	New Castle	10003	1000300021	019	1	10200601	43.00	MANEVU2002	14.7434	0.0983	0.0983	SUNCO INC R M
DE	New Castle	10003	1000300021	020	1	10200701	43.00	MANEVU2002	9.4276	0.0051	0.0051	SUNCO INC R M
DE	New Castle	10003	1000300021	021	1	10200701	43.00	MANEVU2002	17.9725	0.0625	0.0625	SUNCO INC R M
DE	New Castle	10003	1000300021	022	1	10200701	43.00	MANEVU2002	6.3189	0.0013	0.0013	SUNCO INC R M
DE	New Castle	10003	1000300021	023	1	10200701	7.10	MANEVU2002	5.5544	0.0192	0.0192	SUNCO INC R M
DE	New Castle	10003	1000300021	024	1	10200701	3.50	MANEVU2002	2.2217	0.0116	0.0116	SUNCO INC R M
DE	New Castle	10003	1000300022	001	2	10300603	5.20	MANEVU2002	0.3285	0.0000	0.0000	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	003	2	10300603	3.30	MANEVU2002	0.3470	0.0005	0.0005	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	005	2	10300602	12.00	MANEVU2002	0.8640	0.0004	0.0004	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	007	2	10300602	76.00	MANEVU2002	2.6085	0.0360	0.0360	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	007	1	10300501	76.00	MANEVU2002	0.0246	0.0003	0.0003	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	008	1	10300501	41.00	MANEVU2002	1.2822	0.0000	0.0000	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	008	2	10300602	41.00	MANEVU2002	4.4890	0.0000	0.0000	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	009	1	10300501	30.00	MANEVU2002	0.2569	0.0026	0.0026	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	009	2	10300602	30.00	MANEVU2002	0.2620	0.0026	0.0026	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	011	2	10300602	40.00	MANEVU2002	0.1990	0.0000	0.0000	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	025	1	10300602	0.70	MANEVU2002	0.0690	0.0005	0.0005	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	030	2	10300603	0.30	MANEVU2002	1.8600	0.0172	0.0172	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	030	3	10300503	0.30	MANEVU2002	0.2711	0.0025	0.0025	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	043	1	10300603	6.40	MANEVU2002	0.6026	0.0014	0.0014	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	050	1	10200603	8.40	MANEVU2002	1.2592	0.0022	0.0022	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	051	1	10200602	23.40	MANEVU2002	1.0800	0.0013	0.0013	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300022	053	1	10200602	5.20	MANEVU2002	0.7155	0.0009	0.0009	UNIVERSITY OF DELAWARE NEWARK
DE	New Castle	10003	1000300023	001	1	10200602	25.00	MANEVU2002	1.1300	0.0000	0.0000	AMTRAK WILMINGTON MAINTENANCE FACILITY
DE	New Castle	10003	1000300023	002	1	10200602	25.00	MANEVU2002	1.1000	0.0000	0.0000	AMTRAK WILMINGTON MAINTENANCE FACILITY
DE	New Castle	10003	1000300023	003	1	10200602	12.00	MANEVU2002	0.6350	0.0050	0.0050	AMTRAK WILMINGTON MAINTENANCE FACILITY
DE	New Castle	10003	1000300024	001	1	10200602	55.00	SCC Descriptio	5.4212	0.0101	0.0101	CHRISTIANA CARE - WILMINGTON HOSPITAL
DE	New Castle	10003	1000300027	002	2	10200602	25.40	MANEVU2002	3.1562	0.0124	0.0124	FORMOSA PLASTICS CORPORATION
DE	New Castle	10003	1000300027	005	2	10200602	33.80	MANEVU2002	6.1774	0.0007	0.0007	FORMOSA PLASTICS CORPORATION
DE	New Castle	10003	1000300029	001	1	10200602	21.00	MANEVU2002	0.9089	0.0041	0.0041	AMETEK INC CHEMICAL PRODUCTS DIVISION
DE	New Castle	10003	1000300029	002	1	10200602	25.00	MANEVU2002	1.1749	0.0000	0.0000	AMETEK INC CHEMICAL PRODUCTS DIVISION
DE	New Castle	10003	1000300029	002	2	10200401	25.00	MANEVU2002	0.0870	0.0000	0.0000	AMETEK INC CHEMICAL PRODUCTS DIVISION
DE	New Castle	10003	1000300030	001	3	10200799	49.00	MANEVU2002	15.7905	0.0574	0.0574	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	001	2	10200602	49.00	MANEVU2002	3.0500	0.0111	0.0111	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	001	1	10200501	49.00	MANEVU2002	0.0926	0.0003	0.0003	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	002	2	10200602	17.00	MANEVU2002	1.0088	0.0572	0.0572	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	002	1	10200501	17.00	MANEVU2002	0.0002	0.0000	0.0000	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	003	2	10200602	17.00	MANEVU2002	0.7761	0.0310	0.0310	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	004	3	10200799	49.00	MANEVU2002	9.7847	0.0367	0.0367	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	004	1	10200501	49.00	MANEVU2002	0.2029	0.0008	0.0008	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	004	2	10200602	49.00	MANEVU2002	2.4044	0.0090	0.0090	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	013	2	10200603	5.00	SCC Descriptio	0.6000	0.0017	0.0017	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300030	014	2	10200602	28.00	MANEVU2002	0.5598	0.0016	0.0016	OCCIDENTAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	007	1	10200401	100.00	MANEVU2002	14.0530	0.0321	0.0321	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	007	2	10300602	100.00	MANEVU2002	18.6305	0.0425	0.0425	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	012	1	10200601	144.00	MANEVU2002	14.4200	0.0439	0.0439	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	012	2	10200501	144.00	MANEVU2002	0.0492	0.0001	0.0001	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	014	1	10200501	6.00	MANEVU2002	0.5156	0.0002	0.0002	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300032	016	1	10200501	17.50	MANEVU2002	0.5156	0.0000	0.0002	GENERAL CHEMICAL CORPORATION

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DE	New Castle	10003	1000300032	017	1	10200501	17.50	MANEVU2002	0.5156	0.0002	0.0002	GENERAL CHEMICAL CORPORATION
DE	New Castle	10003	1000300033	006	6	10200603	5.00	SCC Descriptio	0.3107	0.0017	0.0017	ROHM & HAAS ELECTRONIC MATERIALS CMP TE
DE	New Castle	10003	1000300033	023	1	10200602	20.90	MANEVU2002	0.4972	0.0018	0.0018	ROHM & HAAS ELECTRONIC MATERIALS CMP TE
DE	New Castle	10003	1000300033	030	1	10200602	0.40	MANEVU2002	0.0277	0.0001	0.0001	ROHM & HAAS ELECTRONIC MATERIALS CMP TE
DE	New Castle	10003	1000300037	004	1	10200603	5.20	MANEVU2002	0.8677	0.0028	0.0028	FP INTERNATIONAL INC
DE	New Castle	10003	1000300049	001	1	10200401	25.00	MANEVU2002	4.1144	0.0274	0.0274	DUPONT WILMINGTON OFFICE BUILDING
DE	New Castle	10003	1000300049	002	1	10200401	25.00	MANEVU2002	3.4632	0.0000	0.0000	DUPONT WILMINGTON OFFICE BUILDING
DE	New Castle	10003	1000300049	003	1	10200401	25.00	MANEVU2002	3.5219	0.0000	0.0000	DUPONT WILMINGTON OFFICE BUILDING
DE	New Castle	10003	1000300049	004	1	10200401	25.00	MANEVU2002	5.8327	0.0000	0.0000	DUPONT WILMINGTON OFFICE BUILDING
DE	New Castle	10003	1000300049	005	1	10200401	25.00	MANEVU2002	7.4708	0.0441	0.0441	DUPONT WILMINGTON OFFICE BUILDING
DE	New Castle	10003	1000300051	201	1	10200602	25.00	MANEVU2002	0.0003	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	202	1	10200602	25.00	MANEVU2002	0.0005	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	302	1	10200602	55.00	SCC Descriptio	0.0005	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	303	1	10200602	55.00	SCC Descriptio	0.0005	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	305	2	10200602	55.00	SCC Descriptio	0.0023	0.0001	0.0001	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	308	1	10200602	55.00	SCC Descriptio	0.0006	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	309	1	10200602	55.00	SCC Descriptio	0.0005	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300051	310	1	10200602	55.00	SCC Descriptio	0.0007	0.0000	0.0000	FMC BIOPOLYMER
DE	New Castle	10003	1000300058	007	1	10200501	2.00	MANEVU2002	0.4920	0.0018	0.0018	UNIQEMA
DE	New Castle	10003	1000300058	009	1	10200501	8.00	MANEVU2002	2.0704	0.0072	0.0072	UNIQEMA
DE	New Castle	10003	1000300063	018	1	10300501	2.00	MANEVU2002	0.0272	0.0000	0.0000	CITISTEEL USA
DE	New Castle	10003	1000300067	007	1	10200603	3.90	MANEVU2002	0.7200	0.0016	0.0016	UNISOURCE WORLDWIDE INC
DE	New Castle	10003	1000300077	001	2	10200501	18.00	MANEVU2002	0.1602	0.0000	0.0003	VETERANS ADMINISTRATION HOSPSITAL
DE	New Castle	10003	1000300077	002	3	10300602	18.00	MANEVU2002	2.9635	0.0052	0.0052	VETERANS ADMINISTRATION HOSPSITAL
DE	New Castle	10003	1000300080	001	1	10200401	49.00	TITLE V PERM	30.4974	0.0536	0.0536	CHRISTIANA CARE - CHRISTIANA HOSPITAL
DE	New Castle	10003	1000300090	001	2	10300602	26.80	MANEVU2002	7.9367	0.0140	0.0140	DELAWARE CORRECTIONAL CENTER - SMYRNA
DE	New Castle	10003	1000300092	001	1	10200603	8.00	MANEVU2002	1.5650	0.0073	0.0073	THE CROWELL CORPORATION
DE	New Castle	10003	1000300093	001	1	10200603	5.00	SCC Descriptio	4.3300	0.0095	0.0095	PRINTPACK INC
DE	New Castle	10003	1000300106	001	1	10200501	3.80	MANEVU2002	1.6260	0.0034	0.0034	ASTRAZENECA PHARMACEUTICALS LP-FAIRFAX
DE	New Castle	10003	1000300106	004	2	10200501	23.00	MANEVU2002	0.3666	0.0008	0.0008	ASTRAZENECA PHARMACEUTICALS LP-FAIRFAX
DE	New Castle	10003	1000300106	004	1	10200602	23.00	MANEVU2002	0.6950	0.0016	0.0016	ASTRAZENECA PHARMACEUTICALS LP-FAIRFAX
DE	New Castle	10003	1000300106	006	1	10200501	33.00	MANEVU2002	0.4080	0.0000	0.0000	ASTRAZENECA PHARMACEUTICALS LP-FAIRFAX
DE	New Castle	10003	1000300106	021	1	10200602	55.00	SCC Descriptio	9.2000	0.0172	0.0172	ASTRAZENECA PHARMACEUTICALS LP-FAIRFAX
DE	New Castle	10003	1000300121	002	2	10200603	8.00	MANEVU2002	0.4255	0.0000	0.0000	WESTVACO CORPORATION
DE	New Castle	10003	1000300126	001	1	10200401	48.00	MANEVU2002	10.1520	0.0709	0.0709	DUPONT CHESTNUT RUN
DE	New Castle	10003	1000300126	002	1	10200401	96.00	MANEVU2002	41.2303	0.1124	0.1124	DUPONT CHESTNUT RUN
DE	New Castle	10003	1000300128	001	2	10200602	72.00	MANEVU2002	4.7786	0.0000	0.0000	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	002	2	10200602	72.00	MANEVU2002	3.5839	0.0000	0.0000	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	003	2	10200602	72.00	MANEVU2002	4.8388	0.0000	0.0000	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	004	2	10200602	72.00	MANEVU2002	0.9974	0.0000	0.0000	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	054	2	10200602	32.70	MANEVU2002	0.9249	0.0034	0.0034	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	056	2	10200602	50.00	MANEVU2002	1.4161	0.0000	0.0000	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300128	078	2	10200602	32.70	MANEVU2002	0.9249	0.0037	0.0037	DAIMLERCHRYSLER CORPORATION
DE	New Castle	10003	1000300129	001	1	10300501	1.90	MANEVU2002	0.0708	0.0000	0.0000	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	002	1	10300501	1.90	MANEVU2002	0.0708	0.0000	0.0000	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	003	1	10300501	1.90	MANEVU2002	0.0708	0.0000	0.0000	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	004	1	10300501	1.90	MANEVU2002	0.0708	0.0000	0.0000	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	005	1	10300501	1.30	MANEVU2002	0.0708	0.0000	0.0000	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	050	1	10200602	95.00	MANEVU2002	55.9800	0.2525	0.2525	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	051	1	10200602	10.00	MANEVU2002	1.0000	0.0053	0.0053	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	052	1	10200602	10.00	MANEVU2002	0.7177	0.0034	0.0034	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	053	1	10200602	10.00	MANEVU2002	1.0114	0.0054	0.0054	LAFARGE NORTH AMERICA INC

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DE	New Castle	10003	1000300129	054	1	10300602	7.00	MANEVU2002	6.6967	0.0381	0.0381	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	055	1	10300603	5.00	MANEVU2002	0.5441	0.0027	0.0027	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	056	1	10300603	5.00	MANEVU2002	2.5194	0.0123	0.0123	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300129	057	1	10300603	7.50	MANEVU2002	0.3808	0.0018	0.0018	LAFARGE NORTH AMERICA INC
DE	New Castle	10003	1000300131	001	1	10300401	36.00	MANEVU2002	27.8799	0.0551	0.0551	ALFRED I DUPONT HOSPITAL FOR CHILDREN
DE	New Castle	10003	1000300133	001	2	10300602	31.00	MANEVU2002	3.4987	0.0058	0.0058	ST. FRANCIS HOSPITAL
DE	New Castle	10003	1000300279	003	1	10200401	46.00	MANEVU2002	13.0110	0.0976	0.0976	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300279	004	2	10200401	46.00	MANEVU2002	26.3863	0.1012	0.1012	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300279	005	2	10200401	47.60	MANEVU2002	0.3762	0.0941	0.0941	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300279	032	1	10200602	49.00	MANEVU2002	2.4000	0.0233	0.0233	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300279	044	1	10200602	47.60	MANEVU2002	2.2894	0.0000	0.0000	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300279	044	2	10200501	47.60	MANEVU2002	0.0001	0.0000	0.0000	DUPONT STINE - HASKELL LABORATORY
DE	New Castle	10003	1000300291	003	1	10200501	12.00	MANEVU2002	0.5826	0.0000	0.0000	DELAWARE TERMINAL COMPANY
DE	New Castle	10003	1000300291	014	1	10200501	8.20	MANEVU2002	1.3230	0.0049	0.0049	DELAWARE TERMINAL COMPANY
DE	New Castle	10003	1000300291	022	1	10200501	8.00	MANEVU2002	2.5059	0.0086	0.0086	DELAWARE TERMINAL COMPANY
DE	New Castle	10003	1000300324	011	2	10200602	20.00	MANEVU2002	1.1700	0.0000	0.0000	NORAMCO INC
DE	New Castle	10003	1000300324	012	1	10200602	10.00	MANEVU2002	0.9780	0.0105	0.0105	NORAMCO INC
DE	New Castle	10003	1000300365	004	1	10200603	5.00	SCC Descriptio	0.8329	0.0000	0.0000	DASSAULT FALCON JET-WILMINGTON CORP
DE	New Castle	10003	1000300367	002	1	10200501	25.20	MANEVU2002	2.4578	0.0138	0.0138	INTERNATIONAL PETROLEUM CORP OF DELAWARE
DE	New Castle	10003	1000300367	002	3	10200501	25.20	MANEVU2002	1.3800	0.0078	0.0078	INTERNATIONAL PETROLEUM CORP OF DELAWARE
DE	New Castle	10003	1000300367	003	1	10200501	25.20	MANEVU2002	1.2000	0.0160	0.0160	INTERNATIONAL PETROLEUM CORP OF DELAWARE
DE	New Castle	10003	1000300367	003	3	10200501	25.20	MANEVU2002	0.4163	0.0056	0.0056	INTERNATIONAL PETROLEUM CORP OF DELAWARE
DE	New Castle	10003	1000300389	005	1	10300701	0.00		0.9120	0.0025	0.0025	WILMINGTON WASTEWATER TREATMENT PLANT
DE	New Castle	10003	1000300389	005	2	10200501	0.00		0.2660	0.0007	0.0007	WILMINGTON WASTEWATER TREATMENT PLANT
DE	New Castle	10003	1000300426	001	1	10200401	37.50	MANEVU2002	12.8274	0.0160	0.0160	SPI POLYOLS INC
DE	New Castle	10003	1000300426	001	2	10200602	37.50	MANEVU2002	2.3754	0.0030	0.0030	SPI POLYOLS INC
DE	New Castle	10003	1000300426	003	1	10200401	75.00	MANEVU2002	34.5090	0.1177	0.1177	SPI POLYOLS INC
DE	New Castle	10003	1000300426	003	2	10200602	75.00	MANEVU2002	0.0300	0.0001	0.0001	SPI POLYOLS INC
DE	New Castle	10003	1000300426	004	1	10200401	115.00	MANEVU2002	78.8800	0.1801	0.1801	SPI POLYOLS INC
DE	New Castle	10003	1000300426	004	2	10200601	115.00	MANEVU2002	7.5950	0.0173	0.0173	SPI POLYOLS INC
DE	New Castle	10003	1000300426	005	1	10200602	96.80	MANEVU2002	1.5311	0.0000	0.0000	SPI POLYOLS INC
DE	New Castle	10003	1000300426	010	2	10200603	2.10	MANEVU2002	0.3466	0.0012	0.0012	SPI POLYOLS INC
DE	New Castle	10003	1000300426	080	3	10200603	1.00	MANEVU2002	0.1733	0.0006	0.0006	SPI POLYOLS INC
DE	New Castle	10003	1000300426	110	1	10300602	55.00	SCC Descriptio	10.8475	0.0308	0.0308	SPI POLYOLS INC
DE	Sussex	10005	1000500002	004	2	10200501	94.00	MANEVU2002	1.5774	0.0000	0.0000	INVISTA
DE	Sussex	10005	1000500002	004	3	10200602	94.00	MANEVU2002	8.7500	0.0000	0.0000	INVISTA
DE	Sussex	10005	1000500002	011	1	10200401	18.00	MANEVU2002	5.3680	0.0000	0.0000	INVISTA
DE	Sussex	10005	1000500002	013	1	10200401	18.00	MANEVU2002	9.6587	0.0398	0.0398	INVISTA
DE	Sussex	10005	1000500002	015	1	10200401	18.00	MANEVU2002	12.0339	0.0410	0.0410	INVISTA
DE	Sussex	10005	1000500002	016	1	10200401	24.00	MANEVU2002	12.5179	0.0401	0.0401	INVISTA
DE	Sussex	10005	1000500002	017	1	10200401	46.60	MANEVU2002	16.0958	0.0902	0.0902	INVISTA
DE	Sussex	10005	1000500002	018	1	10200401	46.40	MANEVU2002	4.6060	0.0000	0.0000	INVISTA
DE	Sussex	10005	1000500003	001	1	10200501	14.60	MANEVU2002	1.1216	0.0031	0.0031	PERDUE FARMS - BRIDGEVILLE
DE	Sussex	10005	1000500003	002	1	10200401	14.60	MANEVU2002	6.9730	0.0192	0.0192	PERDUE FARMS - BRIDGEVILLE
DE	Sussex	10005	1000500003	021	1	10200602	35.00	MANEVU2002	0.3734	0.0014	0.0014	PERDUE FARMS - BRIDGEVILLE
DE	Sussex	10005	1000500004	002	1	10200401	61.70	MANEVU2002	22.1840	0.0536	0.0536	MOUNTAIRE FARMS OF DELAWARE INC-MILLSBOR
DE	Sussex	10005	1000500004	003	1	10200401	69.00	MANEVU2002	3.3630	0.0081	0.0081	MOUNTAIRE FARMS OF DELAWARE INC-MILLSBOR
DE	Sussex	10005	1000500006	001	1	10200603	6.30	MANEVU2002	0.1406	0.0004	0.0004	JOHNSON POLYMER INC
DE	Sussex	10005	1000500009	001	2	10300601	25.00	MANEVU2002	10.1338	0.0456	0.0456	SEA WATCH INTERNATIONAL LTD
DE	Sussex	10005	1000500009	001	1	10300404	25.00	MANEVU2002	4.8263	0.0217	0.0217	SEA WATCH INTERNATIONAL LTD
DE	Sussex	10005	1000500012	001	1	10200401	8.40	MANEVU2002	9.5556	0.0231	0.0231	MOUNTAIRE FARMS OF DELMARVA FRANKFORD
DE	Sussex	10005	1000500013	001	1	10200401	21.00	MANEVU2002	7.0425	0.0163	0.0163	ALLEN FAMILY FOODS INC

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DE	Sussex	10005	1000500016	001	1	10200401	12.00	MANEVU2002	7.3198	0.0201	0.0201	ALLEN'S HATCHERY INC ALLEN'S MILLING
DE	Sussex	10005	1000500016	001	2	10200602	12.00	MANEVU2002	2.7234	0.0075	0.0075	ALLEN'S HATCHERY INC ALLEN'S MILLING
DE	Sussex	10005	1000500036	001	1	10300504	11.70	CONVERSION	2.7303	0.0057	0.0057	BAYHEALTH MEDICAL CTR - MILFORD MEMORIAL
DE	Sussex	10005	1000500066	001	2	10200501	0.20	CONVERSION	0.2582	0.0000	0.0000	JUSTIN TANKS LLC
DE	Sussex	10005	1000500071	001	1	10200401	16.70	MANEVU2002	4.6093	0.0185	0.0185	PINNACLE FOODS CORPORATION - VLASIC PLNT
DE	Sussex	10005	1000500071	002	1	10200401	16.70	MANEVU2002	4.6093	0.0185	0.0185	PINNACLE FOODS CORPORATION - VLASIC PLNT
DE	Sussex	10005	1000500073	001	1	10200401	12.00	MANEVU2002	13.3811	0.0368	0.0368	MOUNTAIRE FARMS OF DELMARVA - SELBYVILLE
DE	Sussex	10005	1000500075	001	1	10200401	20.80	MANEVU2002	7.7097	0.0297	0.0297	PERDUE FARMS INC - GEORGETOWN
DE	Sussex	10005	1000500075	002	1	10200401	20.00	MANEVU2002	11.5646	0.0445	0.0445	PERDUE FARMS INC - GEORGETOWN
DC	Washington	11001	00008	CU-1	1	10300501	59.00	Deirdre Elvis	6.1940	0.0000	0.0165	D.C. GENERAL HOSPITAL
DC	Washington	11001	00008	CU-2	1	10300501	59.00	Deirdre Elvis	6.1940	0.0000	0.0165	D.C. GENERAL HOSPITAL
DC	Washington	11001	00008	CU-4	1	10300501	59.00	Deirdre Elvis	6.1940	0.0000	0.0165	D.C. GENERAL HOSPITAL
DC	Washington	11001	0006	003	1	10301002	160.00	Deirdre Elvis	35.1799	0.0000	0.0966	CAPITOL POWER PLANT
DC	Washington	11001	0006	004	1	10300503	50.00	Deirdre Elvis	11.4414	0.0000	0.0314	CAPITOL POWER PLANT
DC	Washington	11001	0009	001	1	10300504	62.50	Deirdre Elvis	0.0093	0.0000	0.0000	ST. ELIZABETH HOSPITAL
DC	Washington	11001	0009	002	1	10300504	68.75	Deirdre Elvis	0.0209	0.0000	0.0001	ST. ELIZABETH HOSPITAL
DC	Washington	11001	0009	003	1	10300601	68.75	Deirdre Elvis	29.5942	0.0000	0.0800	ST. ELIZABETH HOSPITAL
DC	Washington	11001	0011	001	1-602	10200602	54.38	Deirdre Elvis	3.5137	0.0000	0.0097	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0011	001	1-502	10200502	54.38	Deirdre Elvis	0.0307	0.0000	0.0001	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0011	002	41-602	10200602	54.38	Deirdre Elvis	4.3338	0.0000	0.0119	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0011	002	41-502	10200502	54.38	Deirdre Elvis	0.0038	0.0000	0.0000	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0011	003	1-602	10300602	36.26	Deirdre Elvis	2.8349	0.0000	0.0078	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0011	003	1-502	10200502	36.26	Deirdre Elvis	0.0081	0.0000	0.0000	U.S. SOLDIERS AND AIRMAN'S HOM
DC	Washington	11001	0022	001	1	10300601	148.20	Deirdre Elvis	3.3220	0.0000	0.0090	HOWARD UNIVERSITY
DC	Washington	11001	0022	002	1-601	10300601	152.00	Deirdre Elvis	28.1649	0.0000	0.0752	HOWARD UNIVERSITY
DC	Washington	11001	0022	002	1-501	10300501	152.00	Deirdre Elvis	0.2422	0.0000	0.0007	HOWARD UNIVERSITY
DC	Washington	11001	0022	003	1	10300601	152.00	Deirdre Elvis	0.4284	0.0000	0.0012	HOWARD UNIVERSITY
DC	Washington	11001	0022	004	1	10300601	8.20	Deirdre Elvis	0.4575	0.0000	0.0012	HOWARD UNIVERSITY
DC	Washington	11001	0022	005	1	10300601	8.20	Deirdre Elvis	0.1440	0.0000	0.0004	HOWARD UNIVERSITY
DC	Washington	11001	0022	006	1	10300601	8.20	Deirdre Elvis	0.4122	0.0000	0.0011	HOWARD UNIVERSITY
DC	Washington	11001	0022	007	1	10300601	8.20	Deirdre Elvis	0.3717	0.0000	0.0010	HOWARD UNIVERSITY
DC	Washington	11001	0022	008	1	10300601	8.00	Deirdre Elvis	0.1839	0.0000	0.0005	HOWARD UNIVERSITY
DC	Washington	11001	0025	001	1	10300601	250.00	Deirdre Elvis	47.3255	0.0000	0.1279	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	002	2	10300601	250.00	Deirdre Elvis	28.0323	0.0000	0.0758	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	003	2	10300601	500.00	Deirdre Elvis	48.7006	0.0000	0.1300	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	003	1	10300501	500.00	Deirdre Elvis	0.9414	0.0000	0.0025	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	004	2	10300601	500.00	Deirdre Elvis	76.7119	0.0000	0.2048	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	004	1	10300501	500.00	Deirdre Elvis	0.6466	0.0000	0.0017	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0025	006	1-601	10300601	250.00	Deirdre Elvis	14.9864	0.0000	0.0405	U.S. GSA CENTRAL HEATING PLANT
DC	Washington	11001	0033	001	51	10300602	84.80	Deirdre Elvis	0.6904	0.0000	0.0018	NAVAL RESEARCH LABORATORY
DC	Washington	11001	0033	001	1	10300501	84.80	Deirdre Elvis	0.2023	0.0000	0.0005	NAVAL RESEARCH LABORATORY
DC	Washington	11001	0033	002	1-602	10300602	84.80	Deirdre Elvis	0.9396	0.0000	0.0025	NAVAL RESEARCH LABORATORY
DC	Washington	11001	0033	002	1-501	10300501	84.80	Deirdre Elvis	0.3562	0.0000	0.0009	NAVAL RESEARCH LABORATORY
DC	Washington	11001	0033	003	51	10300602	56.70	Deirdre Elvis	0.8215	0.0000	0.0022	NAVAL RESEARCH LABORATORY
DC	Washington	11001	0033	003	1	10300501	56.70	Deirdre Elvis	0.5920	0.0000	0.0015	NAVAL RESEARCH LABORATORY
ME	Androscoggin	23001	2300100004	001	2	10300602	49.00	MANEVU2002	14.6950	0.0210	0.0210	SAINT MARYS REGIONAL MEDICAL CENTER
ME	Androscoggin	23001	2300100004	001	1	10300501	49.00	MANEVU2002	1.2252	0.0018	0.0018	SAINT MARYS REGIONAL MEDICAL CENTER
ME	Androscoggin	23001	2300100004	002	3	10300603	5.00	SCC Descriptio	3.0100	0.0082	0.0082	SAINT MARYS REGIONAL MEDICAL CENTER
ME	Androscoggin	23001	2300100004	002	2	10300603	5.00	SCC Descriptio	1.7750	0.0048	0.0048	SAINT MARYS REGIONAL MEDICAL CENTER
ME	Androscoggin	23001	2300100004	002	1	10300501	5.00	SCC Descriptio	0.2328	0.0006	0.0006	SAINT MARYS REGIONAL MEDICAL CENTER
ME	Androscoggin	23001	2300100016	001	1	10300502	29.40	MANEVU2002	1.6903	0.0034	0.0034	BATES COLLEGE
ME	Androscoggin	23001	2300100016	001	2	10300602	29.40	MANEVU2002	0.2996	0.0006	0.0006	BATES COLLEGE

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ME	Androscoggin	23001	2300100016	002	1	10300502	29.40	MANEVU2002	1.6903	0.0034	0.0034	BATES COLLEGE
ME	Androscoggin	23001	2300100016	002	2	10300602	29.40	MANEVU2002	0.2996	0.0006	0.0006	BATES COLLEGE
ME	Androscoggin	23001	2300100016	003	1	10300502	29.40	MANEVU2002	1.6903	0.0034	0.0034	BATES COLLEGE
ME	Androscoggin	23001	2300100016	003	2	10300602	29.40	MANEVU2002	0.2996	0.0006	0.0006	BATES COLLEGE
ME	Androscoggin	23001	2300100016	004	1	10300503	32.80	MANEVU2002	1.9500	0.0054	0.0054	BATES COLLEGE
ME	Androscoggin	23001	2300100016	004	2	10300603	32.80	MANEVU2002	2.3500	0.0065	0.0065	BATES COLLEGE
ME	Androscoggin	23001	2300100021	001	3	10300501	3.60	MANEVU2002	0.5991	0.0000	0.0000	PHILIPS ELMET
ME	Androscoggin	23001	2300100021	002	3	10300501	4.50	MANEVU2002	0.2028	0.0000	0.0000	PHILIPS ELMET
ME	Androscoggin	23001	2300100021	003	1	10300603	4.00	MANEVU2002	0.4046	0.0000	0.0007	PHILIPS ELMET
ME	Androscoggin	23001	2300100021	005	1	10300603	5.00	SCC Descriptio	2.8200	0.0000	0.0077	PHILIPS ELMET
ME	Androscoggin	23001	2300100027	001	1	10200401	55.50	MANEVU2002	2.2466	0.0150	0.0150	PIONEER PLASTICS CORPORATION
ME	Androscoggin	23001	2300100027	002	1	10200603	5.00	MANEVU2002	0.5500	0.0015	0.0015	PIONEER PLASTICS CORPORATION
ME	Androscoggin	23001	2300100027	003	1	10200401	39.50	MANEVU2002	27.5453	0.0696	0.0696	PIONEER PLASTICS CORPORATION
ME	Androscoggin	23001	2300100027	004	1	10200401	96.00	MANEVU2002	7.2146	0.0182	0.0182	PIONEER PLASTICS CORPORATION
ME	Androscoggin	23001	2300100027	004	2	10200602	96.00	MANEVU2002	7.9165	0.0200	0.0200	PIONEER PLASTICS CORPORATION
ME	Androscoggin	23001	2300100035	004	3	10201002	55.00	SCC Descriptio	0.1957	0.0005	0.0005	MASONITE CORP
ME	Androscoggin	23001	2300100035	005	1	10301002	6.70	MANEVU2002	0.5684	0.0018	0.0018	MASONITE CORP
ME	Androscoggin	23001	2300100035	006	1	10301002	6.70	MANEVU2002	0.2632	0.0007	0.0007	MASONITE CORP
ME	Androscoggin	23001	2300100070	001	1	10300401	27.00	MANEVU2002	7.8840	0.0000	0.0087	CENTRAL MAINE MEDICAL CENTER
ME	Androscoggin	23001	2300100070	002	1	10300401	27.00	MANEVU2002	9.5175	0.0000	0.0000	CENTRAL MAINE MEDICAL CENTER
ME	Androscoggin	23001	2300100070	003	1	10300401	12.20	MANEVU2002	4.2120	0.0292	0.0292	CENTRAL MAINE MEDICAL CENTER
ME	Androscoggin	23001	2300100070	003	2	10300602	12.20	MANEVU2002	0.0001	0.0000	0.0000	CENTRAL MAINE MEDICAL CENTER
ME	Androscoggin	23001	2300100072	001	1	10301002	0.00		0.3672	0.0010	0.0010	DINGLEY PRESS
ME	Androscoggin	23001	2300100072	002	1	10300603	5.00	SCC Descriptio	2.8400	0.0078	0.0078	DINGLEY PRESS
ME	Androscoggin	23001	2300100076	001	1	10200401	10.50	MANEVU2002	4.0450	0.0111	0.0111	INTERNATIONAL PAPER - AUBURN
ME	Androscoggin	23001	2300100076	002	1	10200401	16.70	MANEVU2002	4.0450	0.0111	0.0111	INTERNATIONAL PAPER - AUBURN
ME	Androscoggin	23001	2300100076	002	2	10200602	16.70	MANEVU2002	1.2700	0.0035	0.0035	INTERNATIONAL PAPER - AUBURN
ME	Androscoggin	23001	2300100081	003	1	10201002	4.70	MANEVU2002	0.8123	0.0021	0.0021	MPAC (MAINE POLY ACQUISTION CORP)
ME	Androscoggin	23001	2300100084	001	1	10200504	6.00	MANEVU2002	0.0705	0.0010	0.0010	TAMBRANDS INC
ME	Androscoggin	23001	2300100084	002	1	10200504	6.00	MANEVU2002	0.6110	0.0012	0.0012	TAMBRANDS INC
ME	Androscoggin	23001	2300100084	003	1	10200504	6.00	MANEVU2002	1.2455	0.0011	0.0011	TAMBRANDS INC
ME	Androscoggin	23001	2300100084	004	1	10200504	6.00	MANEVU2002	0.7990	0.0719	0.0719	TAMBRANDS INC
ME	Androscoggin	23001	2300100084	005	1	10200504	6.00	MANEVU2002	0.3525	0.0000	0.0000	TAMBRANDS INC
ME	Androscoggin	23001	2300100092	001	1	10300503	5.00	SCC Descriptio	0.9037	0.0025	0.0025	QUALITY EGG OF NEW ENGLAND, LLC-DECOSTER
ME	Androscoggin	23001	2300100104	002	1	10201002	0.00		0.6634	0.0000	0.0007	PERFORMANCE PRODUCT PAINTING
ME	Androscoggin	23001	2300100105	001	2	10200603	5.00	SCC Descriptio	2.2890	0.0063	0.0063	FORMED FIBER TECHNOLOGIES
ME	Androscoggin	23001	2300100105	002	4	10200603	5.00	SCC Descriptio	1.4560	0.0040	0.0040	FORMED FIBER TECHNOLOGIES
ME	Androscoggin	23001	2300100105	003	5	10200603	5.00	SCC Descriptio	0.4160	0.0011	0.0011	FORMED FIBER TECHNOLOGIES
ME	Aroostook	23003	2300300004	001	1	10300501	10.40	MANEVU2002	1.2000	0.0000	0.0017	CARY MEDICAL CENTER
ME	Aroostook	23003	2300300004	002	1	10300501	10.40	MANEVU2002	1.2000	0.0000	0.0017	CARY MEDICAL CENTER
ME	Aroostook	23003	2300300004	003	1	10300501	1.30	MANEVU2002	0.6660	0.0000	0.0018	CARY MEDICAL CENTER
ME	Aroostook	23003	2300300010	001	1	10300404	21.00	MANEVU2002	1.4603	0.0000	0.0035	HOULTON REGIONAL HOSPITAL
ME	Aroostook	23003	2300300010	002	1	10300404	49.00	MANEVU2002	1.4300	0.0000	0.0014	HOULTON REGIONAL HOSPITAL
ME	Aroostook	23003	2300300011	002	1	10200401	29.00	MANEVU2002	25.5916	0.0000	0.0591	A E STALEY MANUFACTURING COMPANY
ME	Aroostook	23003	2300300011	002	3	10200401	29.00	MANEVU2002	0.0253	0.0000	0.0001	A E STALEY MANUFACTURING COMPANY
ME	Aroostook	23003	2300300011	002	2	10201002	29.00	MANEVU2002	0.0010	0.0000	0.0000	A E STALEY MANUFACTURING COMPANY
ME	Aroostook	23003	2300300017	001	1	10200905	0.00		5.3780	0.0000	0.0118	COLUMBIA FOREST PRODUCTS VENEER DIV2002
ME	Aroostook	23003	2300300017	002	1	10200902	0.00		5.3780	0.0000	0.0118	COLUMBIA FOREST PRODUCTS VENEER DIV2002
ME	Aroostook	23003	2300300017	006	2	10200905	0.00		2.7809	0.0000	0.0064	COLUMBIA FOREST PRODUCTS VENEER DIV2002
ME	Aroostook	23003	2300300024	001	1	10300501	0.00		5.3292	0.0000	0.0146	LORING COMMERCE CENTRE
ME	Aroostook	23003	2300300026	003	1	10200501	0.00		0.0267	0.0000	0.0000	ATLANTIC CUSTOM PROCESSORS LLC
ME	Aroostook	23003	2300300027	001	1	10200401	240.00	MANEVU2002	38.1640	0.0000	0.1468	NEXFOR FRASER PAPERS INC

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ME	Aroostook	23003	2300300032	001	1	10300402	22.50	MANEVU2002	8.5138	0.0000	0.0103	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300032	002	1	10300402	22.50	MANEVU2002	9.8200	0.0000	0.0194	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300032	003	1	10300402	60.00	MANEVU2002	55.9886	0.0000	0.1354	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300032	004	1	10300402	60.00	MANEVU2002	43.7198	0.0000	0.1057	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300032	004	2	10301002	60.00	MANEVU2002	0.0021	0.0000	0.0000	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300032	005	1	10300402	98.50	MANEVU2002	17.6018	0.0000	0.0445	MCCAIN FOODS USA INC - EASTON
ME	Aroostook	23003	2300300033	001	1	10200906	10.00	MANEVU2002	1.3182	0.0000	0.0087	IRVING FOREST PRODUCTS - PINKHAM SAWMIL
ME	Aroostook	23003	2300300033	003	1	10200501	68.00	MANEVU2002	0.0144	0.0000	0.0000	IRVING FOREST PRODUCTS - PINKHAM SAWMIL
ME	Aroostook	23003	2300300033	003	2	10200905	68.00	MANEVU2002	6.5348	0.0000	0.0000	IRVING FOREST PRODUCTS - PINKHAM SAWMIL
ME	Aroostook	23003	2300300040	002	4	10200503	5.00	SCC Descriptio	0.0084	0.0000	0.0000	LANE CONSTRUCTION CORP (23)
ME	Aroostook	23003	2300300048	001	2	10200902	84.00	MANEVU2002	79.6000	0.0000	0.2099	J M HUBER CORPORATION
ME	Aroostook	23003	2300300048	001	1	10200501	84.00	MANEVU2002	0.0496	0.0000	0.0001	J M HUBER CORPORATION
ME	Aroostook	23003	2300300050	001	1	10200902	27.00	PART 70 LICEI	18.7545	0.0000	0.0392	J PAUL LEVESQUE & SONS INC - MASARDIS
ME	Aroostook	23003	2300300050	002	1	10200902	12.20	PART 70 LICEI	2.1788	0.0000	0.0000	J PAUL LEVESQUE & SONS INC - MASARDIS
ME	Aroostook	23003	2300300062	001	1	10200904	27.10	MANEVU2002	12.1000	0.0000	0.0213	LOUISIANA-PACIFIC CORP - NEW LIMERICK
ME	Aroostook	23003	2300300062	001	2	10200501	27.10	MANEVU2002	0.0064	0.0000	0.0000	LOUISIANA-PACIFIC CORP - NEW LIMERICK
ME	Aroostook	23003	2300300062	002	2	10200904	27.10	MANEVU2002	9.8630	0.0000	0.0217	LOUISIANA-PACIFIC CORP - NEW LIMERICK
ME	Aroostook	23003	2300300062	002	1	10200501	27.10	MANEVU2002	0.0044	0.0000	0.0000	LOUISIANA-PACIFIC CORP - NEW LIMERICK
ME	Aroostook	23003	2300300063	001	2	10200401	20.40	MANEVU2002	11.9967	0.0000	0.0330	NATIONAL STARCH & CHEMICAL CO
ME	Aroostook	23003	2300300063	001	1	10200906	20.40	MANEVU2002	7.8700	0.0000	0.0216	NATIONAL STARCH & CHEMICAL CO
ME	Aroostook	23003	2300300063	001	3	10200501	20.40	MANEVU2002	0.4450	0.0000	0.0012	NATIONAL STARCH & CHEMICAL CO
ME	Aroostook	23003	2300300070	001	1	10200902	39.00	MANEVU2002	45.1486	0.0000	0.0992	J PAUL LEVESQUE & SONS INC - ASHLAND
ME	Aroostook	23003	2300300076	001	1	10200905	20.10	CONVERSION	2.5670	0.0000	0.0056	MAINE WOODS CO
ME	Cumberland	23005	2300500004	001	1	10300401	11.20	MANEVU2002	1.7480	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	002	1	10300401	11.20	MANEVU2002	1.7480	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	003	1	10300401	16.80	MANEVU2002	1.7480	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	004	1	10300501	1.00	MANEVU2002	0.0841	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	005	1	10300501	4.80	MANEVU2002	0.2632	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	006	1	10300501	1.10	MANEVU2002	0.2390	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	007	1	10300603	4.20	MANEVU2002	0.2411	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	008	1	10300603	1.00	MANEVU2002	0.0311	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	009	1	10300603	1.00	MANEVU2002	0.0311	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500004	010	1	10300603	1.00	MANEVU2002	0.0311	0.0000	0.0000	UNIV OF SOUTHERN MAINE AT PORTLAND
ME	Cumberland	23005	2300500009	001	1	10200402	55.00	SCC Descriptio	8.6900	0.0238	0.0238	BURNHAM AND MORRILL CO
ME	Cumberland	23005	2300500009	001	2	10200602	55.00	SCC Descriptio	2.4500	0.0067	0.0067	BURNHAM AND MORRILL CO
ME	Cumberland	23005	2300500029	001	2	10300602	55.00	SCC Descriptio	1.9400	0.0041	0.0041	MAINE MEDICAL CENTER
ME	Cumberland	23005	2300500029	002	4	10300602	55.00	SCC Descriptio	1.9400	0.0041	0.0041	MAINE MEDICAL CENTER
ME	Cumberland	23005	2300500029	003	6	10300602	55.00	SCC Descriptio	1.9400	0.0041	0.0041	MAINE MEDICAL CENTER
ME	Cumberland	23005	2300500029	004	8	10300602	55.00	SCC Descriptio	1.9400	0.0041	0.0041	MAINE MEDICAL CENTER
ME	Cumberland	23005	2300500046	002	2	10300501	14.00	MANEVU2002	1.4520	0.0042	0.0042	LONG CREEK YOUTH DEVELOPMENT CENTER
ME	Cumberland	23005	2300500053	001	2	10200502	12.50	MANEVU2002	0.0140	0.0118	0.0118	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	001	3	10200603	12.50	MANEVU2002	1.8840	0.0075	0.0075	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	002	2	10200501	20.70	MANEVU2002	0.0897	0.0000	0.0000	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	002	3	10200603	20.70	MANEVU2002	0.4580	0.0000	0.0000	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	003	2	10200501	22.00	MANEVU2002	0.0012	0.0000	0.0000	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	003	3	10200603	22.00	MANEVU2002	1.2255	0.0138	0.0138	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	004	3	10200603	22.00	MANEVU2002	2.1140	0.0127	0.0127	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	097	1	10200603	0.70	MANEVU2002	0.2270	0.0006	0.0006	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500053	099	1	10200603	3.00	MANEVU2002	0.7500	0.0021	0.0021	FAIRCHILD SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500057	001	1	10200905	0.00		0.8015	0.0022	0.0022	SAUNDERS BROTHERS
ME	Cumberland	23005	2300500057	002	1	10200905	0.00		0.8015	0.0022	0.0022	SAUNDERS BROTHERS
ME	Cumberland	23005	2300500067	001	1	10300401	20.90	MANEVU2002	0.6159	0.0017	0.0017	UNIV OF SOUTHERN MAINE AT GORHAM

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ME	Cumberland	23005	2300500067	001	2	10300602	20.90	MANEVU2002	1.2302	0.0034	0.0034	UNIV OF SOUTHERN MAINE AT GORHAM
ME	Cumberland	23005	2300500067	003	1	10300401	6.30	MANEVU2002	0.6159	0.0017	0.0017	UNIV OF SOUTHERN MAINE AT GORHAM
ME	Cumberland	23005	2300500067	003	2	10300602	6.30	MANEVU2002	1.2302	0.0034	0.0034	UNIV OF SOUTHERN MAINE AT GORHAM
ME	Cumberland	23005	2300500087	001	1	10300402	45.10	MANEVU2002	9.3852	0.0000	0.0000	BOWDOIN COLLEGE
ME	Cumberland	23005	2300500087	002	1	10300402	29.30	MANEVU2002	10.5452	0.0264	0.0264	BOWDOIN COLLEGE
ME	Cumberland	23005	2300500087	003	1	10300402	48.60	MANEVU2002	8.3876	0.0000	0.0000	BOWDOIN COLLEGE
ME	Cumberland	23005	2300500087	004	1	10300503	12.30	MANEVU2002	2.9998	0.0010	0.0010	BOWDOIN COLLEGE
ME	Cumberland	23005	2300500087	005	1	10301002	15.40	MANEVU2002	0.9825	0.0036	0.0036	BOWDOIN COLLEGE
ME	Cumberland	23005	2300500089	001	1	10200404	9.00	MANEVU2002	0.0564	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	002	1	10200404	9.00	MANEVU2002	0.0564	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	003	1	10200404	25.10	MANEVU2002	5.5272	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	003	2	10200602	25.10	MANEVU2002	0.2695	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	006	2	10200601	5.50	MANEVU2002	0.0102	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	006	1	10201002	5.50	MANEVU2002	0.2727	0.0000	0.0003	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	009	2	10200601	2.50	MANEVU2002	0.0076	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	009	1	10201002	2.50	MANEVU2002	0.2043	0.0000	0.0002	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	010	2	10200601	3.00	MANEVU2002	0.0076	0.0000	0.0000	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500089	010	1	10201002	3.00	MANEVU2002	0.2043	0.0003	0.0003	BATH IRON WORKS - HARDING FACILITY
ME	Cumberland	23005	2300500098	001	1	10200401	10.00	MANEVU2002	4.5331	0.0125	0.0125	GULF OIL LIMITED PARTNERSHIP
ME	Cumberland	23005	2300500098	001	2	10200502	10.00	MANEVU2002	0.1425	0.0004	0.0004	GULF OIL LIMITED PARTNERSHIP
ME	Cumberland	23005	2300500101	001	2	10301002	0.00		0.0448	0.0000	0.0000	SABRE CORPORATION
ME	Cumberland	23005	2300500103	001	3	10300603	5.50	MANEVU2002	0.3195	0.0001	0.0001	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	001	1	10300501	5.50	MANEVU2002	0.0800	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	002	2	10300603	1.30	MANEVU2002	0.1410	0.0002	0.0002	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	003	2	10300603	1.50	MANEVU2002	0.1150	0.0003	0.0003	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	004	2	10300603	1.60	MANEVU2002	0.0725	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	005	2	10300603	2.20	MANEVU2002	0.0560	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	006	2	10300603	1.70	MANEVU2002	0.0408	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	007	2	10300603	4.30	MANEVU2002	0.6720	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	009	2	10300603	5.50	MANEVU2002	0.5065	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	010	3	10300603	5.30	MANEVU2002	0.4758	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	011	2	10300603	3.00	MANEVU2002	0.1387	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	012	2	10300603	6.00	MANEVU2002	0.6711	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	013	2	10300603	6.20	MANEVU2002	0.6393	0.0002	0.0002	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	013	1	10300501	6.20	MANEVU2002	0.1600	0.0001	0.0001	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	098	2	10300603	5.00	SCC Descriptio	3.9340	0.0337	0.0337	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	098	1	10300501	5.00	SCC Descriptio	2.4600	0.0211	0.0211	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500103	098	3	10301002	5.00	SCC Descriptio	0.0057	0.0000	0.0000	BRUNSWICK NAVAL AIR STATION
ME	Cumberland	23005	2300500120	026	1	10200501	5.00	MANEVU2002	1.2120	0.0033	0.0033	SPRAGUE ENERGY
ME	Cumberland	23005	2300500120	027	1	10200501	8.00	MANEVU2002	1.7760	0.0049	0.0049	SPRAGUE ENERGY
ME	Cumberland	23005	2300500120	028	1	10200501	0.80	MANEVU2002	0.1200	0.0003	0.0003	SPRAGUE ENERGY
ME	Cumberland	23005	2300500129	001	1	10200603	5.00	SCC Descriptio	0.4461	0.0005	0.0005	SANMINA CORP
ME	Cumberland	23005	2300500138	002	1	10200401	232.70	MANEVU2002	9.3000	0.0000	0.0000	S D WARREN CO - WESTBROOK
ME	Cumberland	23005	2300500138	003	1	10200401	232.70	MANEVU2002	7.7000	0.0000	0.0000	S D WARREN CO - WESTBROOK
ME	Cumberland	23005	2300500138	004	1	10200401	247.80	MANEVU2002	6.4000	0.0000	0.0000	S D WARREN CO - WESTBROOK
ME	Cumberland	23005	2300500145	001	1	10300401	16.80	MANEVU2002	4.0226	0.0080	0.0080	GLOBAL COMPANIES LLC
ME	Cumberland	23005	2300500145	001	2	10300401	16.80	MANEVU2002	4.0226	0.0080	0.0080	GLOBAL COMPANIES LLC
ME	Cumberland	23005	2300500176	001	1	10300603	6.30	MANEVU2002	1.4306	0.0039	0.0039	MAINE RUBBER INTERNATIONAL
ME	Cumberland	23005	2300500191	001	1	10200501	29.30	MANEVU2002	3.4544	0.0070	0.0070	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	001	2	10200602	29.30	MANEVU2002	0.0338	0.0001	0.0001	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	002	1	10200501	29.30	MANEVU2002	3.8675	0.0104	0.0104	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	002	2	10200601	29.30	MANEVU2002	0.0654	0.0002	0.0002	NATIONAL SEMICONDUCTOR CORP

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ME	Cumberland	23005	2300500191	003	1	10200501	29.30	MANEVU2002	2.9202	0.0081	0.0081	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	003	2	10200601	29.30	MANEVU2002	0.0430	0.0001	0.0001	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	004	1	10200501	29.30	MANEVU2002	2.4375	0.0066	0.0066	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	004	2	10200602	29.30	MANEVU2002	0.0267	0.0001	0.0001	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	005	1	10200501	29.30	MANEVU2002	0.0015	0.0000	0.0000	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	005	2	10200602	29.30	MANEVU2002	0.0103	0.0000	0.0000	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	007	1	10200602	1.80	MANEVU2002	0.8337	0.0023	0.0023	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500191	008	1	10200602	2.00	MANEVU2002	4.1323	0.0114	0.0114	NATIONAL SEMICONDUCTOR CORP
ME	Cumberland	23005	2300500193	002	1	10200602	55.00	SCC Descriptio	0.7000	0.0000	0.0000	WESTBROOK ENERGY CENTER
ME	Cumberland	23005	2300500198	002	1	10300503	5.00	SCC Descriptio	0.0914	0.0003	0.0003	SEBAGO INC - BRIDGTON
ME	Cumberland	23005	2300500201	001	1	10300502	55.00	SCC Descriptio	0.5333	0.0015	0.0015	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	002	1	10300502	55.00	SCC Descriptio	0.5333	0.0015	0.0015	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	003	1	10300502	55.00	SCC Descriptio	0.5333	0.0015	0.0015	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	004	1	10301002	0.00		0.0747	0.0002	0.0002	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	005	1	10301002	0.00		0.0747	0.0002	0.0002	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	007	1	10301002	0.00		0.0259	0.0001	0.0001	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	008	1	10301002	0.00		0.0179	0.0000	0.0000	MID COAST HOSPITAL
ME	Cumberland	23005	2300500201	009	1	10301002	0.00		0.0747	0.0002	0.0002	MID COAST HOSPITAL
ME	Cumberland	23005	2300500202	001	1	10200906	0.00		3.2674	0.0090	0.0090	MEGQUIER HILL FARMS
ME	Cumberland	23005	2300500203	001	1	10200603	1.20	MANEVU2002	0.1101	0.0003	0.0003	SEBAGO INC - GORHAM
ME	Cumberland	23005	2300500203	002	1	10200603	1.80	MANEVU2002	0.0601	0.0002	0.0002	SEBAGO INC - GORHAM
ME	Cumberland	23005	2300500204	001	1	10200603	2.30	MANEVU2002	0.0749	0.0002	0.0002	WOLVERINE (SEBAGO MECHANIC ST WESTBROOK)
ME	Franklin	23007	2300700007	001	1	10200401	147.00	PART 70 LICEI	113.6975	0.0000	0.2624	WAUSAU-MOSINEE PAPER CO - OTIS MILL
ME	Franklin	23007	2300700007	003	1	10200401	73.00	PART 70 LICEI	48.0665	0.0000	0.1690	WAUSAU-MOSINEE PAPER CO - OTIS MILL
ME	Franklin	23007	2300700007	004	1	10200401	73.00	PART 70 LICEI	42.3120	0.0000	0.0465	WAUSAU-MOSINEE PAPER CO - OTIS MILL
ME	Franklin	23007	2300700021	003	2	10200901	480.00	MANEVU2002	570.0000	0.0000	1.0022	INTERNATIONAL PAPER - ANDROSCOGGIN
ME	Franklin	23007	2300700021	017	1	10201002	0.00		2.0000	0.0000	0.0053	INTERNATIONAL PAPER - ANDROSCOGGIN
ME	Franklin	23007	2300700022	001	1	10200907	7.90	MANEVU2002	7.6800	0.0000	0.0000	KINGFIELD WOOD PRODUCTS
ME	Franklin	23007	2300700026	001	1	10200903	0.00		14.9569	0.0000	0.0411	STRATTON LUMBER INCORPORATED
ME	Hancock	23009	2300900001	001	1	10200502	10.50	MANEVU2002	0.0780	0.0002	0.0002	JACKSON LABORATORY
ME	Hancock	23009	2300900001	002	1	10200502	10.50	MANEVU2002	0.2080	0.0006	0.0006	JACKSON LABORATORY
ME	Hancock	23009	2300900001	003	1	10200502	20.90	MANEVU2002	0.5670	0.0013	0.0013	JACKSON LABORATORY
ME	Hancock	23009	2300900001	004	1	10200502	33.50	MANEVU2002	8.4230	0.0241	0.0241	JACKSON LABORATORY
ME	Hancock	23009	2300900001	005	1	10200502	33.50	MANEVU2002	5.7980	0.1988	0.1988	JACKSON LABORATORY
ME	Hancock	23009	2300900001	006	1	10300501	0.00		0.2124	0.0055	0.0055	JACKSON LABORATORY
ME	Hancock	23009	2300900001	007	1	10300501	0.00		0.4668	0.0045	0.0045	JACKSON LABORATORY
ME	Hancock	23009	2300900003	001	1	10300404	0.00		2.0350	0.0000	0.0036	BLUE HILL MEMORIAL HOSPITAL
ME	Hancock	23009	2300900015	001	4	10200503	5.00	SCC Descriptio	0.0535	0.0000	0.0003	LANE CONSTRUCTION CORP - HANCOCK (42)
ME	Hancock	23009	2300900029	001	1	10200503	5.00	SCC Descriptio	0.0700	0.0000	0.0000	HINCKLEY COMPANY - SOUTHWEST HARBOR
ME	Kennebec	23011	2301100003	001	1	10300401	29.00	MANEVU2002	6.8379	0.0075	0.0075	AUGUSTA MENTAL HEALTH INSTITUTE
ME	Kennebec	23011	2301100003	002	1	10300401	29.00	MANEVU2002	6.8379	0.0075	0.0075	AUGUSTA MENTAL HEALTH INSTITUTE
ME	Kennebec	23011	2301100003	003	1	10300401	8.00	MANEVU2002	6.8379	0.0075	0.0075	AUGUSTA MENTAL HEALTH INSTITUTE
ME	Kennebec	23011	2301100004	001	3	10300402	55.00	SCC Descriptio	6.9300	0.0116	0.0116	VA MEDICAL CENTER
ME	Kennebec	23011	2301100004	001	1	10300402	55.00	SCC Descriptio	5.4588	0.0091	0.0091	VA MEDICAL CENTER
ME	Kennebec	23011	2301100004	001	2	10300402	55.00	SCC Descriptio	4.7025	0.0078	0.0078	VA MEDICAL CENTER
ME	Kennebec	23011	2301100033	001	1	10300401	10.80	MANEVU2002	2.4675	0.0191	0.0191	MAINE GENERAL MEDICAL CENTER - THAYER
ME	Kennebec	23011	2301100033	002	1	10300401	10.80	MANEVU2002	2.7448	0.0157	0.0157	MAINE GENERAL MEDICAL CENTER - THAYER
ME	Kennebec	23011	2301100033	003	1	10300401	10.80	MANEVU2002	1.5745	0.0181	0.0181	MAINE GENERAL MEDICAL CENTER - THAYER
ME	Kennebec	23011	2301100033	004	1	10300401	8.40	MANEVU2002	2.9622	0.0170	0.0170	MAINE GENERAL MEDICAL CENTER - THAYER
ME	Kennebec	23011	2301100034	001	1	10300401	12.60	MANEVU2002	4.6601	0.0127	0.0127	MAINE GENERAL MEDICAL CENTER - SETON
ME	Kennebec	23011	2301100034	002	1	10300401	12.60	MANEVU2002	3.4381	0.0227	0.0227	MAINE GENERAL MEDICAL CENTER - SETON
ME	Kennebec	23011	2301100036	002	1	10200401	29.30	PART 70 LICEI	50.7119	0.1115	0.1115	HUHTAMAKI FOODSERVICE INC

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ME	Kennebec	23011	2301100036	003	1	10200401	29.30	PART 70 LICEI	33.8558	0.0744	0.0744	HUHTAMAKI FOODSERVICE INC
ME	Kennebec	23011	2301100036	005	1	10200401	64.80	PART 70 LICEI	103.1266	0.2267	0.2267	HUHTAMAKI FOODSERVICE INC
ME	Kennebec	23011	2301100039	001	1	10300401	37.00	MANEVU2002	12.1147	0.0093	0.0093	COLBY COLLEGE
ME	Kennebec	23011	2301100039	001	3	10300401	37.00	MANEVU2002	6.6420	0.0051	0.0051	COLBY COLLEGE
ME	Kennebec	23011	2301100039	001	2	10300401	37.00	MANEVU2002	6.5254	0.0050	0.0050	COLBY COLLEGE
ME	Kennebec	23011	2301100039	002	1	10300501	1.00	MANEVU2002	0.1851	0.0005	0.0005	COLBY COLLEGE
ME	Kennebec	23011	2301100039	003	1	10301002	1.00	MANEVU2002	0.1856	0.0005	0.0005	COLBY COLLEGE
ME	Kennebec	23011	2301100075	001	1	10200401	10.50	MANEVU2002	2.3030	0.0036	0.0036	TEX TECH INDUSTRIES INC
ME	Kennebec	23011	2301100075	002	1	10200401	14.60	MANEVU2002	3.2900	0.0051	0.0051	TEX TECH INDUSTRIES INC
ME	Knox	23013	2301300009	001	1	10200401	85.60	MANEVU2002	64.9305	0.2277	0.2277	FMC BIOPOLYMER
ME	Knox	23013	2301300009	002	1	10200401	48.60	MANEVU2002	19.5755	0.0000	0.0559	FMC BIOPOLYMER
ME	Knox	23013	2301300009	003	1	10200401	48.40	MANEVU2002	20.3980	0.0583	0.0583	FMC BIOPOLYMER
ME	Knox	23013	2301300038	001	1	10300502	20.90	MANEVU2002	2.1030	0.0000	0.0012	MAINE STATE PRISON AT WARREN
ME	Knox	23013	2301300038	002	1	10300502	20.90	MANEVU2002	2.3017	0.0000	0.0013	MAINE STATE PRISON AT WARREN
ME	Knox	23013	2301300038	003	1	10300502	20.90	MANEVU2002	1.5452	0.0000	0.0008	MAINE STATE PRISON AT WARREN
ME	Knox	23013	2301300038	004	1	10300503	8.40	MANEVU2002	0.2198	0.0000	0.0001	MAINE STATE PRISON AT WARREN
ME	Oxford	23017	2301700001	001	1	10200905	0.00		1.2524	0.0000	0.0017	FOREST INDUSTRIES
ME	Oxford	23017	2301700004	001	1	10200502	14.60	MANEVU2002	0.0593	0.0000	0.0002	ANDOVER WOOD PRODUCTS INC
ME	Oxford	23017	2301700004	002	1	10200906	14.60	MANEVU2002	1.8986	0.0000	0.0052	ANDOVER WOOD PRODUCTS INC
ME	Oxford	23017	2301700008	002	1	10200905	13.00	MANEVU2002	0.8935	0.0000	0.0016	BETHEL FURNITURE STOCK INC
ME	Oxford	23017	2301700013	001	1	10300401	0.00		9.2590	0.0000	0.0163	ROBINSON MANUFACTURING COMPANY
ME	Oxford	23017	2301700022	001	1	10200907	6.20	MANEVU2002	1.4226	0.0000	0.0019	PENLEY CORPORATION
ME	Oxford	23017	2301700038	001	1	10200502	25.10	MANEVU2002	5.5100	0.0000	0.0151	HANCOCK LUMBER CO INC
ME	Oxford	23017	2301700038	002	1	10200906	13.30	MANEVU2002	1.5864	0.0000	0.0044	HANCOCK LUMBER CO INC
ME	Oxford	23017	2301700045	011	1	10200601	150.00	SCC Descriptio	4.6300	0.0000	0.0102	MEADWESTVACO OXFORD CORP
ME	Oxford	23017	2301700046	001	1	10300902	12.00	MANEVU2002	3.6200	0.0000	0.0048	IRVING FOREST PRODUCTS - DIXFIELD
ME	Oxford	23017	2301700046	002	1	10300902	12.00	MANEVU2002	4.8400	0.0000	0.0064	IRVING FOREST PRODUCTS - DIXFIELD
ME	Oxford	23017	2301700046	003	1	10300402	16.80	MANEVU2002	0.7050	0.0000	0.0024	IRVING FOREST PRODUCTS - DIXFIELD
ME	Oxford	23017	2301700046	004	1	10300902	46.20	MANEVU2002	34.0500	0.0000	0.0636	IRVING FOREST PRODUCTS - DIXFIELD
ME	Oxford	23017	2301700058	004	1	10200905	0.00		2.0592	0.0000	0.0048	LOVELL LUMBER CO INC
ME	Oxford	23017	2301700058	005	1	10200503	5.00	SCC Descriptio	0.1869	0.0000	0.0003	LOVELL LUMBER CO INC
ME	Oxford	23017	2301700060	001	1	10201002	0.00		0.3962	0.0000	0.0011	NATIONAL WOOD PRODUCTS
ME	Penobscot	23019	2301900002	001	1	10300502	13.00	MANEVU2002	1.5839	0.0000	0.0044	BANGOR MENTAL HEALTH INSTITUTE
ME	Penobscot	23019	2301900002	002	1	10300502	25.00	MANEVU2002	1.5839	0.0000	0.0044	BANGOR MENTAL HEALTH INSTITUTE
ME	Penobscot	23019	2301900002	003	1	10300502	55.00	SCC Descriptio	1.5839	0.0000	0.0044	BANGOR MENTAL HEALTH INSTITUTE
ME	Penobscot	23019	2301900003	001	1	10300401	21.00	MANEVU2002	4.6295	0.0000	0.0076	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900003	002	1	10300401	21.00	MANEVU2002	4.6295	0.0000	0.0076	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900003	003	1	10300401	21.00	MANEVU2002	4.6295	0.0000	0.0076	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900003	004	1	10300401	14.00	MANEVU2002	3.0080	0.0000	0.0050	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900003	005	1	10300401	14.00	MANEVU2002	3.0080	0.0000	0.0050	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900003	006	1	10300401	14.00	MANEVU2002	3.0080	0.0000	0.0050	EASTERN MAINE MEDICAL CENTER
ME	Penobscot	23019	2301900018	001	1	10300503	5.00	MANEVU2002	0.4460	0.0000	0.0000	OSRAM SYLVANIA INC
ME	Penobscot	23019	2301900020	001	1	10200401	170.00	MANEVU2002	102.5600	0.0000	0.2818	EASTERN FINE PAPER INC
ME	Penobscot	23019	2301900020	002	1	10200401	170.00	MANEVU2002	83.3800	0.0000	0.2199	EASTERN FINE PAPER INC
ME	Penobscot	23019	2301900023	001	1	10200402	242.00	MANEVU2002	6.1630	0.0000	0.0169	LINCOLN PULP AND PAPER CO INC
ME	Penobscot	23019	2301900023	005	1	10200401	127.00	MANEVU2002	7.7400	0.0000	0.0476	LINCOLN PULP AND PAPER CO INC
ME	Penobscot	23019	2301900023	006	1	10200401	100.00	MANEVU2002	25.1100	0.0000	0.0248	LINCOLN PULP AND PAPER CO INC
ME	Penobscot	23019	2301900023	013	1	10200902	433.00	MANEVU2002	197.9400	0.0000	0.4568	LINCOLN PULP AND PAPER CO INC
ME	Penobscot	23019	2301900023	013	2	10200501	433.00	MANEVU2002	0.8897	0.0000	0.0021	LINCOLN PULP AND PAPER CO INC
ME	Penobscot	23019	2301900028	001	1	10200402	34.50	MANEVU2002	6.1325	0.0000	0.0546	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900028	002	1	10200402	34.50	MANEVU2002	6.6000	0.0000	0.0000	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900028	003	1	10200402	73.60	MANEVU2002	27.4725	0.0000	0.0000	UNIVERSITY OF MAINE ORONO

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ME	Penobscot	23019	2301900028	004	1	10200402	73.60	MANEVU2002	8.0850	0.0000	0.0000	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900028	005	1	10200402	73.60	MANEVU2002	27.6925	0.0000	0.0243	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900028	005	2	10200602	73.60	MANEVU2002	0.4665	0.0000	0.0004	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900028	007	1	10300503	5.00	SCC Descriptio	2.2600	0.0000	0.0107	UNIVERSITY OF MAINE ORONO
ME	Penobscot	23019	2301900030	001	1	10300902	0.00		0.0279	0.0000	0.0000	OLD TOWN CANOE
ME	Penobscot	23019	2301900030	002	1	10200401	0.00		3.8305	0.0000	0.0000	OLD TOWN CANOE
ME	Penobscot	23019	2301900030	003	2	10200501	0.00		1.7040	0.0000	0.0047	OLD TOWN CANOE
ME	Penobscot	23019	2301900030	003	1	10201002	0.00		1.6815	0.0000	0.0046	OLD TOWN CANOE
ME	Penobscot	23019	2301900034	001	2	10200501	250.00	MANEVU2002	0.1849	0.0000	0.0005	GEORGIA-PACIFIC CORPORATION
ME	Penobscot	23019	2301900034	002	1	10200401	521.00	MANEVU2002	1.3530	0.0000	0.0037	GEORGIA-PACIFIC CORPORATION
ME	Penobscot	23019	2301900034	015	1	10200403	249.00	MANEVU2002	6.6530	0.0000	0.0139	GEORGIA-PACIFIC CORPORATION
ME	Penobscot	23019	2301900052	001	1	10200905	0.00		1.0689	0.0000	0.0021	PERMA TREAT CORP
ME	Penobscot	23019	2301900052	002	1	10200905	0.00		1.1435	0.0000	0.0023	PERMA TREAT CORP
ME	Penobscot	23019	2301900052	003	1	10200905	0.00		1.0646	0.0000	0.0032	PERMA TREAT CORP
ME	Penobscot	23019	2301900052	004	1	10200905	0.00		1.1687	0.0000	0.0030	PERMA TREAT CORP
ME	Penobscot	23019	2301900056	001	1	10200401	370.00	MANEVU2002	218.6000	0.0000	0.4804	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	001	2	10200501	370.00	MANEVU2002	0.1464	0.0000	0.0003	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	001	3	10201002	370.00	MANEVU2002	0.0694	0.0000	0.0002	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	002	1	10200401	370.00	MANEVU2002	189.1000	0.0000	0.7273	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	003	1	10200401	370.00	MANEVU2002	32.9799	0.0000	0.0000	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	004	1	10200401	740.00	MANEVU2002	291.0000	0.0000	0.4797	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	005	1	10200401	592.00	MANEVU2002	141.3173	0.0000	0.2951	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900056	010	1	10301002	27.30	MANEVU2002	0.7875	0.0000	0.0000	GREAT NORTHERN PAPER INC MILL WEST
ME	Penobscot	23019	2301900058	001	1	10200401	370.00	MANEVU2002	142.3000	0.0000	0.2346	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	001	2	10200501	370.00	MANEVU2002	0.0621	0.0000	0.0001	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	001	3	10301002	370.00	MANEVU2002	0.0140	0.0000	0.0000	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	002	1	10200401	370.00	MANEVU2002	119.9000	0.0000	0.3030	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	002	2	10200501	370.00	MANEVU2002	0.0621	0.0000	0.0002	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	003	1	10200401	498.00	MANEVU2002	15.7000	0.0000	0.0328	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	003	2	10200902	498.00	MANEVU2002	0.3000	0.0000	0.0006	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900058	003	3	10200501	498.00	MANEVU2002	0.0828	0.0000	0.0002	GREAT NORTHERN PAPER INC MILL EAST
ME	Penobscot	23019	2301900092	001	1	10300903	4.40	MANEVU2002	0.0241	0.0000	0.0001	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	002	1	10300903	4.40	MANEVU2002	0.0241	0.0000	0.0001	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	003	1	10300404	4.40	MANEVU2002	1.5461	0.0000	0.0042	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	004	1	10300404	4.40	MANEVU2002	0.9548	0.0000	0.0026	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	005	1	10300503	6.70	MANEVU2002	0.7690	0.0000	0.0021	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	006	1	10300503	6.70	MANEVU2002	0.7010	0.0000	0.0019	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900092	010	1	10300503	5.00	SCC Descriptio	0.0430	0.0000	0.0001	CHARLESTON CORRECTIONAL FACILITY
ME	Penobscot	23019	2301900115	003	1	10200602	21.00	MANEVU2002	0.1870	0.0000	0.0005	MAINE INDEPENDENCE STATION
ME	Penobscot	23019	2301900117	001	1	10300501	0.00		2.4000	0.0000	0.0066	MAINE AIR NATIONAL GUARD 101ST AIR
ME	Penobscot	23019	2301900117	002	1	10300501	0.00		0.4500	0.0000	0.0012	MAINE AIR NATIONAL GUARD 101ST AIR
ME	Penobscot	23019	2301900118	001	1	10200902	23.00	MANEVU2002	0.5119	0.0000	0.0014	CALLEY & CURRIER CO
ME	Penobscot	23019	2301900123	001	1	10200503	1.20	MANEVU2002	0.2499	0.0000	0.0004	OLD TOWN LUMBER
ME	Penobscot	23019	2301900123	002	1	10200503	1.20	MANEVU2002	0.2499	0.0000	0.0004	OLD TOWN LUMBER
ME	Penobscot	23019	2301900126	001	1	10200403	8.40	MANEVU2002	1.4660	0.0000	0.0032	NORTHEASTERN LOG HOMES
ME	Penobscot	23019	2301900126	002	1	10200403	8.40	MANEVU2002	1.4660	0.0000	0.0032	NORTHEASTERN LOG HOMES
ME	Piscataquis	23021	2302100001	001	1	10200902	11.70	MANEVU2002	1.9418	0.0000	0.0053	MOOSEHEAD MFG CO - MONSON
ME	Piscataquis	23021	2302100005	001	1	10200905	17.00	MANEVU2002	3.9938	0.0000	0.0066	INTERFACE FABRICS GROUP NORTH INC
ME	Piscataquis	23021	2302100005	002	1	10200502	13.00	MANEVU2002	0.6174	0.0000	0.0012	INTERFACE FABRICS GROUP NORTH INC
ME	Piscataquis	23021	2302100005	003	1	10200906	17.00	MANEVU2002	3.9938	0.0000	0.0066	INTERFACE FABRICS GROUP NORTH INC
ME	Piscataquis	23021	2302100005	004	1	10200503	2.50	MANEVU2002	0.3553	0.0000	0.0001	INTERFACE FABRICS GROUP NORTH INC
ME	Piscataquis	23021	2302100006	001	1	10300903	28.00	MANEVU2002	5.6352	0.0000	0.0118	HARDWOOD PRODUCTS COMPANY

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ME	Piscataquis	23021	2302100006	001	2	10300501	28.00	MANEVU2002	0.0309	0.0000	0.0001	HARDWOOD PRODUCTS COMPANY
ME	Piscataquis	23021	2302100012	001	1	10200902	0.00		2.0445	0.0000	0.0056	MOOSEHEAD MFG CO - DOV-FOX
ME	Piscataquis	23021	2302100013	001	1	10200401	20.00	MANEVU2002	3.3110	0.0000	0.0091	MONTREAL MAINE & ATLANTIC RAILWAY
ME	Piscataquis	23021	2302100019	001	1	10200502	20.90	MANEVU2002	10.1136	0.0000	0.0278	PLEASANT RIVER LUMBER CO
ME	Sagadahoc	23023	2302300004	001	1	10200401	29.30	MANEVU2002	14.7886	0.0000	0.0390	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	002	1	10200401	29.30	MANEVU2002	10.0181	0.0000	0.0000	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	003	1	10200401	29.30	MANEVU2002	10.1943	0.0000	0.0022	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	005	1	10200401	25.10	MANEVU2002	1.5487	0.0000	0.0000	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	006	1	10200401	25.10	MANEVU2002	6.8503	0.0000	0.0000	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	007	1	10200401	29.30	MANEVU2002	3.9339	0.0000	0.0000	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300004	008	1	10200401	25.10	MANEVU2002	0.1269	0.0000	0.0004	BATH IRON WORKS - BATH FACILITY
ME	Sagadahoc	23023	2302300011	004	1	10200404	0.00		0.0798	0.0000	0.0000	HARRY C CROOKER & SONS INC - TOPSHAM
ME	Sagadahoc	23023	2302300011	005	1	10200404	0.00		0.0260	0.0000	0.0000	HARRY C CROOKER & SONS INC - TOPSHAM
ME	Sagadahoc	23023	2302300011	005	2	10200501	0.00		0.0832	0.0000	0.0001	HARRY C CROOKER & SONS INC - TOPSHAM
ME	Sagadahoc	23023	2302300011	005	3	10200501	0.00		0.0534	0.0000	0.0001	HARRY C CROOKER & SONS INC - TOPSHAM
ME	Somerset	23025	2302500002	001	1	10200401	33.00	MANEVU2002	19.5000	0.0000	0.0386	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	002	1	10200401	20.00	MANEVU2002	2.7375	0.0000	0.0054	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	003	1	10200401	22.00	MANEVU2002	10.7250	0.0000	0.0212	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	004	1	10200401	21.00	MANEVU2002	4.3500	0.0000	0.0067	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	005	1	10200401	20.00	MANEVU2002	4.3500	0.0000	0.0067	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	006	1	10200401	8.00	MANEVU2002	4.3500	0.0000	0.0067	IRVING TANNING COMPANY
ME	Somerset	23025	2302500002	010	1	10200501	6.00	MANEVU2002	0.2450	0.0000	0.0000	IRVING TANNING COMPANY
ME	Somerset	23025	2302500004	001	1	10200902	0.00		0.0653	0.0000	0.0002	DIRIGO DOWELS INC
ME	Somerset	23025	2302500007	001	1	10200404	0.00		1.7475	0.0000	0.0096	EDWARDS SYSTEMS TECHNOLOGY
ME	Somerset	23025	2302500007	002	1	10200404	0.00		1.4399	0.0000	0.0000	EDWARDS SYSTEMS TECHNOLOGY
ME	Somerset	23025	2302500011	001	1	10200905	6.40	MANEVU2002	0.5522	0.0000	0.0008	SOLON MANUFACTURING CO INC
ME	Somerset	23025	2302500011	002	1	10200905	8.90	MANEVU2002	1.5312	0.0000	0.0040	SOLON MANUFACTURING CO INC
ME	Somerset	23025	2302500020	003	1	10200401	119.00	MANEVU2002	74.5693	0.0000	0.2049	MADISON PAPER INDUSTRIES
ME	Somerset	23025	2302500020	004	1	10200401	100.00	MANEVU2002	67.6408	0.0000	0.1784	MADISON PAPER INDUSTRIES
ME	Somerset	23025	2302500020	005	1	10200401	117.00	MANEVU2002	26.1301	0.0000	0.0144	MADISON PAPER INDUSTRIES
ME	Somerset	23025	2302500027	003	1	10200401	175.00	Title V	26.8900	0.0000	0.0768	SAPPI - SOMERSET
ME	Somerset	23025	2302500027	009	1	10200501	70.60	MANEVU2002	0.9400	0.0000	0.0000	SAPPI - SOMERSET
ME	Somerset	23025	2302500037	001	1	10200905	0.00		1.2444	0.0000	0.0021	COUSINEAU WOOD PRODUCTS
ME	Somerset	23025	2302500043	001	1	10300903	9.80	MANEVU2002	7.7004	0.0000	0.0135	MOOSE RIVER LUMBER COMPANY INC
ME	Somerset	23025	2302500043	002	1	10300902	4.50	MANEVU2002	1.4375	0.0000	0.0000	MOOSE RIVER LUMBER COMPANY INC
ME	Somerset	23025	2302500043	003	1	10300502	25.10	MANEVU2002	6.3292	0.0000	0.0167	MOOSE RIVER LUMBER COMPANY INC
ME	Somerset	23025	2302500044	001	1	10200503	1.20	MANEVU2002	0.1341	0.0000	0.0001	CIANBRO FABRICATION AND COATING CORP
ME	Somerset	23025	2302500044	002	1	10201002	5.00	MANEVU2002	0.3753	0.0000	0.0002	CIANBRO FABRICATION AND COATING CORP
ME	Somerset	23025	2302500044	003	1	10201002	1.50	MANEVU2002	0.1126	0.0000	0.0001	CIANBRO FABRICATION AND COATING CORP
ME	Somerset	23025	2302500045	001	2	10200503	5.00	SCC Descriptio	0.0150	0.0000	0.0000	CARRIER CHIPPING INC
ME	Waldo	23027	2302700005	001	1	10200903	21.00	MANEVU2002	0.1344	0.0004	0.0004	ROBBINS LUMBER INC
ME	Waldo	23027	2302700005	002	1	10200903	49.00	MANEVU2002	49.8700	0.1096	0.1096	ROBBINS LUMBER INC
ME	Waldo	23027	2302700020	001	1	10200401	4.00	MANEVU2002	0.9900	0.0000	0.0000	IRVING OIL CORP
ME	Waldo	23027	2302700035	001	1	10200502	20.90	MANEVU2002	0.0590	0.0000	0.0002	PRIDE MANUFACTURING CO
ME	Waldo	23027	2302700035	002	1	10200906	20.90	MANEVU2002	1.5470	0.0000	0.0043	PRIDE MANUFACTURING CO
ME	Waldo	23027	2302700037	001	1	10300501	4.50	MANEVU2002	0.0876	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	002	1	10300501	4.50	MANEVU2002	0.0876	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	003	1	10300501	8.00	MANEVU2002	0.2340	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	004	1	10300501	8.00	MANEVU2002	0.2340	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	005	1	10300501	2.40	MANEVU2002	0.0653	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	006	1	10300501	2.40	MANEVU2002	0.0653	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Waldo	23027	2302700037	007	1	10300501	1.20	MANEVU2002	0.3986	0.0000	0.0000	MBNA BRACEBRIDGE CORP

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ME	Waldo	23027	2302700037	008	1	10300501	1.20	MANEVU2002	0.3986	0.0000	0.0000	MBNA BRACEBRIDGE CORP
ME	Washington	23029	2302900003	001	1	10200501	4.00	MANEVU2002	0.4440	0.0000	0.0000	NAVAL COMPUTER & TELECOMM DET - CUTLER
ME	Washington	23029	2302900003	004	1	10200501	2.20	MANEVU2002	0.1920	0.0000	0.0000	NAVAL COMPUTER & TELECOMM DET - CUTLER
ME	Washington	23029	2302900003	005	1	10300503	6.40	MANEVU2002	0.3600	0.0000	0.0000	NAVAL COMPUTER & TELECOMM DET - CUTLER
ME	Washington	23029	2302900003	006	1	10300503	1.20	MANEVU2002	0.1200	0.0000	0.0000	NAVAL COMPUTER & TELECOMM DET - CUTLER
ME	Washington	23029	2302900020	003	2	10300401	1207.00	PART 70 LICEI	39.9970	0.0000	0.1231	DOMTAR MAINE CORP
ME	Washington	23029	2302900021	001	1	10200907	190.00	MANEVU2002	124.8672	0.0000	0.5214	LOUISIANA-PACIFIC CORP - WOODLAND OSB
ME	Washington	23029	2302900021	002	2	10201002	0.00		0.4160	0.0000	0.0023	LOUISIANA-PACIFIC CORP - WOODLAND OSB
ME	Washington	23029	2302900021	003	2	10201002	0.00		0.4160	0.0000	0.0023	LOUISIANA-PACIFIC CORP - WOODLAND OSB
ME	York	23031	2303100001	001	3	10300502	12.60	MANEVU2002	0.5672	0.0014	0.0014	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100001	001	2	10300602	12.60	MANEVU2002	0.3625	0.0009	0.0009	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100001	002	3	10300502	12.60	MANEVU2002	0.5672	0.0014	0.0014	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100001	002	2	10300602	12.60	MANEVU2002	0.3625	0.0009	0.0009	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100001	003	3	10300503	6.30	MANEVU2002	0.2836	0.0007	0.0007	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100001	003	2	10300603	6.30	MANEVU2002	0.1295	0.0003	0.0003	SOUTHERN MAINE MEDICAL CENTER
ME	York	23031	2303100004	001	1	10200601	110.00	MANEVU2002	9.3100	0.0181	0.0181	WESTPOINT STEVENS INC
ME	York	23031	2303100013	001	1	10200401	0.00		3.9083	0.0107	0.0107	GENERAL DYNAMICS ARMAMENT SYSTEMS
ME	York	23031	2303100013	002	1	10200401	0.00		3.9083	0.0107	0.0107	GENERAL DYNAMICS ARMAMENT SYSTEMS
ME	York	23031	2303100013	003	1	10200401	0.00		3.9083	0.0107	0.0107	GENERAL DYNAMICS ARMAMENT SYSTEMS
ME	York	23031	2303100013	004	1	10200501	0.00		0.6216	0.0018	0.0018	GENERAL DYNAMICS ARMAMENT SYSTEMS
ME	York	23031	2303100020	001	1	10200401	0.00		24.7925	0.0463	0.0463	CYRO INDUSTRIES
ME	York	23031	2303100020	003	1	10200501	0.00		1.6920	0.0046	0.0046	CYRO INDUSTRIES
ME	York	23031	2303100025	002	1	10200501	14.60	MANEVU2002	0.0638	0.0000	0.0000	LAVALLEY LUMBER CO LLC
ME	York	23031	2303100028	001	1	10200401	34.00	MANEVU2002	9.0005	0.0257	0.0257	PRIME TANNING COMPANY INC
ME	York	23031	2303100028	002	1	10200401	21.00	MANEVU2002	4.6060	0.0154	0.0154	PRIME TANNING COMPANY INC
ME	York	23031	2303100028	003	1	10200401	21.00	MANEVU2002	4.6060	0.0154	0.0154	PRIME TANNING COMPANY INC
ME	York	23031	2303100028	004	1	10201002	15.00	MANEVU2002	0.0950	0.0000	0.0000	PRIME TANNING COMPANY INC
ME	York	23031	2303100029	001	1	10200401	30.00	MANEVU2002	5.8292	0.0041	0.0041	PRATT & WHITNEY - NO BERWICK
ME	York	23031	2303100029	001	2	10200602	30.00	MANEVU2002	1.6062	0.0011	0.0011	PRATT & WHITNEY - NO BERWICK
ME	York	23031	2303100029	002	1	10200401	24.00	MANEVU2002	3.5801	0.0126	0.0126	PRATT & WHITNEY - NO BERWICK
ME	York	23031	2303100029	002	2	10200602	24.00	MANEVU2002	1.4222	0.0050	0.0050	PRATT & WHITNEY - NO BERWICK
ME	York	23031	2303100029	003	2	10200602	50.00	MANEVU2002	0.0961	0.0006	0.0006	PRATT & WHITNEY - NO BERWICK
ME	York	23031	2303100041	004	1	10200503	5.00	SCC Descriptio	0.1551	0.0000	0.0000	F R CARROLL INC
ME	York	23031	2303100046	001	2	10200503	110.00	MANEVU2002	5.9010	0.0269	0.0269	DAYTON SAND AND GRAVEL CO INC
ME	York	23031	2303100046	004	1	10200501	0.00		0.1560	0.0000	0.0000	DAYTON SAND AND GRAVEL CO INC
ME	York	23031	2303100047	001	1	10200603	8.30	MANEVU2002	0.5250	0.0016	0.0016	HUSSEY SEATING CO
ME	York	23031	2303100047	002	1	10200603	11.60	MANEVU2002	0.7250	0.0000	0.0000	HUSSEY SEATING CO
ME	York	23031	2303100053	001	2	10200601	180.00	MANEVU2002	2.9260	0.0000	0.0000	PORTSMOUTH NAVAL SHIPYARD
ME	York	23031	2303100053	002	1	10200501	160.00	MANEVU2002	13.0956	0.0327	0.0327	PORTSMOUTH NAVAL SHIPYARD
ME	York	23031	2303100053	002	2	10200601	160.00	MANEVU2002	11.0040	0.0275	0.0275	PORTSMOUTH NAVAL SHIPYARD
ME	York	23031	2303100053	003	2	10200501	160.00	MANEVU2002	4.3272	0.0000	0.0000	PORTSMOUTH NAVAL SHIPYARD
ME	York	23031	2303100053	003	3	10200601	160.00	MANEVU2002	34.4260	0.0000	0.0000	PORTSMOUTH NAVAL SHIPYARD
ME	York	23031	2303100067	001	2	10200602	11.00	MANEVU2002	5.0295	0.0143	0.0143	SPENCER PRESS OF MAINE INC
ME	York	23031	2303100078	002	2	10300601	150.00	SCC Descriptio	0.8260	0.0000	0.0024	MAINE ENERGY RECOVERY COMPANY
ME	York	23031	2303100081	004	1	10200603	5.00	SCC Descriptio	9.0024	0.0247	0.0247	INTERSTATE BRANDS CORPORATION
MD	Allegany	24001	001-0011	1	01S1	10200203	500.00	Roger Thunell I	2039.1000	5.2866	5.2866	WESTVACO FINE PAPERS
MD	Allegany	24001	001-0011	2	01S2	10200212	500.00	Roger Thunell I	1717.3125	4.4523	4.4523	WESTVACO FINE PAPERS
MD	Allegany	24001	001-0011	33	01S33	10200503	1.00	Roger Thunell I	0.0900	0.0001	0.0001	WESTVACO FINE PAPERS
MD	Allegany	24001	001-0011	34	01S34	10200503	1.00	Roger Thunell I	0.0900	0.0001	0.0001	WESTVACO FINE PAPERS
MD	Allegany	24001	001-0011	41	01S41	10200601	338.00	Roger Thunell I	37.5075	0.1021	0.1021	WESTVACO FINE PAPERS
MD	Allegany	24001	001-0173	1	01S1	10200603	5.00	Roger Thunell I	0.1825	0.0001	0.0001	US MARINE - CUMBERLAND I
MD	Allegany	24001	001-0184	2	01S2	10200603	3.00	Roger Thunell I	0.1825	0.0001	0.0001	US MARINE - CUMBERLAND II

									2002 NOx Emissions			
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MD	Anne Arundel	24003	003-0021	1	01S1	10200602	57.00	Roger Thunell F	2.9133	0.0079	0.0079	NEVAMAR COMPANY
MD	Anne Arundel	24003	003-0021	14	01S14	10200602	74.00	Roger Thunell F	0.6425	0.0017	0.0017	NEVAMAR COMPANY
MD	Anne Arundel	24003	003-0021	17	01S17	10200602	60.00	Roger Thunell F	24.0737	0.0656	0.0656	NEVAMAR COMPANY
MD	Anne Arundel	24003	003-0046	1	01S1	10300504	4.00	Roger Thunell F	0.0600	0.0002	0.0002	RAINBOW CLEANERS & UNIFORM RENTAL
MD	Anne Arundel	24003	003-0046	2	01S2	10300603	5.00	Roger Thunell F	0.6600	0.0018	0.0018	RAINBOW CLEANERS & UNIFORM RENTAL
MD	Anne Arundel	24003	003-0118	7	01S7	10200603	1.00	Roger Thunell F	1.6100	0.0014	0.0014	BURNETT, WM. T. COMPANY
MD	Anne Arundel	24003	003-0250	134	01S134	10200602	42.00	Roger Thunell F	11.5700	0.0126	0.0126	NORTHROP-GRUMMAN - BWI
MD	Anne Arundel	24003	003-0310	16	01S16	10300602	95.00	Roger Thunell F	4.7320	0.0047	0.0047	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0310	17	01S17	10300602	95.00	Roger Thunell F	11.1020	0.0140	0.0140	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0310	18	01S18	10300602	95.00	Roger Thunell F	4.8230	0.0142	0.0142	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0310	23	01S23	10300503	8.00	Roger Thunell F	0.1825	0.0003	0.0003	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0310	24	01S24	10300503	8.00	Roger Thunell F	0.1825	0.0002	0.0002	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0310	38	01S38	10300502	12.00	Roger Thunell F	0.1650	0.0004	0.0004	US NAVAL ACADEMY
MD	Anne Arundel	24003	003-0316	17	01S17	10300602	32.00	Roger Thunell F	8.2900	0.0470	0.0470	U.S. COAST GUARD YARD - CURTIS BAY
MD	Anne Arundel	24003	003-0317	102	01S102	10300602	85.00	Roger Thunell F	9.7010	0.0380	0.0380	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	103	01S103	10300602	85.00	Roger Thunell F	6.0950	0.0166	0.0166	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	104	01S104	10300602	85.00	Roger Thunell F	9.7110	0.0138	0.0138	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	105	01S105	10300602	90.00	Roger Thunell F	9.3375	0.0254	0.0254	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	77	01S77	10300602	20.00	Roger Thunell F	0.1825	0.0005	0.0005	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	79	01S79	10300603	4.00	Roger Thunell F	0.1825	0.0002	0.0002	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0317	80	01S80	10300603	4.00	Roger Thunell F	0.1825	0.0002	0.0002	NATIONAL SECURITY AGENCY
MD	Anne Arundel	24003	003-0322	133	01S133	10300603	4.00	Roger Thunell F	14.1800	0.0124	0.0124	FORT GEORGE MEADE
MD	Baltimore	24005	005-0097	4	01S4	10200603	11.00	Roger Thunell F	1.8000	0.0049	0.0049	SIGNODE EASTERN OPERATIONS
MD	Baltimore	24005	005-0146	3	01S3	10200602	15.00	Roger Thunell F	0.8580	0.0038	0.0038	DIAGEO NORTH AMERICA, INC.
MD	Baltimore	24005	005-0146	4	01S4	10200602	28.00	Roger Thunell F	1.1430	0.0007	0.0007	DIAGEO NORTH AMERICA, INC.
MD	Baltimore	24005	005-0147	11	01S11	10200503	2.00	Roger Thunell F	4.1100	0.0036	0.0036	BETHLEHEM STEEL
MD	Baltimore	24005	005-0147	16	01S16	10200401	812.00	Roger Thunell F	42.0000	0.1144	0.1144	BETHLEHEM STEEL
MD	Baltimore	24005	005-0147	17	01S17	10200401	1085.00	Roger Thunell F	42.0000	0.1144	0.1144	BETHLEHEM STEEL
MD	Baltimore	24005	005-0147	18	01S18	10200401	725.00	Roger Thunell F	42.0000	0.1144	0.1144	BETHLEHEM STEEL
MD	Baltimore	24005	005-0147	19	01S19	10200401	725.00	Roger Thunell F	42.0000	0.1144	0.1144	BETHLEHEM STEEL
MD	Baltimore	24005	005-0147	21	01S21	10200603	2.00	Roger Thunell F	41.0000	0.0357	0.0357	BETHLEHEM STEEL
MD	Baltimore	24005	005-0240	1	01S1	10200501	2.00	Roger Thunell F	0.2650	0.0007	0.0007	THOMAS MANUFACTURING CORPORATION
MD	Baltimore	24005	005-0290	11	01S11	10200603	5.00	Roger Thunell F	0.1300	0.0001	0.0001	MAIL-WELL LABEL
MD	Baltimore	24005	005-0306	67	01S67	10200602	31.00	Roger Thunell F	1.8798	0.0051	0.0051	SWEETHEART HOLDINGS
MD	Baltimore	24005	005-0306	68	01S68	10200602	31.00	Roger Thunell F	1.8798	0.0051	0.0051	SWEETHEART HOLDINGS
MD	Baltimore	24005	005-0306	69	01S69	10200602	62.00	Roger Thunell F	3.7778	0.0103	0.0103	SWEETHEART HOLDINGS
MD	Baltimore	24005	005-0306	75	01S75	10200603	4.00	Roger Thunell F	0.3577	0.0004	0.0004	SWEETHEART HOLDINGS
MD	Baltimore	24005	005-0384	1	01S1	10200503	2.00	Roger Thunell F	0.1900	0.0005	0.0005	SCHLUMBERGER MALCO
MD	Baltimore	24005	005-0384	2	01S2	10200503	2.00	Roger Thunell F	0.1900	0.0005	0.0005	SCHLUMBERGER MALCO
MD	Baltimore	24005	005-0384	3	01S3	10200503	3.00	Roger Thunell F	0.3200	0.0009	0.0009	SCHLUMBERGER MALCO
MD	Baltimore	24005	005-0812	2	01S2	10300603	9.00	Roger Thunell F	2.5550	0.0070	0.0070	BACK RIVER WASTE WATER TRTMNT PLANT
MD	Baltimore	24005	005-0812	27	01S27	10300799	33.00	Roger Thunell F	4.0150	0.0109	0.0109	BACK RIVER WASTE WATER TRTMNT PLANT
MD	Baltimore	24005	005-0812	29	01S29	10300799	33.00	Roger Thunell F	4.0150	0.0109	0.0109	BACK RIVER WASTE WATER TRTMNT PLANT
MD	Baltimore	24005	005-0812	4	01S4	10300602	14.00	Roger Thunell F	20.4400	0.0557	0.0557	BACK RIVER WASTE WATER TRTMNT PLANT
MD	Baltimore	24005	005-0979	1	01S1	10200501	5.00	Roger Thunell F	1.1500	0.0031	0.0031	AMERICAN YEAST
MD	Baltimore	24005	005-0979	4	01S4	10200501	8.00	Roger Thunell F	3.4640	0.0094	0.0094	AMERICAN YEAST
MD	Baltimore	24005	005-0979	5	01S5	10200501	5.00	Roger Thunell F	1.1500	0.0031	0.0031	AMERICAN YEAST
MD	Baltimore	24005	005-1956	1	01S1	10200501	3.00	Roger Thunell F	0.1400	0.0004	0.0004	POLYSTYRENE PRODUCTS
MD	Baltimore	24005	005-2305	7	01S7	10200501	3.00	Roger Thunell F	0.6100	0.0017	0.0017	POLYSTYRENE PRODUCTS
MD	Baltimore	24005	005-2407	1	01S1	10200602	4.00	Roger Thunell F	2.0000	0.0017	0.0017	MIDDLE RIVER AIRCRAFT SYSTEMS
MD	Caroline	24011	011-0006	5	01S5	10200602	12.00	Roger Thunell F	0.1720	0.0001	0.0001	GENERAL MILLS BAKERIES
MD	Caroline	24011	011-0006	6	01S6	10200603	2.00	Roger Thunell F	0.0860	0.0001	0.0001	GENERAL MILLS BAKERIES

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MD	Caroline	24011	011-0044	2	01S2	10200602	14.00	Roger Thunell F	0.5000	0.0014	0.0014	SOLO CUP - RT. 313
MD	Cecil	24015	015-0079	1	01S1	10200503	1.00	Roger Thunell F	1.4600	0.0016	0.0016	GORE, W.L. - CHERRY HILL PLANT
MD	Charles	24017	017-0040	102	01S102	10300503	1.00	Roger Thunell F	1.5912	0.0007	0.0007	NAVAL SURFACE WARFARE CNTR-INDIAN HD
MD	Charles	24017	017-0040	9	01S9	10300402	43.00	Roger Thunell F	0.0527	0.0000	0.0000	NAVAL SURFACE WARFARE CNTR-INDIAN HD
MD	Charles	24017	017-0040	93	01S93	10300226	180.00	Roger Thunell F	29.0727	0.0443	0.0443	NAVAL SURFACE WARFARE CNTR-INDIAN HD
MD	Charles	24017	017-0040	94	01S94	10300226	180.00	Roger Thunell F	4.3510	0.0118	0.0118	NAVAL SURFACE WARFARE CNTR-INDIAN HD
MD	Charles	24017	017-0040	95	01S95	10300226	180.00	Roger Thunell F	134.3222	0.2048	0.2048	NAVAL SURFACE WARFARE CNTR-INDIAN HD
MD	Dorchester	24019	019-0029	19	01S19	10200602	100.00	Roger Thunell F	10.5456	0.0287	0.0287	JCR ENTERPRISES
MD	Dorchester	24019	019-0029	21	01S21	10200602	50.00	Roger Thunell F	6.7860	0.0185	0.0185	JCR ENTERPRISES
MD	Dorchester	24019	019-0029	22	01S22	10200602	50.00	Roger Thunell F	1.5132	0.0041	0.0041	JCR ENTERPRISES
MD	Dorchester	24019	019-0083	18	01S18	10200603	2.00	Roger Thunell F	1.0100	0.0037	0.0037	WESTERN PUBLISHING/MAIL-WELL GRAPHIC
MD	Frederick	24021	021-0005	16	01S16	10200603	7.00	Roger Thunell F	2.1563	0.0033	0.0033	EASTALCO ALUMINUM
MD	Frederick	24021	021-0005	17	01S17	10200603	2.00	Roger Thunell F	1.0328	0.0016	0.0016	EASTALCO ALUMINUM
MD	Frederick	24021	021-0005	19	01S19	10200603	1.00	Roger Thunell F	0.3495	0.0005	0.0005	EASTALCO ALUMINUM
MD	Frederick	24021	021-0010	2	01S2	10200503	6.00	Roger Thunell F	0.2700	0.0003	0.0003	MOORE COMMUNICATIONS SERVICES
MD	Frederick	24021	021-0010	3	01S3	10200503	3.00	Roger Thunell F	0.2250	0.0002	0.0002	MOORE COMMUNICATIONS SERVICES
MD	Frederick	24021	021-0131	16	01S16	10300503	3.00	Roger Thunell F	0.4723	0.0004	0.0004	FORT DETRICK
MD	Frederick	24021	021-0131	17	01S17	10300503	3.00	Roger Thunell F	0.4263	0.0004	0.0004	FORT DETRICK
MD	Frederick	24021	021-0131	18	01S18	10300503	3.00	Roger Thunell F	0.3899	0.0003	0.0003	FORT DETRICK
MD	Frederick	24021	021-0131	19	01S19	10300602	77.00	Roger Thunell F	6.9521	0.0189	0.0189	FORT DETRICK
MD	Frederick	24021	021-0131	20	01S20	10300602	77.00	Roger Thunell F	7.9771	0.0217	0.0217	FORT DETRICK
MD	Frederick	24021	021-0131	23	01S23	10300503	4.00	Roger Thunell F	0.5478	0.0005	0.0005	FORT DETRICK
MD	Frederick	24021	021-0131	26	01S26	10300603	2.00	Roger Thunell F	0.0723	0.0002	0.0002	FORT DETRICK
MD	Frederick	24021	021-0131	27	01S27	10300603	3.00	Roger Thunell F	0.1502	0.0002	0.0002	FORT DETRICK
MD	Frederick	24021	021-0131	31	01S31	10300603	2.00	Roger Thunell F	0.0505	0.0001	0.0001	FORT DETRICK
MD	Frederick	24021	021-0131	32	01S32	10300603	2.00	Roger Thunell F	0.0423	0.0000	0.0000	FORT DETRICK
MD	Frederick	24021	021-0131	33	01S33	10300603	3.00	Roger Thunell F	0.0870	0.0001	0.0001	FORT DETRICK
MD	Frederick	24021	021-0131	34	01S34	10300603	3.00	Roger Thunell F	0.0870	0.0001	0.0001	FORT DETRICK
MD	Frederick	24021	021-0131	35	01S35	10300603	2.00	Roger Thunell F	0.2430	0.0002	0.0002	FORT DETRICK
MD	Frederick	24021	021-0131	38	01S38	10300603	1.00	Roger Thunell F	0.1140	0.0003	0.0003	FORT DETRICK
MD	Frederick	24021	021-0131	5	01S5	10300601	165.00	Roger Thunell F	49.9855	0.0436	0.0436	FORT DETRICK
MD	Frederick	24021	021-0131	6	01S6	10300602	98.00	Roger Thunell F	7.3010	0.0159	0.0159	FORT DETRICK
MD	Frederick	24021	021-0131	9	01S9	10300602	98.00	Roger Thunell F	5.5994	0.0049	0.0049	FORT DETRICK
MD	Frederick	24021	021-0172	2	01S2	10200603	8.00	Roger Thunell F	0.4550	0.0012	0.0012	TAMKO ROOFING PRODUCTS
MD	Frederick	24021	021-0172	7	01S7	10200603	8.00	Roger Thunell F	0.4575	0.0012	0.0012	TAMKO ROOFING PRODUCTS
MD	Harford	24025	025-0002	10	01S10	10200503	4.00	Roger Thunell F	0.1250	0.0002	0.0002	MCCORQUODALE COLOR CARD
MD	Harford	24025	025-0002	9	01S9	10200503	3.00	Roger Thunell F	0.1250	0.0002	0.0002	MCCORQUODALE COLOR CARD
MD	Harford	24025	025-0005	3	01S3	10200602	47.00	Roger Thunell F	6.7980	0.0185	0.0185	J.M. HUBER CORPORATION
MD	Harford	24025	025-0005	4	01S4	10200602	88.00	Roger Thunell F	1.3570	0.0037	0.0037	J.M. HUBER CORPORATION
MD	Harford	24025	025-0006	41	01S41	10200602	17.00	Roger Thunell F	2.1240	0.0028	0.0028	CYTEC ENGINEERED MATERIALS
MD	Harford	24025	025-0006	42	01S42	10200603	8.00	Roger Thunell F	0.6875	0.0030	0.0030	CYTEC ENGINEERED MATERIALS
MD	Harford	24025	025-0006	58	01S58	10200603	2.00	Roger Thunell F	0.1725	0.0002	0.0002	CYTEC ENGINEERED MATERIALS
MD	Harford	24025	025-0006	59	01S59	10200603	2.00	Roger Thunell F	0.3650	0.0003	0.0003	CYTEC ENGINEERED MATERIALS
MD	Harford	24025	025-0145	14	01S14	10200602	10.00	Roger Thunell F	0.7200	0.0012	0.0012	SHERWIN WILLIAMS CLEANING SOLUTIONS
MD	Harford	24025	025-0423	3	01S3	10200603	4.00	Roger Thunell F	0.8120	0.0022	0.0022	ALCORE - QUARRY DRIVE
MD	Howard	24027	027-0005	1	01S1	10200401	150.00	Roger Thunell F	67.2039	0.1757	0.1757	SIMKINS INDUSTRIES
MD	Kent	24029	029-0001	25	01S25	10200402	11.00	Roger Thunell F	5.1000	0.0139	0.0139	VELSICOL CHEMICAL
MD	Kent	24029	029-0001	26	01S26	10200402	29.00	Roger Thunell F	9.6400	0.0263	0.0263	VELSICOL CHEMICAL
MD	Montgomery	24031	031-0220	1	01S1	10200602	10.00	Roger Thunell F	0.3650	0.0006	0.0006	DOW JONES & COMPANY
MD	Montgomery	24031	031-0323	1	01S1	10300602	55.00	Roger Thunell F	4.8585	0.0042	0.0042	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
MD	Montgomery	24031	031-0323	2	01S2	10300602	55.00	Roger Thunell F	5.8855	0.0051	0.0051	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
MD	Montgomery	24031	031-0323	3	01S3	10300602	55.00	Roger Thunell F	6.0435	0.0053	0.0053	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

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MD	Montgomery	24031	031-0323	4	01S4	10300602	55.00	Roger Thunell F	4.9375	0.0043	0.0043	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
MD	Montgomery	24031	031-0323	6	01S6	10300602	100.00	Roger Thunell F	4.9770	0.0043	0.0043	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
MD	Montgomery	24031	031-0323	7	01S7	10300602	100.00	Roger Thunell F	1.9600	0.0017	0.0017	NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
MD	Montgomery	24031	031-0324	25	01S25	10300601	200.00	Roger Thunell F	3.3811	0.0069	0.0069	NATIONAL INSTITUTE OF HEALTH
MD	Montgomery	24031	031-0324	26	01S26	10300601	200.00	Roger Thunell F	7.6958	0.0158	0.0158	NATIONAL INSTITUTE OF HEALTH
MD	Montgomery	24031	031-0324	27	01S27	10300601	200.00	Roger Thunell F	4.5543	0.0093	0.0093	NATIONAL INSTITUTE OF HEALTH
MD	Montgomery	24031	031-0324	28	01S28	10300601	311.00	Roger Thunell F	11.4749	0.0235	0.0235	NATIONAL INSTITUTE OF HEALTH
MD	Montgomery	24031	031-0324	8	01S8	10300601	245.00	Roger Thunell F	32.9820	0.0323	0.0323	NATIONAL INSTITUTE OF HEALTH
MD	Montgomery	24031	031-1124	17	01S17	10300602	68.00	Roger Thunell F	2.1947	0.0031	0.0031	NATIONAL NAVAL MEDICAL CENTER
MD	Montgomery	24031	031-1124	20	01S20	10300602	68.00	Roger Thunell F	2.0491	0.0063	0.0063	NATIONAL NAVAL MEDICAL CENTER
MD	Montgomery	24031	031-1124	22	01S22	10300602	37.00	Roger Thunell F	3.8269	0.0017	0.0017	NATIONAL NAVAL MEDICAL CENTER
MD	Montgomery	24031	031-1124	23	01S23	10300602	67.00	Roger Thunell F	3.7182	0.0032	0.0032	NATIONAL NAVAL MEDICAL CENTER
MD	Montgomery	24031	031-1124	24	01S24	10300602	67.00	Roger Thunell F	1.0281	0.0009	0.0009	NATIONAL NAVAL MEDICAL CENTER
MD	Prince Georges	24033	033-0010	14	01S14	10300603	2.00	Roger Thunell F	0.6844	0.0010	0.0010	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	19	01S19	10300603	2.00	Roger Thunell F	0.0799	0.0001	0.0001	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	20	01S20	10300603	2.00	Roger Thunell F	0.0799	0.0001	0.0001	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	24	01S24	10300603	1.00	Roger Thunell F	0.0012	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	25	01S25	10300603	1.00	Roger Thunell F	0.0012	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	26	01S26	10300603	1.00	Roger Thunell F	0.0010	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	3	01S3	10300601	132.00	Roger Thunell F	38.4300	0.0795	0.0795	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	33	01S33	10300603	2.00	Roger Thunell F	0.1712	0.0002	0.0002	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	34	01S34	10300603	1.00	Roger Thunell F	0.0064	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	35	01S35	10300603	1.00	Roger Thunell F	0.0064	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	36	01S36	10300603	1.00	Roger Thunell F	0.0039	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	37	01S37	10300603	1.00	Roger Thunell F	0.0039	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	4	01S4	10300601	117.00	Roger Thunell F	18.1545	0.0277	0.0277	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	42	01S42	10300603	1.00	Roger Thunell F	0.0118	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	43	01S43	10300603	1.00	Roger Thunell F	0.0118	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	44	01S44	10300603	3.00	Roger Thunell F	0.0783	0.0001	0.0001	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	45	01S45	10300603	4.00	Roger Thunell F	0.0783	0.0001	0.0001	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	46	01S46	10300603	1.00	Roger Thunell F	0.0045	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	47	01S47	10300603	1.00	Roger Thunell F	0.0045	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	48	01S48	10300603	1.00	Roger Thunell F	0.0403	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	49	01S49	10300603	2.00	Roger Thunell F	0.0538	0.0000	0.0000	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	50	01S50	10300603	2.00	Roger Thunell F	0.0672	0.0001	0.0001	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	53	01S53	10300602	60.00	Roger Thunell F	1.5795	0.0028	0.0028	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	54	01S54	10300602	80.00	Roger Thunell F	5.2013	0.0091	0.0091	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0010	6	01S6	10300601	157.00	Roger Thunell F	32.0400	0.0663	0.0663	UNIVERSITY OF MARYLAND
MD	Prince Georges	24033	033-0655	115	01S115	10300503	5.00	Roger Thunell F	0.9125	0.0014	0.0014	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	116	01S116	10300603	1.00	Roger Thunell F	6.3875	0.0056	0.0056	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	121	01S121	10300602	24.00	Roger Thunell F	0.5610	0.0009	0.0009	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	122	01S122	10300602	24.00	Roger Thunell F	0.7565	0.0012	0.0012	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	123	01S123	10300602	21.00	Roger Thunell F	0.9295	0.0014	0.0014	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	124	01S124	10300602	21.00	Roger Thunell F	0.9450	0.0014	0.0014	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	125	01S125	10300602	20.00	Roger Thunell F	1.0275	0.0016	0.0016	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	75	01S75	10300602	85.00	Roger Thunell F	3.4380	0.0056	0.0056	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	76	01S76	10300602	85.00	Roger Thunell F	3.4410	0.0056	0.0056	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0655	77	01S77	10300602	85.00	Roger Thunell F	4.1125	0.0067	0.0067	ANDREWS AIR FORCE BASE
MD	Prince Georges	24033	033-0675	19	01S19	10300811	50.00	Roger Thunell F	4.7450	0.0105	0.0105	GODDARD SPACE FLIGHT CENTER
MD	Prince Georges	24033	033-0675	20	01S20	10300811	50.00	Roger Thunell F	4.7450	0.0105	0.0105	GODDARD SPACE FLIGHT CENTER
MD	Prince Georges	24033	033-0675	21	01S21	10300811	50.00	Roger Thunell F	4.7450	0.0105	0.0105	GODDARD SPACE FLIGHT CENTER
MD	Prince Georges	24033	033-0675	22	01S22	10300811	50.00	Roger Thunell F	4.7450	0.0105	0.0105	GODDARD SPACE FLIGHT CENTER

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MD	Prince Georges	24033	033-0675	23	01S23	10300811	50.00	Roger Thunell I	4.7450	0.0105	0.0105	GODDARD SPACE FLIGHT CENTER
MD	Prince Georges	24033	033-0675	27	01S27	10300603	1.00	Roger Thunell I	0.1825	0.0003	0.0003	GODDARD SPACE FLIGHT CENTER
MD	Prince Georges	24033	033-1737	2	01S2	10200603	8.00	Roger Thunell I	1.0950	0.0030	0.0030	WASHINGTON POST, THE
MD	Prince Georges	24033	033-1737	3	01S3	10200603	8.00	Roger Thunell I	1.0950	0.0030	0.0030	WASHINGTON POST, THE
MD	Prince Georges	24033	033-2234	2	01S2	10200603	5.00	Roger Thunell I	0.3600	0.0002	0.0002	CRAFTSMAN PRESS - CRAFTSMAN CIRCLE
MD	Prince Georges	24033	033-2234	3	01S3	10200603	5.00	Roger Thunell I	0.3600	0.0002	0.0002	CRAFTSMAN PRESS - CRAFTSMAN CIRCLE
MD	St. Marys	24037	037-0001	13	01S13	10300402	26.00	Roger Thunell I	3.8600	0.0105	0.0105	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	14	01S14	10300402	26.00	Roger Thunell I	7.2600	0.0198	0.0198	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	15	01S15	10300402	17.00	Roger Thunell I	3.3600	0.0092	0.0092	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	16	01S16	10300402	17.00	Roger Thunell I	2.4800	0.0068	0.0068	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	17	01S17	10300402	25.00	Roger Thunell I	13.2000	0.0359	0.0359	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	18	01S18	10300502	15.00	Roger Thunell I	4.4000	0.0120	0.0120	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0001	19	01S19	10300502	15.00	Roger Thunell I	2.6400	0.0072	0.0072	S.T. SERVICES TERMINAL
MD	St. Marys	24037	037-0017	118	01S118	10300602	10.00	Roger Thunell I	0.2100	0.0002	0.0002	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	119	01S119	10300602	10.00	Roger Thunell I	0.2100	0.0002	0.0002	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	193	01S193	10300503	3.00	Roger Thunell I	0.3650	0.0010	0.0010	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	194	01S194	10300503	3.00	Roger Thunell I	0.7350	0.0008	0.0008	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	195	01S195	10300603	4.00	Roger Thunell I	5.0400	0.0055	0.0055	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	196	01S196	10300603	2.00	Roger Thunell I	3.1025	0.0084	0.0084	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	66	01S66	10300502	29.00	Roger Thunell I	0.1825	0.0002	0.0002	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	67	01S67	10300502	29.00	Roger Thunell I	0.1825	0.0002	0.0002	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	68	01S68	10300502	12.00	Roger Thunell I	0.1825	0.0002	0.0002	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	88	01S88	10300602	13.00	Roger Thunell I	1.0500	0.0014	0.0014	PATUXENT RIVER NAVAL AIR STATION
MD	St. Marys	24037	037-0017	89	01S89	10300602	13.00	Roger Thunell I	1.0500	0.0014	0.0014	PATUXENT RIVER NAVAL AIR STATION
MD	Somerset	24039	039-0055	1	01S1	10300902	40.00	Roger Thunell I	20.4750	0.0558	0.0558	EASTERN CORRECTIONAL INSTITUTION
MD	Somerset	24039	039-0055	3	01S3	10300902	40.00	Roger Thunell I	20.8120	0.0567	0.0567	EASTERN CORRECTIONAL INSTITUTION
MD	Talbot	24041	041-0027	6	01S6	10200504	3.00	Roger Thunell I	0.3540	0.0004	0.0004	CADMUS COMMUNICATIONS
MD	Talbot	24041	041-0027	7	01S7	10200603	4.00	Roger Thunell I	0.3540	0.0004	0.0004	CADMUS COMMUNICATIONS
MD	Washington	24043	043-0006	1	01S1	10200601	140.00	Roger Thunell I	13.6300	0.0241	0.0241	MACK TRUCKS
MD	Washington	24043	043-0006	2	01S2	10200601	140.00	Roger Thunell I	24.7000	0.0436	0.0436	MACK TRUCKS
MD	Washington	24043	043-0006	3	01S3	10200601	140.00	Roger Thunell I	17.9900	0.0317	0.0317	MACK TRUCKS
MD	Washington	24043	043-0075	10	01S10	10200603	7.00	Roger Thunell I	0.0800	0.0002	0.0002	GARDEN STATE TANNING/BYRON PLANT
MD	Washington	24043	043-0075	11	01S11	10200602	25.00	Roger Thunell I	0.0800	0.0001	0.0001	GARDEN STATE TANNING/BYRON PLANT
MD	Washington	24043	043-0075	13	01S13	10200603	2.00	Roger Thunell I	0.0800	0.0002	0.0002	GARDEN STATE TANNING/BYRON PLANT
MD	Washington	24043	043-0075	14	01S14	10200502	25.00	Roger Thunell I	3.3000	0.0090	0.0090	GARDEN STATE TANNING/BYRON PLANT
MD	Washington	24043	043-0075	15	01S15	10200502	25.00	Roger Thunell I	3.3000	0.0090	0.0090	GARDEN STATE TANNING/BYRON PLANT
MD	Washington	24043	043-0095	3	01S3	10200903	12.00	Roger Thunell I	0.0950	0.0003	0.0003	STATTON FURNITURE
MD	Washington	24043	043-0095	9	01S9	10200603	8.00	Roger Thunell I	0.1800	0.0002	0.0002	STATTON FURNITURE
MD	Washington	24043	043-0206	8	01S8	10201003	3.00	Roger Thunell I	0.4075	0.0004	0.0004	FIL-TEC
MD	Washington	24043	043-0305	5	01S5	10201002	0.00		1.6735	0.0046	0.0046	ENGINEERED POLYMER SOLUTIONS
MD	Washington	24043	043-0305	6	01S6	10201002	0.00		1.6735	0.0046	0.0046	ENGINEERED POLYMER SOLUTIONS
MD	Wicomico	24045	045-0042	2	01S2	10200402	25.00	Roger Thunell I	13.1400	0.0358	0.0358	PERDUE FARMS
MD	Wicomico	24045	045-0042	24	01S24	10200402	52.00	Roger Thunell I	45.8075	0.1247	0.1247	PERDUE FARMS
MD	Wicomico	24045	045-0042	3	01S3	10200402	29.00	Roger Thunell I	17.3375	0.0472	0.0472	PERDUE FARMS
MD	Wicomico	24045	045-0042	4	01S4	10200603	8.00	Roger Thunell I	3.6500	0.0099	0.0099	PERDUE FARMS
MD	Wicomico	24045	045-0042	57	01S57	10200402	24.00	Roger Thunell I	19.7100	0.0537	0.0537	PERDUE FARMS
MD	Wicomico	24045	045-0082	15	01S15	10200402	19.00	Roger Thunell I	6.8200	0.0119	0.0119	VPI MIRREX
MD	Wicomico	24045	045-0082	16	01S16	10200402	15.00	Roger Thunell I	7.8300	0.0136	0.0136	VPI MIRREX
MD	Wicomico	24045	045-0129	1	01S1	10200902	32.00	Roger Thunell I	10.9500	0.0298	0.0298	WELLS, J.V., INC - SHARPTOWN
MD	Wicomico	24045	045-0129	2	01S2	10200902	32.00	Roger Thunell I	10.9500	0.0298	0.0298	WELLS, J.V., INC - SHARPTOWN
MD	Wicomico	24045	045-0134	2	01S2	10200603	6.00	Roger Thunell I	0.2070	0.0002	0.0002	U.S. MARINE
MD	Wicomico	24045	045-0134	3	01S3	10200603	6.00	Roger Thunell I	0.2070	0.0002	0.0002	U.S. MARINE

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MD	Wicomico	24045	045-0134	9	01S9	10200603	4.00	Roger Thunell F	0.0470	0.0000	0.0000	U.S. MARINE
MD	Baltimore City	24510	510-0001	2	01S2	10300601	103.00	Roger Thunell F	29.3830	0.0704	0.0704	JOHNS HOPKINS HOSPITAL
MD	Baltimore City	24510	510-0001	3	01S3	10300601	103.00	Roger Thunell F	29.3830	0.0704	0.0704	JOHNS HOPKINS HOSPITAL
MD	Baltimore City	24510	510-0001	4	01S4	10300601	103.00	Roger Thunell F	29.3830	0.0704	0.0704	JOHNS HOPKINS HOSPITAL
MD	Baltimore City	24510	510-0001	5	01S5	10300601	103.00	Roger Thunell F	29.3830	0.0704	0.0704	JOHNS HOPKINS HOSPITAL
MD	Baltimore City	24510	510-0001	6	01S6	10300602	92.00	Roger Thunell F	29.3830	0.0704	0.0704	JOHNS HOPKINS HOSPITAL
MD	Baltimore City	24510	510-0071	18	01S18	10200603	8.00	Roger Thunell F	1.4000	0.0038	0.0038	GAF BUILDING PRODUCTS
MD	Baltimore City	24510	510-0071	19	01S19	10200602	12.00	Roger Thunell F	0.0600	0.0002	0.0002	GAF BUILDING PRODUCTS
MD	Baltimore City	24510	510-0073	29	01S29	10200603	8.00	Roger Thunell F	2.7720	0.0075	0.0075	FMC CORP. ORGANIC CHEMICALS DIVISION
MD	Baltimore City	24510	510-0073	3	01S3	10200602	44.00	Roger Thunell F	2.3625	0.0026	0.0026	FMC CORP. ORGANIC CHEMICALS DIVISION
MD	Baltimore City	24510	510-0073	4	01S4	10200602	44.00	Roger Thunell F	10.3740	0.0158	0.0158	FMC CORP. ORGANIC CHEMICALS DIVISION
MD	Baltimore City	24510	510-0073	5	01S5	10200602	95.00	Roger Thunell F	8.3055	0.0130	0.0130	FMC CORP. ORGANIC CHEMICALS DIVISION
MD	Baltimore City	24510	510-0073	6	01S6	10200602	90.00	Roger Thunell F	10.2370	0.0279	0.0279	FMC CORP. ORGANIC CHEMICALS DIVISION
MD	Baltimore City	24510	510-0076	1	01S1	10200602	60.00	Roger Thunell F	0.5900	0.0016	0.0016	GRACE - DAVISON CHEMICAL
MD	Baltimore City	24510	510-0076	5	01S5	10200601	125.00	Roger Thunell F	10.7500	0.0293	0.0293	GRACE - DAVISON CHEMICAL
MD	Baltimore City	24510	510-0077	10	01S10	10300602	93.00	Roger Thunell F	4.9275	0.0075	0.0075	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0077	11	01S11	10300603	2.00	Roger Thunell F	0.0900	0.0001	0.0001	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0077	12	01S12	10300603	2.00	Roger Thunell F	0.0900	0.0001	0.0001	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0077	5	01S5	10300602	59.00	Roger Thunell F	5.1100	0.0078	0.0078	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0077	6	01S6	10300602	59.00	Roger Thunell F	4.9275	0.0075	0.0075	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0077	7	01S7	10300602	59.00	Roger Thunell F	4.9275	0.0075	0.0075	JOHNS HOPKINS - HOMEWOOD CAMPUS
MD	Baltimore City	24510	510-0100	1	01S1	10200402	62.00	Roger Thunell F	34.2000	0.0931	0.0931	SASOL NORTH AMERICA, INC.
MD	Baltimore City	24510	510-0100	2	01S2	10200402	60.00	Roger Thunell F	38.3000	0.1043	0.1043	SASOL NORTH AMERICA, INC.
MD	Baltimore City	24510	510-0106	1	01S1	10200603	2.00	Roger Thunell F	0.3900	0.0003	0.0003	UNITED STATES GYPSUM COMPANY
MD	Baltimore City	24510	510-0109	3	01S3	10200601	130.00	Roger Thunell F	8.9972	0.0245	0.0245	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0109	4	01S4	10200601	130.00	Roger Thunell F	39.9675	0.1088	0.1088	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0109	53	01S53	10200602	56.00	Roger Thunell F	3.8635	0.0105	0.0105	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0109	54	01S54	10200602	56.00	Roger Thunell F	3.8635	0.0105	0.0105	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0109	55	01S55	10200602	56.00	Roger Thunell F	3.8635	0.0105	0.0105	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0109	6	01S6	10200602	13.00	Roger Thunell F	2.0988	0.0057	0.0057	MILLENIUM INORGANIC CHEMICALS
MD	Baltimore City	24510	510-0111	31	01S31	10300603	2.00	Roger Thunell F	0.1825	0.0002	0.0002	PEMCO CORPORATION
MD	Baltimore City	24510	510-0111	32	01S32	10300603	2.00	Roger Thunell F	0.1825	0.0003	0.0003	PEMCO CORPORATION
MD	Baltimore City	24510	510-0111	33	01S33	10300603	1.00	Roger Thunell F	0.1825	0.0003	0.0003	PEMCO CORPORATION
MD	Baltimore City	24510	510-0111	34	01S34	10300603	2.00	Roger Thunell F	0.1250	0.0001	0.0001	PEMCO CORPORATION
MD	Baltimore City	24510	510-0121	4	01S4	10200602	100.00	Roger Thunell F	21.5400	0.0587	0.0587	UNILEVER HOME & PERSONAL CARE
MD	Baltimore City	24510	510-0191	1	01S1	10200602	43.00	Roger Thunell F	1.3323	0.0036	0.0036	RED STAR YEAST
MD	Baltimore City	24510	510-0191	2	01S2	10200602	41.00	Roger Thunell F	1.2410	0.0034	0.0034	RED STAR YEAST
MD	Baltimore City	24510	510-0286	25	01S25	10200603	7.00	Roger Thunell F	1.2640	0.0031	0.0031	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	26	01S26	10200603	4.00	Roger Thunell F	1.0500	0.0026	0.0026	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	28	01S28	10200603	5.00	Roger Thunell F	1.2250	0.0030	0.0030	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	29	01S29	10200602	11.00	Roger Thunell F	0.4000	0.0010	0.0010	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	30	01S30	10200602	11.00	Roger Thunell F	0.4000	0.0010	0.0010	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	34	01S34	10200603	1.00	Roger Thunell F	0.0750	0.0001	0.0001	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0286	35	01S35	10200603	1.00	Roger Thunell F	0.0750	0.0001	0.0001	SHERWIN-WILLIAMS COMPANY
MD	Baltimore City	24510	510-0314	50	01S50	10200601	130.00	Roger Thunell F	52.3240	0.1425	0.1425	TATE & LYLE NORTH AMERICAN SUGARS
MD	Baltimore City	24510	510-0314	51	01S51	10200601	130.00	Roger Thunell F	5.1500	0.0140	0.0140	TATE & LYLE NORTH AMERICAN SUGARS
MD	Baltimore City	24510	510-0314	52	01S52	10200601	130.00	Roger Thunell F	44.1910	0.1203	0.1203	TATE & LYLE NORTH AMERICAN SUGARS
MD	Baltimore City	24510	510-0314	53	01S53	10200601	130.00	Roger Thunell F	5.1500	0.0140	0.0140	TATE & LYLE NORTH AMERICAN SUGARS
MD	Baltimore City	24510	510-0314	54	01S54	10200601	250.00	Roger Thunell F	62.5695	0.1704	0.1704	TATE & LYLE NORTH AMERICAN SUGARS
MD	Baltimore City	24510	510-0337	44	01S44	10200502	30.00	Roger Thunell F	1.2420	0.0014	0.0014	KAYDON RING & SEAL INC.
MD	Baltimore City	24510	510-0337	45	01S45	10200502	30.00	Roger Thunell F	1.2420	0.0014	0.0014	KAYDON RING & SEAL INC.
MD	Baltimore City	24510	510-0337	47	01S47	10200603	6.00	Roger Thunell F	1.3203	0.0058	0.0058	KAYDON RING & SEAL INC.

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MD	Baltimore City	24510	510-0354	3	01S3	10200502	93.00	Roger Thunell F	0.8000	0.0013	0.0013	GENERAL MOTORS TRUCK & BUS GROUP
MD	Baltimore City	24510	510-0354	4	01S4	10200602	93.00	Roger Thunell F	6.7000	0.0035	0.0035	GENERAL MOTORS TRUCK & BUS GROUP
MD	Baltimore City	24510	510-0354	5	01S5	10200602	93.00	Roger Thunell F	4.7000	0.0079	0.0079	GENERAL MOTORS TRUCK & BUS GROUP
MD	Baltimore City	24510	510-0354	7	01S7	10200601	200.00	Roger Thunell F	8.1000	0.0088	0.0088	GENERAL MOTORS TRUCK & BUS GROUP
MD	Baltimore City	24510	510-0354	7	01F7	10200601	200.00	Roger Thunell F	3.5000	0.0038	0.0038	GENERAL MOTORS TRUCK & BUS GROUP
MD	Baltimore City	24510	510-0582	3	01S3	10200603	4.00	Roger Thunell F	0.9900	0.0031	0.0031	HAUSWALD BAKERY/DIV OF SCHMIDT'S
MD	Baltimore City	24510	510-0651	3	01S3	10300601	150.00	Roger Thunell F	31.8010	0.0312	0.0312	TRIGEN - NORTH CENTRAL AVENUE
MD	Baltimore City	24510	510-0651	4	01S4	10300601	150.00	Roger Thunell F	0.2230	0.0003	0.0003	TRIGEN - NORTH CENTRAL AVENUE
MD	Baltimore City	24510	510-0651	7	01S7	10300602	91.00	Roger Thunell F	8.4460	0.0294	0.0294	TRIGEN - NORTH CENTRAL AVENUE
MD	Baltimore City	24510	510-0651	8	01S8	10300602	91.00	Roger Thunell F	4.9400	0.0108	0.0108	TRIGEN - NORTH CENTRAL AVENUE
MD	Baltimore City	24510	510-0677	2	01S2	10200402	4.00	Roger Thunell F	0.1370	0.0004	0.0004	PETROLEUM FUEL & TERMINAL COMPANY
MD	Baltimore City	24510	510-0677	5	01S5	10200402	2.00	Roger Thunell F	0.0640	0.0002	0.0002	PETROLEUM FUEL & TERMINAL COMPANY
MD	Baltimore City	24510	510-0703	3	01S3	10200501	1.00	Roger Thunell F	0.0470	0.0000	0.0000	CONOCOPHILLIPS BALTIMORE TERMINAL
MD	Baltimore City	24510	510-0918	1	01S1	10300402	21.00	Roger Thunell F	1.5100	0.0041	0.0041	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-0918	2	01S2	10300503	2.00	Roger Thunell F	0.0500	0.0000	0.0000	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-0918	3	01S3	10300402	25.00	Roger Thunell F	3.4900	0.0095	0.0095	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-0918	4	01S4	10300402	29.00	Roger Thunell F	6.9400	0.0189	0.0189	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-0918	4	02S4	10300402	29.00	Roger Thunell F	3.7900	0.0103	0.0103	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-0918	4	03S4	10300402	29.00	Roger Thunell F	1.5500	0.0042	0.0042	AMERADA HESS TERMINAL
MD	Baltimore City	24510	510-1043	3	01S3	10300602	25.00	Roger Thunell F	1.5622	0.0024	0.0024	SINAI HOSPITAL OF BALTIMORE
MD	Baltimore City	24510	510-1043	4	01S4	10300602	38.00	Roger Thunell F	2.3743	0.0036	0.0036	SINAI HOSPITAL OF BALTIMORE
MD	Baltimore City	24510	510-1043	5	01S5	10300602	29.00	Roger Thunell F	1.8122	0.0028	0.0028	SINAI HOSPITAL OF BALTIMORE
MD	Baltimore City	24510	510-1043	6	01S6	10300602	47.00	Roger Thunell F	2.9364	0.0045	0.0045	SINAI HOSPITAL OF BALTIMORE
MD	Baltimore City	24510	510-1400	1	01S1	10200603	1.00	Roger Thunell F	0.1600	0.0004	0.0004	AUTOMATIC ROLLS
MD	Baltimore City	24510	510-1400	2	01S2	10200603	1.00	Roger Thunell F	0.1600	0.0004	0.0004	AUTOMATIC ROLLS
MD	Baltimore City	24510	510-1923	4	01S4	10300502	10.00	Roger Thunell F	3.1600	0.0086	0.0086	PETROLEUM FUEL & TERMINAL COMPANY
MD	Baltimore City	24510	510-1923	5	01S5	10300603	8.00	Roger Thunell F	1.0704	0.0029	0.0029	PETROLEUM FUEL & TERMINAL COMPANY
MD	Baltimore City	24510	510-1986	3	01S3	10200503	4.00	Roger Thunell F	0.0750	0.0000	0.0000	TNEMEC COMPANY
MD	Baltimore City	24510	510-2260	4	01S4	10300503	4.00	Roger Thunell F	0.1825	0.0005	0.0005	CLEAN HARBORS OF BALTIMORE
MD	Baltimore City	24510	510-2796	2	01S2	10300601	129.00	Roger Thunell F	3.2760	0.0046	0.0046	TRIGEN - LEADENHALL STREET
MD	Baltimore City	24510	510-2796	3	01S3	10300601	129.00	Roger Thunell F	21.1120	0.0299	0.0299	TRIGEN - LEADENHALL STREET
MD	Baltimore City	24510	510-2796	6	01S6	10300601	129.00	Roger Thunell F	2.0020	0.0028	0.0028	TRIGEN - LEADENHALL STREET
MD	Baltimore City	24510	510-2796	7	01S7	10300601	188.00	Roger Thunell F	23.6600	0.0335	0.0335	TRIGEN - LEADENHALL STREET
MD	Baltimore City	24510	510-2796	8	01S8	10300602	99.00	Roger Thunell F	10.1920	0.0144	0.0144	TRIGEN - LEADENHALL STREET
MD	Baltimore City	24510	510-3071	1	01S1	10200602	21.00	Roger Thunell F	2.0560	0.0043	0.0043	LIFE LIKE PRODUCTS - CHESAPEAKE AVE.
MA	Barnstable	25001	1200055	01	0101	10300603	1.00	MANEVU2002	0.0265	0.0000	0.0000	102FW/SPTG-ESO MASS ANG BASE
MA	Barnstable	25001	1200055	15	0115	10300603	12.00	MANEVU2002	1.0000	0.0000	0.0011	102FW/SPTG-ESO MASS ANG BASE
MA	Barnstable	25001	1200055	54	0254	10300603	2.00	MANEVU2002	3.8120	0.0000	0.0042	102FW/SPTG-ESO MASS ANG BASE
MA	Barnstable	25001	1200056	06	0106	10300501	3.00	MANEVU2002	0.2200	0.0000	0.0002	US AIR FORCE CAPE COD
MA	Barnstable	25001	1200056	07	0107	10300501	3.00	MANEVU2002	0.2200	0.0000	0.0002	US AIR FORCE CAPE COD
MA	Barnstable	25001	1200056	09	0109	10300501	55.00	MANEVU2002	0.0700	0.0000	0.0001	US AIR FORCE CAPE COD
MA	Barnstable	25001	1200056	09	0209	10300602	55.00	MANEVU2002	0.0030	0.0000	0.0000	US AIR FORCE CAPE COD
MA	Barnstable	25001	1200057	17	0108	10200603	2.00	MANEVU2002	0.0090	0.0000	0.0000	ACCURATE PLASTICS IN
MA	Barnstable	25001	1200078	01	0101	10200603	75.00	MANEVU2002	3.0000	0.0000	0.0000	MA ARMY NATIONAL GUARD
MA	Barnstable	25001	1200090	02	0101	10300504	28.00	MANEVU2002	2.0000	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	12	0110	10200603	1.00	MANEVU2002	0.0980	0.0000	0.0003	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	13	0111	10300603	1.00	MANEVU2002	0.0285	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	16	0114	10200603	1.00	MANEVU2002	0.0140	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	17	0115	10200603	1.00	MANEVU2002	0.0100	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	18	0116	10200603	1.00	MANEVU2002	0.0140	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	19	0117	10300603	1.00	MANEVU2002	0.0140	0.0000	0.0000	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200090	20	0118	10200603	1.00	MANEVU2002	0.0275	0.0000	0.0001	MASS MARITIME ACADEMY

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MA	Barnstable	25001	1200090	21	0119	10200603	1.00	MANEVU2002	0.0275	0.0000	0.0001	MASS MARITIME ACADEMY
MA	Barnstable	25001	1200130	09	0109	10300603	21.00	MANEVU2002	2.0000	0.0000	0.0055	CAPE COD HOSPITAL
MA	Barnstable	25001	1200130	10	0110	10300603	21.00	MANEVU2002	1.0000	0.0000	0.0027	CAPE COD HOSPITAL
MA	Barnstable	25001	1200212	04	0104	10200602	15.00	MANEVU2002	0.0135	0.0000	0.0000	KEYSPAN ENERGY DELIVERY NEW ENGLAND
MA	Barnstable	25001	1200212	05	0105	10300603	1.00	MANEVU2002	0.0790	0.0000	0.0002	KEYSPAN ENERGY DELIVERY NEW ENGLAND
MA	Barnstable	25001	1200249	04	0101	10200603	2.00	MANEVU2002	0.1600	0.0000	0.0005	LAWRENCE LYNCH CORP
MA	Barnstable	25001	1200447	01	0101	10300501	25.00	MANEVU2002	1.0000	0.0000	0.0000	BOURNE HIGH SCHOOL
MA	Barnstable	25001	1200460	01	0101	10300603	5.00	MANEVU2002	4.0000	0.0000	0.0000	CHATHAM JUNIOR SENIOR HIGH SCHOOL
MA	Barnstable	25001	1200460	02	0102	10300603	5.00	MANEVU2002	4.0000	0.0000	0.0000	CHATHAM JUNIOR SENIOR HIGH SCHOOL
MA	Barnstable	25001	1200460	03	0102	10300603	5.00	MANEVU2002	4.0000	0.0000	0.0000	CHATHAM JUNIOR SENIOR HIGH SCHOOL
MA	Barnstable	25001	1200548	01	0101	10300602	15.00	MANEVU2002	1.0000	0.0000	0.0000	FALMOUTH HIGH SCHOOL
MA	Barnstable	25001	1200555	01	0101	10300501	13.00	MANEVU2002	1.0000	0.0000	0.0018	WOODS HOLE OCEAN INSTITUTE
MA	Barnstable	25001	1200795	01	0101	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0027	YARMOUTH WWTP
MA	Barnstable	25001	1200795	02	0101	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0027	YARMOUTH WWTP
MA	Barnstable	25001	1200923	03	0103	10300603	1.00	MANEVU2002	0.1765	0.0000	0.0005	SENCORP SYSTEMS INCORPORATED
MA	Barnstable	25001	1200924	03	0103	10300603	1.00	MANEVU2002	0.0500	0.0000	0.0001	CAPE COD POTATO CHIPS
MA	Barnstable	25001	1200924	07	0107	10200603	11.00	MANEVU2002	0.4000	0.0000	0.0011	CAPE COD POTATO CHIPS
MA	Berkshire	25003	1170003	01	0101	10200401	49.00	MANEVU2002	21.0000	0.0000	0.0462	CURTIS FINE PAPERS
MA	Berkshire	25003	1170003	02	0102	10200401	49.00	MANEVU2002	14.0000	0.0000	0.0308	CURTIS FINE PAPERS
MA	Berkshire	25003	1170003	06	0103	10301002	0.00	MANEVU2002	0.0435	0.0000	0.0001	CURTIS FINE PAPERS
MA	Berkshire	25003	1170006	17	0117	10200603	5.00	MANEVU2002	0.2250	0.0000	0.0006	PITTSFIELD GENERATING
MA	Berkshire	25003	1170008	01	0101	10300603	4.00	MANEVU2002	0.0070	0.0000	0.0000	WILLIAMS ELEMENTARY SCH - PITTSFIELD
MA	Berkshire	25003	1170008	03	0103	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	WILLIAMS ELEMENTARY SCH - PITTSFIELD
MA	Berkshire	25003	1170009	01	0101	10200401	34.00	MANEVU2002	11.0000	0.0000	0.0302	FOX RIVER PAPER COMPANY
MA	Berkshire	25003	1170009	02	0102	10200401	47.00	MANEVU2002	29.0000	0.0000	0.0797	FOX RIVER PAPER COMPANY
MA	Berkshire	25003	1170009	02	0202	10200501	47.00	MANEVU2002	5.0000	0.0000	0.0137	FOX RIVER PAPER COMPANY
MA	Berkshire	25003	1170014	01	0101	10200401	38.00	MANEVU2002	1.0000	0.0000	0.0000	MW CUSTOM PAPERS, LLC - LAUREL MILL
MA	Berkshire	25003	1170014	02	0101	10200401	48.00	MANEVU2002	37.0000	0.0000	0.0895	MW CUSTOM PAPERS, LLC - LAUREL MILL
MA	Berkshire	25003	1170015	01	0101	10200401	38.00	MANEVU2002	4.0000	0.0000	0.0000	MW CUSTOM PAPERS, LLC - WILLOW MILL
MA	Berkshire	25003	1170015	02	0101	10200401	48.00	MANEVU2002	30.0000	0.0000	0.0692	MW CUSTOM PAPERS, LLC - WILLOW MILL
MA	Berkshire	25003	1170016	01	0101	10200401	105.00	MANEVU2002	15.0000	0.0000	0.0132	SCHWEITZER MAUDUIT
MA	Berkshire	25003	1170016	01	0201	10200601	105.00	MANEVU2002	21.0000	0.0000	0.0185	SCHWEITZER MAUDUIT
MA	Berkshire	25003	1170016	02	0102	10200401	105.00	MANEVU2002	25.0000	0.0000	0.0220	SCHWEITZER MAUDUIT
MA	Berkshire	25003	1170016	02	0202	10200601	105.00	MANEVU2002	30.0000	0.0000	0.0264	SCHWEITZER MAUDUIT
MA	Berkshire	25003	1170018	01	0201	10200602	21.00	MANEVU2002	4.0000	0.0000	0.0105	SCHWEITZER MAUDUIT
MA	Berkshire	25003	1170026	01	0101	10300401	21.00	MANEVU2002	1.0000	0.0000	0.0011	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170026	01	0201	10300602	21.00	MANEVU2002	0.0065	0.0000	0.0000	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170026	02	0101	10300401	21.00	MANEVU2002	4.0000	0.0000	0.0132	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170026	02	0201	10300602	21.00	MANEVU2002	0.0065	0.0000	0.0000	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170026	03	0102	10300401	21.00	MANEVU2002	2.0000	0.0000	0.0066	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170026	03	0202	10300602	21.00	MANEVU2002	0.0065	0.0000	0.0000	BERKSHIRE MEDICAL CENTER
MA	Berkshire	25003	1170036	01	0101	10300401	75.00	MANEVU2002	27.0000	0.0000	0.0000	WILLIAMS COLLEGE
MA	Berkshire	25003	1170036	01	0201	10300602	75.00	MANEVU2002	3.0000	0.0000	0.0000	WILLIAMS COLLEGE
MA	Berkshire	25003	1170036	02	0101	10300401	75.00	MANEVU2002	2.0000	0.0000	0.0000	WILLIAMS COLLEGE
MA	Berkshire	25003	1170036	02	0201	10300602	75.00	MANEVU2002	0.0100	0.0000	0.0000	WILLIAMS COLLEGE
MA	Berkshire	25003	1170036	06	0103	10300603	5.00	MANEVU2002	0.0690	0.0000	0.0006	WILLIAMS COLLEGE
MA	Berkshire	25003	1170036	07	0104	10300603	3.00	MANEVU2002	0.0570	0.0000	0.0000	WILLIAMS COLLEGE
MA	Berkshire	25003	1170038	01	0101	10200401	50.00	MANEVU2002	9.0000	0.0000	0.0247	CRANE & COMPANY INC
MA	Berkshire	25003	1170038	01	0201	10200602	50.00	MANEVU2002	2.0000	0.0000	0.0055	CRANE & COMPANY INC
MA	Berkshire	25003	1170038	02	0101	10200401	59.00	MANEVU2002	9.0000	0.0000	0.0247	CRANE & COMPANY INC
MA	Berkshire	25003	1170038	02	0201	10200602	59.00	MANEVU2002	4.0000	0.0000	0.0110	CRANE & COMPANY INC
MA	Berkshire	25003	1170039	01	0101	10200401	71.00	MANEVU2002	3.0000	0.0000	0.0082	CRANE & COMPANY INC

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MA	Berkshire	25003	1170039	01	0201	10200602	71.00	MANEVU2002	1.0000	0.0000	0.0027	CRANE & COMPANY INC
MA	Berkshire	25003	1170042	02	0102	10200501	16.00	MANEVU2002	1.0000	0.0000	0.0027	SPECIALTY MINERALS
MA	Berkshire	25003	1170042	02	0202	10200603	16.00	MANEVU2002	2.0000	0.0000	0.0055	SPECIALTY MINERALS
MA	Berkshire	25003	1170046	01	0101	10300602	16.00	MANEVU2002	1.0000	0.0000	0.0027	KIMBALL FARMS
MA	Berkshire	25003	1170047	01	0101	10200601	5.00	MANEVU2002	7.0000	0.0000	0.0192	BERKSHIRE MILL APARTMENTS
MA	Berkshire	25003	1170052	01	0101	10301002	2.00	MANEVU2002	1.0000	0.0000	0.0027	BERKSHIRE GAS NORTH ADAMS
MA	Berkshire	25003	1170052	04	0104	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	BERKSHIRE GAS NORTH ADAMS
MA	Berkshire	25003	1170055	01	0101	10301002	5.00	MANEVU2002	3.0000	0.0000	0.0082	BERKSHIRE GAS PITTSFIELD
MA	Berkshire	25003	1170055	02	0102	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0000	BERKSHIRE GAS PITTSFIELD
MA	Berkshire	25003	1170066	01	0101	10200602	9.00	MANEVU2002	5.0000	0.0000	0.0137	RUS OF PITTSFIELD
MA	Berkshire	25003	1170068	01	0101	10300501	6.00	MANEVU2002	0.1260	0.0000	0.0001	HOOSAC WATER QUALITY DISTRICT
MA	Berkshire	25003	1170081	01	0201	10300602	10.00	MANEVU2002	0.3000	0.0000	0.0008	HILLCREST HOSPITAL
MA	Berkshire	25003	1170081	02	0101	10300401	10.00	MANEVU2002	1.0000	0.0000	0.0027	HILLCREST HOSPITAL
MA	Berkshire	25003	1170081	02	0201	10300602	10.00	MANEVU2002	0.3000	0.0000	0.0008	HILLCREST HOSPITAL
MA	Berkshire	25003	1170081	03	0101	10300603	3.00	MANEVU2002	0.0500	0.0000	0.0001	HILLCREST HOSPITAL
MA	Berkshire	25003	1170081	04	0102	10300603	2.00	MANEVU2002	0.2000	0.0000	0.0005	HILLCREST HOSPITAL
MA	Berkshire	25003	1170082	01	0101	10200602	10.00	MANEVU2002	2.0000	0.0000	0.0055	HOLLAND COMPANY INC
MA	Berkshire	25003	1170101	01	0101	10300501	4.00	MANEVU2002	1.2000	0.0000	0.0033	MODERN ALUMINUM ANOD
MA	Berkshire	25003	1170101	02	0102	10300501	15.00	MANEVU2002	0.0800	0.0000	0.0000	MODERN ALUMINUM ANOD
MA	Berkshire	25003	1170103	01	0101	10300504	15.00	MANEVU2002	1.0000	0.0000	0.0000	MT GREYLOCK SCHOOL DISTRICT
MA	Berkshire	25003	1170105	01	0201	10300603	4.00	MANEVU2002	0.1615	0.0000	0.0004	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	01	0101	10300501	4.00	MANEVU2002	0.0870	0.0000	0.0002	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	02	0201	10300603	4.00	MANEVU2002	0.1615	0.0000	0.0004	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	02	0101	10300501	4.00	MANEVU2002	0.0155	0.0000	0.0000	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	03	0201	10300603	6.00	MANEVU2002	0.4840	0.0000	0.0013	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	03	0101	10300501	6.00	MANEVU2002	0.2860	0.0000	0.0008	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	04	0101	10300501	6.00	MANEVU2002	0.2860	0.0000	0.0008	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	04	0201	10300603	6.00	MANEVU2002	0.1615	0.0000	0.0004	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	05	0201	10300603	1.00	MANEVU2002	0.0485	0.0000	0.0001	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170105	05	0101	10300501	1.00	MANEVU2002	0.0155	0.0000	0.0000	NORTH ADAMS REGIONAL HOSPITAL
MA	Berkshire	25003	1170112	01	0201	10300602	36.00	MANEVU2002	3.0000	0.0000	0.0000	MASS COLLEGE OF LIBERAL ARTS
MA	Berkshire	25003	1170112	02	0202	10300602	38.00	MANEVU2002	3.0000	0.0000	0.0000	MASS COLLEGE OF LIBERAL ARTS
MA	Berkshire	25003	1170127	02	0201	10300602	11.00	MANEVU2002	0.1800	0.0000	0.0000	CROSBY ELEMENTARY SCHOOL
MA	Berkshire	25003	1170131	01	0201	10300603	11.00	MANEVU2002	0.2300	0.0000	0.0000	PITTSFIELD HIGH SCHOOL
MA	Berkshire	25003	1170131	02	0201	10300603	11.00	MANEVU2002	0.2300	0.0000	0.0000	PITTSFIELD HIGH SCHOOL
MA	Berkshire	25003	1170131	03	0201	10300603	11.00	MANEVU2002	0.2300	0.0000	0.0000	PITTSFIELD HIGH SCHOOL
MA	Berkshire	25003	1170134	01	0201	10300602	11.00	MANEVU2002	0.0650	0.0000	0.0000	REID MIDDLE SCHOOL
MA	Berkshire	25003	1170134	02	0201	10300602	11.00	MANEVU2002	0.0650	0.0000	0.0000	REID MIDDLE SCHOOL
MA	Berkshire	25003	1170134	04	0103	10300603	1.00	MANEVU2002	0.0045	0.0000	0.0000	REID MIDDLE SCHOOL
MA	Berkshire	25003	1170140	01	0201	10300603	11.00	MANEVU2002	0.0675	0.0000	0.0000	HERBERG MIDDLE SCHOOL
MA	Berkshire	25003	1170140	02	0201	10300603	10.00	MANEVU2002	0.0675	0.0000	0.0000	HERBERG MIDDLE SCHOOL
MA	Berkshire	25003	1170142	01	0201	10300602	12.00	MANEVU2002	0.2350	0.0000	0.0000	TACONIC HIGH SCHOOL
MA	Berkshire	25003	1170142	02	0201	10300602	11.00	MANEVU2002	0.2350	0.0000	0.0000	TACONIC HIGH SCHOOL
MA	Berkshire	25003	1170142	03	0201	10300602	11.00	MANEVU2002	0.2350	0.0000	0.0000	TACONIC HIGH SCHOOL
MA	Berkshire	25003	1170142	04	0201	10300602	11.00	MANEVU2002	0.2350	0.0000	0.0000	TACONIC HIGH SCHOOL
MA	Berkshire	25003	1170142	05	0201	10300602	11.00	MANEVU2002	0.2350	0.0000	0.0000	TACONIC HIGH SCHOOL
MA	Berkshire	25003	1170143	01	0201	10300603	6.00	MANEVU2002	0.1075	0.0000	0.0000	MORNINGSIDE SCHOOL
MA	Berkshire	25003	1170143	02	0201	10300603	6.00	MANEVU2002	0.1075	0.0000	0.0000	MORNINGSIDE SCHOOL
MA	Berkshire	25003	1170145	01	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0027	AH RICE CORPORATION
MA	Berkshire	25003	1170152	03	0102	10200603	2.00	MANEVU2002	0.0530	0.0000	0.0000	ELECTRONIC CONCEPTS INC
MA	Berkshire	25003	1170173	01	0201	10200602	13.00	MANEVU2002	1.0000	0.0000	0.0027	ADAMS LAUNDRY & DRY
MA	Berkshire	25003	1170179	01	0101	10200501	7.00	MANEVU2002	1.0000	0.0000	0.0012	COMMONWEALTH SPRAGUE

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MA	Bristol	25005	1192312	01	0101	10300603	2.00	MANEVU2002	0.1475	0.0000	0.0004	PHARMASOL CORPORATION
MA	Bristol	25005	1192312	02	0102	10300603	2.00	MANEVU2002	0.1475	0.0000	0.0004	PHARMASOL CORPORATION
MA	Bristol	25005	1192312	04	0104	10300603	1.00	MANEVU2002	0.0405	0.0000	0.0001	PHARMASOL CORPORATION
MA	Bristol	25005	1192312	05	0105	10300603	1.00	MANEVU2002	0.0415	0.0000	0.0001	PHARMASOL CORPORATION
MA	Bristol	25005	1192312	06	0106	10200602	1.00	MANEVU2002	0.0230	0.0000	0.0001	PHARMASOL CORPORATION
MA	Bristol	25005	1192318	01	0101	10300603	5.00	MANEVU2002	2.0000	0.0000	0.0002	EASTON JUNIOR HIGH SCHOOL
MA	Bristol	25005	1192318	02	0101	10300603	5.00	MANEVU2002	2.0000	0.0000	0.0002	EASTON JUNIOR HIGH SCHOOL
MA	Bristol	25005	1192319	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0001	EASTON MIDDLE SCHOOL
MA	Bristol	25005	1192319	02	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0001	EASTON MIDDLE SCHOOL
MA	Bristol	25005	1192324	03	0102	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0001	STONEHILL COLLEGE
MA	Bristol	25005	1200002	02	0101	10200401	28.00	MANEVU2002	5.0000	0.0000	0.0060	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	03	0102	10200401	59.00	MANEVU2002	20.0000	0.0000	0.0615	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	03	0302	10200602	59.00	MANEVU2002	3.0000	0.0000	0.0092	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	04	0102	10200401	75.00	MANEVU2002	25.0000	0.0000	0.0330	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	05	0103	10200401	25.00	MANEVU2002	2.0000	0.0000	0.0018	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	06	0103	10200401	12.00	MANEVU2002	6.0000	0.0000	0.0073	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	07	0104	10200401	25.00	MANEVU2002	0.2650	0.0000	0.0008	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	07	0204	10200602	25.00	MANEVU2002	0.0225	0.0000	0.0001	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	08	0104	10200401	13.00	MANEVU2002	3.0000	0.0000	0.0030	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200002	08	0204	10200602	13.00	MANEVU2002	0.1770	0.0000	0.0002	TEXAS INSTRUMENTS INC
MA	Bristol	25005	1200007	02	0102	10200603	3.00	MANEVU2002	0.0125	0.0000	0.0000	KILMARTIN INDUSTRIES
MA	Bristol	25005	1200007	03	0103	10200603	3.00	MANEVU2002	0.0125	0.0000	0.0000	KILMARTIN INDUSTRIES
MA	Bristol	25005	1200012	01	0101	10200401	7.00	MANEVU2002	1.0000	0.0000	0.0000	COMPOSITE MODULES INCORPORATED
MA	Bristol	25005	1200013	02	0101	10200501	25.00	MANEVU2002	2.0000	0.0000	0.0002	DIGHTON INDUSTRIES
MA	Bristol	25005	1200013	03	0101	10200501	29.00	MANEVU2002	2.0000	0.0000	0.0002	DIGHTON INDUSTRIES
MA	Bristol	25005	1200014	01	0101	10200501	9.00	MANEVU2002	1.0000	0.0000	0.0014	AT&T FAIRHAVEN
MA	Bristol	25005	1200015	01	0101	10200603	5.00	MANEVU2002	0.0715	0.0000	0.0001	TITLEIST & FOOT JOY
MA	Bristol	25005	1200015	02	0102	10200603	2.00	MANEVU2002	0.6015	0.0000	0.0007	TITLEIST & FOOT JOY
MA	Bristol	25005	1200015	03	0102	10200603	2.00	MANEVU2002	0.0600	0.0000	0.0001	TITLEIST & FOOT JOY
MA	Bristol	25005	1200015	04	0103	10200603	1.00	MANEVU2002	0.0510	0.0000	0.0001	TITLEIST & FOOT JOY
MA	Bristol	25005	1200018	01	0101	10200401	11.00	MANEVU2002	1.0000	0.0000	0.0000	DURO FINISHING INC
MA	Bristol	25005	1200018	02	0101	10200401	30.00	MANEVU2002	15.0000	0.0000	0.0412	DURO FINISHING INC
MA	Bristol	25005	1200018	02	0201	10200602	30.00	MANEVU2002	0.0255	0.0000	0.0001	DURO FINISHING INC
MA	Bristol	25005	1200018	03	0101	10200401	21.00	MANEVU2002	13.0000	0.0000	0.0357	DURO FINISHING INC
MA	Bristol	25005	1200018	04	0101	10200401	25.00	MANEVU2002	15.0000	0.0000	0.0412	DURO FINISHING INC
MA	Bristol	25005	1200018	04	0201	10200602	25.00	MANEVU2002	0.0015	0.0000	0.0000	DURO FINISHING INC
MA	Bristol	25005	1200022	01	0101	10300502	12.00	MANEVU2002	1.7395	0.0000	0.0000	STEVENS SERVICE CORP
MA	Bristol	25005	1200032	02	0101	10200602	13.00	MANEVU2002	3.0000	0.0000	0.0056	ADM COCOA
MA	Bristol	25005	1200038	01	0101	10200401	33.00	MANEVU2002	5.0000	0.0000	0.0137	ACUSHNET COMPANY-PLANT I
MA	Bristol	25005	1200038	02	0101	10200401	33.00	MANEVU2002	5.0000	0.0000	0.0137	ACUSHNET COMPANY-PLANT I
MA	Bristol	25005	1200039	01	0101	10200401	33.00	MANEVU2002	5.0000	0.0000	0.0000	HATHAWAY MILLS LLC
MA	Bristol	25005	1200045	01	0101	10300401	37.00	MANEVU2002	8.0000	0.0000	0.0220	WHEATON COLLEGE
MA	Bristol	25005	1200045	02	0101	10300401	22.00	MANEVU2002	2.0000	0.0000	0.0002	WHEATON COLLEGE
MA	Bristol	25005	1200045	03	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0004	WHEATON COLLEGE
MA	Bristol	25005	1200045	05	0101	10300603	8.00	MANEVU2002	0.4100	0.0000	0.0000	WHEATON COLLEGE
MA	Bristol	25005	1200045	06	0102	10300603	3.00	MANEVU2002	0.0850	0.0000	0.0000	WHEATON COLLEGE
MA	Bristol	25005	1200048	01	0101	10200501	15.00	MANEVU2002	2.0000	0.0000	0.0037	GLOBAL COMPANIES LLC
MA	Bristol	25005	1200059	01	0101	10200501	13.00	MANEVU2002	1.0000	0.0000	0.0027	MY BREAD BAKING CO
MA	Bristol	25005	1200059	02	0102	10200501	13.00	MANEVU2002	1.0000	0.0000	0.0027	MY BREAD BAKING CO
MA	Bristol	25005	1200063	01	0101	10200401	27.00	MANEVU2002	4.0000	0.0000	0.0110	INFINITY HOLDING LLC
MA	Bristol	25005	1200063	02	0101	10200401	27.00	MANEVU2002	4.0000	0.0000	0.0110	INFINITY HOLDING LLC
MA	Bristol	25005	1200063	04	0101	10200401	27.00	MANEVU2002	2.0000	0.0000	0.0055	INFINITY HOLDING LLC

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MA	Bristol	25005	1200064	01	0101	10200401	59.00	MANEVU2002	7.0000	0.0000	0.0138	HARODITE INDUSTRIES INC
MA	Bristol	25005	1200064	01	0201	10200602	59.00	MANEVU2002	3.0000	0.0000	0.0059	HARODITE INDUSTRIES INC
MA	Bristol	25005	1200065	01	0101	10200603	6.00	MANEVU2002	0.8500	0.0000	0.0023	ROSEMAR SILVER COMPANY
MA	Bristol	25005	1200066	01	0101	10200401	29.00	MANEVU2002	2.0000	0.0000	0.0055	REED & BARTON SILVER
MA	Bristol	25005	1200066	01	0201	10200602	29.00	MANEVU2002	0.9700	0.0000	0.0027	REED & BARTON SILVER
MA	Bristol	25005	1200066	02	0101	10200401	15.00	MANEVU2002	2.0000	0.0000	0.0055	REED & BARTON SILVER
MA	Bristol	25005	1200066	02	0201	10200603	15.00	MANEVU2002	0.9700	0.0000	0.0027	REED & BARTON SILVER
MA	Bristol	25005	1200075	01	0101	10200401	29.00	MANEVU2002	8.0000	0.0000	0.0000	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200075	01	0201	10200501	29.00	MANEVU2002	0.0640	0.0000	0.0000	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200075	02	0102	10200401	12.00	MANEVU2002	12.0000	0.0000	0.0330	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200075	02	0202	10200501	12.00	MANEVU2002	0.2855	0.0000	0.0008	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200075	20	0120	10200501	6.00	MANEVU2002	0.0475	0.0000	0.0001	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200075	22	0122	10200501	16.00	MANEVU2002	1.0000	0.0000	0.0027	ISP FREETOWN FINE CHEMICALS
MA	Bristol	25005	1200086	01	0101	10300401	13.00	MANEVU2002	0.5270	0.0000	0.0009	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200086	01	0201	10300602	13.00	MANEVU2002	0.0985	0.0000	0.0002	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200086	02	0101	10300401	13.00	MANEVU2002	0.5270	0.0000	0.0009	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200086	02	0201	10300602	13.00	MANEVU2002	0.0985	0.0000	0.0002	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200086	03	0101	10300401	16.00	MANEVU2002	4.9785	0.0000	0.0109	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200086	03	0201	10300602	16.00	MANEVU2002	0.4435	0.0000	0.0010	STURDY MEMORIAL HOSP
MA	Bristol	25005	1200087	01	0101	10200401	15.00	MANEVU2002	3.0000	0.0000	0.0033	SWANK INCORPORATED
MA	Bristol	25005	1200087	02	0101	10200401	22.00	MANEVU2002	0.3410	0.0000	0.0000	SWANK INCORPORATED
MA	Bristol	25005	1200088	01	0101	10200401	21.00	MANEVU2002	11.0000	0.0000	0.0302	TEKNOR APEX COMPANY
MA	Bristol	25005	1200088	02	0102	10200401	18.00	MANEVU2002	20.0000	0.0000	0.0549	TEKNOR APEX COMPANY
MA	Bristol	25005	1200089	01	0101	10200603	1.00	MANEVU2002	0.0030	0.0000	0.0000	ROBBINS CO
MA	Bristol	25005	1200091	02	0101	10300401	36.00	MANEVU2002	14.0000	0.0000	0.0354	UMASS DARTMOUTH
MA	Bristol	25005	1200091	03	0101	10300401	36.00	MANEVU2002	15.0000	0.0000	0.0379	UMASS DARTMOUTH
MA	Bristol	25005	1200091	04	0101	10300401	36.00	MANEVU2002	0.1000	0.0000	0.0003	UMASS DARTMOUTH
MA	Bristol	25005	1200091	05	0102	10300602	13.00	MANEVU2002	0.3000	0.0000	0.0003	UMASS DARTMOUTH
MA	Bristol	25005	1200091	08	0104	10300603	1.00	MANEVU2002	0.0300	0.0000	0.0000	UMASS DARTMOUTH
MA	Bristol	25005	1200091	09	0105	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0002	UMASS DARTMOUTH
MA	Bristol	25005	1200094	02	0101	10300504	10.00	MANEVU2002	0.7700	0.0000	0.0000	BRISTOL COMMUNITY CO
MA	Bristol	25005	1200097	01	0101	10200504	5.00	MANEVU2002	2.0000	0.0000	0.0055	ARGUS REALITY
MA	Bristol	25005	1200097	02	0101	10200504	5.00	MANEVU2002	2.0000	0.0000	0.0055	ARGUS REALITY
MA	Bristol	25005	1200097	03	0101	10200504	15.00	MANEVU2002	2.0000	0.0000	0.0000	ARGUS REALITY
MA	Bristol	25005	1200100	01	0101	10200401	3.00	MANEVU2002	2.0000	0.0000	0.0055	PRECIX
MA	Bristol	25005	1200100	02	0101	10200401	6.00	MANEVU2002	3.0000	0.0000	0.0082	PRECIX
MA	Bristol	25005	1200100	03	0101	10200401	8.00	MANEVU2002	5.0000	0.0000	0.0137	PRECIX
MA	Bristol	25005	1200101	01	0101	10200401	24.00	MANEVU2002	7.0000	0.0000	0.0192	PRECIX
MA	Bristol	25005	1200101	02	0102	10300602	24.00	MANEVU2002	2.0000	0.0000	0.0110	PRECIX
MA	Bristol	25005	1200102	01	0101	10300401	29.00	MANEVU2002	2.0000	0.0000	0.0000	DURFEE UNION MILLS
MA	Bristol	25005	1200102	01	0201	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0000	DURFEE UNION MILLS
MA	Bristol	25005	1200102	02	0101	10300401	29.00	MANEVU2002	2.0000	0.0000	0.0000	DURFEE UNION MILLS
MA	Bristol	25005	1200102	02	0201	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0000	DURFEE UNION MILLS
MA	Bristol	25005	1200104	03	0101	10200603	5.00	MANEVU2002	0.9915	0.0000	0.0000	GOLD MEDAL BAKERY
MA	Bristol	25005	1200104	03	0201	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0000	GOLD MEDAL BAKERY
MA	Bristol	25005	1200104	04	0102	10200603	5.00	MANEVU2002	2.0000	0.0000	0.0055	GOLD MEDAL BAKERY
MA	Bristol	25005	1200110	01	0101	10200401	11.00	MANEVU2002	1.0000	0.0000	0.0000	GRIFFIN STREET CORPORATION
MA	Bristol	25005	1200111	02	0101	10200401	17.00	MANEVU2002	1.0000	0.0000	0.0027	MANUFACTURERS REALTY
MA	Bristol	25005	1200115	01	0101	10200501	17.00	MANEVU2002	5.0000	0.0000	0.0060	QUAKER FABRIC CORPORATION
MA	Bristol	25005	1200115	02	0101	10200501	17.00	MANEVU2002	5.0000	0.0000	0.0060	QUAKER FABRIC CORPORATION
MA	Bristol	25005	1200117	02	0101	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0082	ST ANNES HOSPITAL
MA	Bristol	25005	1200117	03	0101	10300401	17.00	MANEVU2002	2.0000	0.0000	0.0055	ST ANNES HOSPITAL

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MA	Bristol	25005	1200118	01	0101	10200401	5.00	MANEVU2002	8.0000	0.0000	0.0220	DURO INDUSTRIES PLANT 2
MA	Bristol	25005	1200118	02	0101	10200401	7.00	MANEVU2002	4.0000	0.0000	0.0110	DURO INDUSTRIES PLANT 2
MA	Bristol	25005	1200118	03	0101	10200401	25.00	MANEVU2002	1.0000	0.0000	0.0000	DURO INDUSTRIES PLANT 2
MA	Bristol	25005	1200118	04	0101	10200401	25.00	MANEVU2002	2.0000	0.0000	0.0055	DURO INDUSTRIES PLANT 2
MA	Bristol	25005	1200119	01	0101	10300504	17.00	MANEVU2002	2.0000	0.0000	0.0000	TIMBACC REALTY INC
MA	Bristol	25005	1200123	01	0101	10300401	18.00	MANEVU2002	5.0000	0.0000	0.0082	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200123	01	0201	10300602	18.00	MANEVU2002	0.0400	0.0000	0.0001	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200123	02	0101	10300401	18.00	MANEVU2002	5.0000	0.0000	0.0082	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200123	02	0201	10300602	18.00	MANEVU2002	0.1900	0.0000	0.0003	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200123	03	0101	10300401	18.00	MANEVU2002	5.0000	0.0000	0.0082	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200123	03	0201	10300602	18.00	MANEVU2002	0.1300	0.0000	0.0002	CHARLTON MEMORIAL HO
MA	Bristol	25005	1200136	01	0101	10200504	15.00	MANEVU2002	2.0000	0.0000	0.0002	NASHAWENA MILLS
MA	Bristol	25005	1200140	01	0101	10200504	16.00	MANEVU2002	0.5220	0.0000	0.0000	COATERS INC
MA	Bristol	25005	1200149	01	0201	10200401	120.00	MANEVU2002	25.0000	0.0000	0.0824	POLAROID HOLDING CORPORTION
MA	Bristol	25005	1200149	01	0301	10200601	120.00	MANEVU2002	9.0000	0.0000	0.0297	POLAROID HOLDING CORPORTION
MA	Bristol	25005	1200149	02	0201	10200401	119.00	MANEVU2002	23.0000	0.0000	0.0758	POLAROID HOLDING CORPORTION
MA	Bristol	25005	1200149	02	0301	10200601	119.00	MANEVU2002	13.0000	0.0000	0.0429	POLAROID HOLDING CORPORTION
MA	Bristol	25005	1200151	01	0101	10200401	25.00	MANEVU2002	4.0000	0.0000	0.0048	REVERE COPPER PRODUCTS
MA	Bristol	25005	1200151	02	0101	10200401	25.00	MANEVU2002	4.0000	0.0000	0.0000	REVERE COPPER PRODUCTS
MA	Bristol	25005	1200154	01	0101	10300401	21.00	MANEVU2002	2.0000	0.0000	0.0055	ST LUKES HOSPITAL
MA	Bristol	25005	1200154	01	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0027	ST LUKES HOSPITAL
MA	Bristol	25005	1200154	02	0101	10300401	21.00	MANEVU2002	1.0000	0.0000	0.0027	ST LUKES HOSPITAL
MA	Bristol	25005	1200154	02	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0027	ST LUKES HOSPITAL
MA	Bristol	25005	1200154	03	0101	10300401	21.00	MANEVU2002	1.0000	0.0000	0.0027	ST LUKES HOSPITAL
MA	Bristol	25005	1200154	03	0201	10300602	21.00	MANEVU2002	0.7800	0.0000	0.0021	ST LUKES HOSPITAL
MA	Bristol	25005	1200155	02	0101	10200603	8.00	MANEVU2002	1.8000	0.0000	0.0049	ALLEGHENY RODNEY
MA	Bristol	25005	1200155	07	0106	10200603	8.00	MANEVU2002	2.0000	0.0000	0.0055	ALLEGHENY RODNEY
MA	Bristol	25005	1200159	09	0109	10300603	5.00	MANEVU2002	0.0030	0.0000	0.0000	NEW ENGLAND GAS COMPANY
MA	Bristol	25005	1200159	11	0111	10300603	2.00	MANEVU2002	0.0655	0.0000	0.0000	NEW ENGLAND GAS COMPANY
MA	Bristol	25005	1200171	01	0101	10300502	11.00	MANEVU2002	1.0000	0.0000	0.0014	MORTON HOSPITAL CORP
MA	Bristol	25005	1200171	02	0101	10300503	10.00	MANEVU2002	1.0000	0.0000	0.0015	MORTON HOSPITAL CORP
MA	Bristol	25005	1200171	03	0101	10300401	11.00	MANEVU2002	1.0000	0.0000	0.0015	MORTON HOSPITAL CORP
MA	Bristol	25005	1200171	04	0101	10300603	2.00	MANEVU2002	0.2220	0.0000	0.0006	MORTON HOSPITAL CORP
MA	Bristol	25005	1200173	01	0101	10200504	8.00	MANEVU2002	0.1800	0.0000	0.0000	SWANK INCORPORATED
MA	Bristol	25005	1200173	02	0101	10200504	8.00	MANEVU2002	0.1800	0.0000	0.0000	SWANK INCORPORATED
MA	Bristol	25005	1200174	01	0201	10300602	50.00	MANEVU2002	1.0000	0.0000	0.0001	TAUNTON STATE HOSPIT
MA	Bristol	25005	1200174	03	0201	10300602	50.00	MANEVU2002	16.0000	0.0000	0.0018	TAUNTON STATE HOSPIT
MA	Bristol	25005	1200175	01	0101	10200603	6.00	MANEVU2002	0.4120	0.0000	0.0011	METALOR TECHNOLOGIES USA
MA	Bristol	25005	1200185	01	0101	10200501	8.00	MANEVU2002	1.0000	0.0000	0.0027	MANTROSE HAEUSER CO
MA	Bristol	25005	1200185	02	0101	10200401	24.00	MANEVU2002	4.0000	0.0000	0.0110	MANTROSE HAEUSER CO
MA	Bristol	25005	1200185	02	0201	10200602	24.00	MANEVU2002	2.0000	0.0000	0.0055	MANTROSE HAEUSER CO
MA	Bristol	25005	1200191	01	0101	10200603	3.00	MANEVU2002	0.8300	0.0000	0.0023	BACON FELT COMPANY INC
MA	Bristol	25005	1200191	12	0108	10200603	3.00	MANEVU2002	0.1100	0.0000	0.0003	BACON FELT COMPANY INC
MA	Bristol	25005	1200191	13	0108	10200603	3.00	MANEVU2002	0.1100	0.0000	0.0003	BACON FELT COMPANY INC
MA	Bristol	25005	1200194	01	0101	10200603	2.00	MANEVU2002	0.1750	0.0000	0.0010	STERN LEACH COMPANY
MA	Bristol	25005	1200194	02	0101	10200603	4.00	MANEVU2002	0.9250	0.0000	0.0000	STERN LEACH COMPANY
MA	Bristol	25005	1200199	01	0101	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0000	FORTIFIBER CORP
MA	Bristol	25005	1200199	02	0101	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0000	FORTIFIBER CORP
MA	Bristol	25005	1200216	01	0101	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0027	BRISTOL COUNTY JAIL
MA	Bristol	25005	1200219	02	0101	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	LIGHTOLIER FALL RIVER
MA	Bristol	25005	1200224	02	0101	10200401	6.00	MANEVU2002	3.0000	0.0000	0.0003	DURO TEXTILE PRINTER
MA	Bristol	25005	1200224	03	0102	10200401	8.00	MANEVU2002	3.0000	0.0000	0.0082	DURO TEXTILE PRINTER

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MA	Bristol	25005	1200224	04	0103	10200401	11.00	MANEVU2002	3.0000	0.0000	0.0082	DURO TEXTILE PRINTER
MA	Bristol	25005	1200224	07	0103	10200401	13.00	MANEVU2002	3.0000	0.0000	0.0082	DURO TEXTILE PRINTER
MA	Bristol	25005	1200224	21	0105	10200401	10.00	MANEVU2002	3.0000	0.0000	0.0082	DURO TEXTILE PRINTER
MA	Bristol	25005	1200224	22	0106	10200602	25.00	MANEVU2002	3.0000	0.0000	0.0082	DURO TEXTILE PRINTER
MA	Bristol	25005	1200229	01	0101	10300504	9.00	MANEVU2002	0.4150	0.0000	0.0000	MAIN STREET TEXTILES
MA	Bristol	25005	1200235	01	0101	10300602	25.00	MANEVU2002	1.0000	0.0000	0.0027	SEA WATCH INTERNATIO
MA	Bristol	25005	1200239	01	0101	10200603	8.00	MANEVU2002	0.5060	0.0000	0.0013	ROMA COLOR INC
MA	Bristol	25005	1200243	01	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0011	WAKEFIELD ENGINEERING
MA	Bristol	25005	1200254	01	0101	10200402	16.00	MANEVU2002	7.0000	0.0000	0.0192	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200254	01	0201	10200602	16.00	MANEVU2002	1.0000	0.0000	0.0027	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200254	02	0101	10200402	16.00	MANEVU2002	7.0000	0.0000	0.0192	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200254	02	0201	10200602	16.00	MANEVU2002	1.0000	0.0000	0.0027	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200254	18	0114	10300603	5.00	MANEVU2002	0.0115	0.0000	0.0000	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200254	19	0115	10300603	5.00	MANEVU2002	0.0015	0.0000	0.0000	ACUSHNET COMPANY PLANT #2
MA	Bristol	25005	1200268	01	0101	10200603	5.00	MANEVU2002	0.1970	0.0000	0.0002	MOTOROLA INCORPORATED
MA	Bristol	25005	1200268	02	0102	10200603	4.00	MANEVU2002	0.0930	0.0000	0.0001	MOTOROLA INCORPORATED
MA	Bristol	25005	1200268	03	0103	10200603	4.00	MANEVU2002	0.1285	0.0000	0.0001	MOTOROLA INCORPORATED
MA	Bristol	25005	1200276	02	0102	10200603	2.00	MANEVU2002	0.0105	0.0000	0.0000	DIGHTON POWER ASSOCATES
MA	Bristol	25005	1200289	02	0101	10300504	12.00	MANEVU2002	0.2665	0.0000	0.0000	BS REALTY LTD PTR
MA	Bristol	25005	1200290	01	0101	10200401	29.00	MANEVU2002	5.0000	0.0000	0.0121	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	01	0201	10200602	29.00	MANEVU2002	0.6285	0.0000	0.0015	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	02	0101	10200401	4.00	MANEVU2002	0.6655	0.0000	0.0016	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	03	0101	10200401	14.00	MANEVU2002	2.0000	0.0000	0.0048	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	03	0301	10200602	14.00	MANEVU2002	0.3130	0.0000	0.0008	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	04	0101	10200401	25.00	MANEVU2002	4.0000	0.0000	0.0097	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200290	04	0201	10200602	25.00	MANEVU2002	0.5355	0.0000	0.0013	BRITTANY DYEING & PRINTING CORP.
MA	Bristol	25005	1200296	01	0101	10200401	8.00	MANEVU2002	2.0000	0.0000	0.0000	CLIFTEX CORPORATION
MA	Bristol	25005	1200296	02	0101	10200401	13.00	MANEVU2002	1.0000	0.0000	0.0000	CLIFTEX CORPORATION
MA	Bristol	25005	1200300	01	0101	10200603	8.00	MANEVU2002	2.0000	0.0000	0.0055	COYNE TEXTILE SERVIC
MA	Bristol	25005	1200303	02	0102	10200799	3.00	MANEVU2002	0.0485	0.0000	0.0000	EPEC INCORPORATED
MA	Bristol	25005	1200304	01	0101	10300504	13.00	MANEVU2002	0.3440	0.0000	0.0000	ERIKA REALTY TRUST
MA	Bristol	25005	1200305	01	0101	10200401	21.00	MANEVU2002	2.0000	0.0000	0.0051	FIBRE LEATHER MANUFACTURING
MA	Bristol	25005	1200305	04	0102	10200603	1.00	MANEVU2002	0.5055	0.0000	0.0014	FIBRE LEATHER MANUFACTURING
MA	Bristol	25005	1200315	01	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0027	UMASS NEW BEDFORD
MA	Bristol	25005	1200316	01	0101	10300602	18.00	MANEVU2002	1.0000	0.0000	0.0011	NEW BEDFORD WATER PO
MA	Bristol	25005	1200319	02	0102	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0027	PLATING TECHNOLOGY INC
MA	Bristol	25005	1200321	01	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0011	CENTURY LLC
MA	Bristol	25005	1200323	01	0101	10200401	6.00	MANEVU2002	1.0000	0.0000	0.0016	SHEPARD CLOTHING CO
MA	Bristol	25005	1200335	01	0101	10200501	1.00	MANEVU2002	0.0040	0.0000	0.0000	BORO SAND & STONE CORPORATION
MA	Bristol	25005	1200335	02	0102	10200501	1.00	MANEVU2002	0.2200	0.0000	0.0002	BORO SAND & STONE CORPORATION
MA	Bristol	25005	1200337	02	0101	10200603	8.00	MANEVU2002	0.2620	0.0000	0.0000	POLYMETALLURGICAL CORPORATION
MA	Bristol	25005	1200337	03	0102	10200603	1.00	MANEVU2002	0.0095	0.0000	0.0000	POLYMETALLURGICAL CORPORATION
MA	Bristol	25005	1200342	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	EUREKA MFG COMPANY
MA	Bristol	25005	1200343	01	0101	10200503	5.00	MANEVU2002	0.1855	0.0000	0.0003	VH BLACKINTON & COMPANY
MA	Bristol	25005	1200343	02	0101	10200503	2.00	MANEVU2002	0.1115	0.0000	0.0003	VH BLACKINTON & COMPANY
MA	Bristol	25005	1200343	03	0101	10200501	2.00	MANEVU2002	0.1280	0.0000	0.0004	VH BLACKINTON & COMPANY
MA	Bristol	25005	1200345	01	0101	10200504	3.00	MANEVU2002	1.0000	0.0000	0.0027	TWEAVE INCORPORATED
MA	Bristol	25005	1200345	04	0101	10200504	5.00	MANEVU2002	1.0000	0.0000	0.0027	TWEAVE INCORPORATED
MA	Bristol	25005	1200373	01	0201	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	SHAWOMET GARDENS
MA	Bristol	25005	1200373	02	0202	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	SHAWOMET GARDENS
MA	Bristol	25005	1200373	03	0203	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	SHAWOMET GARDENS
MA	Bristol	25005	1200373	04	0204	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	SHAWOMET GARDENS

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MA	Bristol	25005	1200376	01	0101	10200504	9.00	MANEVU2002	0.3115	0.0000	0.0000	SWAN FINISHING COMPANY
MA	Bristol	25005	1200381	01	0101	10200501	7.00	MANEVU2002	0.1400	0.0000	0.0000	GENERAL CABLE
MA	Bristol	25005	1200381	02	0102	10200501	1.00	MANEVU2002	0.1025	0.0000	0.0003	GENERAL CABLE
MA	Bristol	25005	1200381	03	0102	10200501	1.00	MANEVU2002	0.1025	0.0000	0.0003	GENERAL CABLE
MA	Bristol	25005	1200381	04	0103	10200501	1.00	MANEVU2002	0.0105	0.0000	0.0000	GENERAL CABLE
MA	Bristol	25005	1200388	01	0101	10200504	15.00	MANEVU2002	2.0000	0.0000	0.0055	KIRKHILL-TA CO HASKON DIV
MA	Bristol	25005	1200388	01	0201	10200602	15.00	MANEVU2002	10.0000	0.0000	0.0275	KIRKHILL-TA CO HASKON DIV
MA	Bristol	25005	1200388	02	0102	10200504	13.00	MANEVU2002	2.0000	0.0000	0.0004	KIRKHILL-TA CO HASKON DIV
MA	Bristol	25005	1200388	02	0202	10200602	13.00	MANEVU2002	9.0000	0.0000	0.0020	KIRKHILL-TA CO HASKON DIV
MA	Bristol	25005	1200405	01	0101	10200501	3.00	MANEVU2002	0.1500	0.0000	0.0008	WATERS TECHNOLOGY CORPORATION
MA	Bristol	25005	1200405	02	0102	10200501	5.00	MANEVU2002	0.0280	0.0000	0.0000	WATERS TECHNOLOGY CORPORATION
MA	Bristol	25005	1200405	03	0103	10200501	6.00	MANEVU2002	0.3750	0.0000	0.0005	WATERS TECHNOLOGY CORPORATION
MA	Bristol	25005	1200408	01	0101	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0027	KORBER HATS INCORPORATED
MA	Bristol	25005	1200421	01	0101	10300603	1.00	MANEVU2002	0.4200	0.0000	0.0005	ALBANY INTERNATIONAL
MA	Bristol	25005	1200424	01	0101	10200603	1.00	MANEVU2002	0.0200	0.0000	0.0001	NEW ENGLAND STERLING
MA	Bristol	25005	1200450	01	0101	10200603	4.00	MANEVU2002	0.3360	0.0000	0.0000	JOHNSON AND WALES INN
MA	Bristol	25005	1200450	02	0101	10200603	4.00	MANEVU2002	0.3360	0.0000	0.0000	JOHNSON AND WALES INN
MA	Bristol	25005	1200450	03	0101	10200603	4.00	MANEVU2002	0.2130	0.0000	0.0000	JOHNSON AND WALES INN
MA	Bristol	25005	1200470	01	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0000	BISHOP STANG HIGH SCHOOL
MA	Bristol	25005	1200486	01	0101	10200501	5.00	MANEVU2002	0.1550	0.0000	0.0004	RIVERSIDE MANUFACTURING CO
MA	Bristol	25005	1200486	01	0201	10200603	5.00	MANEVU2002	0.0040	0.0000	0.0000	RIVERSIDE MANUFACTURING CO
MA	Bristol	25005	1200486	02	0102	10200501	5.00	MANEVU2002	0.1550	0.0000	0.0000	RIVERSIDE MANUFACTURING CO
MA	Bristol	25005	1200486	02	0202	10200603	5.00	MANEVU2002	0.0045	0.0000	0.0000	RIVERSIDE MANUFACTURING CO
MA	Bristol	25005	1200491	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0000	MORTON MIDDLE SCHOOL
MA	Bristol	25005	1200491	02	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0000	MORTON MIDDLE SCHOOL
MA	Bristol	25005	1200491	03	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0000	MORTON MIDDLE SCHOOL
MA	Bristol	25005	1200503	01	0101	10200603	3.00	MANEVU2002	0.1800	0.0000	0.0002	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	02	0102	10200603	1.00	MANEVU2002	0.0760	0.0000	0.0002	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	03	0103	10200603	1.00	MANEVU2002	0.0135	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	04	0104	10200603	1.00	MANEVU2002	0.0265	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	05	0105	10200603	1.00	MANEVU2002	0.0265	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	07	0107	10200603	1.00	MANEVU2002	0.0200	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	08	0108	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200503	09	0109	10200603	1.00	MANEVU2002	0.0190	0.0000	0.0000	DEPUY ORTHOPAEDICS INCORPORATED
MA	Bristol	25005	1200513	01	0201	10300603	5.00	MANEVU2002	0.1080	0.0000	0.0003	AEROVOX INCORPORATED
MA	Bristol	25005	1200527	01	0201	10300603	10.00	MANEVU2002	1.0000	0.0000	0.0000	NORTH ATTLEBORO MIDDLE SCHOOL
MA	Bristol	25005	1200527	02	0201	10300603	10.00	MANEVU2002	1.0000	0.0000	0.0000	NORTH ATTLEBORO MIDDLE SCHOOL
MA	Bristol	25005	1200534	01	0101	10300504	3.00	MANEVU2002	1.0000	0.0000	0.0001	BISHOP CONNOLLY HIGH SCHOOL
MA	Bristol	25005	1200553	01	0101	10300501	1.00	MANEVU2002	0.2970	0.0000	0.0008	CLEAN RENTALS INC
MA	Bristol	25005	1200570	02	0102	10200603	3.00	MANEVU2002	0.2500	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Bristol	25005	1200570	03	0102	10300603	1.00	MANEVU2002	0.0100	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Bristol	25005	1200617	05	0103	10300603	20.00	MANEVU2002	0.1010	0.0000	0.0003	STAR HOLDINGS LP
MA	Bristol	25005	1200619	01	0201	10300504	17.00	MANEVU2002	0.2900	0.0000	0.0003	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200619	01	0101	10300602	17.00	MANEVU2002	0.2100	0.0000	0.0002	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200619	02	0201	10300504	17.00	MANEVU2002	0.2900	0.0000	0.0003	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200619	02	0101	10300602	17.00	MANEVU2002	0.2100	0.0000	0.0002	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200619	03	0102	10300602	17.00	MANEVU2002	0.3450	0.0000	0.0009	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200619	04	0103	10300603	1.00	MANEVU2002	0.0600	0.0000	0.0002	ACUSHNET COMPANY - BALL PLANT III
MA	Bristol	25005	1200622	02	0102	10300603	3.00	MANEVU2002	0.2500	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Bristol	25005	1200622	03	0103	10300603	1.00	MANEVU2002	0.0100	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Bristol	25005	1200626	01	0101	10300501	12.00	MANEVU2002	1.0000	0.0000	0.0001	NEW BEDFORD AJ GOMES
MA	Bristol	25005	1200633	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	NEW BEDFORD MCFADDEN

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MA	Bristol	25005	1200633	02	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	NEW BEDFORD MCFADDEN
MA	Bristol	25005	1200638	01	0101	10200603	1.00	MANEVU2002	0.1200	0.0000	0.0003	MAIN STREET TEXTILE
MA	Bristol	25005	1200646	02	0101	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0000	NEW BEDFORD HIGH SCHOOL
MA	Bristol	25005	1200647	01	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0000	NEW BEDFORD NORMADIN
MA	Bristol	25005	1200657	01	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0011	NEW BEDFORD RODRIGUES ADMINSTRATION BLDG
MA	Bristol	25005	1200657	02	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0011	NEW BEDFORD RODRIGUES ADMINSTRATION BLDG
MA	Bristol	25005	1200659	01	0101	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0000	NEW BEDFORD KEITH JUNIOR HIGH SCHOOL
MA	Bristol	25005	1200659	02	0101	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0000	NEW BEDFORD KEITH JUNIOR HIGH SCHOOL
MA	Bristol	25005	1200673	01	0101	10300603	3.00	MANEVU2002	0.1900	0.0000	0.0002	HOMELAND BUILDERS
MA	Bristol	25005	1200707	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0011	AD A DAY COMPANY INCORPORATED
MA	Bristol	25005	1200724	01	0101	10300602	16.00	MANEVU2002	1.0000	0.0000	0.0001	SEEKONK HIGH SCHOOL
MA	Bristol	25005	1200724	02	0101	10300602	16.00	MANEVU2002	1.0000	0.0000	0.0001	SEEKONK HIGH SCHOOL
MA	Bristol	25005	1200735	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0027	SWANSEA BROWN ELEMENTARY SCHOOL
MA	Bristol	25005	1200807	01	0101	10200401	21.00	MANEVU2002	1.0000	0.0000	0.0001	GLAD REALTY
MA	Bristol	25005	1200807	02	0101	10200401	16.00	MANEVU2002	1.0000	0.0000	0.0001	GLAD REALTY
MA	Bristol	25005	1200820	01	0101	10200401	25.00	MANEVU2002	10.0000	0.0000	0.0220	SWAN FINISHING COMPANY
MA	Bristol	25005	1200820	02	0101	10200401	25.00	MANEVU2002	10.0000	0.0000	0.0220	SWAN FINISHING COMPANY
MA	Bristol	25005	1200820	03	0101	10200401	25.00	MANEVU2002	10.0000	0.0000	0.0220	SWAN FINISHING COMPANY
MA	Bristol	25005	1200821	01	0101	10200504	10.00	MANEVU2002	1.0000	0.0000	0.0027	BRISTOL PACIFIC-HOWARD ARTHUR MILLS
MA	Bristol	25005	1200822	01	0101	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN SEAFOODS INTERNATIONAL LLC
MA	Bristol	25005	1200822	02	0101	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN SEAFOODS INTERNATIONAL LLC
MA	Bristol	25005	1200824	01	0201	10200401	4.00	MANEVU2002	1.0000	0.0000	0.0027	JUSTIN CLOTHING CO
MA	Bristol	25005	1200830	01	0101	10200401	14.00	MANEVU2002	1.0000	0.0000	0.0001	TILLY REALTY
MA	Bristol	25005	1200830	02	0102	10200401	14.00	MANEVU2002	1.0000	0.0000	0.0001	TILLY REALTY
MA	Bristol	25005	1200848	01	0101	10300603	7.00	MANEVU2002	0.3300	0.0000	0.0000	ELBE CESCO UNIONBOOK
MA	Bristol	25005	1200858	01	0101	10200401	12.00	MANEVU2002	2.0000	0.0000	0.0055	CROWN SERVICE SYSTEM
MA	Bristol	25005	1200859	02	0101	10200401	15.00	MANEVU2002	6.0000	0.0000	0.0000	TILLOTSON COMPLEX
MA	Bristol	25005	1200859	03	0101	10200401	15.00	MANEVU2002	10.0000	0.0000	0.0275	TILLOTSON COMPLEX
MA	Bristol	25005	1200859	03	0201	10200602	15.00	MANEVU2002	1.0000	0.0000	0.0027	TILLOTSON COMPLEX
MA	Bristol	25005	1200859	04	0102	10200401	12.00	MANEVU2002	2.0000	0.0000	0.0055	TILLOTSON COMPLEX
MA	Bristol	25005	1200859	04	0202	10200602	12.00	MANEVU2002	2.0000	0.0000	0.0055	TILLOTSON COMPLEX
MA	Bristol	25005	1200861	01	0101	10200401	5.00	MANEVU2002	3.0000	0.0000	0.0082	CH YATES RUBBER COMPANY
MA	Bristol	25005	1200861	01	0201	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	CH YATES RUBBER COMPANY
MA	Bristol	25005	1200862	01	0101	10200504	10.00	MANEVU2002	2.0000	0.0000	0.0000	QUAKER FABRIC PLANT J
MA	Bristol	25005	1200870	01	0101	10200602	13.00	MANEVU2002	8.0000	0.0000	0.0220	STONE CONTAINER CORP
MA	Bristol	25005	1200875	10	0110	10200603	5.00	MANEVU2002	0.0500	0.0000	0.0001	TITLEIST BLDG C
MA	Bristol	25005	1200875	11	0111	10200603	5.00	MANEVU2002	0.0500	0.0000	0.0001	TITLEIST BLDG C
MA	Bristol	25005	1200877	01	0101	10200602	25.00	MANEVU2002	1.0000	0.0000	0.0027	SEA WATCH INTERNATIONAL LTD
MA	Bristol	25005	1200877	02	0102	10200602	29.00	MANEVU2002	1.0000	0.0000	0.0027	SEA WATCH INTERNATIONAL LTD
MA	Bristol	25005	1200879	01	0101	10200603	1.00	MANEVU2002	0.0490	0.0000	0.0001	PROFESSIONAL CONTRACT
MA	Bristol	25005	1200879	02	0101	10200603	1.00	MANEVU2002	0.0660	0.0000	0.0001	PROFESSIONAL CONTRACT
MA	Bristol	25005	1200879	05	0104	10300603	2.00	MANEVU2002	0.1150	0.0000	0.0002	PROFESSIONAL CONTRACT
MA	Bristol	25005	1200887	01	0101	10300401	26.00	MANEVU2002	1.0000	0.0000	0.0027	NEW BEDFORD REGIONAL HIGH SCHOOL
MA	Bristol	25005	1200887	02	0101	10300401	26.00	MANEVU2002	3.0000	0.0000	0.0082	NEW BEDFORD REGIONAL HIGH SCHOOL
MA	Bristol	25005	1200887	03	0101	10300401	26.00	MANEVU2002	1.0000	0.0000	0.0027	NEW BEDFORD REGIONAL HIGH SCHOOL
MA	Bristol	25005	1200912	02	0102	10200603	3.00	MANEVU2002	0.2800	0.0000	0.0000	FALL RIVER SSI
MA	Bristol	25005	1200912	04	0203	10200603	2.00	MANEVU2002	0.1300	0.0000	0.0000	FALL RIVER SSI
MA	Bristol	25005	1200912	06	0105	10200603	1.00	MANEVU2002	0.0420	0.0000	0.0001	FALL RIVER SSI
MA	Bristol	25005	1200912	07	0106	10200603	1.00	MANEVU2002	0.0420	0.0000	0.0001	FALL RIVER SSI
MA	Bristol	25005	1200912	08	0107	10200603	1.00	MANEVU2002	0.0030	0.0000	0.0000	FALL RIVER SSI
MA	Bristol	25005	1200920	01	0101	10300603	3.00	MANEVU2002	0.2000	0.0000	0.0005	GENERAL DYNAMICS C4 SYSTEMS
MA	Dukes	25007	1200349	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0022	MARTHAS VINEYARD HOSPITAL

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MA	Dukes	25007	1200349	03	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0022	MARTHAS VINEYARD HOSPITAL
MA	Essex	25009	1190138	01	0201	10200601	199.00	MANEVU2002	19.0000	0.0000	0.0522	GENERAL ELECTRIC AIRCRAFT ENGINES
MA	Essex	25009	1190138	02	0202	10200601	195.00	MANEVU2002	59.0000	0.0000	0.1621	GENERAL ELECTRIC AIRCRAFT ENGINES
MA	Essex	25009	1190138	03	0203	10200601	382.00	MANEVU2002	213.0000	0.0000	0.5852	GENERAL ELECTRIC AIRCRAFT ENGINES
MA	Essex	25009	1190138	07	0206	10200601	243.00	MANEVU2002	14.0000	0.0000	0.0385	GENERAL ELECTRIC AIRCRAFT ENGINES
MA	Essex	25009	1190159	02	0101	10200602	8.00	MANEVU2002	0.1860	0.0000	0.0020	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	04	0102	10200602	4.00	MANEVU2002	0.1040	0.0000	0.0003	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	05	0103	10200602	21.00	MANEVU2002	1.4060	0.0000	0.0000	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	06	0104	10200603	4.00	MANEVU2002	0.5090	0.0000	0.0014	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	07	0105	10200603	1.00	MANEVU2002	0.0350	0.0000	0.0001	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	08	0106	10200603	3.00	MANEVU2002	0.1370	0.0000	0.0004	BOSTIK FINDLEY INC
MA	Essex	25009	1190159	14	0311	10300602	6.00	MANEVU2002	1.9940	0.0000	0.0055	BOSTIK FINDLEY INC
MA	Essex	25009	1190175	01	0201	10200602	87.00	MANEVU2002	2.0000	0.0000	0.0042	EASTMAN GELATINE CORP
MA	Essex	25009	1190175	02	0101	10200401	87.00	MANEVU2002	1.0000	0.0000	0.0000	EASTMAN GELATINE CORP
MA	Essex	25009	1190175	02	0201	10200602	87.00	MANEVU2002	1.0000	0.0000	0.0000	EASTMAN GELATINE CORP
MA	Essex	25009	1190175	03	0201	10200602	92.00	MANEVU2002	26.0000	0.0000	0.0743	EASTMAN GELATINE CORP
MA	Essex	25009	1190175	04	0202	10200602	93.00	MANEVU2002	21.0000	0.0000	0.0600	EASTMAN GELATINE CORP
MA	Essex	25009	1190175	05	0203	10200603	93.00	MANEVU2002	49.0000	0.0000	0.1508	EASTMAN GELATINE CORP
MA	Essex	25009	1190181	02	0102	10200602	15.00	MANEVU2002	1.0000	0.0000	0.0027	TRAVEL LEATHER CO
MA	Essex	25009	1190242	01	0101	10300401	56.00	MANEVU2002	7.0000	0.0000	0.0015	HOGAN REGIONAL CENTER
MA	Essex	25009	1190242	02	0101	10300401	56.00	MANEVU2002	13.0000	0.0000	0.0429	HOGAN REGIONAL CENTER
MA	Essex	25009	1190252	01	0101	10300504	3.00	MANEVU2002	6.0000	0.0000	0.0000	GORDON CONWELL THEOLOGICAL SEMINARY
MA	Essex	25009	1190252	02	0102	10300501	3.00	MANEVU2002	2.0000	0.0000	0.0000	GORDON CONWELL THEOLOGICAL SEMINARY
MA	Essex	25009	1190252	03	0102	10300501	3.00	MANEVU2002	2.0000	0.0000	0.0000	GORDON CONWELL THEOLOGICAL SEMINARY
MA	Essex	25009	1190259	01	0101	10300602	35.00	MANEVU2002	1.0000	0.0000	0.0027	SALEM STATE POWER PL
MA	Essex	25009	1190259	02	0101	10300401	49.00	MANEVU2002	2.0000	0.0000	0.0055	SALEM STATE POWER PL
MA	Essex	25009	1190300	01	0101	10200501	2.00	MANEVU2002	0.0520	0.0000	0.0001	CL HAUTHAWAY & SONS
MA	Essex	25009	1190300	02	0101	10200501	2.00	MANEVU2002	0.0565	0.0000	0.0000	CL HAUTHAWAY & SONS
MA	Essex	25009	1190303	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0027	KINDRED HOSPITAL BOSTON NORTH SHORE
MA	Essex	25009	1190303	02	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0027	KINDRED HOSPITAL BOSTON NORTH SHORE
MA	Essex	25009	1190303	03	0101	10300501	13.00	MANEVU2002	1.0000	0.0000	0.0027	KINDRED HOSPITAL BOSTON NORTH SHORE
MA	Essex	25009	1190445	01	0101	10300603	6.00	MANEVU2002	0.0570	0.0000	0.0002	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	02	0102	10300603	4.00	MANEVU2002	1.1500	0.0000	0.0032	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	03	0103	10300603	4.00	MANEVU2002	0.3840	0.0000	0.0011	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	06	0106	10300603	4.00	MANEVU2002	0.4600	0.0000	0.0013	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	07	0107	10300603	4.00	MANEVU2002	0.9600	0.0000	0.0026	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	08	0108	10300603	4.00	MANEVU2002	0.8800	0.0000	0.0024	GORTONS OF GLOUCESTER
MA	Essex	25009	1190445	09	0109	10300603	4.00	MANEVU2002	0.8100	0.0000	0.0022	GORTONS OF GLOUCESTER
MA	Essex	25009	1190501	01	0101	10200603	6.00	MANEVU2002	0.5810	0.0000	0.0011	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	02	0102	10200603	3.00	MANEVU2002	0.3305	0.0000	0.0007	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	03	0103	10200603	5.00	MANEVU2002	0.5175	0.0000	0.0010	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	04	0104	10300603	5.00	MANEVU2002	0.5175	0.0000	0.0010	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	05	0105	10300603	5.00	MANEVU2002	0.5175	0.0000	0.0010	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	06	0106	10300603	6.00	MANEVU2002	0.5810	0.0000	0.0011	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	07	0107	10300603	6.00	MANEVU2002	0.5810	0.0000	0.0011	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	08	0108	10300603	6.00	MANEVU2002	0.5810	0.0000	0.0011	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	09	0109	10300603	6.00	MANEVU2002	0.5810	0.0000	0.0011	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	12	0112	10300603	1.00	MANEVU2002	0.0285	0.0000	0.0000	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	21	0121	10200603	2.00	MANEVU2002	0.0870	0.0000	0.0002	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190501	22	0122	10300603	1.00	MANEVU2002	0.0205	0.0000	0.0001	SOUTH ESSEX SEWERAGE
MA	Essex	25009	1190511	02	0102	10200602	12.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY DELIVERY SALEM LNG
MA	Essex	25009	1190563	01	0101	10300401	20.00	MANEVU2002	5.0000	0.0000	0.0077	NORTH SHORE MEDICAL

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MA	Essex	25009	1190563	02	0101	10300401	20.00	MANEVU2002	5.0000	0.0000	0.0077	NORTH SHORE MEDICAL
MA	Essex	25009	1190563	03	0101	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0046	NORTH SHORE MEDICAL
MA	Essex	25009	1190653	01	0101	10300603	9.00	MANEVU2002	0.1050	0.0000	0.0000	MILLIPORE CORPORATION
MA	Essex	25009	1190653	02	0102	10200603	9.00	MANEVU2002	0.1050	0.0000	0.0000	MILLIPORE CORPORATION
MA	Essex	25009	1190654	01	0101	10300501	10.00	MANEVU2002	0.4300	0.0000	0.0000	HUNT CENTER
MA	Essex	25009	1190654	06	0204	10300603	10.00	MANEVU2002	1.1500	0.0000	0.0013	HUNT CENTER
MA	Essex	25009	1190656	01	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0011	DANVERS HIGH SCHOOL
MA	Essex	25009	1190683	01	0101	10200603	6.00	MANEVU2002	2.0000	0.0000	0.0022	ITW DEVCON
MA	Essex	25009	1190683	02	0102	10200603	1.00	MANEVU2002	0.3500	0.0000	0.0010	ITW DEVCON
MA	Essex	25009	1190691	01	0101	10300603	6.00	MANEVU2002	2.0000	0.0000	0.0055	ESSEX COUNTY COURT HOUSE
MA	Essex	25009	1190691	02	0101	10300603	6.00	MANEVU2002	2.0000	0.0000	0.0055	ESSEX COUNTY COURT HOUSE
MA	Essex	25009	1190691	03	0101	10300603	6.00	MANEVU2002	2.0000	0.0000	0.0055	ESSEX COUNTY COURT HOUSE
MA	Essex	25009	1190715	01	0201	10300602	22.00	MANEVU2002	5.0000	0.0000	0.0143	BEVERLY HOSPITAL
MA	Essex	25009	1190715	02	0201	10300602	26.00	MANEVU2002	1.0000	0.0000	0.0030	BEVERLY HOSPITAL
MA	Essex	25009	1190716	01	0101	10200501	4.00	MANEVU2002	0.0100	0.0000	0.0000	CPI-BEVERLY MICROWAVE DIVISION
MA	Essex	25009	1190804	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190804	02	0102	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0011	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190804	03	0103	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190804	06	0106	10200501	1.00	MANEVU2002	0.0100	0.0000	0.0000	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190804	07	0107	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0011	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190804	08	0108	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0011	VARIAN SEMICONDUCTOR EQUIPMENT ASSO
MA	Essex	25009	1190820	03	0103	10300501	0.00	MANEVU2002	0.1000	0.0000	0.0000	UNIVAR USA INCORPORATED
MA	Essex	25009	1190833	01	0201	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	UNION HOSPITAL
MA	Essex	25009	1190833	02	0201	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	UNION HOSPITAL
MA	Essex	25009	1190833	03	0201	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	UNION HOSPITAL
MA	Essex	25009	1190833	04	0201	10300603	1.00	MANEVU2002	2.0000	0.0000	0.0055	UNION HOSPITAL
MA	Essex	25009	1190833	06	0201	10300602	1.00	MANEVU2002	2.0000	0.0000	0.0055	UNION HOSPITAL
MA	Essex	25009	1190836	01	0101	10200401	8.00	MANEVU2002	1.0000	0.0000	0.0000	LYNN PLASTICS COMPANY LLC
MA	Essex	25009	1190838	01	0101	10200602	17.00	MANEVU2002	0.5350	0.0000	0.0015	GARELICK FARMS - LYNN
MA	Essex	25009	1190838	02	0101	10200602	21.00	MANEVU2002	0.7150	0.0000	0.0020	GARELICK FARMS - LYNN
MA	Essex	25009	1190838	03	0101	10200602	10.00	MANEVU2002	0.5020	0.0000	0.0014	GARELICK FARMS - LYNN
MA	Essex	25009	1190838	04	0101	10200603	4.00	MANEVU2002	0.6780	0.0000	0.0019	GARELICK FARMS - LYNN
MA	Essex	25009	1190838	06	0103	10200501	4.00	MANEVU2002	0.5610	0.0000	0.0006	GARELICK FARMS - LYNN
MA	Essex	25009	1190838	06	0203	10200602	4.00	MANEVU2002	0.2660	0.0000	0.0003	GARELICK FARMS - LYNN
MA	Essex	25009	1190931	01	0101	10300603	7.00	MANEVU2002	0.2000	0.0000	0.0002	VERIZON MASSACHUSETTS
MA	Essex	25009	1190931	02	0101	10300603	7.00	MANEVU2002	0.2000	0.0000	0.0002	VERIZON MASSACHUSETTS
MA	Essex	25009	1190931	03	0102	10300603	7.00	MANEVU2002	0.0005	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Essex	25009	1190983	01	0101	10200501	10.00	MANEVU2002	1.0000	0.0000	0.0027	SALEM OIL & GREASE COMPANY
MA	Essex	25009	1190983	02	0101	10200501	0.00	MANEVU2002	1.0000	0.0000	0.0027	SALEM OIL & GREASE COMPANY
MA	Essex	25009	1190983	03	0102	10200501	10.00	MANEVU2002	0.3000	0.0000	0.0008	SALEM OIL & GREASE COMPANY
MA	Essex	25009	1191021	02	0101	10200602	13.00	MANEVU2002	0.3300	0.0000	0.0009	NORTHSHORE MALL
MA	Essex	25009	1191021	03	0101	10200602	14.00	MANEVU2002	0.3300	0.0000	0.0009	NORTHSHORE MALL
MA	Essex	25009	1191068	01	0101	10300401	8.00	MANEVU2002	1.0000	0.0000	0.0000	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	02	0101	10300401	8.00	MANEVU2002	1.0000	0.0000	0.0000	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	04	0203	10300603	3.00	MANEVU2002	0.0330	0.0000	0.0002	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	05	0204	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	06	0205	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	08	0206	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191068	09	0207	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	ADDISON GILBERT HOSPITAL
MA	Essex	25009	1191331	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	TANNERY II
MA	Essex	25009	1191342	01	0101	10300603	9.00	MANEVU2002	1.0000	0.0000	0.0027	HARBOR LOFTS VAMP BD
MA	Essex	25009	1191387	01	0101	10200501	8.00	MANEVU2002	1.0000	0.0000	0.0027	STAHL USA INCORPORATED

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MA	Essex	25009	1191387	02	0102	10200501	10.00	MANEVU2002	1.0000	0.0000	0.0027	STAHL USA INCORPORATED
MA	Essex	25009	1191387	03	0203	10200501	4.00	MANEVU2002	0.1210	0.0000	0.0003	STAHL USA INCORPORATED
MA	Essex	25009	1191387	04	0104	10200501	1.00	MANEVU2002	0.2085	0.0000	0.0002	STAHL USA INCORPORATED
MA	Essex	25009	1191533	02	0101	10200603	5.00	MANEVU2002	1.9265	0.0000	0.0053	BRADFORD & BIGELOW INC
MA	Essex	25009	1191841	01	0101	10200501	13.00	MANEVU2002	0.3650	0.0000	0.0010	OSRAM SYLVANIA INC
MA	Essex	25009	1191841	01	0201	10200602	13.00	MANEVU2002	1.0000	0.0000	0.0027	OSRAM SYLVANIA INC
MA	Essex	25009	1191841	02	0101	10200501	13.00	MANEVU2002	0.3650	0.0000	0.0010	OSRAM SYLVANIA INC
MA	Essex	25009	1191841	02	0201	10200602	13.00	MANEVU2002	0.2050	0.0000	0.0006	OSRAM SYLVANIA INC
MA	Essex	25009	1191906	01	0101	10300603	4.00	MANEVU2002	0.0050	0.0000	0.0000	KEYSPAN ENERGY-DANVERSPORT
MA	Essex	25009	1191906	02	0102	10300501	4.00	MANEVU2002	0.0070	0.0000	0.0000	KEYSPAN ENERGY-DANVERSPORT
MA	Essex	25009	1191906	07	0107	10300603	1.00	MANEVU2002	0.0050	0.0000	0.0000	KEYSPAN ENERGY-DANVERSPORT
MA	Essex	25009	1191938	01	0101	10300501	8.00	MANEVU2002	0.1400	0.0000	0.0000	MACLELLAN-AMESBURY
MA	Essex	25009	1191946	01	0101	10300603	9.00	MANEVU2002	0.4940	0.0000	0.0014	ENDICOTT COLLEGE
MA	Essex	25009	1191946	02	0102	10300603	9.00	MANEVU2002	0.3000	0.0000	0.0008	ENDICOTT COLLEGE
MA	Essex	25009	1191946	03	0103	10300603	8.00	MANEVU2002	0.3620	0.0000	0.0010	ENDICOTT COLLEGE
MA	Essex	25009	1191946	06	0106	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	ENDICOTT COLLEGE
MA	Essex	25009	1191946	07	0107	10300501	1.00	MANEVU2002	0.0950	0.0000	0.0003	ENDICOTT COLLEGE
MA	Essex	25009	1192860	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0004	US POSTAL SERVICE
MA	Essex	25009	1192860	02	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0004	US POSTAL SERVICE
MA	Essex	25009	1192860	03	0102	10300603	2.00	MANEVU2002	0.0780	0.0000	0.0000	US POSTAL SERVICE
MA	Essex	25009	1197654	01	0201	10200501	325.00	MANEVU2002	1.0000	0.0000	0.0030	WHEELABRATOR SAUGUS JV
MA	Essex	25009	1197654	02	0201	10200501	325.00	MANEVU2002	1.0000	0.0000	0.0030	WHEELABRATOR SAUGUS JV
MA	Essex	25009	1210003	01	0101	10300501	41.00	MANEVU2002	2.0000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210003	01	0201	10300602	41.00	MANEVU2002	0.9000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210003	02	0101	10300501	41.00	MANEVU2002	0.4000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210003	02	0201	10300602	41.00	MANEVU2002	0.1000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210003	03	0101	10300501	41.00	MANEVU2002	1.0000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210003	03	0201	10300602	41.00	MANEVU2002	0.9000	0.0000	0.0000	PHILLIPS ACADEMY
MA	Essex	25009	1210009	01	0101	10200401	5.00	MANEVU2002	2.0000	0.0000	0.0000	EVERETT MILLS STEAM CO
MA	Essex	25009	1210009	01	0201	10200603	5.00	MANEVU2002	2.0000	0.0000	0.0000	EVERETT MILLS STEAM CO
MA	Essex	25009	1210009	02	0101	10200401	24.00	MANEVU2002	1.0000	0.0000	0.0000	EVERETT MILLS STEAM CO
MA	Essex	25009	1210009	02	0201	10200602	24.00	MANEVU2002	1.0000	0.0000	0.0000	EVERETT MILLS STEAM CO
MA	Essex	25009	1210017	01	0101	10200401	150.00	MANEVU2002	174.0000	0.0000	0.4780	HAVERHILL PAPERBOARD
MA	Essex	25009	1210017	01	0201	10200601	150.00	MANEVU2002	13.0000	0.0000	0.0357	HAVERHILL PAPERBOARD
MA	Essex	25009	1210025	02	0101	10300401	11.00	MANEVU2002	2.0000	0.0000	0.0000	LAWRENCE GENERAL HOSPITAL
MA	Essex	25009	1210025	04	0101	10300401	15.00	MANEVU2002	8.0000	0.0000	0.0220	LAWRENCE GENERAL HOSPITAL
MA	Essex	25009	1210027	01	0201	10200603	6.00	MANEVU2002	0.3500	0.0000	0.0005	SOUTHWICK CLOTHING LLC
MA	Essex	25009	1210027	02	0202	10200603	6.00	MANEVU2002	0.5500	0.0000	0.0008	SOUTHWICK CLOTHING LLC
MA	Essex	25009	1210029	01	0101	10200602	17.00	MANEVU2002	2.0000	0.0000	0.0000	WOOD AYER REALTY COMPANY
MA	Essex	25009	1210029	02	0101	10200602	17.00	MANEVU2002	2.0000	0.0000	0.0000	WOOD AYER REALTY COMPANY
MA	Essex	25009	1210030	01	0101	10200401	56.00	MANEVU2002	40.0000	0.0000	0.1055	MERRIMAC PAPER COMPANY
MA	Essex	25009	1210032	02	0101	10200401	25.00	MANEVU2002	2.0000	0.0000	0.0000	PACIFIC MILLS INDUSTRIAL COMPLEX
MA	Essex	25009	1210032	03	0101	10200401	25.00	MANEVU2002	2.0000	0.0000	0.0000	PACIFIC MILLS INDUSTRIAL COMPLEX
MA	Essex	25009	1210053	02	0101	10200401	48.00	MANEVU2002	1.0000	0.0000	0.0000	LUCENT TECHNOLOGIES
MA	Essex	25009	1210053	03	0101	10200401	40.00	MANEVU2002	11.0000	0.0000	0.0459	LUCENT TECHNOLOGIES
MA	Essex	25009	1210053	04	0101	10200401	48.00	MANEVU2002	11.0000	0.0000	0.0000	LUCENT TECHNOLOGIES
MA	Essex	25009	1210063	01	0101	10200401	29.00	MANEVU2002	3.0000	0.0000	0.0082	GILLETTE COMPANY THE
MA	Essex	25009	1210063	02	0102	10200401	29.00	MANEVU2002	4.0000	0.0000	0.0110	GILLETTE COMPANY THE
MA	Essex	25009	1210063	03	0103	10200401	29.00	MANEVU2002	10.0000	0.0000	0.0275	GILLETTE COMPANY THE
MA	Essex	25009	1210066	07	0104	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0011	ITW FOILMARK INC
MA	Essex	25009	1210081	01	0101	10300602	10.00	MANEVU2002	0.1000	0.0000	0.0001	EISAI RESEARCH INSTI
MA	Essex	25009	1210081	02	0101	10300603	5.00	MANEVU2002	0.2000	0.0000	0.0002	EISAI RESEARCH INSTI

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MA	Essex	25009	1210081	03	0101	10300603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210081	04	0101	10300602	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210081	05	0101	10300603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210081	06	0101	10300603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210081	07	0101	10200603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210093	01	0401	10200504	15.00	MANEVU2002	2.0000	0.0000	0.0033	VERNON PLASTICS INC
MA	Essex	25009	1210093	01	0201	10200602	15.00	MANEVU2002	1.0000	0.0000	0.0016	VERNON PLASTICS INC
MA	Essex	25009	1210095	05	0105	10300603	1.00	MANEVU2002	0.1000	0.0000	0.0002	BRADFORD COLLEGE
MA	Essex	25009	1210095	08	0106	10300603	1.00	MANEVU2002	0.0900	0.0000	0.0002	BRADFORD COLLEGE
MA	Essex	25009	1210095	15	0108	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	BRADFORD COLLEGE
MA	Essex	25009	1210095	16	0109	10300501	1.00	MANEVU2002	0.0250	0.0000	0.0000	BRADFORD COLLEGE
MA	Essex	25009	1210095	17	0109	10300501	1.00	MANEVU2002	0.0200	0.0000	0.0000	BRADFORD COLLEGE
MA	Essex	25009	1210095	18	0110	10300603	1.00	MANEVU2002	0.0140	0.0000	0.0000	BRADFORD COLLEGE
MA	Essex	25009	1210095	19	0111	10300603	1.00	MANEVU2002	0.0200	0.0000	0.0001	BRADFORD COLLEGE
MA	Essex	25009	1210095	21	0112	10300603	1.00	MANEVU2002	0.0200	0.0000	0.0000	BRADFORD COLLEGE
MA	Essex	25009	1210095	22	0113	10300603	1.00	MANEVU2002	0.0200	0.0000	0.0000	BRADFORD COLLEGE
MA	Essex	25009	1210095	23	0114	10300603	1.00	MANEVU2002	0.0870	0.0000	0.0001	BRADFORD COLLEGE
MA	Essex	25009	1210095	24	0114	10300603	1.00	MANEVU2002	0.0870	0.0000	0.0001	BRADFORD COLLEGE
MA	Essex	25009	1210095	25	0114	10300603	1.00	MANEVU2002	0.0870	0.0000	0.0001	BRADFORD COLLEGE
MA	Essex	25009	1210102	09	0107	10200603	3.00	MANEVU2002	0.2000	0.0000	0.0005	HOOD COATINGS
MA	Essex	25009	1210106	01	0101	10200603	6.00	MANEVU2002	2.0000	0.0000	0.0000	RIVERWALK DEV INC
MA	Essex	25009	1210106	02	0101	10200603	6.00	MANEVU2002	2.0000	0.0000	0.0000	RIVERWALK DEV INC
MA	Essex	25009	1210106	03	0102	10200603	3.00	MANEVU2002	2.0000	0.0000	0.0000	RIVERWALK DEV INC
MA	Essex	25009	1210108	03	0103	10200603	5.00	MANEVU2002	0.2500	0.0000	0.0007	SCHNEIDER AUTOMATION
MA	Essex	25009	1210124	01	0101	10200401	16.00	MANEVU2002	4.0000	0.0000	0.0110	ARAMARK UNIFORMS
MA	Essex	25009	1210140	01	0101	10200501	6.00	MANEVU2002	1.0000	0.0000	0.0000	ANDREA MANAGEMENT COMPANY
MA	Essex	25009	1210144	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0027	US INTERNAL REVENUE SERVICE
MA	Essex	25009	1210144	02	0102	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0055	US INTERNAL REVENUE SERVICE
MA	Essex	25009	1210144	03	0103	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0000	US INTERNAL REVENUE SERVICE
MA	Essex	25009	1210144	04	0104	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0000	US INTERNAL REVENUE SERVICE
MA	Essex	25009	1210150	03	0103	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0027	NOVEON INCORPORATED
MA	Essex	25009	1210164	01	0101	10300602	13.00	MANEVU2002	0.8015	0.0000	0.0009	MERRIMACK COLLEGE
MA	Essex	25009	1210164	02	0102	10300602	13.00	MANEVU2002	0.8015	0.0000	0.0009	MERRIMACK COLLEGE
MA	Essex	25009	1210164	03	0103	10300603	2.00	MANEVU2002	0.2745	0.0000	0.0003	MERRIMACK COLLEGE
MA	Essex	25009	1210164	04	0104	10300603	2.00	MANEVU2002	0.2745	0.0000	0.0003	MERRIMACK COLLEGE
MA	Essex	25009	1210164	05	0105	10300603	2.00	MANEVU2002	0.1885	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210164	06	0105	10300603	2.00	MANEVU2002	0.1885	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210164	07	0106	10300603	2.00	MANEVU2002	0.1340	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	08	0107	10300603	1.00	MANEVU2002	0.1825	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210164	09	0108	10300603	2.00	MANEVU2002	0.2195	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210164	10	0108	10300603	2.00	MANEVU2002	0.2195	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210164	11	0109	10300603	1.00	MANEVU2002	0.0855	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	12	0110	10300603	1.00	MANEVU2002	0.0825	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	13	0110	10300603	1.00	MANEVU2002	0.0825	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	14	0111	10300603	1.00	MANEVU2002	0.0890	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	18	0115	10300603	2.00	MANEVU2002	0.1275	0.0000	0.0001	MERRIMACK COLLEGE
MA	Essex	25009	1210164	19	0116	10300603	2.00	MANEVU2002	0.1825	0.0000	0.0002	MERRIMACK COLLEGE
MA	Essex	25009	1210185	01	0101	10300603	5.00	MANEVU2002	5.0000	0.0000	0.0055	MERRIMACK MUTUAL FIRE INSURANCE COMPANY
MA	Essex	25009	1210185	02	0101	10300603	5.00	MANEVU2002	5.0000	0.0000	0.0055	MERRIMACK MUTUAL FIRE INSURANCE COMPANY
MA	Essex	25009	1210194	01	0101	10200603	8.00	MANEVU2002	0.8000	0.0000	0.0022	RAYTHEON RF COMPONENTS
MA	Essex	25009	1210194	02	0101	10200603	8.00	MANEVU2002	0.8000	0.0000	0.0022	RAYTHEON RF COMPONENTS
MA	Essex	25009	1210194	03	0102	10200603	6.00	MANEVU2002	0.9000	0.0000	0.0025	RAYTHEON RF COMPONENTS

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MA	Essex	25009	1210194	04	0102	10200603	6.00	MANEVU2002	0.9000	0.0000	0.0025	RAYTHEON RF COMPONENTS
MA	Essex	25009	1210201	01	0101	10300504	3.00	MANEVU2002	2.0000	0.0000	0.0029	MERRIMACK VALLEY HOSPITAL
MA	Essex	25009	1210201	01	0201	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0014	MERRIMACK VALLEY HOSPITAL
MA	Essex	25009	1210202	01	0101	10200401	25.00	MANEVU2002	4.0000	0.0000	0.0110	DYETEX INC
MA	Essex	25009	1210212	01	0101	10200401	70.00	MANEVU2002	7.0000	0.0000	0.0008	MALDEN MILLS INDUSTRIES
MA	Essex	25009	1210212	01	0201	10200602	70.00	MANEVU2002	1.0000	0.0000	0.0001	MALDEN MILLS INDUSTRIES
MA	Essex	25009	1210212	02	0101	10200401	70.00	MANEVU2002	4.0000	0.0000	0.0013	MALDEN MILLS INDUSTRIES
MA	Essex	25009	1210212	02	0201	10200602	70.00	MANEVU2002	0.3345	0.0000	0.0001	MALDEN MILLS INDUSTRIES
MA	Essex	25009	1210213	01	0101	10300401	18.00	MANEVU2002	4.0000	0.0000	0.0066	HOLY FAMILY HOSPITAL
MA	Essex	25009	1210213	01	0201	10300602	18.00	MANEVU2002	0.2960	0.0000	0.0005	HOLY FAMILY HOSPITAL
MA	Essex	25009	1210213	02	0101	10300401	18.00	MANEVU2002	2.0000	0.0000	0.0064	HOLY FAMILY HOSPITAL
MA	Essex	25009	1210213	03	0101	10300401	18.00	MANEVU2002	3.0000	0.0000	0.0007	HOLY FAMILY HOSPITAL
MA	Essex	25009	1210219	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0026	ANDOVER COATED PRODUCTS INC
MA	Essex	25009	1210221	01	0101	10200603	8.00	MANEVU2002	0.4000	0.0000	0.0000	FERRAZ SHAWMUT INC
MA	Essex	25009	1210221	01	0201	10200501	8.00	MANEVU2002	0.2800	0.0000	0.0000	FERRAZ SHAWMUT INC
MA	Essex	25009	1210221	02	0102	10200603	8.00	MANEVU2002	0.0400	0.0000	0.0000	FERRAZ SHAWMUT INC
MA	Essex	25009	1210221	02	0202	10200501	8.00	MANEVU2002	0.2800	0.0000	0.0000	FERRAZ SHAWMUT INC
MA	Essex	25009	1210224	05	0104	10200603	2.00	MANEVU2002	0.4300	0.0000	0.0012	BERKSHIRE MANUFACTURED PRODUCTS INC
MA	Essex	25009	1210225	01	0101	10300401	15.00	MANEVU2002	3.0000	0.0000	0.0082	ANNA JAQUES HOSPITAL
MA	Essex	25009	1210225	02	0201	10300602	15.00	MANEVU2002	1.0000	0.0000	0.0027	ANNA JAQUES HOSPITAL
MA	Essex	25009	1210231	01	0101	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0027	FANTINI BAKERY
MA	Essex	25009	1210241	01	0201	10300602	13.00	MANEVU2002	0.0800	0.0000	0.0000	BROOKS SCHOOL
MA	Essex	25009	1210241	02	0201	10300602	13.00	MANEVU2002	0.0800	0.0000	0.0000	BROOKS SCHOOL
MA	Essex	25009	1210241	03	0201	10300601	6.00	MANEVU2002	0.0300	0.0000	0.0000	BROOKS SCHOOL
MA	Essex	25009	1210241	04	0102	10300501	7.00	MANEVU2002	0.8800	0.0000	0.0014	BROOKS SCHOOL
MA	Essex	25009	1210242	01	0201	10200799	8.00	MANEVU2002	0.0540	0.0000	0.0001	GREATER LAWRENCE SANITARY DISTRICT
MA	Essex	25009	1210242	01	0101	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0027	GREATER LAWRENCE SANITARY DISTRICT
MA	Essex	25009	1210242	02	0202	10200799	8.00	MANEVU2002	0.0540	0.0000	0.0001	GREATER LAWRENCE SANITARY DISTRICT
MA	Essex	25009	1210242	03	0203	10200799	8.00	MANEVU2002	0.0540	0.0000	0.0001	GREATER LAWRENCE SANITARY DISTRICT
MA	Essex	25009	1210262	01	0101	10300603	8.00	MANEVU2002	0.7870	0.0000	0.0009	COLUMBO
MA	Essex	25009	1210262	02	0102	10300603	8.00	MANEVU2002	1.5730	0.0000	0.0043	COLUMBO
MA	Essex	25009	1210267	14	0114	10200603	1.00	MANEVU2002	0.0125	0.0000	0.0000	CARGOCAIRE ENGINEERING
MA	Essex	25009	1210293	01	0101	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0016	PUTNAM INVESTMENTS
MA	Essex	25009	1210293	02	0102	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0016	PUTNAM INVESTMENTS
MA	Essex	25009	1210296	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	HANCOCK COURTS
MA	Essex	25009	1210308	01	0101	10200603	2.00	MANEVU2002	0.1755	0.0000	0.0004	BME ENGINEERING INCORPORATED
MA	Essex	25009	1210312	01	0101	10200603	4.00	MANEVU2002	0.3030	0.0000	0.0003	HEWLETT PACKARD CORPORATION
MA	Essex	25009	1210312	02	0102	10200603	4.00	MANEVU2002	0.3030	0.0000	0.0003	HEWLETT PACKARD CORPORATION
MA	Essex	25009	1210312	06	0103	10200603	1.00	MANEVU2002	0.0310	0.0000	0.0001	HEWLETT PACKARD CORPORATION
MA	Essex	25009	1210322	05	0105	10200603	1.00	MANEVU2002	0.0800	0.0000	0.0001	KEYSPAN ENERGY-HAVERHILL
MA	Essex	25009	1210322	06	0105	10200603	1.00	MANEVU2002	0.0800	0.0000	0.0001	KEYSPAN ENERGY-HAVERHILL
MA	Essex	25009	1210322	07	0106	10200603	1.00	MANEVU2002	0.0790	0.0000	0.0001	KEYSPAN ENERGY-HAVERHILL
MA	Essex	25009	1210366	01	0101	10300501	6.00	MANEVU2002	0.2000	0.0000	0.0002	ANDOVER DOHERTY MIDDLE SCHOOL
MA	Essex	25009	1210366	02	0101	10300501	6.00	MANEVU2002	0.2000	0.0000	0.0002	ANDOVER DOHERTY MIDDLE SCHOOL
MA	Essex	25009	1210367	01	0101	10300501	6.00	MANEVU2002	0.1000	0.0000	0.0001	ANDOVER SOUTH ELEMENTARY
MA	Essex	25009	1210367	02	0101	10300501	6.00	MANEVU2002	0.1000	0.0000	0.0001	ANDOVER SOUTH ELEMENTARY
MA	Essex	25009	1210374	01	0101	10200602	17.00	MANEVU2002	1.0000	0.0000	0.0027	EISAI RESEARCH INSTI
MA	Essex	25009	1210374	03	0103	10200603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EISAI RESEARCH INSTI
MA	Essex	25009	1210379	05	0105	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0027	ALDEN MERRELL CORPORATION
MA	Essex	25009	1210379	09	0109	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	ALDEN MERRELL CORPORATION
MA	Essex	25009	1210411	09	0108	10300603	3.00	MANEVU2002	0.0090	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Essex	25009	1210411	10	0108	10300603	3.00	MANEVU2002	0.0900	0.0000	0.0000	VERIZON MASSACHUSETTS

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MA	Essex	25009	1210411	11	0109	10300603	1.00	MANEVU2002	0.0200	0.0000	0.0001	VERIZON MASSACHUSETTS
MA	Essex	25009	1211013	01	0201	10200602	13.00	MANEVU2002	2.6600	0.0000	0.0073	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211013	02	0201	10200602	13.00	MANEVU2002	2.6600	0.0000	0.0073	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211013	03	0202	10200603	6.00	MANEVU2002	0.8000	0.0000	0.0022	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211013	04	0202	10200603	6.00	MANEVU2002	0.8000	0.0000	0.0022	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211013	05	0203	10200603	10.00	MANEVU2002	0.4500	0.0000	0.0012	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211013	06	0204	10200603	10.00	MANEVU2002	0.4500	0.0000	0.0025	RAYTHEON SYSTEMS COMPANY - IDS
MA	Essex	25009	1211015	08	0106	10200602	48.00	MANEVU2002	2.0000	0.0000	0.0055	GENETICS INSTITUTE LLC
MA	Essex	25009	1211015	09	0106	10200602	46.00	MANEVU2002	1.0000	0.0000	0.0027	GENETICS INSTITUTE LLC
MA	Franklin	25011	0420053	01	0101	10301002	3.00	MANEVU2002	0.0010	0.0000	0.0000	BERKSHIRE GAS GREENFIELD
MA	Franklin	25011	0420053	02	0102	10300603	4.00	MANEVU2002	2.0000	0.0000	0.0022	BERKSHIRE GAS GREENFIELD
MA	Franklin	25011	0420061	01	0101	10300401	44.00	MANEVU2002	2.0000	0.0000	0.0055	BBA NONWOVENS COLRAIN
MA	Franklin	25011	0420100	01	0201	10200501	16.00	MANEVU2002	0.5670	0.0000	0.0012	ESLEECK MANUFACTURING
MA	Franklin	25011	0420100	01	0101	10200602	16.00	MANEVU2002	1.1500	0.0000	0.0025	ESLEECK MANUFACTURING
MA	Franklin	25011	0420100	02	0201	10200501	16.00	MANEVU2002	0.7340	0.0000	0.0016	ESLEECK MANUFACTURING
MA	Franklin	25011	0420100	02	0101	10200602	16.00	MANEVU2002	1.5750	0.0000	0.0035	ESLEECK MANUFACTURING
MA	Franklin	25011	0420100	03	0201	10200501	16.00	MANEVU2002	0.6360	0.0000	0.0014	ESLEECK MANUFACTURING
MA	Franklin	25011	0420100	03	0101	10200602	16.00	MANEVU2002	1.5330	0.0000	0.0034	ESLEECK MANUFACTURING
MA	Franklin	25011	0420121	01	0101	10200401	78.00	MANEVU2002	55.0000	0.0000	0.1692	ERVING PAPER MILLS
MA	Franklin	25011	0420121	02	0102	10200401	49.00	MANEVU2002	1.0000	0.0000	0.0109	ERVING PAPER MILLS
MA	Franklin	25011	0420121	03	0102	10200401	15.00	MANEVU2002	0.3800	0.0000	0.0041	ERVING PAPER MILLS
MA	Franklin	25011	0420227	02	0102	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0011	BOSTON & MAINE CORPORATION
MA	Franklin	25011	0420356	01	0101	10300501	24.00	MANEVU2002	1.0000	0.0000	0.0000	DEERFIELD ACADEMY-TRUSTEE
MA	Franklin	25011	0420382	01	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0015	FARREN CARE CENTER
MA	Franklin	25011	0420382	02	0101	10300504	6.00	MANEVU2002	1.0000	0.0000	0.0015	FARREN CARE CENTER
MA	Franklin	25011	0420386	01	0101	10300401	15.00	MANEVU2002	2.0000	0.0000	0.0011	FRANKLIN MEDICAL CEN
MA	Franklin	25011	0420386	02	0101	10300401	15.00	MANEVU2002	2.0000	0.0000	0.0011	FRANKLIN MEDICAL CEN
MA	Franklin	25011	0420386	03	0101	10300401	3.00	MANEVU2002	0.4300	0.0000	0.0002	FRANKLIN MEDICAL CEN
MA	Franklin	25011	0420386	04	0101	10300401	3.00	MANEVU2002	0.4300	0.0000	0.0012	FRANKLIN MEDICAL CEN
MA	Franklin	25011	0420386	05	0101	10300401	10.00	MANEVU2002	2.0000	0.0000	0.0055	FRANKLIN MEDICAL CEN
MA	Franklin	25011	0420391	01	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0000	FRONTIER REGIONAL SCHOOL DISTRICT
MA	Franklin	25011	0420391	02	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0000	FRONTIER REGIONAL SCHOOL DISTRICT
MA	Franklin	25011	0420417	01	0101	10200501	2.00	MANEVU2002	1.0000	0.0000	0.0011	GREENFIELD INDUSTRIES
MA	Franklin	25011	0420417	05	0102	10300601	1.00	MANEVU2002	0.0285	0.0000	0.0000	GREENFIELD INDUSTRIES
MA	Franklin	25011	0420458	01	0101	10200401	11.00	MANEVU2002	1.0000	0.0000	0.0000	RODNEY HUNT COMPANY
MA	Franklin	25011	0420458	02	0102	10200401	11.00	MANEVU2002	1.0000	0.0000	0.0000	RODNEY HUNT COMPANY
MA	Franklin	25011	0420467	01	0101	10200603	1.00	MANEVU2002	0.4875	0.0000	0.0005	JUDD WIRE INCORPORATED
MA	Franklin	25011	0420550	01	0101	10300401	11.00	MANEVU2002	3.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420550	02	0101	10300401	9.00	MANEVU2002	3.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420550	03	0101	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420550	04	0101	10300401	15.00	MANEVU2002	3.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420550	05	0101	10300501	9.00	MANEVU2002	0.5605	0.0000	0.0015	NORTHFIELD MT HERMON
MA	Franklin	25011	0420551	01	0101	10300401	7.00	MANEVU2002	2.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420551	02	0101	10300401	7.00	MANEVU2002	2.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420551	03	0101	10300401	9.00	MANEVU2002	2.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420551	04	0101	10300401	9.00	MANEVU2002	2.0000	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420551	05	0102	10300501	3.00	MANEVU2002	0.3230	0.0000	0.0000	NORTHFIELD MT HERMON
MA	Franklin	25011	0420554	01	0101	10300501	12.00	MANEVU2002	2.0000	0.0000	0.0000	PIONEER VALLEY REGIONAL SCHOOL
MA	Franklin	25011	0420603	02	0102	10200401	8.00	MANEVU2002	1.0000	0.0000	0.0005	LUNT SILVERSMITHS
MA	Franklin	25011	0420811	01	0101	10200501	1.00	MANEVU2002	1.0000	0.0000	0.0027	FOREST PRODUCTS ASSOCIATION
MA	Franklin	25011	0420853	03	0103	10200603	8.00	MANEVU2002	0.3220	0.0000	0.0004	HARDIGG INDUSTRIES
MA	Hampden	25013	0420005	04	0104	10200603	3.00	MANEVU2002	0.5000	0.0000	0.0014	TENNESSEE GAS PIPELINE STATION 261

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MA	Hampden	25013	0420014	01	0201	10200602	31.00	MANEVU2002	0.0005	0.0000	0.0000	TOP-FLIGHT GOLF COMPANY
MA	Hampden	25013	0420014	03	0201	10200602	31.00	MANEVU2002	13.0000	0.0000	0.0357	TOP-FLIGHT GOLF COMPANY
MA	Hampden	25013	0420014	04	0101	10200602	27.00	MANEVU2002	5.0000	0.0000	0.0000	TOP-FLIGHT GOLF COMPANY
MA	Hampden	25013	0420016	01	0101	10200401	15.00	MANEVU2002	8.0000	0.0000	0.0220	FACEMATE CORP
MA	Hampden	25013	0420017	01	0201	10300602	18.00	MANEVU2002	0.2650	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	03	0102	10300502	36.00	MANEVU2002	1.5230	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	04	0102	10300502	36.00	MANEVU2002	1.5230	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	05	0103	10300503	7.00	MANEVU2002	0.0400	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	05	0203	10300603	7.00	MANEVU2002	0.0485	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	06	0204	10300603	6.00	MANEVU2002	0.0045	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	07	0205	10300603	6.00	MANEVU2002	0.0045	0.0000	0.0000	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	08	0206	10300603	6.00	MANEVU2002	0.0855	0.0000	0.0001	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	09	0107	10300503	6.00	MANEVU2002	0.0310	0.0000	0.0001	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	19	0212	10300603	5.00	MANEVU2002	4.5000	0.0000	0.0124	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420017	19	0112	10300501	5.00	MANEVU2002	0.2950	0.0000	0.0008	WESTOVER AIR RESERVE BASE
MA	Hampden	25013	0420036	01	0101	10300401	15.00	MANEVU2002	1.0000	0.0000	0.0055	HOLYOKE HOSPITAL
MA	Hampden	25013	0420036	02	0101	10300401	15.00	MANEVU2002	3.0000	0.0000	0.0165	HOLYOKE HOSPITAL
MA	Hampden	25013	0420036	02	0201	10300603	15.00	MANEVU2002	2.0000	0.0000	0.0110	HOLYOKE HOSPITAL
MA	Hampden	25013	0420036	03	0102	10300401	30.00	MANEVU2002	2.0000	0.0000	0.0000	HOLYOKE HOSPITAL
MA	Hampden	25013	0420036	03	0202	10300601	30.00	MANEVU2002	4.0000	0.0000	0.0000	HOLYOKE HOSPITAL
MA	Hampden	25013	0420041	01	0201	10300602	26.00	MANEVU2002	5.0000	0.0000	0.0082	PROVIDENCE HOSPITAL
MA	Hampden	25013	0420041	02	0201	10300602	26.00	MANEVU2002	5.0000	0.0000	0.0082	PROVIDENCE HOSPITAL
MA	Hampden	25013	0420047	01	0101	10200401	28.00	MANEVU2002	6.0000	0.0000	0.0000	LUDLOW INDUSTRIAL REALTIES
MA	Hampden	25013	0420047	02	0102	10200401	28.00	MANEVU2002	4.0000	0.0000	0.0000	LUDLOW INDUSTRIAL REALTIES
MA	Hampden	25013	0420062	01	0101	10200504	21.00	MANEVU2002	1.0000	0.0000	0.0014	CASCADES DIAMOND INCORPORATED
MA	Hampden	25013	0420062	02	0102	10200504	21.00	MANEVU2002	2.0000	0.0000	0.0029	CASCADES DIAMOND INCORPORATED
MA	Hampden	25013	0420062	03	0103	10200504	29.00	MANEVU2002	1.0000	0.0000	0.0010	CASCADES DIAMOND INCORPORATED
MA	Hampden	25013	0420065	01	0101	10300401	25.00	MANEVU2002	6.0000	0.0000	0.0092	MA MONSON DEVELOPMENTAL CENTER
MA	Hampden	25013	0420065	02	0101	10300401	25.00	MANEVU2002	9.0000	0.0000	0.0138	MA MONSON DEVELOPMENTAL CENTER
MA	Hampden	25013	0420065	03	0101	10300401	27.00	MANEVU2002	2.0000	0.0000	0.0031	MA MONSON DEVELOPMENTAL CENTER
MA	Hampden	25013	0420080	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	REEDS LANDING
MA	Hampden	25013	0420083	01	0101	10200501	23.00	MANEVU2002	1.0000	0.0000	0.0000	INDIAN ORCHARD MILL
MA	Hampden	25013	0420085	01	0101	10300401	30.00	MANEVU2002	1.0000	0.0000	0.0027	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420085	01	0201	10300602	30.00	MANEVU2002	1.0500	0.0000	0.0029	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420085	02	0101	10300401	30.00	MANEVU2002	2.0000	0.0000	0.0055	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420085	03	0101	10300401	30.00	MANEVU2002	1.0000	0.0000	0.0027	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420085	04	0101	10300401	30.00	MANEVU2002	1.0000	0.0000	0.0027	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420085	04	0201	10300602	30.00	MANEVU2002	0.5500	0.0000	0.0015	MASS MUTUAL INSURANCE
MA	Hampden	25013	0420086	02	0202	10300601	110.00	MANEVU2002	5.0000	0.0000	0.0137	SOLUTIA INCORPORATED
MA	Hampden	25013	0420086	03	0103	10200601	196.00	MANEVU2002	11.0000	0.0000	0.0302	SOLUTIA INCORPORATED
MA	Hampden	25013	0420086	04	0104	10200204	249.00	MANEVU2002	240.0000	0.0000	0.6593	SOLUTIA INCORPORATED
MA	Hampden	25013	0420087	01	0201	10300603	9.00	MANEVU2002	4.0000	0.0000	0.0127	PARK VIEW SPECIALTY HOSPITAL
MA	Hampden	25013	0420087	01	0101	10300501	9.00	MANEVU2002	2.0000	0.0000	0.0064	PARK VIEW SPECIALTY HOSPITAL
MA	Hampden	25013	0420087	02	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0044	PARK VIEW SPECIALTY HOSPITAL
MA	Hampden	25013	0420087	02	0201	10300602	9.00	MANEVU2002	1.0000	0.0000	0.0044	PARK VIEW SPECIALTY HOSPITAL
MA	Hampden	25013	0420089	01	0101	10200401	16.00	MANEVU2002	4.0000	0.0000	0.0044	SMITH & WESSON
MA	Hampden	25013	0420089	01	0201	10200602	16.00	MANEVU2002	0.3000	0.0000	0.0003	SMITH & WESSON
MA	Hampden	25013	0420089	02	0101	10200401	16.00	MANEVU2002	1.0000	0.0000	0.0011	SMITH & WESSON
MA	Hampden	25013	0420089	02	0201	10200602	16.00	MANEVU2002	0.2700	0.0000	0.0003	SMITH & WESSON
MA	Hampden	25013	0420093	01	0101	10300401	34.00	MANEVU2002	7.0000	0.0000	0.0331	BAYSTATE MEDICAL CEN
MA	Hampden	25013	0420093	01	0201	10300602	34.00	MANEVU2002	3.0000	0.0000	0.0142	BAYSTATE MEDICAL CEN
MA	Hampden	25013	0420093	02	0101	10300401	34.00	MANEVU2002	4.0000	0.0000	0.0035	BAYSTATE MEDICAL CEN

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MA	Hampden	25013	0420093	02	0201	10300602	34.00	MANEVU2002	2.0000	0.0000	0.0018	BAYSTATE MEDICAL CEN
MA	Hampden	25013	0420093	03	0101	10300401	33.00	MANEVU2002	6.0000	0.0000	0.0026	BAYSTATE MEDICAL CEN
MA	Hampden	25013	0420093	03	0201	10300602	33.00	MANEVU2002	1.0000	0.0000	0.0004	BAYSTATE MEDICAL CEN
MA	Hampden	25013	0420094	01	0201	10300602	38.00	MANEVU2002	2.0000	0.0000	0.0015	SPRINGFIELD TECHNICAL COLLEGE
MA	Hampden	25013	0420094	02	0201	10300602	38.00	MANEVU2002	2.0000	0.0000	0.0055	SPRINGFIELD TECHNICAL COLLEGE
MA	Hampden	25013	0420094	03	0201	10300602	38.00	MANEVU2002	2.0000	0.0000	0.0055	SPRINGFIELD TECHNICAL COLLEGE
MA	Hampden	25013	0420095	01	0301	10200504	29.00	MANEVU2002	3.0000	0.0000	0.0016	TITEFLEX CORPORATION
MA	Hampden	25013	0420095	01	0201	10200602	29.00	MANEVU2002	2.0000	0.0000	0.0011	TITEFLEX CORPORATION
MA	Hampden	25013	0420096	01	0101	10300401	27.00	MANEVU2002	1.0000	0.0000	0.0000	SOUTH CAMPUS GROUP LLC
MA	Hampden	25013	0420096	01	0201	10300602	27.00	MANEVU2002	0.1000	0.0000	0.0000	SOUTH CAMPUS GROUP LLC
MA	Hampden	25013	0420096	02	0101	10300401	25.00	MANEVU2002	1.0000	0.0000	0.0000	SOUTH CAMPUS GROUP LLC
MA	Hampden	25013	0420096	02	0201	10300602	25.00	MANEVU2002	0.1000	0.0000	0.0000	SOUTH CAMPUS GROUP LLC
MA	Hampden	25013	0420096	08	0203	10300603	3.00	MANEVU2002	0.0615	0.0000	0.0002	SOUTH CAMPUS GROUP LLC
MA	Hampden	25013	0420107	01	0102	10300603	1.00	MANEVU2002	7.0000	0.0000	0.0192	COLUMBIA MANUFACTURING INCORPORATED
MA	Hampden	25013	0420107	01	0202	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	COLUMBIA MANUFACTURING INCORPORATED
MA	Hampden	25013	0420107	03	0201	10300603	8.00	MANEVU2002	3.0000	0.0000	0.0066	COLUMBIA MANUFACTURING INCORPORATED
MA	Hampden	25013	0420107	04	0201	10300603	8.00	MANEVU2002	3.0000	0.0000	0.0066	COLUMBIA MANUFACTURING INCORPORATED
MA	Hampden	25013	0420113	01	0101	10300504	58.00	MANEVU2002	7.0000	0.0000	0.0000	WESTFIELD STATE COLLEGE
MA	Hampden	25013	0420113	02	0101	10300504	58.00	MANEVU2002	5.0000	0.0000	0.0000	WESTFIELD STATE COLLEGE
MA	Hampden	25013	0420113	03	0101	10300504	17.00	MANEVU2002	5.0000	0.0000	0.0000	WESTFIELD STATE COLLEGE
MA	Hampden	25013	0420128	01	0201	10200501	6.00	MANEVU2002	0.5355	0.0000	0.0015	HAZEN PAPER COMPANY
MA	Hampden	25013	0420128	01	0101	10200603	6.00	MANEVU2002	0.2935	0.0000	0.0008	HAZEN PAPER COMPANY
MA	Hampden	25013	0420128	02	0202	10200501	2.00	MANEVU2002	0.1755	0.0000	0.0005	HAZEN PAPER COMPANY
MA	Hampden	25013	0420128	02	0102	10200603	2.00	MANEVU2002	0.0810	0.0000	0.0002	HAZEN PAPER COMPANY
MA	Hampden	25013	0420129	01	0101	10200501	1.00	MANEVU2002	0.2000	0.0000	0.0000	NEW ENGLAND ETCHING
MA	Hampden	25013	0420145	01	0101	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0029	HOLYOKE CARD COMPANY
MA	Hampden	25013	0420149	01	0101	10200501	6.00	MANEVU2002	0.0300	0.0000	0.0000	EASTERN ETCHNG & MANUFACTURING
MA	Hampden	25013	0420149	08	0101	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	EASTERN ETCHNG & MANUFACTURING
MA	Hampden	25013	0420150	01	0101	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0014	DANAHER TOOL GROUP
MA	Hampden	25013	0420150	03	0103	10200603	13.00	MANEVU2002	2.0000	0.0000	0.0029	DANAHER TOOL GROUP
MA	Hampden	25013	0420150	04	0104	10200602	13.00	MANEVU2002	2.0000	0.0000	0.0029	DANAHER TOOL GROUP
MA	Hampden	25013	0420150	06	0106	10200603	5.00	MANEVU2002	0.4000	0.0000	0.0006	DANAHER TOOL GROUP
MA	Hampden	25013	0420152	01	0101	10200401	20.00	MANEVU2002	3.0000	0.0000	0.0000	TEXON USA
MA	Hampden	25013	0420152	02	0102	10200401	43.00	MANEVU2002	23.0000	0.0000	0.0632	TEXON USA
MA	Hampden	25013	0420157	03	0202	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	SULLIVAN PAPER COMPANY
MA	Hampden	25013	0420172	01	0101	10200501	3.00	MANEVU2002	0.0860	0.0000	0.0001	HANO DOCUMENT PRINTE
MA	Hampden	25013	0420172	02	0102	10200603	3.00	MANEVU2002	0.0520	0.0000	0.0001	HANO DOCUMENT PRINTE
MA	Hampden	25013	0420172	03	0103	10300603	3.00	MANEVU2002	0.0500	0.0000	0.0001	HANO DOCUMENT PRINTE
MA	Hampden	25013	0420181	10	0110	10200603	6.00	MANEVU2002	0.0200	0.0000	0.0001	HAMPDEN PAPERS INC
MA	Hampden	25013	0420186	01	0101	10201002	4.00	MANEVU2002	1.0000	0.0000	0.0000	CARAUSTAR INDUSTRIES
MA	Hampden	25013	0420187	01	0101	10200501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FOUNTAIN PLATING COMPANY
MA	Hampden	25013	0420187	01	0201	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0027	FOUNTAIN PLATING COMPANY
MA	Hampden	25013	0420191	02	0102	10300603	3.00	MANEVU2002	0.2210	0.0000	0.0006	UNIFIRST CORPORATION
MA	Hampden	25013	0420202	09	0103	10200501	1.00	MANEVU2002	0.0690	0.0000	0.0000	EXXON MOBIL OIL CORPORATION
MA	Hampden	25013	0420202	10	0103	10200501	1.00	MANEVU2002	0.0290	0.0000	0.0000	EXXON MOBIL OIL CORPORATION
MA	Hampden	25013	0420208	02	0102	10200504	5.00	MANEVU2002	0.2160	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	03	0103	10200504	5.00	MANEVU2002	0.2160	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	04	0104	10200504	5.00	MANEVU2002	0.2160	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	05	0105	10200504	8.00	MANEVU2002	0.7080	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	05	0205	10200603	8.00	MANEVU2002	0.0380	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	06	0106	10200504	10.00	MANEVU2002	0.7080	0.0000	0.0000	HASBRO GAMES
MA	Hampden	25013	0420208	07	0107	10200504	8.00	MANEVU2002	0.5900	0.0000	0.0000	HASBRO GAMES

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MA	Hampden	25013	0420221	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD LIBRARY & MUSEUM
MA	Hampden	25013	0420222	01	0101	10300602	6.00	MANEVU2002	1.0000	0.0000	0.0000	CW REALTY COMPANY
MA	Hampden	25013	0420222	02	0101	10300602	6.00	MANEVU2002	1.0000	0.0000	0.0000	CW REALTY COMPANY
MA	Hampden	25013	0420226	02	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	1350 MAIN STREET
MA	Hampden	25013	0420226	03	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	1350 MAIN STREET
MA	Hampden	25013	0420228	01	0101	10200602	15.00	MANEVU2002	8.0000	0.0000	0.0220	NOVA CHEMICALS INC
MA	Hampden	25013	0420243	02	0102	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0007	BAY STATE GAS CO
MA	Hampden	25013	0420259	01	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0000	AGAWAM SCHOOL SYSTEM
MA	Hampden	25013	0420265	01	0101	10200603	3.00	MANEVU2002	0.0825	0.0000	0.0002	AVERY DENNISON CORPORATION
MA	Hampden	25013	0420265	02	0102	10200603	1.00	MANEVU2002	0.0205	0.0000	0.0000	AVERY DENNISON CORPORATION
MA	Hampden	25013	0420265	03	0203	10200603	9.00	MANEVU2002	0.0205	0.0000	0.0000	AVERY DENNISON CORPORATION
MA	Hampden	25013	0420270	01	0201	10200602	12.00	MANEVU2002	1.0000	0.0000	0.0000	AMERICAN SAW & MANUFACTURING
MA	Hampden	25013	0420271	01	0101	10300603	8.00	MANEVU2002	2.0000	0.0000	0.0055	INTERNATIONAL METAL PRODUCTS
MA	Hampden	25013	0420288	01	0201	10300603	4.00	MANEVU2002	0.0635	0.0000	0.0000	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420288	02	0101	10300501	5.00	MANEVU2002	0.0915	0.0000	0.0000	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420288	02	0201	10300603	5.00	MANEVU2002	0.0785	0.0000	0.0000	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420288	03	0101	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420288	26	0206	10300603	2.00	MANEVU2002	0.0600	0.0000	0.0002	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420288	27	0206	10300601	9.00	MANEVU2002	0.0600	0.0000	0.0002	MA ANG 104 FIGHTER WING
MA	Hampden	25013	0420301	01	0201	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0000	WESTOVER JOB CORPS CENTER
MA	Hampden	25013	0420304	01	0101	10200504	10.00	MANEVU2002	1.0000	0.0000	0.0011	OMNIGLOW CORPORATION
MA	Hampden	25013	0420304	01	0201	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0011	OMNIGLOW CORPORATION
MA	Hampden	25013	0420304	02	0101	10200504	10.00	MANEVU2002	1.0000	0.0000	0.0011	OMNIGLOW CORPORATION
MA	Hampden	25013	0420318	01	0101	10300602	14.00	MANEVU2002	1.0000	0.0000	0.0000	CHESTNUT PARK ASSOC
MA	Hampden	25013	0420318	02	0101	10300602	14.00	MANEVU2002	1.0000	0.0000	0.0000	CHESTNUT PARK ASSOC
MA	Hampden	25013	0420349	01	0101	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	COREX PRODUCTS INC
MA	Hampden	25013	0420362	03	0103	10300501	5.00	MANEVU2002	0.6000	0.0000	0.0016	VERIZON MASSACHUSETTS (SPRINGFIELD)
MA	Hampden	25013	0420365	01	0101	10200401	14.00	MANEVU2002	6.0000	0.0000	0.0165	SMURFIT-STONE CONTAINER CORP
MA	Hampden	25013	0420372	01	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0000	EAST LONGMEADOW HIGH
MA	Hampden	25013	0420390	02	0202	10200602	10.00	MANEVU2002	2.0000	0.0000	0.0044	FRIENDLY ICE CREAM
MA	Hampden	25013	0420395	01	0101	10200602	24.00	MANEVU2002	1.0000	0.0000	0.0022	LONGVIEW FIBRE CO
MA	Hampden	25013	0420395	02	0101	10200602	11.00	MANEVU2002	1.0000	0.0000	0.0000	LONGVIEW FIBRE CO
MA	Hampden	25013	0420395	03	0102	10200603	1.00	MANEVU2002	0.0120	0.0000	0.0000	LONGVIEW FIBRE CO
MA	Hampden	25013	0420395	04	0103	10200603	2.00	MANEVU2002	0.0830	0.0000	0.0002	LONGVIEW FIBRE CO
MA	Hampden	25013	0420433	01	0101	10200602	21.00	MANEVU2002	2.0000	0.0000	0.0055	HERCULES INC
MA	Hampden	25013	0420436	01	0101	10300501	4.00	MANEVU2002	0.0655	0.0000	0.0000	HOLYOKE WWT PLANT
MA	Hampden	25013	0420436	02	0102	10300501	4.00	MANEVU2002	0.0655	0.0000	0.0000	HOLYOKE WWT PLANT
MA	Hampden	25013	0420436	03	0103	10300501	9.00	MANEVU2002	0.0655	0.0000	0.0000	HOLYOKE WWT PLANT
MA	Hampden	25013	0420456	01	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0022	HP HOOD INC
MA	Hampden	25013	0420456	01	0201	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0022	HP HOOD INC
MA	Hampden	25013	0420460	02	0101	10300401	15.00	MANEVU2002	2.0000	0.0000	0.0000	CABOTVILLE INDUSTRIAL PARK
MA	Hampden	25013	0420473	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0000	KIMBALL CONDOMINIUMS
MA	Hampden	25013	0420489	02	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0000	LONGMEADOW HIGH SCHOOL
MA	Hampden	25013	0420489	04	0101	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0000	LONGMEADOW HIGH SCHOOL
MA	Hampden	25013	0420500	01	0101	10200501	0.00	MANEVU2002	1.0000	0.0000	0.0027	MAACO AUTO PAINTING
MA	Hampden	25013	0420507	03	0103	10200603	2.00	MANEVU2002	0.2500	0.0000	0.0007	MCKINSTRY INCORPORATED
MA	Hampden	25013	0420507	04	0104	10200603	2.00	MANEVU2002	0.1000	0.0000	0.0000	MCKINSTRY INCORPORATED
MA	Hampden	25013	0420508	01	0101	10300501	23.00	MANEVU2002	1.0000	0.0000	0.0007	MERCY MEDICAL CENTER
MA	Hampden	25013	0420508	01	0201	10300602	23.00	MANEVU2002	1.0000	0.0000	0.0007	MERCY MEDICAL CENTER
MA	Hampden	25013	0420508	02	0201	10300602	23.00	MANEVU2002	2.0000	0.0000	0.0013	MERCY MEDICAL CENTER
MA	Hampden	25013	0420508	02	0101	10300501	23.00	MANEVU2002	1.0000	0.0000	0.0007	MERCY MEDICAL CENTER
MA	Hampden	25013	0420508	03	0101	10300501	23.00	MANEVU2002	1.0000	0.0000	0.0007	MERCY MEDICAL CENTER

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MA	Hampden	25013	0420508	03	0201	10300602	23.00	MANEVU2002	1.0000	0.0000	0.0007	MERCY MEDICAL CENTER
MA	Hampden	25013	0420524	01	0201	10300603	9.00	MANEVU2002	3.0000	0.0000	0.0000	SPRINGFIELD MUNICIPAL HEATING PLANT
MA	Hampden	25013	0420524	02	0201	10300603	9.00	MANEVU2002	3.0000	0.0000	0.0000	SPRINGFIELD MUNICIPAL HEATING PLANT
MA	Hampden	25013	0420527	01	0101	10200501	4.00	MANEVU2002	1.0000	0.0000	0.0018	NATIONAL METAL FINISHING, INC
MA	Hampden	25013	0420527	01	0201	10200603	4.00	MANEVU2002	0.0005	0.0000	0.0000	NATIONAL METAL FINISHING, INC
MA	Hampden	25013	0420527	02	0101	10200501	4.00	MANEVU2002	1.0000	0.0000	0.0018	NATIONAL METAL FINISHING, INC
MA	Hampden	25013	0420527	02	0201	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0018	NATIONAL METAL FINISHING, INC
MA	Hampden	25013	0420569	02	0101	10300603	11.00	MANEVU2002	1.0000	0.0000	0.0000	OUR LADY OF ELMS COLLEGE
MA	Hampden	25013	0420569	03	0102	10300602	2.00	MANEVU2002	0.0750	0.0000	0.0000	OUR LADY OF ELMS COLLEGE
MA	Hampden	25013	0420587	23	0123	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0000	POLY METAL FINISHING
MA	Hampden	25013	0420594	02	0102	10300501	1.00	MANEVU2002	0.7500	0.0000	0.0021	RATHBONE PRECISION METALS
MA	Hampden	25013	0420629	01	0101	10300602	10.00	MANEVU2002	4.0000	0.0000	0.0044	HOLYOKE SOLDIERS HOME
MA	Hampden	25013	0420629	02	0101	10300602	10.00	MANEVU2002	4.0000	0.0000	0.0000	HOLYOKE SOLDIERS HOME
MA	Hampden	25013	0420639	01	0101	10200501	8.00	MANEVU2002	0.1200	0.0000	0.0003	SOUTHWORTH COMPANY
MA	Hampden	25013	0420639	02	0101	10200602	8.00	MANEVU2002	5.0000	0.0000	0.0121	SOUTHWORTH COMPANY
MA	Hampden	25013	0420641	01	0101	10300501	25.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD COLLEGE
MA	Hampden	25013	0420641	02	0101	10300501	25.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD COLLEGE
MA	Hampden	25013	0420641	02	0201	10300602	25.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD COLLEGE
MA	Hampden	25013	0420641	03	0201	10300602	8.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD COLLEGE
MA	Hampden	25013	0420647	01	0101	10300602	31.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD INDUSTRIAL CENTER
MA	Hampden	25013	0420647	02	0102	10300603	31.00	MANEVU2002	1.0000	0.0000	0.0000	SPRINGFIELD INDUSTRIAL CENTER
MA	Hampden	25013	0420687	01	0201	10300501	11.00	MANEVU2002	1.0000	0.0000	0.0000	PUTNAM VOCATIONAL HIGH SCHOOL
MA	Hampden	25013	0420687	02	0201	10300501	11.00	MANEVU2002	1.0000	0.0000	0.0000	PUTNAM VOCATIONAL HIGH SCHOOL
MA	Hampden	25013	0420687	03	0102	10300501	14.00	MANEVU2002	1.0000	0.0000	0.0011	PUTNAM VOCATIONAL HIGH SCHOOL
MA	Hampden	25013	0420687	04	0102	10300501	11.00	MANEVU2002	1.0000	0.0000	0.0011	PUTNAM VOCATIONAL HIGH SCHOOL
MA	Hampden	25013	0420687	05	0102	10300501	11.00	MANEVU2002	1.0000	0.0000	0.0011	PUTNAM VOCATIONAL HIGH SCHOOL
MA	Hampden	25013	0420709	01	0101	10200401	15.00	MANEVU2002	2.0000	0.0000	0.0000	INTERNATIONAL PAPER
MA	Hampden	25013	0420709	02	0101	10200401	28.00	MANEVU2002	2.0000	0.0000	0.0000	INTERNATIONAL PAPER
MA	Hampden	25013	0420727	01	0101	10300602	5.00	MANEVU2002	1.0000	0.0000	0.0000	US POSTAL SERVICE
MA	Hampden	25013	0420727	02	0101	10300602	5.00	MANEVU2002	1.0000	0.0000	0.0000	US POSTAL SERVICE
MA	Hampden	25013	0420743	01	0201	10300603	9.00	MANEVU2002	2.0000	0.0000	0.0055	WESTERN MASS RENDERING CO INC
MA	Hampden	25013	0420762	03	0102	10200401	5.00	MANEVU2002	2.0000	0.0000	0.0000	380 UNION ST PROPERTIES LLC
MA	Hampden	25013	0420774	01	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0000	WEST SPRINGFIELD SENIOR HIGH SCHOOL
MA	Hampden	25013	0420774	02	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0000	WEST SPRINGFIELD SENIOR HIGH SCHOOL
MA	Hampden	25013	0420778	03	0101	10300501	21.00	MANEVU2002	1.0000	0.0000	0.0000	MINNECHAUG HIGH
MA	Hampden	25013	0420788	01	0101	10200401	25.00	MANEVU2002	8.0000	0.0000	0.0220	AGRI MARK INC
MA	Hampden	25013	0420788	02	0101	10200401	25.00	MANEVU2002	8.0000	0.0000	0.0220	AGRI MARK INC
MA	Hampden	25013	0420804	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	CLASSICAL HIGH CONDOMINIUMS
MA	Hampden	25013	0420815	01	0101	10300603	6.00	MANEVU2002	2.0000	0.0000	0.0022	HOLYOKE MALL AT INGLESIDE
MA	Hampden	25013	0420815	02	0102	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	HOLYOKE MALL AT INGLESIDE
MA	Hampden	25013	0420817	01	0101	10200603	2.00	MANEVU2002	2.0000	0.0000	0.0022	K AND M ELECTRONICS
MA	Hampden	25013	0420817	02	0102	10200603	2.00	MANEVU2002	2.0000	0.0000	0.0022	K AND M ELECTRONICS
MA	Hampden	25013	0420838	01	0101	10300501	1.00	MANEVU2002	0.0800	0.0000	0.0001	SOUTH HADLEY WWTP
MA	Hampden	25013	0420838	02	0102	10300501	1.00	MANEVU2002	0.0125	0.0000	0.0000	SOUTH HADLEY WWTP
MA	Hampshire	25015	0420003	01	0101	10300401	62.00	MANEVU2002	2.0000	0.0000	0.0000	AMHERST COLLEGE
MA	Hampshire	25015	0420003	01	0201	10300602	62.00	MANEVU2002	3.0000	0.0000	0.0000	AMHERST COLLEGE
MA	Hampshire	25015	0420003	01	0301	10300401	62.00	MANEVU2002	5.0000	0.0000	0.0000	AMHERST COLLEGE
MA	Hampshire	25015	0420003	02	0302	10300401	62.00	MANEVU2002	5.0000	0.0000	0.0165	AMHERST COLLEGE
MA	Hampshire	25015	0420003	02	0102	10300401	62.00	MANEVU2002	2.0000	0.0000	0.0066	AMHERST COLLEGE
MA	Hampshire	25015	0420003	02	0202	10300602	62.00	MANEVU2002	3.0000	0.0000	0.0099	AMHERST COLLEGE
MA	Hampshire	25015	0420004	01	0201	10300602	75.00	MANEVU2002	7.0000	0.0000	0.0162	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	01	0101	10300501	75.00	MANEVU2002	2.0000	0.0000	0.0046	UMASS AMHERST CAMPUS

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MA	Hampshire	25015	0420004	02	0201	10300602	76.00	MANEVU2002	7.0000	0.0000	0.0077	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	03	0201	10300602	75.00	MANEVU2002	2.0000	0.0000	0.0026	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	04	0102	10300208	66.00	MANEVU2002	42.0000	0.0000	0.0000	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	05	0102	10300208	66.00	MANEVU2002	39.0000	0.0000	0.0257	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	06	0102	10300208	66.00	MANEVU2002	57.0000	0.0000	0.1253	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420004	15	0203	10200602	77.00	MANEVU2002	7.0000	0.0000	0.0092	UMASS AMHERST CAMPUS
MA	Hampshire	25015	0420018	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0000	BRIDGE STREET SCHOOL
MA	Hampshire	25015	0420018	02	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0000	BRIDGE STREET SCHOOL
MA	Hampshire	25015	0420023	01	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0000	ROBERT K FINN SCHOOL
MA	Hampshire	25015	0420023	02	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0000	ROBERT K FINN SCHOOL
MA	Hampshire	25015	0420033	01	0101	10300602	25.00	MANEVU2002	1.0415	0.0000	0.0029	MINUTE MAID COMPANY THE
MA	Hampshire	25015	0420033	02	0102	10300602	25.00	MANEVU2002	1.0415	0.0000	0.0029	MINUTE MAID COMPANY THE
MA	Hampshire	25015	0420033	03	0103	10300602	25.00	MANEVU2002	1.0415	0.0000	0.0029	MINUTE MAID COMPANY THE
MA	Hampshire	25015	0420051	01	0101	10200501	0.00	MANEVU2002	0.0170	0.0000	0.0000	SOUTH HADLEY SEWER PUMP STATION
MA	Hampshire	25015	0420054	01	0101	10300501	25.00	MANEVU2002	0.3000	0.0000	0.0008	COOLEY DICKINSON HOSPITAL
MA	Hampshire	25015	0420054	01	0201	10300602	25.00	MANEVU2002	0.0235	0.0000	0.0001	COOLEY DICKINSON HOSPITAL
MA	Hampshire	25015	0420054	02	0101	10300501	17.00	MANEVU2002	0.3000	0.0000	0.0008	COOLEY DICKINSON HOSPITAL
MA	Hampshire	25015	0420054	03	0101	10300903	31.00	MANEVU2002	7.0000	0.0000	0.0192	COOLEY DICKINSON HOSPITAL
MA	Hampshire	25015	0420058	01	0101	10300401	50.00	MANEVU2002	5.0000	0.0000	0.0000	SMITH COLLEGE
MA	Hampshire	25015	0420058	04	0101	10300401	70.00	MANEVU2002	16.0000	0.0000	0.0053	SMITH COLLEGE
MA	Hampshire	25015	0420058	05	0201	10300401	69.00	MANEVU2002	20.0000	0.0000	0.0000	SMITH COLLEGE
MA	Hampshire	25015	0420058	08	0104	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0055	SMITH COLLEGE
MA	Hampshire	25015	0420058	15	0108	10300501	1.00	MANEVU2002	0.0075	0.0000	0.0000	SMITH COLLEGE
MA	Hampshire	25015	0420059	01	0201	10300602	24.00	MANEVU2002	2.0000	0.0000	0.0033	US VA MEDICAL CENTER
MA	Hampshire	25015	0420059	02	0201	10300602	24.00	MANEVU2002	2.0000	0.0000	0.0033	US VA MEDICAL CENTER
MA	Hampshire	25015	0420059	03	0201	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0016	US VA MEDICAL CENTER
MA	Hampshire	25015	0420073	01	0101	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0000	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	01	0201	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0000	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	02	0101	10300401	20.00	MANEVU2002	9.0000	0.0000	0.0000	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	03	0101	10300401	25.00	MANEVU2002	4.0000	0.0000	0.0000	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	03	0201	10300602	25.00	MANEVU2002	1.0000	0.0000	0.0000	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	06	0103	10300603	10.00	MANEVU2002	0.4900	0.0000	0.0013	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	06	0203	10300501	10.00	MANEVU2002	0.1810	0.0000	0.0005	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420073	15	0107	10300401	24.00	MANEVU2002	0.0825	0.0000	0.0002	MOUNT HOLYOKE COLLEGE
MA	Hampshire	25015	0420134	01	0201	10200602	4.00	MANEVU2002	0.0020	0.0000	0.0000	NATIONAL NONWOVENS
MA	Hampshire	25015	0420134	02	0102	10200401	5.00	MANEVU2002	0.2885	0.0000	0.0008	NATIONAL NONWOVENS
MA	Hampshire	25015	0420134	02	0202	10200603	5.00	MANEVU2002	0.0075	0.0000	0.0000	NATIONAL NONWOVENS
MA	Hampshire	25015	0420134	03	0103	10200401	5.00	MANEVU2002	0.5360	0.0000	0.0015	NATIONAL NONWOVENS
MA	Hampshire	25015	0420134	03	0203	10200603	5.00	MANEVU2002	0.0195	0.0000	0.0001	NATIONAL NONWOVENS
MA	Hampshire	25015	0420135	01	0201	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0000	EASTWORKS LLP
MA	Hampshire	25015	0420138	01	0101	10200603	2.00	MANEVU2002	0.0665	0.0000	0.0000	TUBED PRODUCTS L.L.C.
MA	Hampshire	25015	0420151	01	0101	10200603	4.00	MANEVU2002	0.4335	0.0000	0.0012	PERSTORP COMPOUNDS INCORPORATED
MA	Hampshire	25015	0420151	02	0102	10200603	3.00	MANEVU2002	0.2590	0.0000	0.0007	PERSTORP COMPOUNDS INCORPORATED
MA	Hampshire	25015	0420151	03	0103	10200603	3.00	MANEVU2002	0.4335	0.0000	0.0012	PERSTORP COMPOUNDS INCORPORATED
MA	Hampshire	25015	0420151	04	0104	10200603	4.00	MANEVU2002	0.4335	0.0000	0.0012	PERSTORP COMPOUNDS INCORPORATED
MA	Hampshire	25015	0420189	01	0101	10200501	5.00	MANEVU2002	0.6105	0.0000	0.0017	KANZAKI SPECIALTY PAPERS
MA	Hampshire	25015	0420189	01	0201	10201002	5.00	MANEVU2002	0.0290	0.0000	0.0001	KANZAKI SPECIALTY PAPERS
MA	Hampshire	25015	0420189	02	0101	10200501	8.00	MANEVU2002	0.2230	0.0000	0.0006	KANZAKI SPECIALTY PAPERS
MA	Hampshire	25015	0420189	10	0107	10201002	1.00	MANEVU2002	0.0700	0.0000	0.0002	KANZAKI SPECIALTY PAPERS
MA	Hampshire	25015	0420193	01	0201	10200602	39.00	MANEVU2002	4.4090	0.0000	0.0121	INTELICOAT TECHNOLOGIES
MA	Hampshire	25015	0420193	02	0201	10200602	39.00	MANEVU2002	4.4090	0.0000	0.0121	INTELICOAT TECHNOLOGIES
MA	Hampshire	25015	0420193	03	0202	10200602	77.00	MANEVU2002	3.2095	0.0000	0.0088	INTELICOAT TECHNOLOGIES

								2002 NOx Emissions				
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MA	Hampshire	25015	0420207	01	0201	10200603	8.00	MANEVU2002	0.8600	0.0000	0.0024	EASTHAMPTON DYE WORK
MA	Hampshire	25015	0420207	02	0201	10300603	8.00	MANEVU2002	0.8600	0.0000	0.0024	EASTHAMPTON DYE WORK
MA	Hampshire	25015	0420230	01	0101	10200504	21.00	MANEVU2002	1.0000	0.0000	0.0001	MONTGOMERY COMPANY
MA	Hampshire	25015	0420230	02	0101	10200504	21.00	MANEVU2002	1.0000	0.0000	0.0001	MONTGOMERY COMPANY
MA	Hampshire	25015	0420273	02	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0000	AMHERST JUNIOR HIGH SCHOOL
MA	Hampshire	25015	0420278	01	0101	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0000	AMHERST WILDWOOD SCHOOL
MA	Hampshire	25015	0420278	02	0101	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0000	AMHERST WILDWOOD SCHOOL
MA	Hampshire	25015	0420338	01	0101	10300401	28.00	MANEVU2002	2.0000	0.0000	0.0000	CLARKE SCHOOL FOR DEAF
MA	Hampshire	25015	0420338	02	0101	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0000	CLARKE SCHOOL FOR DEAF
MA	Hampshire	25015	0420338	03	0102	10300401	1.00	MANEVU2002	0.0800	0.0000	0.0002	CLARKE SCHOOL FOR DEAF
MA	Hampshire	25015	0420343	01	0101	10200401	20.00	MANEVU2002	0.1360	0.0000	0.0004	NATIONAL NONWOVENS
MA	Hampshire	25015	0420343	03	0101	10200401	25.00	MANEVU2002	4.4050	0.0000	0.0121	NATIONAL NONWOVENS
MA	Hampshire	25015	0420474	04	0103	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	KOLLMORGEN CORPORATION ELECTRO-OPTICAL
MA	Hampshire	25015	0420519	01	0301	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0009	MONTGOMERY COMPANY
MA	Hampshire	25015	0420519	02	0302	10200504	25.00	MANEVU2002	2.0000	0.0000	0.0009	MONTGOMERY COMPANY
MA	Hampshire	25015	0420574	01	0101	10200603	5.00	MANEVU2002	0.1545	0.0000	0.0000	PACKAGING CORPORATION OF AMERICA
MA	Hampshire	25015	0420574	02	0102	10200603	4.00	MANEVU2002	0.1545	0.0000	0.0000	PACKAGING CORPORATION OF AMERICA
MA	Hampshire	25015	0420574	04	0104	10200602	15.00	MANEVU2002	2.0000	0.0000	0.0040	PACKAGING CORPORATION OF AMERICA
MA	Hampshire	25015	0420742	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0000	WARE HIGH SCHOOL
MA	Hampshire	25015	0420745	01	0101	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0000	WARE MIDDLE SCHOOL
MA	Middlesex	25017	1180297	03	0103	10300603	2.00	MANEVU2002	0.1200	0.0000	0.0003	EMC CORPORATION
MA	Middlesex	25017	1180299	01	0101	10300401	21.00	MANEVU2002	1.0000	0.0000	0.0011	MCI SHIRLEY
MA	Middlesex	25017	1180299	02	0101	10300401	21.00	MANEVU2002	3.0000	0.0000	0.0033	MCI SHIRLEY
MA	Middlesex	25017	1180320	01	0101	10300603	2.00	MANEVU2002	0.3600	0.0000	0.0000	COMPAQ COMPUTER CORPORATION-TAY2
MA	Middlesex	25017	1180363	01	0101	10300603	7.00	MANEVU2002	0.5700	0.0000	0.0000	EMC CORPORATION
MA	Middlesex	25017	1180375	01	0201	10200501	1.00	MANEVU2002	0.1000	0.0000	0.0000	IDEAL CONCRETE BLOCK CO
MA	Middlesex	25017	1180375	02	0102	10300603	1.00	MANEVU2002	0.1000	0.0000	0.0000	IDEAL CONCRETE BLOCK CO
MA	Middlesex	25017	1180378	01	0101	10300603	7.00	MANEVU2002	0.7400	0.0000	0.0020	COMPAQ COMPUTER CORP
MA	Middlesex	25017	1180795	01	0101	10200603	3.00	MANEVU2002	0.2235	0.0000	0.0002	BEMIS ASSOCIATES INC
MA	Middlesex	25017	1180805	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	NORTH MIDDLESEX REGIONAL HIGH
MA	Middlesex	25017	1190002	01	0201	10300602	20.00	MANEVU2002	1.0000	0.0000	0.0011	MCLEAN HOSPITAL
MA	Middlesex	25017	1190002	02	0101	10300401	21.00	MANEVU2002	2.0000	0.0000	0.0033	MCLEAN HOSPITAL
MA	Middlesex	25017	1190002	02	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0016	MCLEAN HOSPITAL
MA	Middlesex	25017	1190002	03	0201	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0027	MCLEAN HOSPITAL
MA	Middlesex	25017	1190029	02	0102	10200603	10.00	MANEVU2002	1.1300	0.0000	0.0031	GENZYME CORPORATION
MA	Middlesex	25017	1190045	01	0101	10200603	6.00	MANEVU2002	1.0000	0.0000	0.0027	NEORESINS
MA	Middlesex	25017	1190045	02	0102	10200603	6.00	MANEVU2002	1.0000	0.0000	0.0027	NEORESINS
MA	Middlesex	25017	1190095	13	0113	10300603	1.00	MANEVU2002	0.0780	0.0000	0.0001	CHARLES RIVER LABORATORIES
MA	Middlesex	25017	1190095	14	0114	10300603	1.00	MANEVU2002	0.0025	0.0000	0.0000	CHARLES RIVER LABORATORIES
MA	Middlesex	25017	1190107	03	0201	10300602	11.00	MANEVU2002	0.4500	0.0000	0.0012	SANCTA MARIA NURSING FACILITY
MA	Middlesex	25017	1190108	01	0101	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0055	YOUVILLE HOSPITAL
MA	Middlesex	25017	1190108	02	0101	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0055	YOUVILLE HOSPITAL
MA	Middlesex	25017	1190108	03	0102	10300603	10.00	MANEVU2002	4.0000	0.0000	0.0110	YOUVILLE HOSPITAL
MA	Middlesex	25017	1190133	01	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0110	WHIDDEN MEMORIAL HOSPITAL
MA	Middlesex	25017	1190133	02	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0110	WHIDDEN MEMORIAL HOSPITAL
MA	Middlesex	25017	1190134	05	0101	10200906	13.00	MANEVU2002	1.0000	0.0000	0.0027	AVERY DENNISON CORP
MA	Middlesex	25017	1190136	03	0101	10200401	29.00	MANEVU2002	5.0000	0.0000	0.0137	SAXONVILLE REALTY TRUST
MA	Middlesex	25017	1190152	02	0101	10300401	21.00	MANEVU2002	5.0000	0.0000	0.0137	LAWRENCE MEMORIAL HOSPITAL
MA	Middlesex	25017	1190152	02	0201	10300602	21.00	MANEVU2002	0.3320	0.0000	0.0009	LAWRENCE MEMORIAL HOSPITAL
MA	Middlesex	25017	1190152	03	0101	10300401	21.00	MANEVU2002	0.6865	0.0000	0.0019	LAWRENCE MEMORIAL HOSPITAL
MA	Middlesex	25017	1190152	03	0201	10300602	21.00	MANEVU2002	0.3210	0.0000	0.0009	LAWRENCE MEMORIAL HOSPITAL
MA	Middlesex	25017	1190156	01	0101	10300401	27.00	MANEVU2002	10.0000	0.0000	0.0011	TUFTS UNIVERSITY

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MA	Middlesex	25017	1190156	02	0101	10300401	29.00	MANEVU2002	8.0000	0.0000	0.0009	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	03	0101	10300501	49.00	MANEVU2002	1.0000	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	04	0102	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0003	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	05	0102	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0003	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	15	0107	10300602	2.00	MANEVU2002	0.0710	0.0000	0.0006	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	16	0107	10300603	1.00	MANEVU2002	0.0710	0.0000	0.0002	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	17	0108	10300603	1.00	MANEVU2002	0.0895	0.0000	0.0002	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	18	0108	10300603	1.00	MANEVU2002	0.0895	0.0000	0.0002	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	19	0109	10300603	2.00	MANEVU2002	0.1665	0.0000	0.0005	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	20	0110	10300603	3.00	MANEVU2002	0.3925	0.0000	0.0011	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	21	0110	10300603	3.00	MANEVU2002	0.3925	0.0000	0.0011	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	75	0121	10300603	9.00	MANEVU2002	0.6430	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	76	0121	10300603	2.00	MANEVU2002	0.1510	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	77	0121	10300501	10.00	MANEVU2002	0.3995	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	78	0121	10300603	1.00	MANEVU2002	0.0370	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	79	0121	10300603	5.00	MANEVU2002	0.0105	0.0000	0.0000	TUFTS UNIVERSITY
MA	Middlesex	25017	1190156	80	0121	10300603	1.00	MANEVU2002	0.0320	0.0000	0.0001	TUFTS UNIVERSITY
MA	Middlesex	25017	1190158	01	0101	10300504	21.00	MANEVU2002	1.0000	0.0000	0.0019	MELROSE WAKEFIELD HOSPITAL
MA	Middlesex	25017	1190158	02	0101	10300504	21.00	MANEVU2002	1.0000	0.0000	0.0019	MELROSE WAKEFIELD HOSPITAL
MA	Middlesex	25017	1190158	02	0201	10300602	21.00	MANEVU2002	0.4000	0.0000	0.0007	MELROSE WAKEFIELD HOSPITAL
MA	Middlesex	25017	1190158	03	0101	10300603	3.00	MANEVU2002	0.3200	0.0000	0.0009	MELROSE WAKEFIELD HOSPITAL
MA	Middlesex	25017	1190162	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0000	ANDOVER NEWTON THEOLOGICAL SCHOOL
MA	Middlesex	25017	1190162	02	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0000	ANDOVER NEWTON THEOLOGICAL SCHOOL
MA	Middlesex	25017	1190167	01	0101	10300504	21.00	MANEVU2002	1.0000	0.0000	0.0027	CHAPEL BRIDGE PARK ASSOCIATES
MA	Middlesex	25017	1190168	01	0101	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0220	NEWTON WELLESLEY HOSPITAL
MA	Middlesex	25017	1190168	02	0101	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0220	NEWTON WELLESLEY HOSPITAL
MA	Middlesex	25017	1190168	03	0101	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0220	NEWTON WELLESLEY HOSPITAL
MA	Middlesex	25017	1190193	01	0101	10200501	5.00	MANEVU2002	0.0090	0.0000	0.0000	ROSENFELD CONCRETE CORP
MA	Middlesex	25017	1190202	01	0101	10300504	32.00	MANEVU2002	2.0000	0.0000	0.0084	STONEHAM RESEARCH CENTER
MA	Middlesex	25017	1190202	02	0101	10300401	10.00	MANEVU2002	2.0000	0.0000	0.0048	STONEHAM RESEARCH CENTER
MA	Middlesex	25017	1190203	01	0101	10300401	15.00	MANEVU2002	1.0000	0.0000	0.0027	SC WAKEFIELD 200
MA	Middlesex	25017	1190203	02	0102	10300401	15.00	MANEVU2002	1.0000	0.0000	0.0027	SC WAKEFIELD 200
MA	Middlesex	25017	1190203	03	0103	10300401	15.00	MANEVU2002	1.0000	0.0000	0.0027	SC WAKEFIELD 200
MA	Middlesex	25017	1190209	02	0101	10300401	30.00	MANEVU2002	7.0000	0.0000	0.0192	FERNALD CENTER
MA	Middlesex	25017	1190209	03	0101	10300401	30.00	MANEVU2002	11.0000	0.0000	0.0302	FERNALD CENTER
MA	Middlesex	25017	1190213	01	0101	10200401	17.00	MANEVU2002	1.0000	0.0000	0.0027	POLAROID CORPORATION
MA	Middlesex	25017	1190213	02	0101	10200401	25.00	MANEVU2002	2.0000	0.0000	0.0055	POLAROID CORPORATION
MA	Middlesex	25017	1190213	03	0102	10200401	10.00	MANEVU2002	3.0000	0.0000	0.0082	POLAROID CORPORATION
MA	Middlesex	25017	1190214	01	0201	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	STANDARD THOMSON CORPORATION
MA	Middlesex	25017	1190226	01	0101	10200602	17.00	MANEVU2002	1.5200	0.0000	0.0042	ANALOG DEVICES INC
MA	Middlesex	25017	1190226	02	0102	10200602	17.00	MANEVU2002	1.5200	0.0000	0.0042	ANALOG DEVICES INC
MA	Middlesex	25017	1190226	03	0103	10200602	20.00	MANEVU2002	1.5200	0.0000	0.0042	ANALOG DEVICES INC
MA	Middlesex	25017	1190226	04	0104	10200603	5.00	MANEVU2002	0.4800	0.0000	0.0013	ANALOG DEVICES INC
MA	Middlesex	25017	1190232	01	0101	10300501	10.00	MANEVU2002	0.0320	0.0000	0.0001	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	01	0201	10200602	10.00	MANEVU2002	0.5210	0.0000	0.0014	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	02	0101	10300501	10.00	MANEVU2002	0.0320	0.0000	0.0001	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	02	0201	10200602	10.00	MANEVU2002	0.5210	0.0000	0.0014	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	03	0201	10300501	10.00	MANEVU2002	0.5210	0.0000	0.0014	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	03	0101	10200602	10.00	MANEVU2002	0.0320	0.0000	0.0001	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190232	04	0104	10200603	2.00	MANEVU2002	1.1125	0.0000	0.0031	WINCHESTER HOSPITAL
MA	Middlesex	25017	1190234	02	0102	10200401	143.00	MANEVU2002	5.0000	0.0000	0.0137	KRAFT FOODS
MA	Middlesex	25017	1190234	02	0202	10200601	143.00	MANEVU2002	40.0000	0.0000	0.1099	KRAFT FOODS

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MA	Middlesex	25017	1190234	03	0103	10200401	112.00	MANEVU2002	2.0000	0.0000	0.0055	KRAFT FOODS
MA	Middlesex	25017	1190234	03	0203	10200601	112.00	MANEVU2002	19.0000	0.0000	0.0522	KRAFT FOODS
MA	Middlesex	25017	1190241	01	0101	10200401	60.00	MANEVU2002	40.0000	0.0000	0.1099	NATICK PAPERBOARD
MA	Middlesex	25017	1190241	01	0201	10200602	60.00	MANEVU2002	6.0000	0.0000	0.0165	NATICK PAPERBOARD
MA	Middlesex	25017	1190247	32	0130	10300603	2.00	MANEVU2002	1.0000	0.0000	0.0027	BENTLEY COLLEGE
MA	Middlesex	25017	1190247	35	0133	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	BENTLEY COLLEGE
MA	Middlesex	25017	1190247	37	0135	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0027	BENTLEY COLLEGE
MA	Middlesex	25017	1190248	01	0201	10300602	28.00	MANEVU2002	2.0000	0.0000	0.0022	US EDITH NOURSE VA HOSPITAL
MA	Middlesex	25017	1190248	02	0201	10300603	28.00	MANEVU2002	1.0000	0.0000	0.0027	US EDITH NOURSE VA HOSPITAL
MA	Middlesex	25017	1190248	03	0201	10300602	44.00	MANEVU2002	0.1000	0.0000	0.0001	US EDITH NOURSE VA HOSPITAL
MA	Middlesex	25017	1190258	01	0101	10300602	12.00	MANEVU2002	7.0000	0.0000	0.0192	ROYAL INSTITUTIONAL SERVICES
MA	Middlesex	25017	1190258	02	0102	10300602	8.00	MANEVU2002	4.0000	0.0000	0.0110	ROYAL INSTITUTIONAL SERVICES
MA	Middlesex	25017	1190269	01	0101	10300501	21.00	MANEVU2002	0.6130	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190269	01	0201	10300602	21.00	MANEVU2002	0.7990	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190269	02	0101	10300501	21.00	MANEVU2002	0.6130	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190269	02	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190269	03	0101	10300501	20.00	MANEVU2002	1.0000	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190269	03	0201	10300602	20.00	MANEVU2002	1.0000	0.0000	0.0000	CAMBRIDGE HOSPITAL
MA	Middlesex	25017	1190292	01	0101	10300401	65.00	MANEVU2002	8.0000	0.0000	0.0220	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	01	0201	10300602	65.00	MANEVU2002	5.0000	0.0000	0.0137	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	02	0101	10300401	65.00	MANEVU2002	3.0000	0.0000	0.0082	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	02	0201	10300602	65.00	MANEVU2002	3.0000	0.0000	0.0082	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	03	0101	10300401	46.00	MANEVU2002	11.0000	0.0000	0.0302	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	03	0201	10300602	46.00	MANEVU2002	0.3300	0.0000	0.0009	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	06	0103	10300504	6.00	MANEVU2002	0.6600	0.0000	0.0018	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	07	0103	10300504	6.00	MANEVU2002	0.6600	0.0000	0.0018	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	10	0105	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0011	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	11	0105	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0011	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	12	0106	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0011	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	13	0106	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0011	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	18	0109	10300602	17.00	MANEVU2002	0.0300	0.0000	0.0000	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	19	0110	10300501	4.00	MANEVU2002	0.5000	0.0000	0.0005	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190292	21	0112	10300504	24.00	MANEVU2002	0.2000	0.0000	0.0005	BOSTON COLLEGE CHESTNUT HILL
MA	Middlesex	25017	1190293	01	0101	10200401	0.00	MANEVU2002	0.3800	0.0000	0.0000	JG MACLELLAN CONCRETE CO
MA	Middlesex	25017	1190308	01	0101	10200603	1.00	MANEVU2002	0.1055	0.0000	0.0002	SURFACE COATINGS INCORPORATED
MA	Middlesex	25017	1190308	02	0102	10200603	8.00	MANEVU2002	0.7655	0.0000	0.0008	SURFACE COATINGS INCORPORATED
MA	Middlesex	25017	1190308	03	0103	10200603	13.00	MANEVU2002	1.1705	0.0000	0.0013	SURFACE COATINGS INCORPORATED
MA	Middlesex	25017	1190329	11	0107	10200603	2.00	MANEVU2002	0.0620	0.0000	0.0002	HUB FABRIC LEATHER
MA	Middlesex	25017	1190329	12	0108	10200603	4.00	MANEVU2002	0.1020	0.0000	0.0003	HUB FABRIC LEATHER
MA	Middlesex	25017	1190335	02	0201	10300602	95.00	MANEVU2002	2.0000	0.0000	0.0000	BRANDEIS UNIVERSITY
MA	Middlesex	25017	1190335	03	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0055	BRANDEIS UNIVERSITY
MA	Middlesex	25017	1190335	04	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0000	BRANDEIS UNIVERSITY
MA	Middlesex	25017	1190335	05	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0000	BRANDEIS UNIVERSITY
MA	Middlesex	25017	1190358	01	0101	10200603	1.00	MANEVU2002	0.1000	0.0000	0.0003	HK GRAPHICS INC
MA	Middlesex	25017	1190365	01	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0011	CAVICCHIO GREENHOUSE
MA	Middlesex	25017	1190365	02	0102	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0011	CAVICCHIO GREENHOUSE
MA	Middlesex	25017	1190365	03	0103	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0011	CAVICCHIO GREENHOUSE
MA	Middlesex	25017	1190424	01	0101	10200401	17.00	MANEVU2002	3.0000	0.0000	0.0000	IVEX NOVACEL INC
MA	Middlesex	25017	1190453	01	0201	10200603	4.00	MANEVU2002	2.0000	0.0000	0.0055	HC STARCK INCORPORATED
MA	Middlesex	25017	1190465	01	0101	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0027	PRINTED CIRCUIT CORP
MA	Middlesex	25017	1190468	01	0101	10300602	7.00	MANEVU2002	1.0000	0.0000	0.0027	FUJIFILM MICRODISKS
MA	Middlesex	25017	1190468	02	0101	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0027	FUJIFILM MICRODISKS

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MA	Middlesex	25017	1190471	02	0101	10200401	10.00	MANEVU2002	2.0000	0.0000	0.0000	NOVA BIOMEDICAL
MA	Middlesex	25017	1190496	01	0201	10200602	8.00	MANEVU2002	0.2095	0.0000	0.0006	MIDDLESEX RESEARCH M
MA	Middlesex	25017	1190496	02	0202	10200602	7.00	MANEVU2002	0.0580	0.0000	0.0000	MIDDLESEX RESEARCH M
MA	Middlesex	25017	1190496	03	0103	10200603	3.00	MANEVU2002	0.0910	0.0000	0.0002	MIDDLESEX RESEARCH M
MA	Middlesex	25017	1190499	01	0101	10200401	43.00	MANEVU2002	18.0000	0.0000	0.0495	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	01	0201	10200602	43.00	MANEVU2002	0.0500	0.0000	0.0001	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	02	0101	10200401	43.00	MANEVU2002	12.0000	0.0000	0.0330	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	02	0201	10200602	43.00	MANEVU2002	2.0000	0.0000	0.0055	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	03	0102	10200401	43.00	MANEVU2002	19.0000	0.0000	0.0522	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	03	0202	10300602	43.00	MANEVU2002	2.0000	0.0000	0.0055	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	04	0102	10200401	43.00	MANEVU2002	17.0000	0.0000	0.0467	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	04	0202	10200602	43.00	MANEVU2002	1.0000	0.0000	0.0027	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0203	10200603	180.00	MANEVU2002	0.3000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0303	10300603	180.00	MANEVU2002	1.0000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0503	10300602	180.00	MANEVU2002	1.0000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0603	10300602	180.00	MANEVU2002	1.0000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0703	10300603	180.00	MANEVU2002	0.4000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	0803	10300603	180.00	MANEVU2002	0.0005	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	05	1003	10301002	180.00	MANEVU2002	0.1000	0.0000	0.0000	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190499	06	0204	10300603	3.00	MANEVU2002	0.1000	0.0000	0.0001	US HANSCOM 66TH SPTG
MA	Middlesex	25017	1190506	01	0101	10200603	3.00	MANEVU2002	0.4000	0.0000	0.0011	DUNCAN GROUP THE
MA	Middlesex	25017	1190543	01	0201	10300602	26.00	MANEVU2002	0.0005	0.0000	0.0000	MT AUBURN HOSPITAL
MA	Middlesex	25017	1190543	02	0201	10300602	26.00	MANEVU2002	0.4000	0.0000	0.0011	MT AUBURN HOSPITAL
MA	Middlesex	25017	1190543	03	0101	10300501	26.00	MANEVU2002	2.0000	0.0000	0.0055	MT AUBURN HOSPITAL
MA	Middlesex	25017	1190543	03	0201	10300602	26.00	MANEVU2002	2.0000	0.0000	0.0055	MT AUBURN HOSPITAL
MA	Middlesex	25017	1190544	01	0101	10300602	43.00	MANEVU2002	2.0000	0.0000	0.0055	MALDEN MEDICAL CENTER
MA	Middlesex	25017	1190544	02	0102	10300602	25.00	MANEVU2002	1.0000	0.0000	0.0027	MALDEN MEDICAL CENTER
MA	Middlesex	25017	1190572	01	0201	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0027	DEACONESS WALTHAM HOSPITAL
MA	Middlesex	25017	1190572	02	0201	10300603	29.00	MANEVU2002	1.0000	0.0000	0.0027	DEACONESS WALTHAM HOSPITAL
MA	Middlesex	25017	1190576	15	0113	10200603	5.00	MANEVU2002	2.0000	0.0000	0.0055	M/A COM INC
MA	Middlesex	25017	1190576	16	0114	10200603	6.00	MANEVU2002	2.0000	0.0000	0.0055	M/A COM INC
MA	Middlesex	25017	1190579	02	0201	10300602	42.00	MANEVU2002	4.0000	0.0000	0.0110	MCI CONCORD
MA	Middlesex	25017	1190579	03	0201	10300602	42.00	MANEVU2002	5.0000	0.0000	0.0137	MCI CONCORD
MA	Middlesex	25017	1190580	01	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0044	MCI FRAMINGHAM
MA	Middlesex	25017	1190580	02	0101	10300401	10.00	MANEVU2002	2.0000	0.0000	0.0022	MCI FRAMINGHAM
MA	Middlesex	25017	1190580	03	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0044	MCI FRAMINGHAM
MA	Middlesex	25017	1190580	04	0101	10300401	17.00	MANEVU2002	4.0000	0.0000	0.0044	MCI FRAMINGHAM
MA	Middlesex	25017	1190584	01	0101	10300401	29.00	MANEVU2002	7.0000	0.0000	0.0092	FRAMINGHAM STATE COL
MA	Middlesex	25017	1190584	02	0101	10300401	29.00	MANEVU2002	5.0000	0.0000	0.0066	FRAMINGHAM STATE COL
MA	Middlesex	25017	1190584	03	0101	10300401	41.00	MANEVU2002	2.0000	0.0000	0.0000	FRAMINGHAM STATE COL
MA	Middlesex	25017	1190584	04	0102	10300603	3.00	MANEVU2002	0.0985	0.0000	0.0003	FRAMINGHAM STATE COL
MA	Middlesex	25017	1190584	05	0102	10300603	1.00	MANEVU2002	0.0495	0.0000	0.0001	FRAMINGHAM STATE COL
MA	Middlesex	25017	1190585	01	0101	10200603	4.00	MANEVU2002	0.9965	0.0000	0.0027	CHOMERICS INCORPORATED
MA	Middlesex	25017	1190586	01	0101	10200501	8.00	MANEVU2002	1.0000	0.0000	0.0027	GOOD HUMOR BREYERS ICE CREAM
MA	Middlesex	25017	1190586	02	0101	10200501	8.00	MANEVU2002	1.0000	0.0000	0.0027	GOOD HUMOR BREYERS ICE CREAM
MA	Middlesex	25017	1190587	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0016	BETHANY HEALTH CARE
MA	Middlesex	25017	1190587	02	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0016	BETHANY HEALTH CARE
MA	Middlesex	25017	1190593	01	0201	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0042	LAHEY HITCHCOCK MEDI
MA	Middlesex	25017	1190593	02	0101	10300501	25.00	MANEVU2002	2.0000	0.0000	0.0042	LAHEY HITCHCOCK MEDI
MA	Middlesex	25017	1190593	02	0201	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0042	LAHEY HITCHCOCK MEDI
MA	Middlesex	25017	1190593	03	0201	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0042	LAHEY HITCHCOCK MEDI
MA	Middlesex	25017	1190600	01	0101	10200602	13.00	MANEVU2002	0.7700	0.0000	0.0021	MILLIPORE CORPORATION

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MA	Middlesex	25017	1190600	02	0102	10200603	6.00	MANEVU2002	0.5900	0.0000	0.0016	MILLIPORE CORPORATION
MA	Middlesex	25017	1190600	03	0103	10200603	6.00	MANEVU2002	0.5900	0.0000	0.0016	MILLIPORE CORPORATION
MA	Middlesex	25017	1190600	07	0107	10200602	13.00	MANEVU2002	1.0000	0.0000	0.0027	MILLIPORE CORPORATION
MA	Middlesex	25017	1190601	01	0201	10200603	10.00	MANEVU2002	0.2420	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	02	0201	10200602	10.00	MANEVU2002	0.2420	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	03	0102	10200603	5.00	MANEVU2002	0.0670	0.0000	0.0002	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	04	0203	10200603	3.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	05	0203	10200603	2.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	06	0204	10200603	6.00	MANEVU2002	0.3000	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	07	0204	10200603	6.00	MANEVU2002	0.3000	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	08	0205	10200603	5.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	09	0205	10200603	5.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	10	0206	10200603	6.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190601	11	0207	10200603	6.00	MANEVU2002	0.2670	0.0000	0.0003	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1190608	01	0201	10300602	5.00	MANEVU2002	1.0000	0.0000	0.0027	EMERSON HOSPITAL
MA	Middlesex	25017	1190608	02	0201	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	EMERSON HOSPITAL
MA	Middlesex	25017	1190608	03	0201	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	EMERSON HOSPITAL
MA	Middlesex	25017	1190608	04	0202	10300603	4.00	MANEVU2002	0.2400	0.0000	0.0007	EMERSON HOSPITAL
MA	Middlesex	25017	1190608	14	0107	10300501	1.00	MANEVU2002	0.0500	0.0000	0.0001	EMERSON HOSPITAL
MA	Middlesex	25017	1190617	01	0101	10201002	20.00	MANEVU2002	12.0000	0.0000	0.0330	BOSTON GAS EVERETT
MA	Middlesex	25017	1190617	02	0102	10201001	8.00	MANEVU2002	2.0000	0.0000	0.0055	BOSTON GAS EVERETT
MA	Middlesex	25017	1190617	03	0103	10201002	6.00	MANEVU2002	2.0000	0.0000	0.0055	BOSTON GAS EVERETT
MA	Middlesex	25017	1190634	01	0101	10300501	150.00	MANEVU2002	4.0000	0.0000	0.0110	SPRAGUE-EVERETT TERMINAL
MA	Middlesex	25017	1190639	01	0101	10200501	1.00	MANEVU2002	0.0150	0.0000	0.0000	TRIRAM CORPORATION
MA	Middlesex	25017	1190676	04	0104	10300603	1.00	MANEVU2002	0.0190	0.0000	0.0001	MA ANG CURTIS
MA	Middlesex	25017	1190677	01	0101	10300401	37.00	MANEVU2002	2.0000	0.0000	0.0037	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190677	01	0201	10300602	37.00	MANEVU2002	0.0665	0.0000	0.0001	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190677	02	0102	10300401	37.00	MANEVU2002	2.0000	0.0000	0.0037	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190677	02	0202	10300602	37.00	MANEVU2002	0.0665	0.0000	0.0001	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190677	03	0103	10300401	37.00	MANEVU2002	2.0000	0.0000	0.0037	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190677	03	0203	10300602	37.00	MANEVU2002	0.0665	0.0000	0.0001	US ARMY SOLDIER SYSTEMS CENTER
MA	Middlesex	25017	1190692	01	0101	10200501	6.00	MANEVU2002	0.2275	0.0000	0.0003	IONICS INCORPORATED
MA	Middlesex	25017	1190692	02	0101	10200501	2.00	MANEVU2002	0.0065	0.0000	0.0000	IONICS INCORPORATED
MA	Middlesex	25017	1190719	01	0101	10300602	15.00	MANEVU2002	0.2220	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	01	0201	10300501	15.00	MANEVU2002	0.0540	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	02	0101	10300602	15.00	MANEVU2002	0.2220	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	02	0201	10300501	15.00	MANEVU2002	0.0540	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	03	0101	10300602	15.00	MANEVU2002	0.2220	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	03	0201	10300501	15.00	MANEVU2002	0.0540	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	04	0101	10300602	15.00	MANEVU2002	0.2220	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	04	0201	10300501	15.00	MANEVU2002	0.0540	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	07	0102	10300501	4.00	MANEVU2002	0.0930	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	08	0103	10300501	5.00	MANEVU2002	0.1940	0.0000	0.0000	MITRE CORPORATION
MA	Middlesex	25017	1190719	21	0101	10300603	5.00	MANEVU2002	0.0425	0.0000	0.0001	MITRE CORPORATION
MA	Middlesex	25017	1190719	22	0101	10200501	0.00	MANEVU2002	0.0500	0.0000	0.0001	MITRE CORPORATION
MA	Middlesex	25017	1190720	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0001	CARDINAL HEALTH
MA	Middlesex	25017	1190723	23	0123	10300501	1.00	MANEVU2002	0.0285	0.0000	0.0000	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190723	24	0124	10300501	1.00	MANEVU2002	0.0250	0.0000	0.0000	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190723	25	0125	10300501	1.00	MANEVU2002	0.0270	0.0000	0.0000	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190723	26	0126	10300501	2.00	MANEVU2002	0.0935	0.0000	0.0001	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190723	27	0127	10300501	1.00	MANEVU2002	0.0125	0.0000	0.0000	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190723	28	0128	10300501	3.00	MANEVU2002	0.4230	0.0000	0.0005	MIT LINCOLN LABORATORY

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MA	Middlesex	25017	1190723	29	0129	10300501	1.00	MANEVU2002	0.0930	0.0000	0.0001	MIT LINCOLN LABORATORY
MA	Middlesex	25017	1190725	02	0102	10200501	17.00	MANEVU2002	1.0000	0.0000	0.0027	ASHLAND TECHNOLOGY CENTER
MA	Middlesex	25017	1190739	04	0102	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0027	WALDEN PARK ASSOCIATES
MA	Middlesex	25017	1190762	01	0101	10300602	33.00	MANEVU2002	1.0000	0.0000	0.0024	METROWEST MEDICAL CENTER
MA	Middlesex	25017	1190762	02	0201	10300602	34.00	MANEVU2002	1.0000	0.0000	0.0024	METROWEST MEDICAL CENTER
MA	Middlesex	25017	1190765	01	0101	10200602	13.00	MANEVU2002	3.0000	0.0000	0.0033	INTERNATIONAL PAPER
MA	Middlesex	25017	1190775	01	0101	10300401	6.00	MANEVU2002	2.0000	0.0000	0.0055	TASCO REALTY COMPANY
MA	Middlesex	25017	1190781	01	0101	10200603	6.00	MANEVU2002	1.0000	0.0000	0.0027	HOPWOOD GLOBE LTD
MA	Middlesex	25017	1190782	01	0101	10200603	4.00	MANEVU2002	0.2910	0.0000	0.0008	PIANTEDOSI BAKING CO
MA	Middlesex	25017	1190782	02	0101	10200603	4.00	MANEVU2002	0.1535	0.0000	0.0004	PIANTEDOSI BAKING CO
MA	Middlesex	25017	1190791	03	0202	10200603	1.00	MANEVU2002	18.0000	0.0000	0.0000	GENERAL ELECTRIC INTERNATIONAL INC
MA	Middlesex	25017	1190793	06	0105	10200603	1.00	MANEVU2002	0.1000	0.0000	0.0001	QUEBECOR WORLD ACME PRINTING CO
MA	Middlesex	25017	1190793	07	0106	10200603	2.00	MANEVU2002	0.3000	0.0000	0.0002	QUEBECOR WORLD ACME PRINTING CO
MA	Middlesex	25017	1190810	01	0101	10300504	14.00	MANEVU2002	1.0000	0.0000	0.0027	ARLINGTON REDEVELOPMENT BOARD
MA	Middlesex	25017	1190810	02	0101	10300504	14.00	MANEVU2002	1.0000	0.0000	0.0027	ARLINGTON REDEVELOPMENT BOARD
MA	Middlesex	25017	1190813	01	0201	10200602	15.00	MANEVU2002	0.3100	0.0000	0.0000	RAYTHEON COMPANY EXECUTIVE OFFICES
MA	Middlesex	25017	1190813	02	0201	10200603	8.00	MANEVU2002	0.0340	0.0000	0.0000	RAYTHEON COMPANY EXECUTIVE OFFICES
MA	Middlesex	25017	1190813	07	0103	10200603	2.00	MANEVU2002	0.1560	0.0000	0.0000	RAYTHEON COMPANY EXECUTIVE OFFICES
MA	Middlesex	25017	1190813	14	0107	10200603	1.00	MANEVU2002	0.0650	0.0000	0.0002	RAYTHEON COMPANY EXECUTIVE OFFICES
MA	Middlesex	25017	1190814	01	0101	10200602	34.00	MANEVU2002	7.0000	0.0000	0.0192	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	02	0102	10200602	34.00	MANEVU2002	7.0000	0.0000	0.0192	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	03	0103	10200602	34.00	MANEVU2002	7.0000	0.0000	0.0192	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	04	0104	10200602	34.00	MANEVU2002	7.0000	0.0000	0.0192	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	10	0110	10200603	1.00	MANEVU2002	0.0300	0.0000	0.0001	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	13	0113	10200602	29.00	MANEVU2002	2.0000	0.0000	0.0055	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	19	0119	10200602	65.00	MANEVU2002	7.0000	0.0000	0.0192	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	20	0120	10200602	65.00	MANEVU2002	6.0000	0.0000	0.0165	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190814	21	0121	10200603	9.00	MANEVU2002	0.6300	0.0000	0.0017	DISTRIGAS OF MASSACHUSETTS, LLC
MA	Middlesex	25017	1190832	01	0101	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0024	METROWEST MEDICAL CENTER
MA	Middlesex	25017	1190832	03	0101	10300602	13.00	MANEVU2002	2.0000	0.0000	0.0048	METROWEST MEDICAL CENTER
MA	Middlesex	25017	1190832	04	0102	10300603	2.00	MANEVU2002	0.3000	0.0000	0.0008	METROWEST MEDICAL CENTER
MA	Middlesex	25017	1190847	15	0110	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0011	ARROW INTERNATIONAL
MA	Middlesex	25017	1190883	01	0101	10200603	4.00	MANEVU2002	0.4580	0.0000	0.0013	IBM CORP - CAMBRIDGE
MA	Middlesex	25017	1190883	03	0102	10300603	1.00	MANEVU2002	0.0660	0.0000	0.0002	IBM CORP - CAMBRIDGE
MA	Middlesex	25017	1190883	08	0104	10300603	6.00	MANEVU2002	0.1475	0.0000	0.0004	IBM CORP - CAMBRIDGE
MA	Middlesex	25017	1190887	01	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0027	MYSTIC VALLEY TOWERS
MA	Middlesex	25017	1190887	02	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0027	MYSTIC VALLEY TOWERS
MA	Middlesex	25017	1190895	01	0201	10300602	17.00	MANEVU2002	0.3595	0.0000	0.0000	WALTHAM ENGINEERING
MA	Middlesex	25017	1190895	02	0201	10300602	17.00	MANEVU2002	0.3595	0.0000	0.0000	WALTHAM ENGINEERING
MA	Middlesex	25017	1190901	01	0101	10200603	3.00	MANEVU2002	0.2300	0.0000	0.0006	HAARTZ CORP
MA	Middlesex	25017	1190905	01	0101	10300602	10.00	MANEVU2002	0.0020	0.0000	0.0000	STOW PARTNERS LLC
MA	Middlesex	25017	1190906	01	0101	10300501	10.00	MANEVU2002	0.0490	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	01	0201	10300602	10.00	MANEVU2002	0.4165	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	02	0101	10300501	10.00	MANEVU2002	0.0490	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	02	0201	10300602	10.00	MANEVU2002	0.4165	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	03	0101	10300501	10.00	MANEVU2002	0.0490	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	03	0201	10300501	10.00	MANEVU2002	0.4165	0.0000	0.0000	PERKINS SCHOOL
MA	Middlesex	25017	1190906	04	0201	10300603	10.00	MANEVU2002	0.4165	0.0000	0.0011	PERKINS SCHOOL
MA	Middlesex	25017	1190906	04	0101	10300501	10.00	MANEVU2002	0.0490	0.0000	0.0001	PERKINS SCHOOL
MA	Middlesex	25017	1190907	01	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0011	MARLBOROUGH HOSPITAL
MA	Middlesex	25017	1190907	03	0101	10300602	10.00	MANEVU2002	1.0000	0.0000	0.0027	MARLBOROUGH HOSPITAL
MA	Middlesex	25017	1190910	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0011	ROHM AND HAAS ELECTRONIC MATERIALS LLC

									2002 NOx Emissions			
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MA	Middlesex	25017	1190910	02	0101	10200603	3.00	MANEVU2002	0.5800	0.0000	0.0006	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	03	0102	10300603	2.00	MANEVU2002	0.2800	0.0000	0.0008	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	04	0102	10200603	2.00	MANEVU2002	0.2800	0.0000	0.0008	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	05	0103	10200603	5.00	MANEVU2002	0.2900	0.0000	0.0008	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	06	0103	10200603	5.00	MANEVU2002	0.2900	0.0000	0.0008	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	07	0104	10200601	3.00	MANEVU2002	0.0930	0.0000	0.0003	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	08	0105	10200603	2.00	MANEVU2002	0.1020	0.0000	0.0003	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190910	15	0109	10200603	5.00	MANEVU2002	0.2900	0.0000	0.0003	ROHM AND HAAS ELECTRONIC MATERIALS LLC
MA	Middlesex	25017	1190920	01	0101	10200603	1.00	MANEVU2002	0.2175	0.0000	0.0002	MILLIPORE CORPORATION
MA	Middlesex	25017	1190922	01	0101	10300501	21.00	MANEVU2002	1.0000	0.0000	0.0027	TOWERS AT CHESTNUT H
MA	Middlesex	25017	1190922	02	0101	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0027	TOWERS AT CHESTNUT H
MA	Middlesex	25017	1190930	01	0201	10200603	5.00	MANEVU2002	0.0100	0.0000	0.0000	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1190930	02	0201	10200603	5.00	MANEVU2002	0.1000	0.0000	0.0001	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1190930	03	0201	10200603	3.00	MANEVU2002	0.1000	0.0000	0.0001	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1190949	01	0101	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0011	FARLEY SCHOOL
MA	Middlesex	25017	1190953	01	0101	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0027	CHASE WALTON ELASTOMERS
MA	Middlesex	25017	1190953	02	0102	10200501	2.00	MANEVU2002	1.0000	0.0000	0.0000	CHASE WALTON ELASTOMERS
MA	Middlesex	25017	1190954	02	0101	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0027	ADDISON WESLEY COMPANY
MA	Middlesex	25017	1190954	05	0103	10300601	1.00	MANEVU2002	1.0000	0.0000	0.0027	ADDISON WESLEY COMPANY
MA	Middlesex	25017	1190954	06	0104	10300601	2.00	MANEVU2002	1.0000	0.0000	0.0027	ADDISON WESLEY COMPANY
MA	Middlesex	25017	1190957	12	0112	10200799	23.00	MANEVU2002	1.0000	0.0000	0.0060	HOPKINTON LNG CORP
MA	Middlesex	25017	1190968	01	0101	10300602	55.00	MANEVU2002	1.0000	0.0000	0.0011	WALSH MIDDLE SCHOOL
MA	Middlesex	25017	1190968	02	0101	10300602	55.00	MANEVU2002	1.0000	0.0000	0.0011	WALSH MIDDLE SCHOOL
MA	Middlesex	25017	1190968	03	0101	10300602	55.00	MANEVU2002	1.0000	0.0000	0.0011	WALSH MIDDLE SCHOOL
MA	Middlesex	25017	1190974	01	0101	10300501	0.00	MANEVU2002	1.0000	0.0000	0.0027	READING HIGH SCHOOL
MA	Middlesex	25017	1190975	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	WALTHAM GOVERNMENT CENTER
MA	Middlesex	25017	1190978	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0011	GALVIN MIDDLE SCHOOL
MA	Middlesex	25017	1190995	02	0102	10200501	29.00	MANEVU2002	3.0000	0.0000	0.0082	WELLESLEY ROSEWOOD MAYNARD MILL LP
MA	Middlesex	25017	1190999	02	0202	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0022	RAYTHEON SYSTEMS
MA	Middlesex	25017	1191008	01	0201	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1191008	02	0201	10200603	5.00	MANEVU2002	0.3900	0.0000	0.0011	RAYTHEON SYSTEMS COMPANY
MA	Middlesex	25017	1191011	01	0101	10300602	10.00	MANEVU2002	1.0000	0.0000	0.0011	KING SCHOOL
MA	Middlesex	25017	1191011	02	0101	10300602	10.00	MANEVU2002	1.0000	0.0000	0.0011	KING SCHOOL
MA	Middlesex	25017	1191022	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	KENNEDY MIDDLE SCHOOL
MA	Middlesex	25017	1191022	02	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	KENNEDY MIDDLE SCHOOL
MA	Middlesex	25017	1191034	01	0101	10300603	8.00	MANEVU2002	0.5600	0.0000	0.0003	GRACE PERFORMANCE CHEMICALS
MA	Middlesex	25017	1191034	02	0101	10300603	8.00	MANEVU2002	0.5600	0.0000	0.0006	GRACE PERFORMANCE CHEMICALS
MA	Middlesex	25017	1191047	01	0101	10300602	25.00	MANEVU2002	2.5640	0.0000	0.0070	MARRIOTT HOTEL
MA	Middlesex	25017	1191047	02	0101	10300602	3.00	MANEVU2002	0.5780	0.0000	0.0016	MARRIOTT HOTEL
MA	Middlesex	25017	1191058	02	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0027	UMASS EASTERN MASS EXT CENTER
MA	Middlesex	25017	1191065	01	0101	10200602	21.00	MANEVU2002	1.0000	0.0000	0.0000	RAYTHEON COMPANY MPT
MA	Middlesex	25017	1191070	01	0101	10200603	1.00	MANEVU2002	0.1550	0.0000	0.0002	WAKEFIELD CORPORATION THE
MA	Middlesex	25017	1191074	01	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0011	CLARENDON HILL TOWER
MA	Middlesex	25017	1191074	02	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0011	CLARENDON HILL TOWER
MA	Middlesex	25017	1191074	03	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0011	CLARENDON HILL TOWER
MA	Middlesex	25017	1191077	01	0101	10300504	6.00	MANEVU2002	2.0000	0.0000	0.0055	UNIVERSAL LAUNDRY
MA	Middlesex	25017	1191078	01	0201	10300602	19.00	MANEVU2002	0.4200	0.0000	0.0012	SOMERVILLE HOSPITAL
MA	Middlesex	25017	1191078	02	0202	10300603	8.00	MANEVU2002	0.0600	0.0000	0.0002	SOMERVILLE HOSPITAL
MA	Middlesex	25017	1191078	03	0103	10300603	1.00	MANEVU2002	0.0630	0.0000	0.0002	SOMERVILLE HOSPITAL
MA	Middlesex	25017	1191078	04	0104	10300603	1.00	MANEVU2002	0.0020	0.0000	0.0000	SOMERVILLE HOSPITAL
MA	Middlesex	25017	1191120	01	0101	10300401	18.00	MANEVU2002	2.0000	0.0000	0.0055	MAHONEYS GARDEN CENTER
MA	Middlesex	25017	1191120	02	0102	10300401	18.00	MANEVU2002	2.0000	0.0000	0.0000	MAHONEYS GARDEN CENTER

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MA	Middlesex	25017	1191120	03	0103	10300401	18.00	MANEVU2002	2.0000	0.0000	0.0000	MAHONEYS GARDEN CENTER
MA	Middlesex	25017	1191149	01	0101	10200602	12.00	MANEVU2002	2.0000	0.0000	0.0022	NORTHERN RESEARCH & ENGINEERING
MA	Middlesex	25017	1191157	03	0102	10300501	6.00	MANEVU2002	3.0000	0.0000	0.0033	BEDFORD SENIOR HIGH
MA	Middlesex	25017	1191166	01	0101	10200603	1.00	MANEVU2002	0.1400	0.0000	0.0008	AGGREGATE INDUSTRIES NORTHEAST REGIONINC
MA	Middlesex	25017	1191173	01	0201	10300501	8.00	MANEVU2002	0.2800	0.0000	0.0008	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1191173	01	0101	10300603	8.00	MANEVU2002	0.2800	0.0000	0.0008	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1191173	03	0102	10300603	1.00	MANEVU2002	0.0200	0.0000	0.0001	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1191174	02	0102	10300602	6.00	MANEVU2002	0.2600	0.0000	0.0007	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1191174	03	0103	10300603	1.00	MANEVU2002	0.0100	0.0000	0.0000	HOBBS BROOK MANAGEMENT
MA	Middlesex	25017	1191179	01	0101	10200602	1.00	MANEVU2002	0.0250	0.0000	0.0000	LIGHTOLIER - WILMINGTON
MA	Middlesex	25017	1191179	19	0119	10300602	1.00	MANEVU2002	0.1000	0.0000	0.0000	LIGHTOLIER - WILMINGTON
MA	Middlesex	25017	1191192	01	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0027	JEFFERSON SMURFIT CO
MA	Middlesex	25017	1191192	01	0201	10200602	13.00	MANEVU2002	1.0000	0.0000	0.0027	JEFFERSON SMURFIT CO
MA	Middlesex	25017	1191192	02	0102	10300504	13.00	MANEVU2002	0.1735	0.0000	0.0000	JEFFERSON SMURFIT CO
MA	Middlesex	25017	1191192	02	0202	10200602	13.00	MANEVU2002	0.0150	0.0000	0.0000	JEFFERSON SMURFIT CO
MA	Middlesex	25017	1191200	02	0102	10200501	2.00	MANEVU2002	0.0900	0.0000	0.0002	AGGREGATE INDUSTRIES-NORTHEAST REGIONINC
MA	Middlesex	25017	1191203	01	0101	10300602	13.00	MANEVU2002	0.5500	0.0000	0.0015	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	02	0101	10300602	13.00	MANEVU2002	0.5515	0.0000	0.0015	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	03	0101	10300602	13.00	MANEVU2002	0.5515	0.0000	0.0015	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	04	0102	10200603	6.00	MANEVU2002	0.2760	0.0000	0.0008	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	05	0102	10200603	6.00	MANEVU2002	0.2760	0.0000	0.0008	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	06	0102	10200603	6.00	MANEVU2002	0.2760	0.0000	0.0008	VERIZON LABORATORIES
MA	Middlesex	25017	1191203	10	0106	10200603	1.00	MANEVU2002	0.0440	0.0000	0.0001	VERIZON LABORATORIES
MA	Middlesex	25017	1191232	01	0101	10200602	8.00	MANEVU2002	0.7800	0.0000	0.0021	NYACOL PRODUCTS INCORPORATED
MA	Middlesex	25017	1191232	02	0102	10200602	8.00	MANEVU2002	0.5200	0.0000	0.0014	NYACOL PRODUCTS INCORPORATED
MA	Middlesex	25017	1191239	01	0101	10300401	5.00	MANEVU2002	1.0000	0.0000	0.0000	HEIMLICH NURSERIES
MA	Middlesex	25017	1191245	01	0101	10200501	8.00	MANEVU2002	2.0000	0.0000	0.0000	SKYWORKS SOLUTIONS INC
MA	Middlesex	25017	1191245	02	0102	10200603	11.00	MANEVU2002	1.0000	0.0000	0.0000	SKYWORKS SOLUTIONS INC
MA	Middlesex	25017	1191245	03	0102	10200601	10.00	MANEVU2002	1.1500	0.0000	0.0000	SKYWORKS SOLUTIONS INC
MA	Middlesex	25017	1191246	01	0101	10200401	13.00	MANEVU2002	2.0000	0.0000	0.0000	JP BARTLETT COMPANY
MA	Middlesex	25017	1191246	02	0102	10200401	13.00	MANEVU2002	3.0000	0.0000	0.0082	JP BARTLETT COMPANY
MA	Middlesex	25017	1191246	02	0302	10300501	13.00	MANEVU2002	1.0000	0.0000	0.0027	JP BARTLETT COMPANY
MA	Middlesex	25017	1191268	02	0101	10200602	13.00	MANEVU2002	2.0000	0.0000	0.0000	MBTA EVERETT SHOPS
MA	Middlesex	25017	1191269	01	0101	10200501	45.00	MANEVU2002	0.5455	0.0000	0.0030	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	01	0201	10200602	45.00	MANEVU2002	0.0345	0.0000	0.0002	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	02	0102	10200501	38.00	MANEVU2002	0.3670	0.0000	0.0031	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	02	0202	10200602	38.00	MANEVU2002	0.0035	0.0000	0.0000	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	03	0103	10200501	38.00	MANEVU2002	0.4950	0.0000	0.0000	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	03	0203	10200602	38.00	MANEVU2002	0.0985	0.0000	0.0000	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191269	04	0104	10200501	1.00	MANEVU2002	0.0290	0.0000	0.0000	TEXTRON SYSTEMS CORPORATION
MA	Middlesex	25017	1191275	01	0201	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0011	WAYLAND BUSINESS CENTER
MA	Middlesex	25017	1191279	02	0101	10300603	11.00	MANEVU2002	1.0000	0.0000	0.0001	NEWTOWNE COURT APARTMENTS
MA	Middlesex	25017	1191282	01	0101	10200603	2.00	MANEVU2002	0.2860	0.0000	0.0008	SANMINA - SCI CORP
MA	Middlesex	25017	1191282	02	0102	10200603	5.00	MANEVU2002	0.0715	0.0000	0.0002	SANMINA - SCI CORP
MA	Middlesex	25017	1191296	03	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	KIDDE FENWAL INCORPORATED
MA	Middlesex	25017	1191301	04	0102	10200603	1.00	MANEVU2002	0.0140	0.0000	0.0000	HERLEY MICRODYNAMICS
MA	Middlesex	25017	1191305	01	0101	10300504	11.00	MANEVU2002	0.4800	0.0000	0.0005	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	02	0101	10300603	1.00	MANEVU2002	1.1100	0.0000	0.0030	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	03	0102	10300504	8.00	MANEVU2002	0.7800	0.0000	0.0021	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	04	0103	10300504	4.00	MANEVU2002	0.8500	0.0000	0.0009	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	05	0103	10300504	4.00	MANEVU2002	0.8500	0.0000	0.0009	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	06	0104	10300603	4.00	MANEVU2002	3.2400	0.0000	0.0036	ARTHUR D LITTLE INCORPORATED

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MA	Middlesex	25017	1191305	07	0104	10300603	4.00	MANEVU2002	3.2400	0.0000	0.0036	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	08	0105	10300603	1.00	MANEVU2002	1.0600	0.0000	0.0012	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	11	0106	10300603	1.00	MANEVU2002	1.1100	0.0000	0.0012	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	12	0106	10300603	2.00	MANEVU2002	2.2400	0.0000	0.0062	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	18	0104	10200603	4.00	MANEVU2002	3.2400	0.0000	0.0036	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191305	19	0104	10200603	4.00	MANEVU2002	3.2400	0.0000	0.0036	ARTHUR D LITTLE INCORPORATED
MA	Middlesex	25017	1191309	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON SCIENTIFIC CORPORATION
MA	Middlesex	25017	1191309	02	0101	10300603	5.00	MANEVU2002	0.1000	0.0000	0.0001	BOSTON SCIENTIFIC CORPORATION
MA	Middlesex	25017	1191309	04	0103	10200603	2.00	MANEVU2002	0.2000	0.0000	0.0002	BOSTON SCIENTIFIC CORPORATION
MA	Middlesex	25017	1191309	05	0103	10200603	2.00	MANEVU2002	0.2000	0.0000	0.0002	BOSTON SCIENTIFIC CORPORATION
MA	Middlesex	25017	1191316	01	0101	10301002	2.00	MANEVU2002	0.0140	0.0000	0.0000	MWRA WESTON RESERVOI
MA	Middlesex	25017	1191347	01	0101	10300503	1.00	MANEVU2002	0.0570	0.0000	0.0000	MWRA ALEWIFE BROOK P
MA	Middlesex	25017	1191361	02	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	MA STATE POLICE
MA	Middlesex	25017	1191389	14	0102	10300501	12.00	MANEVU2002	0.1100	0.0000	0.0000	LONGVIEW FIBRE COMPANY
MA	Middlesex	25017	1191398	01	0101	10300504	18.00	MANEVU2002	2.0000	0.0000	0.0007	REGIS COLLEGE
MA	Middlesex	25017	1191398	01	0201	10300602	18.00	MANEVU2002	1.0000	0.0000	0.0003	REGIS COLLEGE
MA	Middlesex	25017	1191398	02	0101	10300504	18.00	MANEVU2002	2.0000	0.0000	0.0007	REGIS COLLEGE
MA	Middlesex	25017	1191398	02	0201	10300602	18.00	MANEVU2002	1.0000	0.0000	0.0003	REGIS COLLEGE
MA	Middlesex	25017	1191398	04	0102	10300603	1.00	MANEVU2002	0.0440	0.0000	0.0001	REGIS COLLEGE
MA	Middlesex	25017	1191398	06	0103	10200603	2.00	MANEVU2002	0.0635	0.0000	0.0003	REGIS COLLEGE
MA	Middlesex	25017	1191398	08	0105	10300603	2.00	MANEVU2002	0.0070	0.0000	0.0000	REGIS COLLEGE
MA	Middlesex	25017	1191398	10	0106	10300603	1.00	MANEVU2002	0.0150	0.0000	0.0001	REGIS COLLEGE
MA	Middlesex	25017	1191398	11	0107	10300501	1.00	MANEVU2002	0.0450	0.0000	0.0000	REGIS COLLEGE
MA	Middlesex	25017	1191398	12	0108	10300501	1.00	MANEVU2002	0.0535	0.0000	0.0000	REGIS COLLEGE
MA	Middlesex	25017	1191398	15	0110	10300603	1.00	MANEVU2002	0.0120	0.0000	0.0000	REGIS COLLEGE
MA	Middlesex	25017	1191445	01	0101	10300603	1.00	MANEVU2002	0.0520	0.0000	0.0000	EAST WEST ENTERPRISE
MA	Middlesex	25017	1191445	02	0101	10300603	1.00	MANEVU2002	0.0520	0.0000	0.0000	EAST WEST ENTERPRISE
MA	Middlesex	25017	1191445	04	0101	10300603	1.00	MANEVU2002	0.0520	0.0000	0.0000	EAST WEST ENTERPRISE
MA	Middlesex	25017	1191445	05	0101	10300603	1.00	MANEVU2002	0.0290	0.0000	0.0001	EAST WEST ENTERPRISE
MA	Middlesex	25017	1191445	10	0106	10300603	2.00	MANEVU2002	0.0440	0.0000	0.0000	EAST WEST ENTERPRISE
MA	Middlesex	25017	1191463	01	0101	10300601	12.00	MANEVU2002	10.0000	0.0000	0.0000	PUTNAM GARDENS
MA	Middlesex	25017	1191463	02	0101	10300601	2.00	MANEVU2002	4.0000	0.0000	0.0110	PUTNAM GARDENS
MA	Middlesex	25017	1191468	01	0101	10300601	11.00	MANEVU2002	2.0000	0.0000	0.0015	ROOSEVELT TOWERS
MA	Middlesex	25017	1191469	01	0101	10300603	12.00	MANEVU2002	1.0000	0.0000	0.0009	WASHINGTON ELMS APARTMENTS
MA	Middlesex	25017	1191485	01	0101	10300603	3.00	MANEVU2002	0.2800	0.0000	0.0000	RADCLIFFE PERKINS CAMPUS
MA	Middlesex	25017	1191485	01	0201	10300501	3.00	MANEVU2002	0.0700	0.0000	0.0000	RADCLIFFE PERKINS CAMPUS
MA	Middlesex	25017	1191485	02	0101	10300603	17.00	MANEVU2002	0.3600	0.0000	0.0000	RADCLIFFE PERKINS CAMPUS
MA	Middlesex	25017	1191485	02	0201	10300504	17.00	MANEVU2002	2.0000	0.0000	0.0000	RADCLIFFE PERKINS CAMPUS
MA	Middlesex	25017	1191541	01	0101	10200603	8.00	MANEVU2002	0.1350	0.0000	0.0000	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191541	02	0102	10200603	6.00	MANEVU2002	1.0000	0.0000	0.0011	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191541	03	0103	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0011	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191541	04	0104	10200603	2.00	MANEVU2002	0.1600	0.0000	0.0004	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191541	09	0109	10200603	1.00	MANEVU2002	0.0700	0.0000	0.0001	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191541	12	0112	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	RAYTHEON ELECTRONIC
MA	Middlesex	25017	1191564	01	0101	10300603	10.00	MANEVU2002	0.3710	0.0000	0.0004	BOSE CORPORATION
MA	Middlesex	25017	1191564	02	0102	10300603	3.00	MANEVU2002	0.0930	0.0000	0.0001	BOSE CORPORATION
MA	Middlesex	25017	1191564	03	0103	10300603	2.00	MANEVU2002	0.0595	0.0000	0.0001	BOSE CORPORATION
MA	Middlesex	25017	1191581	01	0101	10200603	11.00	MANEVU2002	0.7400	0.0000	0.0002	TECOGEN
MA	Middlesex	25017	1191598	01	0101	10200501	6.00	MANEVU2002	0.5000	0.0000	0.0014	LEDGEMONT RESEARCH
MA	Middlesex	25017	1191598	02	0101	10200501	14.00	MANEVU2002	0.5000	0.0000	0.0000	LEDGEMONT RESEARCH
MA	Middlesex	25017	1191604	01	0101	10300603	55.00	MANEVU2002	4.0000	0.0000	0.0018	HARVARD UNIVERSITY
MA	Middlesex	25017	1191604	01	0201	10300501	55.00	MANEVU2002	0.3300	0.0000	0.0001	HARVARD UNIVERSITY

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MA	Middlesex	25017	1191604	02	0101	10300602	55.00	MANEVU2002	1.0000	0.0000	0.0011	HARVARD UNIVERSITY
MA	Middlesex	25017	1191604	02	0201	10300504	55.00	MANEVU2002	0.3100	0.0000	0.0003	HARVARD UNIVERSITY
MA	Middlesex	25017	1191604	03	0101	10300603	5.00	MANEVU2002	0.1800	0.0000	0.0005	HARVARD UNIVERSITY
MA	Middlesex	25017	1191612	05	0105	10200603	3.00	MANEVU2002	0.0420	0.0000	0.0001	MA BAY COMMUTER RAILROAD CO
MA	Middlesex	25017	1191612	06	0106	10200603	2.00	MANEVU2002	0.0190	0.0000	0.0001	MA BAY COMMUTER RAILROAD CO
MA	Middlesex	25017	1191612	08	0108	10200603	2.00	MANEVU2002	0.0190	0.0000	0.0001	MA BAY COMMUTER RAILROAD CO
MA	Middlesex	25017	1191631	01	0101	10300603	1.00	MANEVU2002	0.4865	0.0000	0.0005	WYETH RESEARCH
MA	Middlesex	25017	1191631	02	0102	10300603	1.00	MANEVU2002	0.4865	0.0000	0.0005	WYETH RESEARCH
MA	Middlesex	25017	1191631	03	0103	10300603	1.00	MANEVU2002	0.3045	0.0000	0.0003	WYETH RESEARCH
MA	Middlesex	25017	1191631	04	0104	10300603	2.00	MANEVU2002	2.5560	0.0000	0.0028	WYETH RESEARCH
MA	Middlesex	25017	1191631	05	0105	10200603	1.00	MANEVU2002	1.4605	0.0000	0.0016	WYETH RESEARCH
MA	Middlesex	25017	1191631	06	0106	10300603	1.00	MANEVU2002	0.5110	0.0000	0.0014	WYETH RESEARCH
MA	Middlesex	25017	1191631	10	0110	10300603	1.00	MANEVU2002	0.4360	0.0000	0.0005	WYETH RESEARCH
MA	Middlesex	25017	1191638	01	0101	10200602	55.00	MANEVU2002	1.0000	0.0000	0.0027	FOREST CITY MANAGEMENT
MA	Middlesex	25017	1191638	02	0101	10200602	55.00	MANEVU2002	1.0000	0.0000	0.0027	FOREST CITY MANAGEMENT
MA	Middlesex	25017	1191668	01	0101	10200603	1.00	MANEVU2002	0.0130	0.0000	0.0000	LEE PRODUCTS COMPANY
MA	Middlesex	25017	1191680	01	0101	10300603	25.00	MANEVU2002	0.5700	0.0000	0.0009	WYETH RESEARCH
MA	Middlesex	25017	1191680	02	0101	10300603	25.00	MANEVU2002	0.5700	0.0000	0.0009	WYETH RESEARCH
MA	Middlesex	25017	1191680	03	0101	10300603	25.00	MANEVU2002	0.5200	0.0000	0.0009	WYETH RESEARCH
MA	Middlesex	25017	1191721	01	0101	10200501	5.00	MANEVU2002	0.3775	0.0000	0.0000	MWRA PRISON POINT PU
MA	Middlesex	25017	1191722	04	0104	10200501	3.00	MANEVU2002	0.0240	0.0000	0.0000	MWRA COTTAGE FARMS
MA	Middlesex	25017	1191722	10	0107	10200501	0.00	MANEVU2002	0.0085	0.0000	0.0000	MWRA COTTAGE FARMS
MA	Middlesex	25017	1191722	11	0107	10300501	0.00	MANEVU2002	0.0085	0.0000	0.0000	MWRA COTTAGE FARMS
MA	Middlesex	25017	1191745	01	0101	10300602	42.00	MANEVU2002	0.4600	0.0000	0.0009	ASTRAZENECA PHARMACEUTICALS LP
MA	Middlesex	25017	1191745	02	0101	10200602	42.00	MANEVU2002	0.9600	0.0000	0.0018	ASTRAZENECA PHARMACEUTICALS LP
MA	Middlesex	25017	1191745	03	0101	10300602	17.00	MANEVU2002	0.4600	0.0000	0.0009	ASTRAZENECA PHARMACEUTICALS LP
MA	Middlesex	25017	1191753	01	0101	10200603	5.00	MANEVU2002	0.1400	0.0000	0.0002	WYETH RESEARCH
MA	Middlesex	25017	1191753	02	0101	10200603	5.00	MANEVU2002	0.1400	0.0000	0.0002	WYETH RESEARCH
MA	Middlesex	25017	1191753	03	0101	10200603	4.00	MANEVU2002	0.0400	0.0000	0.0001	WYETH RESEARCH
MA	Middlesex	25017	1191753	04	0101	10200603	4.00	MANEVU2002	0.0400	0.0000	0.0001	WYETH RESEARCH
MA	Middlesex	25017	1191753	05	0102	10200603	1.00	MANEVU2002	0.0200	0.0000	0.0001	WYETH RESEARCH
MA	Middlesex	25017	1191753	06	0102	10200603	1.00	MANEVU2002	0.0200	0.0000	0.0001	WYETH RESEARCH
MA	Middlesex	25017	1191771	01	0101	10200602	8.00	MANEVU2002	1.9000	0.0000	0.0000	GENZYME CORPORATION
MA	Middlesex	25017	1191777	01	0101	10200603	3.00	MANEVU2002	0.1000	0.0000	0.0003	FM CALLAHAN & SONS
MA	Middlesex	25017	1191812	01	0101	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	LISTA INTERNATIONAL CORP
MA	Middlesex	25017	1191812	02	0102	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	LISTA INTERNATIONAL CORP
MA	Middlesex	25017	1191839	01	0101	10300602	9.00	MANEVU2002	0.7165	0.0000	0.0000	ARQULE INCORPORATED
MA	Middlesex	25017	1191844	01	0201	10300601	211.00	MANEVU2002	5.0000	0.0000	0.0137	MIT
MA	Middlesex	25017	1191844	03	0101	10300401	116.00	MANEVU2002	10.0000	0.0000	0.0275	MIT
MA	Middlesex	25017	1191844	03	0201	10300601	116.00	MANEVU2002	19.0000	0.0000	0.0522	MIT
MA	Middlesex	25017	1191844	04	0101	10300401	116.00	MANEVU2002	10.0000	0.0000	0.0275	MIT
MA	Middlesex	25017	1191844	04	0201	10300601	116.00	MANEVU2002	17.0000	0.0000	0.0467	MIT
MA	Middlesex	25017	1191844	05	0201	10300601	145.00	MANEVU2002	16.0000	0.0000	0.0440	MIT
MA	Middlesex	25017	1191844	05	0101	10300401	145.00	MANEVU2002	2.0000	0.0000	0.0055	MIT
MA	Middlesex	25017	1191844	16	0107	10300603	4.00	MANEVU2002	0.3700	0.0000	0.0010	MIT
MA	Middlesex	25017	1191844	17	0108	10300603	4.00	MANEVU2002	0.0900	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	18	0109	10300603	4.00	MANEVU2002	0.2100	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	19	0110	10300603	4.00	MANEVU2002	0.2100	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	20	0111	10300603	4.00	MANEVU2002	0.2100	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	24	0114	10300603	5.00	MANEVU2002	0.1600	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	29	0118	10300603	4.00	MANEVU2002	0.2500	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	30	0119	10300603	4.00	MANEVU2002	0.2500	0.0000	0.0000	MIT

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MA	Middlesex	25017	1191844	35	0124	10300603	8.00	MANEVU2002	0.3700	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	35	0224	10300603	8.00	MANEVU2002	0.0500	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	42	0127	10300603	10.00	MANEVU2002	0.6200	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	43	0127	10300501	126.00	MANEVU2002	0.1100	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	44	0127	10300603	15.00	MANEVU2002	0.1300	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	44	0227	10300603	15.00	MANEVU2002	0.2200	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	44	0327	10300603	15.00	MANEVU2002	0.2800	0.0000	0.0000	MIT
MA	Middlesex	25017	1191844	47	0529	10300501	2.00	MANEVU2002	0.0200	0.0000	0.0001	MIT
MA	Middlesex	25017	1191847	01	0101	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	CHARLES STARK DRAPER
MA	Middlesex	25017	1191847	02	0102	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	CHARLES STARK DRAPER
MA	Middlesex	25017	1191847	03	0103	10200602	13.00	MANEVU2002	1.0000	0.0000	0.0027	CHARLES STARK DRAPER
MA	Middlesex	25017	1191854	01	0101	10300603	6.00	MANEVU2002	0.1520	0.0000	0.0000	AG/ND 225 METRONORTH LESSEE LLC
MA	Middlesex	25017	1191855	01	0101	10300602	25.00	MANEVU2002	0.3260	0.0000	0.0009	ARQULE INCORPORATED
MA	Middlesex	25017	1191855	02	0102	10300603	1.00	MANEVU2002	0.1970	0.0000	0.0005	ARQULE INCORPORATED
MA	Middlesex	25017	1191855	03	0102	10300603	1.00	MANEVU2002	0.2570	0.0000	0.0007	ARQULE INCORPORATED
MA	Middlesex	25017	1191866	03	0103	10300603	5.00	MANEVU2002	0.3100	0.0000	0.0000	SUN MICROSYSTEMS INCORPORATED
MA	Middlesex	25017	1191874	01	0101	10300603	5.00	MANEVU2002	0.1810	0.0000	0.0000	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	02	0102	10300603	2.00	MANEVU2002	0.0590	0.0000	0.0001	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	03	0102	10300603	2.00	MANEVU2002	0.0590	0.0000	0.0000	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	04	0102	10300603	2.00	MANEVU2002	0.0590	0.0000	0.0002	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	05	0102	10300603	2.00	MANEVU2002	0.0590	0.0000	0.0002	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	07	0104	10300603	1.00	MANEVU2002	0.0060	0.0000	0.0000	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191874	08	0105	10300603	1.00	MANEVU2002	0.2500	0.0000	0.0007	PFIZER GLOBAL RESEARCH & DEVELOPMENT
MA	Middlesex	25017	1191878	01	0101	10300603	6.00	MANEVU2002	0.1900	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Middlesex	25017	1191879	03	0102	10300603	5.00	MANEVU2002	0.2200	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Middlesex	25017	1191879	04	0102	10300603	5.00	MANEVU2002	0.0100	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Middlesex	25017	1191881	01	0101	10300603	12.00	MANEVU2002	0.2800	0.0000	0.0008	WAKEFIELD MATERIALS
MA	Middlesex	25017	1191891	01	0101	10300603	3.00	MANEVU2002	0.1600	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Middlesex	25017	1191895	01	0101	10300603	3.00	MANEVU2002	0.0105	0.0000	0.0000	NATICK HIGH SCHOOL
MA	Middlesex	25017	1191895	02	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0027	NATICK HIGH SCHOOL
MA	Middlesex	25017	1191895	03	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0027	NATICK HIGH SCHOOL
MA	Middlesex	25017	1191895	04	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0027	NATICK HIGH SCHOOL
MA	Middlesex	25017	1191896	01	0101	10300603	6.00	MANEVU2002	1.2180	0.0000	0.0033	TRANSKARYOTIC THERAPIES, INC
MA	Middlesex	25017	1191896	02	0101	10300603	6.00	MANEVU2002	1.2180	0.0000	0.0033	TRANSKARYOTIC THERAPIES, INC
MA	Middlesex	25017	1191896	04	0103	10300603	5.00	MANEVU2002	0.0550	0.0000	0.0002	TRANSKARYOTIC THERAPIES, INC
MA	Middlesex	25017	1191896	05	0103	10300603	1.00	MANEVU2002	0.0550	0.0000	0.0002	TRANSKARYOTIC THERAPIES, INC
MA	Middlesex	25017	1191897	02	0102	10200602	12.00	MANEVU2002	0.8000	0.0000	0.0000	GENZYME CORPORATION
MA	Middlesex	25017	1191898	01	0101	10200602	5.00	MANEVU2002	0.5000	0.0000	0.0000	GENZYME CORPORATION
MA	Middlesex	25017	1191901	01	0101	10300603	20.00	MANEVU2002	1.8000	0.0000	0.0000	GENZYME CORPORATION
MA	Middlesex	25017	1192000	01	0101	10200603	27.00	MANEVU2002	2.0000	0.0000	0.0022	KENS FOODS INCORPORATED
MA	Middlesex	25017	1192000	02	0102	10300701	3.00	MANEVU2002	0.3500	0.0000	0.0010	KENS FOODS INCORPORATED
MA	Middlesex	25017	1192000	03	0103	10300701	12.00	MANEVU2002	0.3700	0.0000	0.0010	KENS FOODS INCORPORATED
MA	Middlesex	25017	1193766	06	0103	10200603	5.00	MANEVU2002	0.0660	0.0000	0.0002	MADICO INC
MA	Middlesex	25017	1193766	07	0104	10200603	10.00	MANEVU2002	0.1735	0.0000	0.0005	MADICO INC
MA	Middlesex	25017	1194011	01	0101	10200504	12.00	MANEVU2002	1.0000	0.0000	0.0027	MASS CONTAINER CORPORATION
MA	Middlesex	25017	1194011	02	0102	10200504	12.00	MANEVU2002	1.0000	0.0000	0.0000	MASS CONTAINER CORPORATION
MA	Middlesex	25017	1194014	01	0101	10300602	16.00	MANEVU2002	3.0000	0.0000	0.0082	RICH PRODUCTS CORPORATION
MA	Middlesex	25017	1194015	03	0103	10200603	6.00	MANEVU2002	2.0000	0.0000	0.0033	INTEL MASSACHUSETTS INC
MA	Middlesex	25017	1194015	05	0105	10200602	40.00	MANEVU2002	4.0000	0.0000	0.0066	INTEL MASSACHUSETTS INC
MA	Middlesex	25017	1194015	09	0109	10200602	32.00	MANEVU2002	5.0000	0.0000	0.0082	INTEL MASSACHUSETTS INC
MA	Middlesex	25017	1194015	10	0110	10200602	32.00	MANEVU2002	5.0000	0.0000	0.0082	INTEL MASSACHUSETTS INC
MA	Middlesex	25017	1194015	11	0111	10200602	32.00	MANEVU2002	5.0000	0.0000	0.0082	INTEL MASSACHUSETTS INC

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MA	Middlesex	25017	1194017	05	0105	10300603	4.00	MANEVU2002	0.9900	0.0000	0.0000	EMC CORPORATION
MA	Middlesex	25017	1194017	06	0106	10300603	3.00	MANEVU2002	0.3900	0.0000	0.0000	EMC CORPORATION
MA	Middlesex	25017	1194017	07	0107	10300603	2.00	MANEVU2002	0.1500	0.0000	0.0004	EMC CORPORATION
MA	Middlesex	25017	1195717	01	0101	10300603	6.00	MANEVU2002	0.6305	0.0000	0.0017	PURECOAT NORTH LLC
MA	Middlesex	25017	1195717	02	0101	10300603	6.00	MANEVU2002	0.6305	0.0000	0.0017	PURECOAT NORTH LLC
MA	Middlesex	25017	1197586	01	0101	10200504	17.00	MANEVU2002	1.0000	0.0000	0.0000	STARMET CORPORATION
MA	Middlesex	25017	1197586	02	0101	10200504	17.00	MANEVU2002	1.0000	0.0000	0.0000	STARMET CORPORATION
MA	Middlesex	25017	1210014	01	0101	10200501	6.00	MANEVU2002	1.0000	0.0000	0.0027	EMPIRE LINEN
MA	Middlesex	25017	1210014	01	0201	10200603	6.00	MANEVU2002	1.0000	0.0000	0.0027	EMPIRE LINEN
MA	Middlesex	25017	1210020	01	0101	10200504	11.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Middlesex	25017	1210020	02	0101	10200504	11.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Middlesex	25017	1210020	03	0102	10300504	9.00	MANEVU2002	1.0000	0.0000	0.0011	GLOBE NEWSPAPER COMPANY
MA	Middlesex	25017	1210033	01	0101	10200401	20.00	MANEVU2002	2.0000	0.0000	0.0000	AMERICRAFT CARTON INC
MA	Middlesex	25017	1210033	02	0102	10200401	17.00	MANEVU2002	1.0000	0.0000	0.0000	AMERICRAFT CARTON INC
MA	Middlesex	25017	1210036	01	0101	10200603	4.00	MANEVU2002	0.2800	0.0000	0.0008	IDEAL TAPE COMPANY
MA	Middlesex	25017	1210036	02	0102	10200603	4.00	MANEVU2002	0.2800	0.0000	0.0008	IDEAL TAPE COMPANY
MA	Middlesex	25017	1210040	01	0101	10300401	20.00	MANEVU2002	5.0000	0.0000	0.0198	UMASS LOWELL-SOUTH CAMPUS
MA	Middlesex	25017	1210040	02	0101	10300401	15.00	MANEVU2002	11.0000	0.0000	0.0326	UMASS LOWELL-SOUTH CAMPUS
MA	Middlesex	25017	1210040	03	0101	10300401	15.00	MANEVU2002	3.0000	0.0000	0.0122	UMASS LOWELL-SOUTH CAMPUS
MA	Middlesex	25017	1210040	09	0103	10300603	3.00	MANEVU2002	0.0560	0.0000	0.0001	UMASS LOWELL-SOUTH CAMPUS
MA	Middlesex	25017	1210041	01	0101	10300401	20.00	MANEVU2002	1.0000	0.0000	0.0015	UMASS LOWELL-NORTH CAMPUS
MA	Middlesex	25017	1210041	02	0201	10300602	24.00	MANEVU2002	1.0000	0.0000	0.0054	UMASS LOWELL-NORTH CAMPUS
MA	Middlesex	25017	1210041	03	0101	10300401	36.00	MANEVU2002	18.0000	0.0000	0.0000	UMASS LOWELL-NORTH CAMPUS
MA	Middlesex	25017	1210050	01	0101	10200603	5.00	MANEVU2002	0.2450	0.0000	0.0007	MAJILITE MFG INC
MA	Middlesex	25017	1210050	02	0101	10200603	3.00	MANEVU2002	0.1300	0.0000	0.0000	MAJILITE MFG INC
MA	Middlesex	25017	1210061	01	0101	10200601	3.00	MANEVU2002	1.0000	0.0000	0.0027	ROCHE BROTHERS BARREL & DRUM CO.
MA	Middlesex	25017	1210076	04	0102	10300603	5.00	MANEVU2002	0.0010	0.0000	0.0000	GETRONICS INCORPORATED
MA	Middlesex	25017	1210076	05	0102	10300603	5.00	MANEVU2002	0.0010	0.0000	0.0000	GETRONICS INCORPORATED
MA	Middlesex	25017	1210086	02	0202	10200401	50.00	MANEVU2002	43.0000	0.0000	0.1181	HOLLINGSWORTH & VOSE
MA	Middlesex	25017	1210086	02	0102	10200401	50.00	MANEVU2002	0.0215	0.0000	0.0001	HOLLINGSWORTH & VOSE
MA	Middlesex	25017	1210086	03	0202	10200401	50.00	MANEVU2002	2.0000	0.0000	0.0055	HOLLINGSWORTH & VOSE
MA	Middlesex	25017	1210087	12	0105	10200603	3.00	MANEVU2002	0.4500	0.0000	0.0011	BRADFORD INDUSTRIES
MA	Middlesex	25017	1210087	26	0108	10200603	10.00	MANEVU2002	1.0000	0.0000	0.0027	BRADFORD INDUSTRIES
MA	Middlesex	25017	1210090	01	0201	10200601	99.00	MANEVU2002	5.0000	0.0000	0.0000	SBGI CORP
MA	Middlesex	25017	1210129	01	0101	10200603	6.00	MANEVU2002	0.4560	0.0000	0.0013	BALLARD MATERIAL PRODUCTS
MA	Middlesex	25017	1210147	01	0101	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0001	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	05	0103	10300603	8.00	MANEVU2002	0.2700	0.0000	0.0007	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	06	0104	10300603	10.00	MANEVU2002	0.1300	0.0000	0.0004	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	07	0105	10300603	6.00	MANEVU2002	0.2500	0.0000	0.0007	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	08	0106	10300603	6.00	MANEVU2002	0.2400	0.0000	0.0007	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	09	0107	10300603	8.00	MANEVU2002	0.0800	0.0000	0.0002	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210147	10	0108	10300603	8.00	MANEVU2002	0.0800	0.0000	0.0002	UMASS LOWELL-RESIDENTIAL NC
MA	Middlesex	25017	1210153	03	0102	10200603	6.00	MANEVU2002	0.1150	0.0000	0.0000	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	04	0102	10200603	6.00	MANEVU2002	0.0350	0.0000	0.0000	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	05	0103	10200602	10.00	MANEVU2002	0.6690	0.0000	0.0018	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	06	0103	10200602	10.00	MANEVU2002	0.1260	0.0000	0.0000	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	07	0103	10200603	1.00	MANEVU2002	0.0430	0.0000	0.0001	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	08	0103	10200603	2.00	MANEVU2002	0.0670	0.0000	0.0002	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	09	0104	10200603	3.00	MANEVU2002	0.4590	0.0000	0.0013	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	79	0170	10200603	5.00	MANEVU2002	0.1320	0.0000	0.0004	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	80	0170	10200603	5.00	MANEVU2002	0.1320	0.0000	0.0004	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC
MA	Middlesex	25017	1210153	81	0170	10200603	3.00	MANEVU2002	0.2970	0.0000	0.0008	BRISTOL MYERS SQUIBB MEDICAL IMAGING INC

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
MA	Middlesex	25017	1210156	01	0201	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0027	MIDDLESEX HOUSE OF CORRECTION
MA	Middlesex	25017	1210156	02	0201	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0027	MIDDLESEX HOUSE OF CORRECTION
MA	Middlesex	25017	1210159	04	0204	10200602	17.00	MANEVU2002	0.3690	0.0000	0.0000	BNZ MATERIALS INC
MA	Middlesex	25017	1210159	05	0205	10200602	17.00	MANEVU2002	0.1890	0.0000	0.0006	BNZ MATERIALS INC
MA	Middlesex	25017	1210159	16	0116	10200603	6.00	MANEVU2002	0.1095	0.0000	0.0003	BNZ MATERIALS INC
MA	Middlesex	25017	1210162	01	0101	10200501	20.00	MANEVU2002	2.0000	0.0000	0.0055	INTERSTATE CONTAINER
MA	Middlesex	25017	1210162	03	0202	10200603	4.00	MANEVU2002	0.4530	0.0000	0.0012	INTERSTATE CONTAINER
MA	Middlesex	25017	1210165	03	0101	10300601	5.00	MANEVU2002	1.0000	0.0000	0.0109	HEALTHSOUTH ST JOSEPHS HEALTHCARE CENTER
MA	Middlesex	25017	1210169	01	0101	10200501	5.00	MANEVU2002	0.1900	0.0000	0.0000	JG MCLELLAN CONCRETE
MA	Middlesex	25017	1210181	01	0101	10300401	41.00	MANEVU2002	2.0000	0.0000	0.0055	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210181	01	0201	10300602	41.00	MANEVU2002	1.0000	0.0000	0.0027	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210181	02	0101	10300401	41.00	MANEVU2002	2.0000	0.0000	0.0055	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210181	02	0201	10300602	41.00	MANEVU2002	1.0000	0.0000	0.0027	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210181	03	0101	10300401	41.00	MANEVU2002	2.0000	0.0000	0.0055	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210181	03	0201	10300602	41.00	MANEVU2002	1.0000	0.0000	0.0027	ST MEMORIAL MEDICAL
MA	Middlesex	25017	1210193	04	0104	10200603	6.00	MANEVU2002	0.3525	0.0000	0.0004	SPECIALTY MATERIALS INCORPORATED
MA	Middlesex	25017	1210193	05	0105	10200603	6.00	MANEVU2002	0.3060	0.0000	0.0003	SPECIALTY MATERIALS INCORPORATED
MA	Middlesex	25017	1210215	01	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210215	02	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210215	03	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210232	01	0101	10200602	12.00	MANEVU2002	1.0000	0.0000	0.0027	CROSSPOINT LIMITED
MA	Middlesex	25017	1210247	01	0101	10200401	69.00	MANEVU2002	17.0000	0.0000	0.0411	BAKER COMMODITIES
MA	Middlesex	25017	1210247	01	0201	10200602	69.00	MANEVU2002	5.0000	0.0000	0.0121	BAKER COMMODITIES
MA	Middlesex	25017	1210247	03	0103	10200504	18.00	MANEVU2002	0.0950	0.0000	0.0001	BAKER COMMODITIES
MA	Middlesex	25017	1210247	04	0103	10200602	16.00	MANEVU2002	0.0860	0.0000	0.0000	BAKER COMMODITIES
MA	Middlesex	25017	1210247	05	0103	10200603	8.00	MANEVU2002	0.6010	0.0000	0.0027	BAKER COMMODITIES
MA	Middlesex	25017	1210255	01	0101	10300602	23.00	MANEVU2002	2.0000	0.0000	0.0110	TEWKSBURY HOSPITAL
MA	Middlesex	25017	1210255	02	0101	10300602	51.00	MANEVU2002	2.0000	0.0000	0.0000	TEWKSBURY HOSPITAL
MA	Middlesex	25017	1210255	02	0201	10300401	51.00	MANEVU2002	10.0000	0.0000	0.0000	TEWKSBURY HOSPITAL
MA	Middlesex	25017	1210255	03	0101	10300602	66.00	MANEVU2002	2.0000	0.0000	0.0000	TEWKSBURY HOSPITAL
MA	Middlesex	25017	1210255	03	0201	10300401	66.00	MANEVU2002	10.0000	0.0000	0.0000	TEWKSBURY HOSPITAL
MA	Middlesex	25017	1210256	01	0101	10200603	2.00	MANEVU2002	0.1000	0.0000	0.0001	CABOT CORPORATION
MA	Middlesex	25017	1210256	02	0101	10200603	2.00	MANEVU2002	0.1000	0.0000	0.0001	CABOT CORPORATION
MA	Middlesex	25017	1210256	03	0102	10200603	2.00	MANEVU2002	0.1000	0.0000	0.0001	CABOT CORPORATION
MA	Middlesex	25017	1210256	04	0102	10200603	2.00	MANEVU2002	0.1000	0.0000	0.0001	CABOT CORPORATION
MA	Middlesex	25017	1210265	03	0203	10300602	60.00	MANEVU2002	4.0000	0.0000	0.0066	LOWELL COGEN COMPANY
MA	Middlesex	25017	1210265	04	0204	10300603	60.00	MANEVU2002	3.0000	0.0000	0.0043	LOWELL COGEN COMPANY
MA	Middlesex	25017	1210265	04	0104	10300501	60.00	MANEVU2002	0.4010	0.0000	0.0006	LOWELL COGEN COMPANY
MA	Middlesex	25017	1210265	09	0106	10200501	1.00	MANEVU2002	0.0460	0.0000	0.0001	LOWELL COGEN COMPANY
MA	Middlesex	25017	1210265	10	0106	10200603	1.00	MANEVU2002	0.0225	0.0000	0.0002	LOWELL COGEN COMPANY
MA	Middlesex	25017	1210284	01	0101	10200603	1.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210284	02	0102	10200603	3.00	MANEVU2002	0.2300	0.0000	0.0003	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210284	10	0110	10200602	20.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210284	11	0111	10200602	20.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210284	12	0112	10200602	14.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210284	13	0113	10200602	14.00	MANEVU2002	0.0200	0.0000	0.0000	KEYSPAN ENERGY-TEWSKBURY
MA	Middlesex	25017	1210301	02	0102	10200603	1.00	MANEVU2002	0.0500	0.0000	0.0001	FREUDENBERG NONWOVEN
MA	Middlesex	25017	1210316	01	0201	10300602	29.00	MANEVU2002	3.0000	0.0000	0.0082	LOWELL GENERAL HOSPITAL
MA	Middlesex	25017	1210316	01	0101	10300401	29.00	MANEVU2002	1.0000	0.0000	0.0027	LOWELL GENERAL HOSPITAL
MA	Middlesex	25017	1210316	02	0201	10300602	29.00	MANEVU2002	3.0000	0.0000	0.0082	LOWELL GENERAL HOSPITAL
MA	Middlesex	25017	1210316	02	0101	10300401	29.00	MANEVU2002	1.0000	0.0000	0.0027	LOWELL GENERAL HOSPITAL
MA	Middlesex	25017	1210316	03	0201	10300602	29.00	MANEVU2002	3.0000	0.0000	0.0082	LOWELL GENERAL HOSPITAL

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MA	Middlesex	25017	1210316	03	0101	10300401	29.00	MANEVU2002	1.0000	0.0000	0.0027	LOWELL GENERAL HOSPITAL
MA	Middlesex	25017	1210329	01	0101	10300602	3.00	MANEVU2002	2.0000	0.0000	0.0000	NORTH STREET SCHOOL
MA	Middlesex	25017	1210329	02	0101	10300602	3.00	MANEVU2002	2.0000	0.0000	0.0000	NORTH STREET SCHOOL
MA	Middlesex	25017	1210330	01	0101	10200602	17.00	MANEVU2002	0.4110	0.0000	0.0011	M/A COM INC
MA	Middlesex	25017	1210330	02	0102	10200602	17.00	MANEVU2002	0.4110	0.0000	0.0011	M/A COM INC
MA	Middlesex	25017	1210335	11	0107	10200603	1.00	MANEVU2002	0.0530	0.0000	0.0001	CAMBRIDGE TOOL & MANUFACTURING COMPANY
MA	Middlesex	25017	1210362	04	0103	10200501	1.00	MANEVU2002	0.0145	0.0000	0.0000	UAE-LOWELL POWER LLC
MA	Middlesex	25017	1210362	05	0104	10200501	5.00	MANEVU2002	0.2865	0.0000	0.0008	UAE-LOWELL POWER LLC
MA	Middlesex	25017	1210373	11	0111	10200603	3.00	MANEVU2002	2.4465	0.0000	0.0067	M/A COM INCORPORATED
MA	Middlesex	25017	1210373	12	0111	10200603	3.00	MANEVU2002	2.4465	0.0000	0.0067	M/A COM INCORPORATED
MA	Middlesex	25017	1210386	01	0201	10200602	21.00	MANEVU2002	0.1930	0.0000	0.0005	SOUTHERN CONTAINER
MA	Middlesex	25017	1210386	02	0201	10200602	21.00	MANEVU2002	0.1930	0.0000	0.0005	SOUTHERN CONTAINER
MA	Middlesex	25017	1210395	09	0109	10300603	1.00	MANEVU2002	0.0150	0.0000	0.0000	FINISH UNLIMITED INCORPORATED
MA	Middlesex	25017	1210406	01	0101	10300603	3.00	MANEVU2002	0.6400	0.0000	0.0000	495 NETWORK CENTER
MA	Middlesex	25017	1210406	02	0101	10300603	3.00	MANEVU2002	0.9000	0.0000	0.0000	495 NETWORK CENTER
MA	Middlesex	25017	1210406	03	0102	10300603	5.00	MANEVU2002	0.6400	0.0000	0.0000	495 NETWORK CENTER
MA	Middlesex	25017	1210406	04	0102	10300603	5.00	MANEVU2002	0.6400	0.0000	0.0000	495 NETWORK CENTER
MA	Middlesex	25017	1210406	05	0103	10300603	2.00	MANEVU2002	0.6400	0.0000	0.0000	495 NETWORK CENTER
MA	Middlesex	25017	1210408	02	0202	10300501	8.00	MANEVU2002	0.0990	0.0000	0.0000	UMASS LOWELL - WEST CAMPUS
MA	Middlesex	25017	1210412	01	0101	10300603	12.00	MANEVU2002	1.7000	0.0000	0.0047	VERIZON MASSACHUSETTS
MA	Middlesex	25017	1210418	01	0101	10200501	8.00	MANEVU2002	0.1600	0.0000	0.0004	GRANITE STATE-WESTFORD
MA	Middlesex	25017	1210892	02	0101	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210892	03	0101	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210893	01	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210893	02	0101	10300603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210893	03	0101	10200603	9.00	MANEVU2002	1.0000	0.0000	0.0011	LOWELL HOUSING AUTHORITY
MA	Middlesex	25017	1210901	02	0102	10300603	4.00	MANEVU2002	0.0935	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	03	0103	10300603	4.00	MANEVU2002	0.0590	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	04	0101	10300603	4.00	MANEVU2002	0.0010	0.0000	0.0000	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	05	0104	10300603	4.00	MANEVU2002	0.0825	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	06	0102	10300603	4.00	MANEVU2002	0.0935	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	07	0105	10300603	8.00	MANEVU2002	0.0390	0.0000	0.0000	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	08	0104	10300603	4.00	MANEVU2002	0.0825	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	09	0106	10300603	8.00	MANEVU2002	0.0390	0.0000	0.0000	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	10	0107	10300603	6.00	MANEVU2002	0.1210	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	11	0108	10300603	6.00	MANEVU2002	0.1210	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	12	0109	10300603	6.00	MANEVU2002	0.1210	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210901	22	0103	10300603	4.00	MANEVU2002	0.0590	0.0000	0.0001	US ARMY DEVENS RFTA
MA	Middlesex	25017	1210907	01	0101	10200401	29.00	MANEVU2002	9.0000	0.0000	0.0247	VERYFINE PRODUCTS INC
MA	Middlesex	25017	1210907	02	0101	10200401	33.00	MANEVU2002	9.0000	0.0000	0.0247	VERYFINE PRODUCTS INC
MA	Middlesex	25017	1210907	03	0101	10200401	33.00	MANEVU2002	9.0000	0.0000	0.0247	VERYFINE PRODUCTS INC
MA	Middlesex	25017	1210907	04	0102	10200603	4.00	MANEVU2002	0.5000	0.0000	0.0014	VERYFINE PRODUCTS INC
MA	Middlesex	25017	1210907	06	0104	10200603	1.00	MANEVU2002	0.0345	0.0000	0.0001	VERYFINE PRODUCTS INC
MA	Middlesex	25017	1210916	01	0101	10200401	7.00	MANEVU2002	1.0000	0.0000	0.0011	PEPPERHORN LLC
MA	Middlesex	25017	1210916	02	0102	10200401	9.00	MANEVU2002	1.0000	0.0000	0.0011	PEPPERHORN LLC
MA	Middlesex	25017	1210926	01	0101	10200602	10.00	MANEVU2002	2.0000	0.0000	0.0055	SHANKLIN CORPORATION
MA	Middlesex	25017	1210928	01	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0000	COURIER WESTFORD
MA	Middlesex	25017	1210932	01	0101	10300603	2.00	MANEVU2002	0.3400	0.0000	0.0009	WESTFORD ANODIZING CORPORATION
MA	Middlesex	25017	1210937	01	0101	10300602	15.00	MANEVU2002	1.3150	0.0000	0.0014	NASOYA FOODS INC
MA	Middlesex	25017	1210937	02	0102	10300603	5.00	MANEVU2002	0.3290	0.0000	0.0004	NASOYA FOODS INC
MA	Middlesex	25017	1210937	03	0103	10300602	15.00	MANEVU2002	0.1540	0.0000	0.0002	NASOYA FOODS INC
MA	Middlesex	25017	1210937	04	0104	10300602	2.00	MANEVU2002	0.1540	0.0000	0.0004	NASOYA FOODS INC

									2002 NOx Emissions			
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MA	Middlesex	25017	1214002	01	0101	10200603	12.00	MANEVU2002	1.0000	0.0000	0.0016	CPF CO-OP INC
MA	Middlesex	25017	1214002	02	0102	10200602	25.00	MANEVU2002	1.0000	0.0000	0.0016	CPF CO-OP INC
MA	Middlesex	25017	1214008	01	0101	10200501	12.00	MANEVU2002	2.0000	0.0000	0.0000	AGGREGATE INDUSTRIES INC
MA	Middlesex	25017	1214011	04	0103	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	DEVENS COMMERCE CTR
MA	Middlesex	25017	1214011	05	0103	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0027	DEVENS COMMERCE CTR
MA	Middlesex	25017	1214011	33	0223	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0011	DEVENS COMMERCE CTR
MA	Norfolk	25021	1190073	01	0101	10200504	8.00	MANEVU2002	1.0000	0.0000	0.0000	COUNTRY CLUB THE
MA	Norfolk	25021	1190081	01	0101	10300501	15.00	MANEVU2002	1.0000	0.0000	0.0027	BRAINTREE HOSPITAL LLC
MA	Norfolk	25021	1190081	02	0101	10300501	15.00	MANEVU2002	1.0000	0.0000	0.0027	BRAINTREE HOSPITAL LLC
MA	Norfolk	25021	1190110	01	0101	10200401	15.00	MANEVU2002	2.5000	0.0000	0.0069	DRAPER PROPERTIES INCORPORATED
MA	Norfolk	25021	1190110	01	0201	10200602	15.00	MANEVU2002	2.5000	0.0000	0.0069	DRAPER PROPERTIES INCORPORATED
MA	Norfolk	25021	1190110	02	0102	10200401	15.00	MANEVU2002	0.6400	0.0000	0.0018	DRAPER PROPERTIES INCORPORATED
MA	Norfolk	25021	1190110	02	0202	10300602	15.00	MANEVU2002	1.6000	0.0000	0.0044	DRAPER PROPERTIES INCORPORATED
MA	Norfolk	25021	1190113	01	0101	10200603	9.00	MANEVU2002	4.0000	0.0000	0.0110	CASUAL MALE CORPORATION
MA	Norfolk	25021	1190113	02	0103	10200603	9.00	MANEVU2002	4.0000	0.0000	0.0110	CASUAL MALE CORPORATION
MA	Norfolk	25021	1190113	03	0102	10200603	9.00	MANEVU2002	3.0000	0.0000	0.0082	CASUAL MALE CORPORATION
MA	Norfolk	25021	1190114	01	0101	10200401	70.00	MANEVU2002	8.0000	0.0000	0.0220	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190114	01	0201	10200602	70.00	MANEVU2002	5.0000	0.0000	0.0137	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190114	02	0101	10200401	70.00	MANEVU2002	8.0000	0.0000	0.0220	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190114	02	0201	10200602	70.00	MANEVU2002	5.0000	0.0000	0.0137	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190114	03	0101	10200401	70.00	MANEVU2002	8.0000	0.0000	0.0220	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190114	03	0201	10200602	70.00	MANEVU2002	5.0000	0.0000	0.0137	PLYMOUTH RUBBER COMPANY
MA	Norfolk	25021	1190198	01	0101	10200603	1.00	MANEVU2002	1.0000	0.0000	0.0027	SOUTH SHORE PLATING COMPANY INCORPORATED
MA	Norfolk	25021	1190228	02	0203	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0000	SOUTH SHORE HOSPITAL
MA	Norfolk	25021	1190228	03	0103	10300504	21.00	MANEVU2002	4.0000	0.0000	0.0000	SOUTH SHORE HOSPITAL
MA	Norfolk	25021	1190228	04	0103	10300504	8.00	MANEVU2002	4.0000	0.0000	0.0193	SOUTH SHORE HOSPITAL
MA	Norfolk	25021	1190228	05	0103	10300504	21.00	MANEVU2002	4.0000	0.0000	0.0000	SOUTH SHORE HOSPITAL
MA	Norfolk	25021	1190236	01	0101	10300504	5.00	MANEVU2002	0.5000	0.0000	0.0003	GENERAL DYNAMICS C4 SYSTEMS
MA	Norfolk	25021	1190236	02	0102	10200504	4.00	MANEVU2002	1.0000	0.0000	0.0005	GENERAL DYNAMICS C4 SYSTEMS
MA	Norfolk	25021	1190246	03	0201	10200602	22.00	MANEVU2002	2.0000	0.0000	0.0055	SOUTHWOOD COMMUNITY HOSPITAL
MA	Norfolk	25021	1190260	01	0101	10200401	44.00	MANEVU2002	8.0000	0.0000	0.0220	HOLLINGSWORTH & VOSE
MA	Norfolk	25021	1190260	01	0201	10300602	44.00	MANEVU2002	0.8000	0.0000	0.0022	HOLLINGSWORTH & VOSE
MA	Norfolk	25021	1190261	01	0101	10300401	51.00	MANEVU2002	9.0000	0.0000	0.0247	WELLESLEY COLLEGE
MA	Norfolk	25021	1190261	02	0101	10300401	51.00	MANEVU2002	15.0000	0.0000	0.0412	WELLESLEY COLLEGE
MA	Norfolk	25021	1190261	03	0201	10300602	5.00	MANEVU2002	0.1000	0.0000	0.0005	WELLESLEY COLLEGE
MA	Norfolk	25021	1190261	04	0201	10300602	56.00	MANEVU2002	8.0000	0.0000	0.0220	WELLESLEY COLLEGE
MA	Norfolk	25021	1190261	04	0101	10300401	56.00	MANEVU2002	0.2100	0.0000	0.0006	WELLESLEY COLLEGE
MA	Norfolk	25021	1190265	01	0101	10200401	36.00	MANEVU2002	22.0000	0.0000	0.0604	POLAROID CORPORATION
MA	Norfolk	25021	1190304	07	0104	10300603	2.00	MANEVU2002	0.4550	0.0000	0.0000	MWRA FORE RIVER STAGING AREA
MA	Norfolk	25021	1190304	08	0104	10300603	2.00	MANEVU2002	0.4550	0.0000	0.0000	MWRA FORE RIVER STAGING AREA
MA	Norfolk	25021	1190304	09	0105	10300603	8.00	MANEVU2002	0.2255	0.0000	0.0001	MWRA FORE RIVER STAGING AREA
MA	Norfolk	25021	1190306	02	0102	10200602	17.00	MANEVU2002	1.0000	0.0000	0.0027	COCA COLA BOTTLING C
MA	Norfolk	25021	1190306	03	0103	10200602	17.00	MANEVU2002	1.0000	0.0000	0.0027	COCA COLA BOTTLING C
MA	Norfolk	25021	1190438	01	0301	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0055	BROOKHOUSE CONDOMINIUMS
MA	Norfolk	25021	1190438	02	0301	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0055	BROOKHOUSE CONDOMINIUMS
MA	Norfolk	25021	1190438	03	0301	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0055	BROOKHOUSE CONDOMINIUMS
MA	Norfolk	25021	1190438	04	0301	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0055	BROOKHOUSE CONDOMINIUMS
MA	Norfolk	25021	1190444	01	0101	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0011	NEWMAN BUILDING
MA	Norfolk	25021	1190444	02	0101	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0011	NEWMAN BUILDING
MA	Norfolk	25021	1190452	01	0101	10200401	10.00	MANEVU2002	1.0000	0.0000	0.0005	GENERAL DYNAMICS CORPORATION
MA	Norfolk	25021	1190452	02	0101	10200401	10.00	MANEVU2002	1.0000	0.0000	0.0005	GENERAL DYNAMICS CORPORATION
MA	Norfolk	25021	1190452	06	0105	10200603	1.00	MANEVU2002	0.0210	0.0000	0.0001	GENERAL DYNAMICS CORPORATION

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Plant Name
MA	Norfolk	25021	1190497	01	0101	10200401	91.00	MANEVU2002	30.0000	0.0000	0.0824	TWIN RIVERS TECHNOLOGY
MA	Norfolk	25021	1190497	02	0101	10200401	44.00	MANEVU2002	12.0000	0.0000	0.0330	TWIN RIVERS TECHNOLOGY
MA	Norfolk	25021	1190558	03	0102	10300504	8.00	MANEVU2002	2.0000	0.0000	0.0055	MILTON HOSPITAL
MA	Norfolk	25021	1190558	13	0101	10300504	1.00	MANEVU2002	2.0000	0.0000	0.0055	MILTON HOSPITAL
MA	Norfolk	25021	1190559	04	0101	10300504	3.00	MANEVU2002	1.0000	0.0000	0.0027	DEACONESS GLOVER HOSPITAL
MA	Norfolk	25021	1190564	02	0102	10200501	1.00	MANEVU2002	0.2425	0.0000	0.0007	CLEAN HARBORS OF BRAINTREE
MA	Norfolk	25021	1190564	03	0103	10200501	6.00	MANEVU2002	0.0410	0.0000	0.0001	CLEAN HARBORS OF BRAINTREE
MA	Norfolk	25021	1190569	30	0121	10200603	1.00	MANEVU2002	0.0045	0.0000	0.0000	WOLLASTON ALLOYS INC
MA	Norfolk	25021	1190578	01	0101	10300602	36.00	MANEVU2002	2.0000	0.0000	0.0055	MCI CEDAR JUNCTION
MA	Norfolk	25021	1190578	02	0101	10300504	36.00	MANEVU2002	2.0000	0.0000	0.0055	MCI CEDAR JUNCTION
MA	Norfolk	25021	1190578	03	0101	10300504	36.00	MANEVU2002	1.0000	0.0000	0.0027	MCI CEDAR JUNCTION
MA	Norfolk	25021	1190581	01	0101	10300401	35.00	MANEVU2002	10.0000	0.0000	0.0275	MCI NORFOLK
MA	Norfolk	25021	1190581	02	0101	10300401	35.00	MANEVU2002	10.0000	0.0000	0.0275	MCI NORFOLK
MA	Norfolk	25021	1190581	03	0101	10300401	35.00	MANEVU2002	10.0000	0.0000	0.0275	MCI NORFOLK
MA	Norfolk	25021	1190591	01	0101	10300401	29.00	MANEVU2002	6.0000	0.0000	0.0330	QUINCY MEDICAL CENTER
MA	Norfolk	25021	1190591	02	0101	10300401	29.00	MANEVU2002	12.0000	0.0000	0.0000	QUINCY MEDICAL CENTER
MA	Norfolk	25021	1190599	01	0101	10200504	8.00	MANEVU2002	1.0000	0.0000	0.0027	CUMBERLAND FARMS INC
MA	Norfolk	25021	1190599	03	0102	10200504	3.00	MANEVU2002	1.0000	0.0000	0.0000	CUMBERLAND FARMS INC
MA	Norfolk	25021	1190599	04	0103	10200501	2.00	MANEVU2002	0.0875	0.0000	0.0002	CUMBERLAND FARMS INC
MA	Norfolk	25021	1190602	01	0101	10200603	6.00	MANEVU2002	0.3440	0.0000	0.0009	EMERSON & CUMING COMPOSITE MATERIALS
MA	Norfolk	25021	1190678	12	0112	10200602	16.00	MANEVU2002	1.0000	0.0000	0.0027	GILLETTE
MA	Norfolk	25021	1190797	02	0101	10200603	8.00	MANEVU2002	0.2175	0.0000	0.0000	GAF MATERIALS CORP
MA	Norfolk	25021	1190868	01	0101	10300501	10.00	MANEVU2002	7.0000	0.0000	0.0000	REGENCY PARK
MA	Norfolk	25021	1190981	01	0101	10300504	16.00	MANEVU2002	1.0000	0.0000	0.0000	WELLESLEY PUBLIC SCHOOLS
MA	Norfolk	25021	1191010	01	0101	10300401	23.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191010	01	0201	10300602	23.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191010	02	0101	10300401	23.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191010	02	0201	10300602	23.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191010	03	0101	10300401	11.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191010	03	0201	10300602	11.00	MANEVU2002	1.0000	0.0000	0.0027	MASSACHUSETTS HOSPITAL SCHOOL
MA	Norfolk	25021	1191013	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0027	NILES COMPANY INCORPORATED, THE
MA	Norfolk	25021	1191013	02	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	NILES COMPANY INCORPORATED, THE
MA	Norfolk	25021	1191038	01	0101	10300401	21.00	MANEVU2002	2.1000	0.0000	0.0058	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191038	01	0201	10300602	21.00	MANEVU2002	0.3900	0.0000	0.0011	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191038	02	0101	10300401	21.00	MANEVU2002	2.1000	0.0000	0.0058	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191038	02	0201	10300602	21.00	MANEVU2002	0.3650	0.0000	0.0010	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191038	03	0101	10300401	21.00	MANEVU2002	2.1000	0.0000	0.0058	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191038	03	0201	10300602	21.00	MANEVU2002	0.3900	0.0000	0.0011	CARITAS NORWOOD HOSP
MA	Norfolk	25021	1191043	10	0101	10200501	0.00	MANEVU2002	0.0900	0.0000	0.0001	CAMGER CHEMICAL
MA	Norfolk	25021	1191071	01	0201	10200603	10.00	MANEVU2002	0.6415	0.0000	0.0000	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	02	0201	10200603	11.00	MANEVU2002	0.6415	0.0000	0.0000	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	04	0103	10200603	10.00	MANEVU2002	0.6390	0.0000	0.0001	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	05	0103	10200603	10.00	MANEVU2002	0.6380	0.0000	0.0001	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	07	0105	10200603	3.00	MANEVU2002	0.2210	0.0000	0.0000	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	08	0105	10200603	4.00	MANEVU2002	0.2210	0.0000	0.0000	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	09	0106	10200603	2.00	MANEVU2002	0.1220	0.0000	0.0000	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191071	16	0111	10300603	9.00	MANEVU2002	0.5700	0.0000	0.0016	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191072	01	0101	10200401	21.00	MANEVU2002	2.0000	0.0000	0.0022	BIRD MACHINE
MA	Norfolk	25021	1191072	02	0101	10200401	21.00	MANEVU2002	2.0000	0.0000	0.0022	BIRD MACHINE
MA	Norfolk	25021	1191089	01	0101	10200501	5.00	MANEVU2002	0.0760	0.0000	0.0001	FACTORY MUTUAL ENGINEERING
MA	Norfolk	25021	1191089	03	0201	10200602	12.00	MANEVU2002	0.3800	0.0000	0.0004	FACTORY MUTUAL ENGINEERING
MA	Norfolk	25021	1191089	08	0106	10300501	0.00	MANEVU2002	0.0765	0.0000	0.0002	FACTORY MUTUAL ENGINEERING

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MA	Norfolk	25021	1191137	01	0101	10200501	8.00	MANEVU2002	0.0800	0.0000	0.0002	VARNEY BROS SAND & GRAVEL
MA	Norfolk	25021	1191145	01	0101	10200501	13.00	MANEVU2002	1.0000	0.0000	0.0000	NORWOOD COMMERCE CENTER
MA	Norfolk	25021	1191145	03	0102	10200501	8.00	MANEVU2002	0.2860	0.0000	0.0000	NORWOOD COMMERCE CENTER
MA	Norfolk	25021	1191205	01	0101	10200603	2.00	MANEVU2002	0.3125	0.0000	0.0009	MICROWAVE DEVELOPMENT
MA	Norfolk	25021	1191256	02	0102	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0027	ROSENFELD CONCRETE COMPANY
MA	Norfolk	25021	1191292	01	0101	10200603	2.00	MANEVU2002	0.0510	0.0000	0.0001	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191292	02	0101	10200603	2.00	MANEVU2002	0.0510	0.0000	0.0001	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191292	03	0101	10200603	3.00	MANEVU2002	0.0750	0.0000	0.0002	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191292	04	0102	10200603	1.00	MANEVU2002	0.0205	0.0000	0.0001	BAYER HEALTHCARE LLC
MA	Norfolk	25021	1191320	90	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	G&L TRILLING HOUSE
MA	Norfolk	25021	1191326	01	0101	10200501	1.00	MANEVU2002	0.0045	0.0000	0.0000	MWRA BROOKLINE PUMP
MA	Norfolk	25021	1191562	01	0101	10300504	6.00	MANEVU2002	1.0000	0.0000	0.0027	BARCLAY HOUSE THE
MA	Norfolk	25021	1191590	01	0101	10300501	14.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON SCIENTIFIC CORPORATION
MA	Norfolk	25021	1191590	02	0101	10300501	14.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON SCIENTIFIC CORPORATION
MA	Norfolk	25021	1191595	01	0101	10300602	46.00	MANEVU2002	1.0000	0.0000	0.0027	STATE STREET BANK SQUARE
MA	Norfolk	25021	1191595	02	0102	10300602	46.00	MANEVU2002	1.0000	0.0000	0.0027	STATE STREET BANK SQUARE
MA	Norfolk	25021	1191595	19	0109	10300501	10.00	MANEVU2002	0.0115	0.0000	0.0000	STATE STREET BANK SQUARE
MA	Norfolk	25021	1191698	01	0101	10300602	21.00	MANEVU2002	0.1600	0.0000	0.0000	REEBOK WORLD HEADQUARTERS
MA	Norfolk	25021	1191698	02	0101	10300602	20.00	MANEVU2002	0.1600	0.0000	0.0000	REEBOK WORLD HEADQUARTERS
MA	Norfolk	25021	1191724	04	0104	10300501	1.00	MANEVU2002	0.0345	0.0000	0.0000	MWRA BRAINTREE WEYMOUTH
MA	Norfolk	25021	1191744	01	0101	10200501	7.00	MANEVU2002	0.5155	0.0000	0.0014	MWRA NUT ISLAND HDWRKS
MA	Norfolk	25021	1191744	02	0101	10200501	7.00	MANEVU2002	0.5155	0.0000	0.0014	MWRA NUT ISLAND HDWRKS
MA	Norfolk	25021	1191744	03	0101	10200501	7.00	MANEVU2002	0.5155	0.0000	0.0014	MWRA NUT ISLAND HDWRKS
MA	Norfolk	25021	1191892	01	0101	10300602	31.00	MANEVU2002	2.5200	0.0000	0.0000	BABSON COLLEGE
MA	Norfolk	25021	1191892	02	0101	10300603	5.00	MANEVU2002	0.1800	0.0000	0.0005	BABSON COLLEGE
MA	Norfolk	25021	1191892	05	0102	10300603	9.00	MANEVU2002	0.3000	0.0000	0.0008	BABSON COLLEGE
MA	Norfolk	25021	1191892	06	0102	10300603	6.00	MANEVU2002	0.0900	0.0000	0.0002	BABSON COLLEGE
MA	Norfolk	25021	1191892	07	0103	10300603	27.00	MANEVU2002	1.1700	0.0000	0.0032	BABSON COLLEGE
MA	Norfolk	25021	1191892	09	0103	10300603	7.00	MANEVU2002	0.2900	0.0000	0.0008	BABSON COLLEGE
MA	Norfolk	25021	1191892	11	0104	10300501	3.00	MANEVU2002	1.1700	0.0000	0.0032	BABSON COLLEGE
MA	Norfolk	25021	1191892	12	0105	10300501	3.00	MANEVU2002	0.0800	0.0000	0.0002	BABSON COLLEGE
MA	Norfolk	25021	1191892	13	0106	10300501	1.00	MANEVU2002	0.0300	0.0000	0.0001	BABSON COLLEGE
MA	Norfolk	25021	1191892	14	0107	10300501	6.00	MANEVU2002	0.4100	0.0000	0.0011	BABSON COLLEGE
MA	Norfolk	25021	1191892	15	0107	10300501	7.00	MANEVU2002	0.9900	0.0000	0.0027	BABSON COLLEGE
MA	Norfolk	25021	1191893	06	0105	10300603	3.00	MANEVU2002	0.1960	0.0000	0.0005	TRANSKARYOTIC THERAPIES, INC (TKT)
MA	Norfolk	25021	1191894	01	0101	10300603	4.00	MANEVU2002	0.3290	0.0000	0.0009	ORGANOGENESIS INC
MA	Norfolk	25021	1191894	02	0102	10300603	4.00	MANEVU2002	0.3010	0.0000	0.0008	ORGANOGENESIS INC
MA	Norfolk	25021	1191894	03	0103	10300603	6.00	MANEVU2002	0.0070	0.0000	0.0000	ORGANOGENESIS INC
MA	Norfolk	25021	1191904	01	0101	10200602	12.00	MANEVU2002	0.8840	0.0000	0.0024	TYCO ELECTRONICS CORP
MA	Norfolk	25021	1191908	01	0101	10201002	4.00	MANEVU2002	0.0040	0.0000	0.0000	KEYSPAN ENERGY-NORWOOD
MA	Norfolk	25021	1192121	01	0101	10200603	1.00	MANEVU2002	0.2800	0.0000	0.0008	AVON TAPE INC
MA	Norfolk	25021	1192121	02	0102	10200601	2.00	MANEVU2002	0.0640	0.0000	0.0002	AVON TAPE INC
MA	Norfolk	25021	1192122	01	0101	10200603	3.00	MANEVU2002	0.2300	0.0000	0.0008	CHAPMAN MFG CO INC
MA	Norfolk	25021	1192134	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	AVON HIGH SCHOOL
MA	Norfolk	25021	1192134	02	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	AVON HIGH SCHOOL
MA	Norfolk	25021	1192491	09	0109	10200603	2.00	MANEVU2002	0.0365	0.0000	0.0001	COURIER STOUGHTON
MA	Norfolk	25021	1192491	11	0111	10200603	2.00	MANEVU2002	0.0135	0.0000	0.0000	COURIER STOUGHTON
MA	Norfolk	25021	1192492	01	0101	10200603	5.00	MANEVU2002	0.3500	0.0000	0.0000	ARK LES CORPORATION
MA	Norfolk	25021	1192497	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	NEW ENGLAND SINAI HOSPITAL
MA	Norfolk	25021	1192516	04	0102	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0001	STOUGHTON HIGH SCHOOL
MA	Norfolk	25021	1195127	01	0101	10200501	21.00	MANEVU2002	0.5500	0.0000	0.0000	TRESCA BROTHERS SAND & GRAVEL
MA	Norfolk	25021	1195127	02	0102	10200501	3.00	MANEVU2002	0.0500	0.0000	0.0000	TRESCA BROTHERS SAND & GRAVEL

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MA	Norfolk	25021	1195127	14	0107	10200603	3.00	MANEVU2002	0.0400	0.0000	0.0001	TRESCA BROTHERS SAND & GRAVEL
MA	Norfolk	25021	1195639	07	0107	10200501	1.00	MANEVU2002	0.0110	0.0000	0.0000	AINSLIE CORPORATION
MA	Norfolk	25021	1195639	09	0109	10200603	1.00	MANEVU2002	0.0075	0.0000	0.0000	AINSLIE CORPORATION
MA	Norfolk	25021	1195639	10	0110	10200603	5.00	MANEVU2002	0.0735	0.0000	0.0002	AINSLIE CORPORATION
MA	Norfolk	25021	1197301	14	0114	10200603	3.00	MANEVU2002	0.2800	0.0000	0.0003	ANALOG DEVICES INCORPORATED
MA	Norfolk	25021	1197301	15	0114	10200603	3.00	MANEVU2002	0.2800	0.0000	0.0003	ANALOG DEVICES INCORPORATED
MA	Norfolk	25021	1197301	19	0116	10200603	1.00	MANEVU2002	0.2200	0.0000	0.0002	ANALOG DEVICES INCORPORATED
MA	Norfolk	25021	1197301	20	0116	10200603	1.00	MANEVU2002	0.2200	0.0000	0.0002	ANALOG DEVICES INCORPORATED
MA	Norfolk	25021	1200125	01	0101	10200401	35.00	MANEVU2002	4.0000	0.0000	0.0110	INVENSYS SYSTEMS
MA	Norfolk	25021	1200125	01	0201	10200602	35.00	MANEVU2002	1.0000	0.0000	0.0027	INVENSYS SYSTEMS
MA	Norfolk	25021	1200125	02	0101	10200401	51.00	MANEVU2002	5.0000	0.0000	0.0137	INVENSYS SYSTEMS
MA	Norfolk	25021	1200125	02	0201	10200602	51.00	MANEVU2002	1.0000	0.0000	0.0027	INVENSYS SYSTEMS
MA	Norfolk	25021	1200125	03	0102	10200401	12.00	MANEVU2002	1.0000	0.0000	0.0027	INVENSYS SYSTEMS
MA	Norfolk	25021	1200125	04	0103	10200401	13.00	MANEVU2002	1.0000	0.0000	0.0027	INVENSYS SYSTEMS
MA	Norfolk	25021	1200127	01	0101	10200401	16.00	MANEVU2002	0.7800	0.0000	0.0017	CLARK CUTLER MCDERMO
MA	Norfolk	25021	1200127	01	0201	10200602	16.00	MANEVU2002	0.7800	0.0000	0.0017	CLARK CUTLER MCDERMO
MA	Norfolk	25021	1200127	02	0101	10200401	35.00	MANEVU2002	0.7935	0.0000	0.0017	CLARK CUTLER MCDERMO
MA	Norfolk	25021	1200127	02	0201	10200602	35.00	MANEVU2002	0.7800	0.0000	0.0017	CLARK CUTLER MCDERMO
MA	Norfolk	25021	1200128	01	0101	10300602	17.00	MANEVU2002	0.2150	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	02	0101	10300602	17.00	MANEVU2002	0.2375	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	03	0102	10300603	4.00	MANEVU2002	0.0590	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	04	0102	10300603	4.00	MANEVU2002	0.0655	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	05	0103	10300603	4.00	MANEVU2002	0.1145	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	06	0104	10300603	8.00	MANEVU2002	0.0635	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	07	0105	10300501	8.00	MANEVU2002	1.1680	0.0000	0.0001	DEAN COLLEGE
MA	Norfolk	25021	1200128	08	0105	10200501	6.00	MANEVU2002	1.6325	0.0000	0.0002	DEAN COLLEGE
MA	Norfolk	25021	1200128	09	0105	10300603	8.00	MANEVU2002	0.1840	0.0000	0.0000	DEAN COLLEGE
MA	Norfolk	25021	1200128	10	0105	10300603	3.00	MANEVU2002	0.0270	0.0000	0.0001	DEAN COLLEGE
MA	Norfolk	25021	1200129	01	0101	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0027	FRANKLIN PAINT CO
MA	Norfolk	25021	1200137	01	0101	10200603	15.00	MANEVU2002	0.7000	0.0000	0.0019	PROMA TECHNOLOGIES
MA	Norfolk	25021	1200137	02	0102	10200602	15.00	MANEVU2002	0.8000	0.0000	0.0022	PROMA TECHNOLOGIES
MA	Norfolk	25021	1200205	02	0102	10200501	1.00	MANEVU2002	0.0080	0.0000	0.0000	VARNEY BROTHERS SAND & GRAVEL INC
MA	Norfolk	25021	1200205	03	0103	10200501	1.00	MANEVU2002	0.0700	0.0000	0.0002	VARNEY BROTHERS SAND & GRAVEL INC
MA	Norfolk	25021	1200205	05	0105	10200501	1.00	MANEVU2002	0.0300	0.0000	0.0001	VARNEY BROTHERS SAND & GRAVEL INC
MA	Norfolk	25021	1200205	06	0106	10200501	3.00	MANEVU2002	0.1000	0.0000	0.0000	VARNEY BROTHERS SAND & GRAVEL INC
MA	Norfolk	25021	1200228	01	0101	10200401	20.00	MANEVU2002	3.0000	0.0000	0.0082	J&J CORRUGATED BOX CO
MA	Norfolk	25021	1200228	01	0201	10200602	20.00	MANEVU2002	0.7000	0.0000	0.0019	J&J CORRUGATED BOX CO
MA	Norfolk	25021	1200228	02	0101	10200401	27.00	MANEVU2002	4.0000	0.0000	0.0110	J&J CORRUGATED BOX CO
MA	Norfolk	25021	1200228	02	0201	10200602	27.00	MANEVU2002	1.0500	0.0000	0.0029	J&J CORRUGATED BOX CO
MA	Norfolk	25021	1200270	01	0101	10200602	10.00	MANEVU2002	1.2800	0.0000	0.0035	EMC CORPORATION
MA	Norfolk	25021	1200270	02	0102	10200603	8.00	MANEVU2002	1.0300	0.0000	0.0028	EMC CORPORATION
MA	Norfolk	25021	1200270	03	0103	10200603	1.00	MANEVU2002	0.0400	0.0000	0.0001	EMC CORPORATION
MA	Norfolk	25021	1200270	04	0104	10200603	1.00	MANEVU2002	0.1000	0.0000	0.0003	EMC CORPORATION
MA	Norfolk	25021	1200270	05	0105	10200603	1.00	MANEVU2002	0.0400	0.0000	0.0001	EMC CORPORATION
MA	Norfolk	25021	1200403	01	0101	10200603	9.00	MANEVU2002	0.1900	0.0000	0.0000	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200403	02	0101	10200603	8.00	MANEVU2002	0.1800	0.0000	0.0000	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200403	04	0103	10200603	1.00	MANEVU2002	0.0020	0.0000	0.0000	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200403	05	0104	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200403	06	0105	10200602	12.00	MANEVU2002	0.0900	0.0000	0.0002	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200403	07	0106	10200602	12.00	MANEVU2002	0.0900	0.0000	0.0002	TYCO VALVES & CONTROLS LP-WRENTHAM
MA	Norfolk	25021	1200452	01	0101	10200603	1.00	MANEVU2002	0.0435	0.0000	0.0001	FABREEKA INTERNATIONAL INC
MA	Norfolk	25021	1200511	02	0102	10300603	20.00	MANEVU2002	2.0000	0.0000	0.0088	NORTHEAST CONCRETE PRODUCTS CORP.

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MA	Norfolk	25021	1200538	08	0108	10300603	12.00	MANEVU2002	0.1170	0.0000	0.0003	SMTC MANUFACTURING CORPORATION
MA	Norfolk	25021	1200538	14	0114	10300603	1.00	MANEVU2002	0.0010	0.0000	0.0000	SMTC MANUFACTURING CORPORATION
MA	Norfolk	25021	1200794	02	0101	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0001	KING PHILIP REGIONAL
MA	Norfolk	25021	1200794	04	0101	10300602	30.00	MANEVU2002	1.0000	0.0000	0.0001	KING PHILIP REGIONAL
MA	Norfolk	25021	1200828	02	0101	10300401	35.00	MANEVU2002	6.0000	0.0000	0.0165	MASS WRENTHAM DEVELOPMENT CENTER
MA	Norfolk	25021	1200828	03	0101	10200602	35.00	MANEVU2002	0.2000	0.0000	0.0005	MASS WRENTHAM DEVELOPMENT CENTER
MA	Norfolk	25021	1200828	04	0101	10300401	51.00	MANEVU2002	19.0000	0.0000	0.0522	MASS WRENTHAM DEVELOPMENT CENTER
MA	Norfolk	25021	1200828	05	0101	10300401	51.00	MANEVU2002	5.0000	0.0000	0.0137	MASS WRENTHAM DEVELOPMENT CENTER
MA	Norfolk	25021	1200828	22	0103	10300603	2.00	MANEVU2002	0.1635	0.0000	0.0004	MASS WRENTHAM DEVELOPMENT CENTER
MA	Norfolk	25021	1200868	01	0101	10200401	17.00	MANEVU2002	4.0000	0.0000	0.0220	GARELICK FARMS INC
MA	Norfolk	25021	1200868	01	0201	10200602	17.00	MANEVU2002	1.0000	0.0000	0.0055	GARELICK FARMS INC
MA	Norfolk	25021	1200868	02	0102	10200401	21.00	MANEVU2002	3.0000	0.0000	0.0000	GARELICK FARMS INC
MA	Norfolk	25021	1200868	02	0202	10200602	21.00	MANEVU2002	1.0000	0.0000	0.0000	GARELICK FARMS INC
MA	Norfolk	25021	1201509	06	0106	10200603	3.00	MANEVU2002	0.4780	0.0000	0.0013	ANP BELLINGHAM
MA	Norfolk	25021	1201509	07	0107	10200603	3.00	MANEVU2002	0.1230	0.0000	0.0003	ANP BELLINGHAM
MA	Norfolk	25021	1201509	15	0115	10200603	3.00	MANEVU2002	0.1230	0.0000	0.0003	ANP BELLINGHAM
MA	Plymouth	25023	1191332	01	0101	10200503	1.00	MANEVU2002	0.0100	0.0000	0.0000	MWRA HINGHAM PUMP STATION
MA	Plymouth	25023	1192104	01	0101	10200603	8.00	MANEVU2002	1.4400	0.0000	0.0002	BRIGHTON REALTY TRUST
MA	Plymouth	25023	1192104	02	0101	10200603	6.00	MANEVU2002	1.4400	0.0000	0.0002	BRIGHTON REALTY TRUST
MA	Plymouth	25023	1192145	01	0101	10300401	44.00	MANEVU2002	9.0000	0.0000	0.0010	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	02	0101	10300401	44.00	MANEVU2002	9.0000	0.0000	0.0010	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	03	0101	10300401	44.00	MANEVU2002	9.0000	0.0000	0.0010	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	05	0102	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	06	0103	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0027	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	07	0103	10200603	1.00	MANEVU2002	1.0000	0.0000	0.0027	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	14	0107	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0000	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	15	0107	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0000	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	49	0140	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0000	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	51	0141	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192145	52	0141	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	BRIDGEWATER STATE COLLEGE
MA	Plymouth	25023	1192148	01	0101	10200501	1.00	MANEVU2002	0.0070	0.0000	0.0000	BRISCO BALING COMPANY
MA	Plymouth	25023	1192150	01	0101	10200501	5.00	MANEVU2002	0.1000	0.0000	0.0003	INSULATION TECH
MA	Plymouth	25023	1192151	01	0201	10300603	92.00	MANEVU2002	1.4055	0.0000	0.0002	MCI BRIDGEWATER CORRECTIONAL COMPLEX
MA	Plymouth	25023	1192151	02	0201	10300603	92.00	MANEVU2002	1.4055	0.0000	0.0039	MCI BRIDGEWATER CORRECTIONAL COMPLEX
MA	Plymouth	25023	1192151	03	0201	10300603	41.00	MANEVU2002	0.9370	0.0000	0.0026	MCI BRIDGEWATER CORRECTIONAL COMPLEX
MA	Plymouth	25023	1192180	01	0101	10300501	2.00	MANEVU2002	0.3120	0.0000	0.0009	BROCKTON HOSPITAL
MA	Plymouth	25023	1192180	02	0101	10300501	2.00	MANEVU2002	0.3120	0.0000	0.0009	BROCKTON HOSPITAL
MA	Plymouth	25023	1192180	03	0201	10300602	17.00	MANEVU2002	1.0630	0.0000	0.0029	BROCKTON HOSPITAL
MA	Plymouth	25023	1192180	04	0201	10300602	10.00	MANEVU2002	1.0630	0.0000	0.0029	BROCKTON HOSPITAL
MA	Plymouth	25023	1192184	01	0101	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0027	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	02	0101	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0027	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	03	0101	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0027	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	10	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	11	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	12	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	13	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	19	0106	10300601	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	20	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192184	21	0106	10300603	1.00	MANEVU2002	0.1250	0.0000	0.0003	CARITAS GOOD SAMARITAN MEDICAL CENTER
MA	Plymouth	25023	1192185	01	0201	10200602	18.00	MANEVU2002	3.0000	0.0000	0.0082	CHURCHILL LINEN SERVICE
MA	Plymouth	25023	1192201	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAIRFIELD FARMS KITC
MA	Plymouth	25023	1192201	01	0201	10200602	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAIRFIELD FARMS KITC

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MA	Plymouth	25023	1192201	02	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0027	FAIRFIELD FARMS KITC
MA	Plymouth	25023	1192208	01	0101	10200603	3.00	MANEVU2002	0.0010	0.0000	0.0000	BROCKTON MULTI SERVICE CENTER
MA	Plymouth	25023	1192208	02	0101	10200603	3.00	MANEVU2002	0.0010	0.0000	0.0000	BROCKTON MULTI SERVICE CENTER
MA	Plymouth	25023	1192224	02	0102	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	SUPERIOR BAKING COMPANY
MA	Plymouth	25023	1192229	01	0201	10300603	28.00	MANEVU2002	1.0000	0.0000	0.0016	US VA MEDICAL CENTER
MA	Plymouth	25023	1192229	02	0201	10300602	28.00	MANEVU2002	1.0000	0.0000	0.0002	US VA MEDICAL CENTER
MA	Plymouth	25023	1192229	03	0201	10300602	22.00	MANEVU2002	1.0000	0.0000	0.0021	US VA MEDICAL CENTER
MA	Plymouth	25023	1192233	01	0101	10200602	14.00	MANEVU2002	0.2700	0.0000	0.0000	BROCKTON SSI WWTP
MA	Plymouth	25023	1192233	03	0103	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0000	BROCKTON SSI WWTP
MA	Plymouth	25023	1192233	04	0104	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0000	BROCKTON SSI WWTP
MA	Plymouth	25023	1192233	06	0106	10200501	4.00	MANEVU2002	2.0000	0.0000	0.0011	BROCKTON SSI WWTP
MA	Plymouth	25023	1192261	01	0101	10200603	6.00	MANEVU2002	0.1300	0.0000	0.0004	ZOOTS INC
MA	Plymouth	25023	1192261	02	0101	10200603	6.00	MANEVU2002	0.1300	0.0000	0.0004	ZOOTS INC
MA	Plymouth	25023	1192261	03	0102	10300603	2.00	MANEVU2002	0.0950	0.0000	0.0003	ZOOTS INC
MA	Plymouth	25023	1192279	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0027	DUXBURY INTERMEDIATE SCHOOL
MA	Plymouth	25023	1192288	01	0201	10200602	10.00	MANEVU2002	0.6795	0.0000	0.0019	EQUITY INDUSTRIAL GHEB LLP
MA	Plymouth	25023	1192288	02	0201	10200603	10.00	MANEVU2002	0.0340	0.0000	0.0001	EQUITY INDUSTRIAL GHEB LLP
MA	Plymouth	25023	1192339	01	0101	10200501	1.00	MANEVU2002	0.0935	0.0000	0.0001	CRI TECH
MA	Plymouth	25023	1192339	07	0107	10201002	1.00	MANEVU2002	0.0065	0.0000	0.0000	CRI TECH
MA	Plymouth	25023	1192425	02	0101	10200501	13.00	MANEVU2002	1.0000	0.0000	0.0003	CODMAN FL & JC CO
MA	Plymouth	25023	1192435	01	0101	10200603	3.00	MANEVU2002	3.4200	0.0000	0.0038	ITW TACC
MA	Plymouth	25023	1192460	01	0101	10200602	4.00	MANEVU2002	0.1300	0.0000	0.0000	GATES INTERMEDIATE SCHOOL
MA	Plymouth	25023	1192460	02	0102	10200603	4.00	MANEVU2002	0.1300	0.0000	0.0000	GATES INTERMEDIATE SCHOOL
MA	Plymouth	25023	1192460	03	0103	10200602	4.00	MANEVU2002	0.1300	0.0000	0.0000	GATES INTERMEDIATE SCHOOL
MA	Plymouth	25023	1192464	01	0101	10300504	6.00	MANEVU2002	0.7100	0.0000	0.0000	WAMPATUCK ELEMENTRY SCHOOL
MA	Plymouth	25023	1192464	02	0102	10300504	6.00	MANEVU2002	0.2400	0.0000	0.0000	WAMPATUCK ELEMENTRY SCHOOL
MA	Plymouth	25023	1192521	01	0101	10200504	16.00	MANEVU2002	5.0000	0.0000	0.0000	RUSSOS GREENHOUSE
MA	Plymouth	25023	1192521	02	0102	10200504	16.00	MANEVU2002	1.0000	0.0000	0.0011	RUSSOS GREENHOUSE
MA	Plymouth	25023	1192527	21	0119	10200501	1.00	MANEVU2002	0.0170	0.0000	0.0000	SHAWMUT CORPORATION
MA	Plymouth	25023	1192527	24	0122	10200603	3.00	MANEVU2002	0.0600	0.0000	0.0002	SHAWMUT CORPORATION
MA	Plymouth	25023	1192527	28	0126	10200603	1.00	MANEVU2002	0.0035	0.0000	0.0000	SHAWMUT CORPORATION
MA	Plymouth	25023	1200260	01	0101	10300504	1.00	MANEVU2002	0.0175	0.0000	0.0000	DB FINISHING COMAPNY
MA	Plymouth	25023	1200260	02	0101	10300504	1.00	MANEVU2002	0.0175	0.0000	0.0000	DB FINISHING COMAPNY
MA	Plymouth	25023	1200278	01	0101	10200401	25.00	MANEVU2002	3.0000	0.0000	0.0082	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	01	0201	10200602	25.00	MANEVU2002	0.4525	0.0000	0.0012	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	02	0102	10200401	25.00	MANEVU2002	3.0000	0.0000	0.0082	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	02	0202	10200602	25.00	MANEVU2002	0.4525	0.0000	0.0012	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	03	0103	10200401	25.00	MANEVU2002	3.0000	0.0000	0.0082	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	03	0203	10200602	25.00	MANEVU2002	0.4525	0.0000	0.0012	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	04	0104	10200401	25.00	MANEVU2002	3.0000	0.0000	0.0082	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200278	04	0204	10200602	25.00	MANEVU2002	0.4525	0.0000	0.0012	OCEAN SPRAY CRANBERRIES INC
MA	Plymouth	25023	1200363	07	0103	10200604	6.00	MANEVU2002	4.0000	0.0000	0.0110	JORDON HOSPITAL THE
MA	Plymouth	25023	1200363	08	0104	10200604	6.00	MANEVU2002	4.0000	0.0000	0.0110	JORDON HOSPITAL THE
MA	Plymouth	25023	1200365	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0011	REVERE GRAPHICS WORLDWIDE
MA	Plymouth	25023	1200365	02	0102	10200602	3.00	MANEVU2002	1.0000	0.0000	0.0011	REVERE GRAPHICS WORLDWIDE
MA	Plymouth	25023	1200400	04	0101	10300504	9.00	MANEVU2002	2.0000	0.0000	0.0002	TOBEY HOSPITAL
MA	Plymouth	25023	1200489	01	0101	10300501	1.00	MANEVU2002	0.0050	0.0000	0.0000	REMCO CONCRETE
MA	Plymouth	25023	1200489	02	0102	10300501	1.00	MANEVU2002	0.0115	0.0000	0.0000	REMCO CONCRETE
MA	Plymouth	25023	1200489	03	0103	10300504	1.00	MANEVU2002	0.0030	0.0000	0.0000	REMCO CONCRETE
MA	Plymouth	25023	1200507	01	0101	10200603	21.00	MANEVU2002	2.0000	0.0000	0.0055	DECAS CRANBERRY PROD
MA	Plymouth	25023	1200637	02	0102	10300603	5.00	MANEVU2002	0.0375	0.0000	0.0001	FRANKLIN FIXTURES INC
MA	Plymouth	25023	1200642	01	0101	10300603	1.00	MANEVU2002	0.0400	0.0000	0.0000	VERIZON MASSACHUSETTS

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MA	Plymouth	25023	1200642	02	0101	10300603	5.00	MANEVU2002	0.1600	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Plymouth	25023	1200702	01	0101	10300504	16.00	MANEVU2002	1.0000	0.0000	0.0027	PLYMOUTH NORTH HIGH
MA	Plymouth	25023	1200738	02	0102	10200603	4.00	MANEVU2002	0.0045	0.0000	0.0000	TECH ETCH INCORPORATED
MA	Suffolk	25025	1190009	02	0102	10200501	184.00	MANEVU2002	1.0000	0.0000	0.0000	TRIGEN BOSTON ENERGY CORP
MA	Suffolk	25025	1190009	03	0103	10200501	161.00	MANEVU2002	1.0000	0.0000	0.0000	TRIGEN BOSTON ENERGY CORP
MA	Suffolk	25025	1190017	01	0101	10300501	38.00	MANEVU2002	2.0000	0.0000	0.0055	UMASS MEDICAL SCHOOL JAMICA PLAIN
MA	Suffolk	25025	1190017	02	0101	10300501	38.00	MANEVU2002	2.0000	0.0000	0.0055	UMASS MEDICAL SCHOOL JAMICA PLAIN
MA	Suffolk	25025	1190017	03	0101	10300501	38.00	MANEVU2002	2.0000	0.0000	0.0055	UMASS MEDICAL SCHOOL JAMICA PLAIN
MA	Suffolk	25025	1190018	01	0101	10300602	14.00	MANEVU2002	1.0000	0.0000	0.0027	MASS COLLEGE OF ART
MA	Suffolk	25025	1190018	02	0101	10300602	20.00	MANEVU2002	2.0000	0.0000	0.0055	MASS COLLEGE OF ART
MA	Suffolk	25025	1190018	03	0101	10300602	20.00	MANEVU2002	2.0000	0.0000	0.0055	MASS COLLEGE OF ART
MA	Suffolk	25025	1190030	01	0101	10300504	6.00	MANEVU2002	1.0000	0.0000	0.0027	DIMOCK COMMUNITY HEA
MA	Suffolk	25025	1190030	02	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0000	DIMOCK COMMUNITY HEA
MA	Suffolk	25025	1190030	03	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0000	DIMOCK COMMUNITY HEA
MA	Suffolk	25025	1190033	01	0101	10200401	142.00	MANEVU2002	23.0000	0.0000	0.0632	GILLETTE COMPANY THE
MA	Suffolk	25025	1190033	01	0201	10200601	142.00	MANEVU2002	107.0000	0.0000	0.2940	GILLETTE COMPANY THE
MA	Suffolk	25025	1190033	02	0101	10200401	142.00	MANEVU2002	23.0000	0.0000	0.0632	GILLETTE COMPANY THE
MA	Suffolk	25025	1190033	02	0201	10200601	142.00	MANEVU2002	107.0000	0.0000	0.2940	GILLETTE COMPANY THE
MA	Suffolk	25025	1190034	01	0101	10300504	15.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190034	01	0201	10300602	15.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190034	02	0202	10300602	15.00	MANEVU2002	4.0000	0.0000	0.0110	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190034	02	0102	10300504	15.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190034	03	0103	10300504	15.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190034	03	0203	10300602	15.00	MANEVU2002	1.0000	0.0000	0.0027	GLOBE NEWSPAPER COMPANY
MA	Suffolk	25025	1190036	01	0101	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0002	HOFFMAN BUILDING
MA	Suffolk	25025	1190040	01	0101	10300504	25.00	MANEVU2002	3.0000	0.0000	0.0082	BOSTON PUBLIC HEALTH-LONG ISLAND
MA	Suffolk	25025	1190040	02	0101	10300504	25.00	MANEVU2002	3.0000	0.0000	0.0082	BOSTON PUBLIC HEALTH-LONG ISLAND
MA	Suffolk	25025	1190040	03	0101	10300504	13.00	MANEVU2002	3.0000	0.0000	0.0082	BOSTON PUBLIC HEALTH-LONG ISLAND
MA	Suffolk	25025	1190040	04	0102	10300502	4.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON PUBLIC HEALTH-LONG ISLAND
MA	Suffolk	25025	1190040	05	0102	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON PUBLIC HEALTH-LONG ISLAND
MA	Suffolk	25025	1190050	01	0101	10200603	8.00	MANEVU2002	0.4425	0.0000	0.0012	UNIFIRST CORPORATION
MA	Suffolk	25025	1190054	01	0201	10300602	21.00	MANEVU2002	2.0000	0.0000	0.0055	NORTHEASTERN UNIVERSITY
MA	Suffolk	25025	1190054	02	0201	10300602	32.00	MANEVU2002	3.0000	0.0000	0.0082	NORTHEASTERN UNIVERSITY
MA	Suffolk	25025	1190054	03	0201	10300602	32.00	MANEVU2002	4.0000	0.0000	0.0110	NORTHEASTERN UNIVERSITY
MA	Suffolk	25025	1190054	04	0201	10300602	42.00	MANEVU2002	8.0000	0.0000	0.0220	NORTHEASTERN UNIVERSITY
MA	Suffolk	25025	1190054	05	0201	10300602	42.00	MANEVU2002	8.0000	0.0000	0.0088	NORTHEASTERN UNIVERSITY
MA	Suffolk	25025	1190059	01	0101	10300401	45.00	MANEVU2002	8.0000	0.0000	0.0009	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	02	0101	10300401	15.00	MANEVU2002	2.0000	0.0000	0.0002	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	03	0101	10300401	24.00	MANEVU2002	3.0000	0.0000	0.0003	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	04	0102	10300603	1.00	MANEVU2002	0.2665	0.0000	0.0005	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	05	0103	10300603	4.00	MANEVU2002	0.0940	0.0000	0.0002	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	06	0104	10300603	4.00	MANEVU2002	0.0940	0.0000	0.0002	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	07	0105	10300501	2.00	MANEVU2002	0.1910	0.0000	0.0000	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	08	0106	10300501	2.00	MANEVU2002	0.1910	0.0000	0.0000	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	09	0107	10300603	1.00	MANEVU2002	0.1880	0.0000	0.0003	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	10	0108	10300603	1.00	MANEVU2002	0.1880	0.0000	0.0003	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	23	0217	10300602	25.00	MANEVU2002	0.0110	0.0000	0.0000	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	24	0217	10300602	25.00	MANEVU2002	0.0110	0.0000	0.0000	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	27	0118	10300501	3.00	MANEVU2002	0.0675	0.0000	0.0001	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	28	0118	10300501	3.00	MANEVU2002	0.0650	0.0000	0.0001	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190059	29	0118	10300501	3.00	MANEVU2002	0.0675	0.0000	0.0001	ST ELIZABETHS MEDICAL CENTER
MA	Suffolk	25025	1190065	01	0101	10300602	11.00	MANEVU2002	1.0000	0.0000	0.0027	SUFFOLK COUNTY COURT

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MA	Suffolk	25025	1190065	02	0101	10300602	11.00	MANEVU2002	1.0000	0.0000	0.0027	SUFFOLK COUNTY COURT
MA	Suffolk	25025	1190065	03	0102	10300603	11.00	MANEVU2002	1.0000	0.0000	0.0027	SUFFOLK COUNTY COURT
MA	Suffolk	25025	1190065	04	0102	10300602	11.00	MANEVU2002	1.0000	0.0000	0.0027	SUFFOLK COUNTY COURT
MA	Suffolk	25025	1190068	01	0101	10300501	7.00	MANEVU2002	0.8670	0.0000	0.0031	BRIGHTON MARINE HEALTH
MA	Suffolk	25025	1190068	02	0101	10300501	14.00	MANEVU2002	0.8670	0.0000	0.0024	BRIGHTON MARINE HEALTH
MA	Suffolk	25025	1190069	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	ST MARYS WOMEN & INFANTS
MA	Suffolk	25025	1190070	01	0101	10300501	32.00	MANEVU2002	2.0000	0.0000	0.0000	LEMUEL SHATTUCK HOSPITAL
MA	Suffolk	25025	1190070	01	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0000	LEMUEL SHATTUCK HOSPITAL
MA	Suffolk	25025	1190070	02	0101	10300501	32.00	MANEVU2002	2.0000	0.0000	0.0073	LEMUEL SHATTUCK HOSPITAL
MA	Suffolk	25025	1190070	02	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0073	LEMUEL SHATTUCK HOSPITAL
MA	Suffolk	25025	1190070	12	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0082	LEMUEL SHATTUCK HOSPITAL
MA	Suffolk	25025	1190075	03	0101	10200401	49.00	MANEVU2002	16.0000	0.0000	0.0000	BAY STATE PAPER CO
MA	Suffolk	25025	1190075	04	0101	10200401	86.00	MANEVU2002	4.0000	0.0000	0.0000	BAY STATE PAPER CO
MA	Suffolk	25025	1190075	05	0101	10200401	121.00	MANEVU2002	93.0000	0.0000	0.2759	BAY STATE PAPER CO
MA	Suffolk	25025	1190079	01	0101	10300603	5.00	MANEVU2002	0.3000	0.0000	0.0000	US BARNES BLDG
MA	Suffolk	25025	1190079	02	0101	10300603	5.00	MANEVU2002	0.3000	0.0000	0.0000	US BARNES BLDG
MA	Suffolk	25025	1190079	03	0101	10300603	5.00	MANEVU2002	0.3000	0.0000	0.0000	US BARNES BLDG
MA	Suffolk	25025	1190086	01	0101	10300602	7.00	MANEVU2002	1.0000	0.0000	0.0027	SIMMONS COLLEGE
MA	Suffolk	25025	1190086	03	0101	10300602	7.00	MANEVU2002	1.0000	0.0000	0.0027	SIMMONS COLLEGE
MA	Suffolk	25025	1190086	05	0202	10300602	14.00	MANEVU2002	2.0000	0.0000	0.0055	SIMMONS COLLEGE
MA	Suffolk	25025	1190099	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	BAKER SQUARE CONDOMINIUM
MA	Suffolk	25025	1190100	01	0101	10300602	2.00	MANEVU2002	0.2000	0.0000	0.0002	BHA MARY ELLEN MCCORMICK
MA	Suffolk	25025	1190119	01	0101	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0074	CHELSEA SOLDIERS HOME
MA	Suffolk	25025	1190119	02	0101	10300602	29.00	MANEVU2002	1.0000	0.0000	0.0000	CHELSEA SOLDIERS HOME
MA	Suffolk	25025	1190119	03	0101	10300602	29.00	MANEVU2002	3.0000	0.0000	0.0000	CHELSEA SOLDIERS HOME
MA	Suffolk	25025	1190225	01	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	TERADYNE INC
MA	Suffolk	25025	1190225	02	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	TERADYNE INC
MA	Suffolk	25025	1190245	01	0201	10300602	33.00	MANEVU2002	4.0000	0.0000	0.0110	HEBREW REHABILITATION CENTER
MA	Suffolk	25025	1190245	01	0101	10300501	33.00	MANEVU2002	1.0000	0.0000	0.0027	HEBREW REHABILITATION CENTER
MA	Suffolk	25025	1190256	01	0101	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0009	BHA MISSION HILL
MA	Suffolk	25025	1190256	02	0101	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0009	BHA MISSION HILL
MA	Suffolk	25025	1190256	03	0102	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0009	BHA MISSION HILL
MA	Suffolk	25025	1190256	04	0103	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0009	BHA MISSION HILL
MA	Suffolk	25025	1190273	01	0101	10300603	8.00	MANEVU2002	0.7550	0.0000	0.0008	ZOO NEW ENGLAND
MA	Suffolk	25025	1190273	02	0102	10300603	8.00	MANEVU2002	0.5000	0.0000	0.0005	ZOO NEW ENGLAND
MA	Suffolk	25025	1190273	03	0103	10300603	5.00	MANEVU2002	0.1000	0.0000	0.0000	ZOO NEW ENGLAND
MA	Suffolk	25025	1190273	04	0103	10300602	5.00	MANEVU2002	0.1000	0.0000	0.0000	ZOO NEW ENGLAND
MA	Suffolk	25025	1190273	05	0104	10300603	2.00	MANEVU2002	0.1000	0.0000	0.0000	ZOO NEW ENGLAND
MA	Suffolk	25025	1190273	06	0104	10300603	2.00	MANEVU2002	0.1000	0.0000	0.0000	ZOO NEW ENGLAND
MA	Suffolk	25025	1190279	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	COASTAL OIL OF NEW ENGLAND
MA	Suffolk	25025	1190279	02	0102	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	COASTAL OIL OF NEW ENGLAND
MA	Suffolk	25025	1190290	03	0202	10300602	25.00	MANEVU2002	2.0000	0.0000	0.0055	CARNEY HOSPITAL
MA	Suffolk	25025	1190290	04	0202	10300602	26.00	MANEVU2002	3.0000	0.0000	0.0082	CARNEY HOSPITAL
MA	Suffolk	25025	1190309	01	0101	10300501	11.00	MANEVU2002	1.2000	0.0000	0.0000	HARBOR TOWERS I & II
MA	Suffolk	25025	1190309	02	0101	10300501	11.00	MANEVU2002	1.2000	0.0000	0.0000	HARBOR TOWERS I & II
MA	Suffolk	25025	1190309	03	0101	10300501	11.00	MANEVU2002	1.2000	0.0000	0.0033	HARBOR TOWERS I & II
MA	Suffolk	25025	1190309	04	0101	10300501	11.00	MANEVU2002	1.2000	0.0000	0.0033	HARBOR TOWERS I & II
MA	Suffolk	25025	1190328	01	0101	10200501	1.00	MANEVU2002	0.0385	0.0000	0.0000	MWRA DELAURIE PUMP STATION
MA	Suffolk	25025	1190328	02	0101	10200501	1.00	MANEVU2002	0.0385	0.0000	0.0000	MWRA DELAURIE PUMP STATION
MA	Suffolk	25025	1190328	03	0101	10200501	1.00	MANEVU2002	0.0385	0.0000	0.0000	MWRA DELAURIE PUMP STATION
MA	Suffolk	25025	1190341	01	0101	10300501	1.00	MANEVU2002	1.0000	0.0000	0.0011	BOYD SMITH INCORPORATED
MA	Suffolk	25025	1190341	02	0101	10300504	1.00	MANEVU2002	1.0000	0.0000	0.0011	BOYD SMITH INCORPORATED

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MA	Suffolk	25025	1190341	03	0101	10300501	1.00	MANEVU2002	1.0000	0.0000	0.0011	BOYD SMITH INCORPORATED
MA	Suffolk	25025	1190345	01	0101	10200603	1.00	MANEVU2002	0.0315	0.0000	0.0001	CLIFLEX BELLOWS CORPORATION
MA	Suffolk	25025	1190350	01	0101	10300603	3.00	MANEVU2002	2.0000	0.0000	0.0000	CAMELOT COMPANY THE
MA	Suffolk	25025	1190350	02	0101	10300603	3.00	MANEVU2002	2.0000	0.0000	0.0000	CAMELOT COMPANY THE
MA	Suffolk	25025	1190350	04	0103	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0000	CAMELOT COMPANY THE
MA	Suffolk	25025	1190350	05	0103	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0000	CAMELOT COMPANY THE
MA	Suffolk	25025	1190357	01	0101	10300401	6.00	MANEVU2002	2.0000	0.0000	0.0037	DAMRELL EWER PARTNERS LLC
MA	Suffolk	25025	1190359	01	0201	10300602	21.00	MANEVU2002	1.9500	0.0000	0.0054	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190359	01	0101	10300501	21.00	MANEVU2002	0.6200	0.0000	0.0017	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190359	02	0201	10300602	21.00	MANEVU2002	1.9500	0.0000	0.0054	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190359	02	0101	10300501	21.00	MANEVU2002	0.6200	0.0000	0.0017	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190359	03	0101	10300501	6.00	MANEVU2002	0.1900	0.0000	0.0000	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190359	03	0201	10300603	6.00	MANEVU2002	0.5900	0.0000	0.0000	FIRST CHURCH OF CHRIST SCIENTIST
MA	Suffolk	25025	1190390	02	0102	10300603	3.00	MANEVU2002	0.1500	0.0000	0.0002	TUFTS UNIVERSITY BOSTON CAMPUS
MA	Suffolk	25025	1190394	01	0101	10300603	4.00	MANEVU2002	3.0000	0.0000	0.0000	MASS COLLEGE OF PHARMACY & HEALTH SERVIC
MA	Suffolk	25025	1190399	01	0101	10300504	25.00	MANEVU2002	1.0000	0.0000	0.0027	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190399	01	0201	10300602	25.00	MANEVU2002	0.3100	0.0000	0.0009	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190399	02	0101	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0055	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190399	02	0201	10300602	25.00	MANEVU2002	0.3100	0.0000	0.0009	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190399	03	0102	10300504	25.00	MANEVU2002	1.0000	0.0000	0.0027	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190399	03	0202	10300602	25.00	MANEVU2002	0.3100	0.0000	0.0009	BUNKER HILL COMMUNIT
MA	Suffolk	25025	1190400	01	0101	10200603	1.00	MANEVU2002	0.0355	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	02	0102	10200603	1.00	MANEVU2002	0.0355	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	03	0103	10200603	1.00	MANEVU2002	0.0355	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	04	0104	10200603	1.00	MANEVU2002	0.0355	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	07	0107	10200603	1.00	MANEVU2002	0.0085	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	10	0110	10200603	1.00	MANEVU2002	0.0810	0.0000	0.0001	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	11	0111	10200603	1.00	MANEVU2002	0.0810	0.0000	0.0001	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	12	0112	10200603	1.00	MANEVU2002	0.0810	0.0000	0.0001	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	15	0115	10200603	1.00	MANEVU2002	0.0700	0.0000	0.0002	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	18	0118	10200603	1.00	MANEVU2002	0.0595	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	19	0118	10200603	1.00	MANEVU2002	0.0595	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190400	22	0120	10200603	1.00	MANEVU2002	0.0035	0.0000	0.0000	PERKINELMER LIFE SCIENCES INC
MA	Suffolk	25025	1190403	01	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	TERADYNE INC
MA	Suffolk	25025	1190403	02	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	TERADYNE INC
MA	Suffolk	25025	1190405	04	0102	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0055	NEW ENGLAND BAPTIST HOSPITAL
MA	Suffolk	25025	1190405	05	0102	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0055	NEW ENGLAND BAPTIST HOSPITAL
MA	Suffolk	25025	1190405	06	0102	10300504	25.00	MANEVU2002	2.0000	0.0000	0.0055	NEW ENGLAND BAPTIST HOSPITAL
MA	Suffolk	25025	1190415	01	0101	10200504	6.00	MANEVU2002	1.0000	0.0000	0.0038	BOSTON WHARF COMPANY
MA	Suffolk	25025	1190418	01	0101	10200501	7.00	MANEVU2002	1.0000	0.0000	0.0038	BOSTON WHARF COMPANY
MA	Suffolk	25025	1190419	01	0101	10200504	9.00	MANEVU2002	1.0000	0.0000	0.0038	BOSTON WHARF COMPANY
MA	Suffolk	25025	1190419	02	0101	10200504	9.00	MANEVU2002	1.0000	0.0000	0.0038	BOSTON WHARF COMPANY
MA	Suffolk	25025	1190433	01	0101	10200602	17.00	MANEVU2002	2.0000	0.0000	0.0055	MORGAN SERVICES INC
MA	Suffolk	25025	1190470	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0036	FAIRMONT COPLEY PLAZA
MA	Suffolk	25025	1190470	02	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAIRMONT COPLEY PLAZA
MA	Suffolk	25025	1190473	01	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0011	BRAEMORE APARTMENTS
MA	Suffolk	25025	1190481	01	0101	10200501	25.00	MANEVU2002	0.0880	0.0000	0.0000	CONOCO PHILLIPS COMPANY
MA	Suffolk	25025	1190481	02	0202	10200602	25.00	MANEVU2002	0.0030	0.0000	0.0000	CONOCO PHILLIPS COMPANY
MA	Suffolk	25025	1190482	01	0101	10200501	33.00	MANEVU2002	1.0000	0.0000	0.0000	COASTAL OIL OF NEW ENGLAND
MA	Suffolk	25025	1190482	05	0106	10200501	2.00	MANEVU2002	0.0865	0.0000	0.0000	COASTAL OIL OF NEW ENGLAND
MA	Suffolk	25025	1190482	31	0105	10200501	1.00	MANEVU2002	0.0730	0.0000	0.0000	COASTAL OIL OF NEW ENGLAND
MA	Suffolk	25025	1190483	01	0101	10300501	2.00	MANEVU2002	0.1030	0.0000	0.0000	GULF OIL LP CHELSEA

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MA	Suffolk	25025	1190490	01	0101	10200501	1.00	MANEVU2002	0.0460	0.0000	0.0001	IRVING OIL TERMINALS
MA	Suffolk	25025	1190492	01	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0027	FORSYTH DENTAL CENTER
MA	Suffolk	25025	1190509	20	0113	10300603	1.00	MANEVU2002	0.0885	0.0000	0.0002	CHILDRENS HOSPITAL
MA	Suffolk	25025	1190513	01	0101	10300603	39.00	MANEVU2002	2.0000	0.0000	0.0022	MASS GENERAL HOSPITAL
MA	Suffolk	25025	1190513	02	0102	10300602	31.00	MANEVU2002	4.0000	0.0000	0.0044	MASS GENERAL HOSPITAL
MA	Suffolk	25025	1190525	01	0201	10300602	32.00	MANEVU2002	4.0000	0.0000	0.0018	VA BOSTON HEALTHCARE SYSTEM
MA	Suffolk	25025	1190525	02	0201	10300602	32.00	MANEVU2002	2.0000	0.0000	0.0000	VA BOSTON HEALTHCARE SYSTEM
MA	Suffolk	25025	1190525	04	0202	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0079	VA BOSTON HEALTHCARE SYSTEM
MA	Suffolk	25025	1190525	05	0103	10300603	1.00	MANEVU2002	0.1830	0.0000	0.0000	VA BOSTON HEALTHCARE SYSTEM
MA	Suffolk	25025	1190525	16	0103	10300603	1.00	MANEVU2002	0.1830	0.0000	0.0000	VA BOSTON HEALTHCARE SYSTEM
MA	Suffolk	25025	1190549	02	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAULKNER HOSPITAL
MA	Suffolk	25025	1190549	03	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAULKNER HOSPITAL
MA	Suffolk	25025	1190549	04	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAULKNER HOSPITAL
MA	Suffolk	25025	1190549	05	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0027	FAULKNER HOSPITAL
MA	Suffolk	25025	1190552	01	0101	10300404	15.00	MANEVU2002	2.0000	0.0000	0.0110	JAMAICAWAY TOWER
MA	Suffolk	25025	1190552	02	0101	10300404	15.00	MANEVU2002	2.0000	0.0000	0.0000	JAMAICAWAY TOWER
MA	Suffolk	25025	1190574	01	0101	10200501	3.00	MANEVU2002	0.1700	0.0000	0.0001	ARMSTRONG PHARMACEUTICALS INC
MA	Suffolk	25025	1190574	02	0102	10200601	1.00	MANEVU2002	0.0300	0.0000	0.0000	ARMSTRONG PHARMACEUTICALS INC
MA	Suffolk	25025	1190596	01	0101	10200602	30.00	MANEVU2002	3.0000	0.0000	0.0082	MBTA SOUTH STATION
MA	Suffolk	25025	1190596	02	0102	10200602	40.00	MANEVU2002	3.0000	0.0000	0.0082	MBTA SOUTH STATION
MA	Suffolk	25025	1190658	01	0101	10200501	6.00	MANEVU2002	0.4625	0.0000	0.0000	MWRA CHELSEA CREEK
MA	Suffolk	25025	1190658	02	0101	10200501	6.00	MANEVU2002	1.3875	0.0000	0.0000	MWRA CHELSEA CREEK
MA	Suffolk	25025	1190658	03	0102	10200603	1.00	MANEVU2002	0.1925	0.0000	0.0005	MWRA CHELSEA CREEK
MA	Suffolk	25025	1190659	01	0101	10300601	1.00	MANEVU2002	1.0000	0.0000	0.0011	DOUBLETREE GUEST SUITES
MA	Suffolk	25025	1190663	01	0101	10200501	4.00	MANEVU2002	1.0000	0.0000	0.0000	MWRA WARD STREET
MA	Suffolk	25025	1190663	02	0101	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0000	MWRA WARD STREET
MA	Suffolk	25025	1190674	01	0101	10200501	6.00	MANEVU2002	1.0000	0.0000	0.0008	MWRA COLUMBUS PARK
MA	Suffolk	25025	1190674	02	0101	10200501	6.00	MANEVU2002	1.0000	0.0000	0.0001	MWRA COLUMBUS PARK
MA	Suffolk	25025	1190694	01	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0027	RITZ CARLTON HOTEL
MA	Suffolk	25025	1190694	02	0201	10200501	9.00	MANEVU2002	1.0000	0.0000	0.0027	RITZ CARLTON HOTEL
MA	Suffolk	25025	1190703	01	0101	10200603	21.00	MANEVU2002	0.2605	0.0000	0.0000	BOSTON SAND & GRAVEL
MA	Suffolk	25025	1190703	02	0102	10200603	15.00	MANEVU2002	0.0650	0.0000	0.0000	BOSTON SAND & GRAVEL
MA	Suffolk	25025	1190772	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0027	GENERAL MILLS BAKERIES & FOODSERVICE
MA	Suffolk	25025	1190773	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	PILLSBURY BAKERIES
MA	Suffolk	25025	1190805	01	0201	10300602	13.00	MANEVU2002	0.9000	0.0000	0.0010	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	02	0201	10300602	13.00	MANEVU2002	0.9000	0.0000	0.0010	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	03	0201	10300602	17.00	MANEVU2002	0.9000	0.0000	0.0010	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	04	0201	10300602	13.00	MANEVU2002	0.9000	0.0000	0.0010	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	05	0202	10300602	11.00	MANEVU2002	0.8000	0.0000	0.0009	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	06	0202	10300602	11.00	MANEVU2002	0.8000	0.0000	0.0009	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190805	07	0202	10300602	11.00	MANEVU2002	0.8000	0.0000	0.0009	BHA BROMLEY HEATH TMC
MA	Suffolk	25025	1190846	01	0101	10200603	2.00	MANEVU2002	0.2200	0.0000	0.0008	AGGREGATE INDUSTRIES NORTHEAST
MA	Suffolk	25025	1190862	05	0105	10200603	2.00	MANEVU2002	0.4500	0.0000	0.0012	STOP & SHOP COMPANY
MA	Suffolk	25025	1190862	06	0106	10200603	2.00	MANEVU2002	0.4750	0.0000	0.0013	STOP & SHOP COMPANY
MA	Suffolk	25025	1190871	01	0101	10200501	5.00	MANEVU2002	0.2900	0.0000	0.0000	GRAPHIC ARTS FINSHERS INC
MA	Suffolk	25025	1190899	01	0101	10300504	25.00	MANEVU2002	1.0000	0.0000	0.0000	WENTWORTH INSTITUTE
MA	Suffolk	25025	1190899	02	0201	10300602	10.00	MANEVU2002	0.3900	0.0000	0.0000	WENTWORTH INSTITUTE
MA	Suffolk	25025	1190899	04	0103	10300603	4.00	MANEVU2002	0.1300	0.0000	0.0000	WENTWORTH INSTITUTE
MA	Suffolk	25025	1190899	05	0103	10300603	4.00	MANEVU2002	0.1300	0.0000	0.0000	WENTWORTH INSTITUTE
MA	Suffolk	25025	1190933	01	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON PARK PLAZA HOTEL
MA	Suffolk	25025	1190933	01	0201	10300401	5.00	MANEVU2002	0.1035	0.0000	0.0003	BOSTON PARK PLAZA HOTEL
MA	Suffolk	25025	1190933	02	0101	10300602	25.00	MANEVU2002	5.0000	0.0000	0.0137	BOSTON PARK PLAZA HOTEL

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MA	Suffolk	25025	1190933	02	0201	10300401	25.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON PARK PLAZA HOTEL
MA	Suffolk	25025	1190933	03	0101	10300401	25.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON PARK PLAZA HOTEL
MA	Suffolk	25025	1190948	01	0101	10200501	4.00	MANEVU2002	0.0880	0.0000	0.0000	NEW BALANCE ATHLETIC SHOE INC
MA	Suffolk	25025	1191063	01	0201	10300603	8.00	MANEVU2002	2.0000	0.0000	0.0077	MERCANTILE WHARF BUILDING
MA	Suffolk	25025	1191063	02	0101	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0038	MERCANTILE WHARF BUILDING
MA	Suffolk	25025	1191083	01	0101	10300501	0.00	MANEVU2002	1.0000	0.0000	0.0011	38 CHAUNCY STREET LLC
MA	Suffolk	25025	1191191	01	0201	10200505	244.00	MANEVU2002	3.0000	0.0000	0.0007	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	01	0101	10200604	244.00	MANEVU2002	46.0000	0.0000	0.0101	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	02	0201	10200505	244.00	MANEVU2002	1.0000	0.0000	0.0043	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	02	0101	10200602	244.00	MANEVU2002	62.0000	0.0000	0.2657	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	03	0201	10200505	244.00	MANEVU2002	4.0000	0.0000	0.0013	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	03	0101	10200604	244.00	MANEVU2002	39.0000	0.0000	0.0129	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	04	0201	10200602	225.00	MANEVU2002	37.0000	0.0000	0.1260	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191191	05	0201	10200604	225.00	MANEVU2002	31.0000	0.0000	0.1260	MEDICAL AREA TOTAL ENERGY
MA	Suffolk	25025	1191194	02	0101	10300401	14.00	MANEVU2002	1.0000	0.0000	0.0036	A SHAPIRO BOSTON INCORPORATED
MA	Suffolk	25025	1191194	90	0101	10300401	14.00	MANEVU2002	1.0000	0.0000	0.0000	A SHAPIRO BOSTON INCORPORATED
MA	Suffolk	25025	1191235	07	0106	10300603	3.00	MANEVU2002	0.4900	0.0000	0.0013	FLEET CENTER, THE
MA	Suffolk	25025	1191235	08	0107	10300603	3.00	MANEVU2002	0.4900	0.0000	0.0013	FLEET CENTER, THE
MA	Suffolk	25025	1191235	09	0108	10300603	7.00	MANEVU2002	1.1000	0.0000	0.0030	FLEET CENTER, THE
MA	Suffolk	25025	1191235	10	0109	10300603	7.00	MANEVU2002	1.1000	0.0000	0.0030	FLEET CENTER, THE
MA	Suffolk	25025	1191366	01	0101	10300602	15.00	MANEVU2002	1.4000	0.0000	0.0000	BHA MAVERICK DEVELOPMENT
MA	Suffolk	25025	1191366	02	0101	10300602	15.00	MANEVU2002	1.4000	0.0000	0.0000	BHA MAVERICK DEVELOPMENT
MA	Suffolk	25025	1191366	03	0101	10300602	15.00	MANEVU2002	0.9000	0.0000	0.0000	BHA MAVERICK DEVELOPMENT
MA	Suffolk	25025	1191367	01	0101	10300504	7.00	MANEVU2002	1.0000	0.0000	0.0027	BHA LENOX STREET
MA	Suffolk	25025	1191367	03	0101	10300504	7.00	MANEVU2002	1.0000	0.0000	0.0027	BHA LENOX STREET
MA	Suffolk	25025	1191367	04	0101	10300504	7.00	MANEVU2002	1.0000	0.0000	0.0027	BHA LENOX STREET
MA	Suffolk	25025	1191370	01	0101	10300504	9.00	MANEVU2002	1.0000	0.0000	0.0027	BHA WHITTIER
MA	Suffolk	25025	1191370	02	0101	10300504	9.00	MANEVU2002	1.0000	0.0000	0.0027	BHA WHITTIER
MA	Suffolk	25025	1191370	03	0101	10300504	9.00	MANEVU2002	1.0000	0.0000	0.0027	BHA WHITTIER
MA	Suffolk	25025	1191372	01	0101	10300504	8.00	MANEVU2002	3.0000	0.0000	0.0033	BHA BEECH STREET
MA	Suffolk	25025	1191372	02	0101	10300504	8.00	MANEVU2002	3.0000	0.0000	0.0033	BHA BEECH STREET
MA	Suffolk	25025	1191372	03	0101	10300504	9.00	MANEVU2002	2.0000	0.0000	0.0022	BHA BEECH STREET
MA	Suffolk	25025	1191373	01	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	BHA FRANKLIN HILL
MA	Suffolk	25025	1191373	02	0101	10300602	6.00	MANEVU2002	1.0000	0.0000	0.0027	BHA FRANKLIN HILL
MA	Suffolk	25025	1191374	01	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	BHA ARCHDALE
MA	Suffolk	25025	1191374	02	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0027	BHA ARCHDALE
MA	Suffolk	25025	1191374	03	0101	10300504	8.00	MANEVU2002	2.0000	0.0000	0.0055	BHA ARCHDALE
MA	Suffolk	25025	1191374	06	0103	10300601	2.00	MANEVU2002	0.3000	0.0000	0.0008	BHA ARCHDALE
MA	Suffolk	25025	1191375	01	0101	10300504	6.00	MANEVU2002	1.5000	0.0000	0.0013	BHA SOUTH STREET
MA	Suffolk	25025	1191375	02	0101	10300504	6.00	MANEVU2002	2.0000	0.0000	0.0018	BHA SOUTH STREET
MA	Suffolk	25025	1191375	03	0101	10300504	6.00	MANEVU2002	1.5000	0.0000	0.0013	BHA SOUTH STREET
MA	Suffolk	25025	1191377	01	0101	10300603	10.00	MANEVU2002	1.1000	0.0000	0.0030	BHA CAMDEN STREET
MA	Suffolk	25025	1191378	01	0101	10300603	6.00	MANEVU2002	0.6000	0.0000	0.0000	BHA OLD COLONY DEVELOPMENT
MA	Suffolk	25025	1191378	03	0102	10300603	6.00	MANEVU2002	2.6000	0.0000	0.0000	BHA OLD COLONY DEVELOPMENT
MA	Suffolk	25025	1191378	05	0103	10300603	7.00	MANEVU2002	3.3000	0.0000	0.0000	BHA OLD COLONY DEVELOPMENT
MA	Suffolk	25025	1191378	08	0104	10300603	8.00	MANEVU2002	1.5000	0.0000	0.0000	BHA OLD COLONY DEVELOPMENT
MA	Suffolk	25025	1191379	01	0101	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0011	BHA CHARLESTOWN
MA	Suffolk	25025	1191379	02	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0011	BHA CHARLESTOWN
MA	Suffolk	25025	1191379	03	0102	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	BHA CHARLESTOWN
MA	Suffolk	25025	1191379	04	0102	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	BHA CHARLESTOWN
MA	Suffolk	25025	1191379	05	0103	10300603	5.00	MANEVU2002	1.0000	0.0000	0.0011	BHA CHARLESTOWN
MA	Suffolk	25025	1191392	05	0104	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0000	MBTA CHARLESTON YARD

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MA	Suffolk	25025	1191397	01	0101	10300603	10.00	MANEVU2002	0.7380	0.0000	0.0000	BARRY CONTROLS
MA	Suffolk	25025	1191397	02	0102	10200501	5.00	MANEVU2002	0.4055	0.0000	0.0011	BARRY CONTROLS
MA	Suffolk	25025	1191397	09	0103	10200603	3.00	MANEVU2002	0.6200	0.0000	0.0017	BARRY CONTROLS
MA	Suffolk	25025	1191431	02	0102	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0027	BETH ISRAEL DEACONESS MEDICAL CENTER
MA	Suffolk	25025	1191492	01	0101	10300603	5.00	MANEVU2002	0.1600	0.0000	0.0004	HARVARD LONGWOOD CAMPUS
MA	Suffolk	25025	1191492	01	0201	10300501	5.00	MANEVU2002	0.0300	0.0000	0.0001	HARVARD LONGWOOD CAMPUS
MA	Suffolk	25025	1191492	02	0101	10300603	3.00	MANEVU2002	0.1200	0.0000	0.0001	HARVARD LONGWOOD CAMPUS
MA	Suffolk	25025	1191504	01	0101	10200603	8.00	MANEVU2002	0.9500	0.0000	0.0010	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191504	02	0102	10200603	3.00	MANEVU2002	0.1100	0.0000	0.0000	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191504	03	0103	10200602	48.00	MANEVU2002	0.0700	0.0000	0.0000	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191504	04	0104	10200602	48.00	MANEVU2002	0.0700	0.0000	0.0000	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191504	05	0105	10200602	48.00	MANEVU2002	0.0700	0.0000	0.0000	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191504	13	0110	10200603	3.00	MANEVU2002	0.0200	0.0000	0.0001	KEYSPAN ENERGY DELIVERY CP LNG
MA	Suffolk	25025	1191508	01	0201	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0038	NOVELTY BIAS BIND CO
MA	Suffolk	25025	1191517	01	0201	10300501	4.00	MANEVU2002	0.0075	0.0000	0.0000	USDA HUMAN NUTRITION
MA	Suffolk	25025	1191517	02	0201	10300501	8.00	MANEVU2002	0.0075	0.0000	0.0000	USDA HUMAN NUTRITION
MA	Suffolk	25025	1191517	03	0201	10300501	8.00	MANEVU2002	0.0075	0.0000	0.0000	USDA HUMAN NUTRITION
MA	Suffolk	25025	1191521	01	0101	10200401	13.00	MANEVU2002	2.0000	0.0000	0.0055	CROWN SERVICE SYSTEM
MA	Suffolk	25025	1191521	01	0201	10200602	13.00	MANEVU2002	0.2000	0.0000	0.0005	CROWN SERVICE SYSTEM
MA	Suffolk	25025	1191526	02	0101	10300501	4.00	MANEVU2002	1.0000	0.0000	0.0027	ATIC
MA	Suffolk	25025	1191557	01	0101	10200504	8.00	MANEVU2002	1.0000	0.0000	0.0038	BOSTON WHARF COMPANY
MA	Suffolk	25025	1191559	01	0101	10200501	9.00	MANEVU2002	8.0000	0.0000	0.0308	BOSTON WHARF COMPANY
MA	Suffolk	25025	1191578	01	0101	10300401	15.00	MANEVU2002	2.0000	0.0000	0.0033	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	02	0101	10300401	15.00	MANEVU2002	5.0000	0.0000	0.0082	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	03	0101	10300401	25.00	MANEVU2002	6.0000	0.0000	0.0099	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	04	0102	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	05	0102	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	06	0102	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	07	0102	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	08	0102	10300401	25.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	11	0104	10300603	15.00	MANEVU2002	0.3665	0.0000	0.0006	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	11	0204	10300501	15.00	MANEVU2002	0.0485	0.0000	0.0001	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	12	0104	10300603	15.00	MANEVU2002	0.3665	0.0000	0.0006	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	12	0204	10300501	15.00	MANEVU2002	0.0485	0.0000	0.0001	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	13	0104	10300603	15.00	MANEVU2002	0.3665	0.0000	0.0006	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	13	0204	10300501	15.00	MANEVU2002	0.0485	0.0000	0.0001	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	17	0108	10300603	33.00	MANEVU2002	0.2650	0.0000	0.0004	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	18	0108	10300603	33.00	MANEVU2002	3.4220	0.0000	0.0056	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	18	0208	10300501	33.00	MANEVU2002	2.0150	0.0000	0.0033	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	19	0108	10300603	33.00	MANEVU2002	5.2325	0.0000	0.0288	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	20	0108	10300603	33.00	MANEVU2002	0.7690	0.0000	0.0013	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	21	0108	10300504	33.00	MANEVU2002	2.0000	0.0000	0.0033	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	22	0108	10300501	211.00	MANEVU2002	8.0000	0.0000	0.0132	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	23	0108	10300501	13.00	MANEVU2002	1.3330	0.0000	0.0022	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	63	0115	10300602	33.00	MANEVU2002	0.6305	0.0000	0.0010	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	64	0115	10300602	33.00	MANEVU2002	0.6305	0.0000	0.0010	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191578	65	0115	10300602	33.00	MANEVU2002	0.6305	0.0000	0.0010	BOSTON UNIVERSITY PHYSICAL PLANT
MA	Suffolk	25025	1191591	01	0101	10200504	3.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON WHARF COMPANY
MA	Suffolk	25025	1191591	02	0102	10200504	5.00	MANEVU2002	1.0000	0.0000	0.0027	BOSTON WHARF COMPANY
MA	Suffolk	25025	1191617	01	0101	10300401	12.00	MANEVU2002	6.0000	0.0000	0.0112	CHELSEA SANDWICH LLC
MA	Suffolk	25025	1191617	02	0101	10300401	12.00	MANEVU2002	5.0000	0.0000	0.0093	CHELSEA SANDWICH LLC
MA	Suffolk	25025	1191679	01	0101	10200501	6.00	MANEVU2002	0.0700	0.0000	0.0002	BERKLEE COLLEGE OF MUSIC

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MA	Suffolk	25025	1191679	01	0201	10200603	6.00	MANEVU2002	0.5700	0.0000	0.0016	BERKLEE COLLEGE OF MUSIC
MA	Suffolk	25025	1191679	02	0101	10200501	6.00	MANEVU2002	0.0700	0.0000	0.0002	BERKLEE COLLEGE OF MUSIC
MA	Suffolk	25025	1191679	02	0201	10200603	6.00	MANEVU2002	0.5700	0.0000	0.0016	BERKLEE COLLEGE OF MUSIC
MA	Suffolk	25025	1191679	03	0101	10200501	6.00	MANEVU2002	0.0700	0.0000	0.0002	BERKLEE COLLEGE OF MUSIC
MA	Suffolk	25025	1191679	03	0201	10200603	6.00	MANEVU2002	0.5700	0.0000	0.0016	BERKLEE COLLEGE OF MUSIC
MA	Suffolk	25025	1191695	01	0101	10200501	15.00	MANEVU2002	3.0000	0.0000	0.0109	BOSTON MUSEUM OF FINE ARTS
MA	Suffolk	25025	1191695	02	0102	10200501	14.00	MANEVU2002	3.0000	0.0000	0.0109	BOSTON MUSEUM OF FINE ARTS
MA	Suffolk	25025	1191695	03	0103	10200501	14.00	MANEVU2002	3.0000	0.0000	0.0109	BOSTON MUSEUM OF FINE ARTS
MA	Suffolk	25025	1191709	01	0201	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0019	US VA MEDICAL CENTER
MA	Suffolk	25025	1191709	02	0202	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0019	US VA MEDICAL CENTER
MA	Suffolk	25025	1191709	03	0203	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0019	US VA MEDICAL CENTER
MA	Suffolk	25025	1191709	04	0204	10300603	8.00	MANEVU2002	1.0000	0.0000	0.0019	US VA MEDICAL CENTER
MA	Suffolk	25025	1191709	05	0205	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0019	US VA MEDICAL CENTER
MA	Suffolk	25025	1191710	01	0101	10300401	6.00	MANEVU2002	2.0000	0.0000	0.0000	FENWAY PARKSIDE LP
MA	Suffolk	25025	1191712	03	0103	10200603	4.00	MANEVU2002	0.2200	0.0000	0.0006	BOSTON GAS COMPANY
MA	Suffolk	25025	1191728	03	0102	10200501	1.00	MANEVU2002	0.1700	0.0000	0.0000	FIRST ELECTRONICS COMPANY
MA	Suffolk	25025	1191729	01	0101	10200603	4.00	MANEVU2002	0.2200	0.0000	0.0002	VERIZON MASSACHUSETTS
MA	Suffolk	25025	1191729	02	0101	10200603	4.00	MANEVU2002	0.2200	0.0000	0.0006	VERIZON MASSACHUSETTS
MA	Suffolk	25025	1191746	01	0101	10300602	10.00	MANEVU2002	2.0000	0.0000	0.0000	SOUTH BOSTON HIGH SCHOOL
MA	Suffolk	25025	1191760	01	0101	10300603	10.00	MANEVU2002	0.9900	0.0000	0.0027	KAYEM FOODS, INC
MA	Suffolk	25025	1191760	02	0102	10300603	5.00	MANEVU2002	0.2500	0.0000	0.0007	KAYEM FOODS, INC
MA	Suffolk	25025	1191833	01	0101	10200601	20.00	MANEVU2002	1.0000	0.0000	0.0027	RITZ TOWERS-BOSTON COMMONS
MA	Suffolk	25025	1191833	02	0102	10200601	20.00	MANEVU2002	6.0000	0.0000	0.0165	RITZ TOWERS-BOSTON COMMONS
MA	Suffolk	25025	1191876	02	0102	10200603	1.00	MANEVU2002	0.1600	0.0000	0.0000	VERIZON MASSACHUSETTS
MA	Suffolk	25025	1191876	03	0102	10200603	5.00	MANEVU2002	0.0200	0.0000	0.0001	VERIZON MASSACHUSETTS
MA	Suffolk	25025	1191899	12	0109	10300501	215.00	MANEVU2002	12.0000	0.0000	0.0330	MWRA DEER ISLAND
MA	Suffolk	25025	1195596	06	0106	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0033	SYNTHON IND INCORPORATED
MA	Suffolk	25025	1197511	02	0102	10300501	1.00	MANEVU2002	0.1195	0.0000	0.0000	AMERICAN ARCHTEC IRON
MA	Worcester	25027	1180004	01	0101	10200401	13.00	MANEVU2002	4.0000	0.0000	0.0044	LS STARRETT COMPANY
MA	Worcester	25027	1180004	02	0101	10200401	13.00	MANEVU2002	4.0000	0.0000	0.0044	LS STARRETT COMPANY
MA	Worcester	25027	1180013	01	0101	10300603	1.00	MANEVU2002	0.0020	0.0000	0.0000	NYPRO INCORPORATED
MA	Worcester	25027	1180015	03	0102	10300603	1.00	MANEVU2002	0.1700	0.0000	0.0005	CLINTON HOSPITAL
MA	Worcester	25027	1180017	01	0101	10200603	1.00	MANEVU2002	0.1675	0.0000	0.0002	ROCKBESTOS SURPRENAN
MA	Worcester	25027	1180017	03	0102	10200603	1.00	MANEVU2002	0.1675	0.0000	0.0002	ROCKBESTOS SURPRENAN
MA	Worcester	25027	1180017	05	0104	10200603	4.00	MANEVU2002	0.1110	0.0000	0.0001	ROCKBESTOS SURPRENAN
MA	Worcester	25027	1180017	06	0105	10200603	4.00	MANEVU2002	0.1110	0.0000	0.0001	ROCKBESTOS SURPRENAN
MA	Worcester	25027	1180018	02	0102	10300504	20.00	MANEVU2002	1.0000	0.0000	0.0000	CLINTON ADAMS COPORATION
MA	Worcester	25027	1180021	01	0101	10200501	10.00	MANEVU2002	0.4400	0.0000	0.0000	TOLTEC INC
MA	Worcester	25027	1180021	02	0102	10200603	1.00	MANEVU2002	0.0005	0.0000	0.0000	TOLTEC INC
MA	Worcester	25027	1180023	02	0101	10200401	17.00	MANEVU2002	2.0000	0.0000	0.0037	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	03	0101	10200401	18.00	MANEVU2002	3.0000	0.0000	0.0056	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	04	0102	10200401	34.00	MANEVU2002	12.0000	0.0000	0.0224	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	05	0103	10201002	6.00	MANEVU2002	0.1315	0.0000	0.0004	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	26	0103	10201002	0.00	MANEVU2002	0.1655	0.0000	0.0005	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	27	0118	10201002	13.00	MANEVU2002	0.0495	0.0000	0.0001	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180023	28	0119	10201002	13.00	MANEVU2002	0.0495	0.0000	0.0001	INTERFACE FABRICS GROUP FINISHING INC
MA	Worcester	25027	1180024	02	0101	10300501	24.00	MANEVU2002	1.5900	0.0000	0.0040	BURBANK HOSPITAL
MA	Worcester	25027	1180024	02	0201	10300602	24.00	MANEVU2002	0.0400	0.0000	0.0001	BURBANK HOSPITAL
MA	Worcester	25027	1180024	03	0101	10300501	24.00	MANEVU2002	1.6500	0.0000	0.0049	BURBANK HOSPITAL
MA	Worcester	25027	1180027	01	0101	10200401	108.00	MANEVU2002	25.0000	0.0000	0.0797	SMURFIT MUNKSJO PAPER INCORPORATED
MA	Worcester	25027	1180027	01	0201	10200601	108.00	MANEVU2002	9.0000	0.0000	0.0287	SMURFIT MUNKSJO PAPER INCORPORATED
MA	Worcester	25027	1180027	02	0101	10200401	95.00	MANEVU2002	6.0000	0.0000	0.0237	SMURFIT MUNKSJO PAPER INCORPORATED

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MA	Worcester	25027	1180027	03	0102	10200401	40.00	MANEVU2002	3.0000	0.0000	0.0000	SMURFIT MUNKSJO PAPER INCORPORATED
MA	Worcester	25027	1180028	01	0101	10300401	25.00	MANEVU2002	9.0000	0.0000	0.0247	FITCHBURG STATE COLLEGE
MA	Worcester	25027	1180028	02	0101	10300401	55.00	MANEVU2002	1.0000	0.0000	0.0027	FITCHBURG STATE COLLEGE
MA	Worcester	25027	1180028	03	0101	10300401	52.00	MANEVU2002	5.0000	0.0000	0.0137	FITCHBURG STATE COLLEGE
MA	Worcester	25027	1180029	02	0201	10200601	25.00	MANEVU2002	5.1815	0.0000	0.0000	GENERAL ELECTRIC FITCHBURG
MA	Worcester	25027	1180030	01	0101	10300401	13.00	MANEVU2002	1.0000	0.0000	0.0005	SIMONDS INDUSTRIES
MA	Worcester	25027	1180030	01	0201	10200602	13.00	MANEVU2002	0.3000	0.0000	0.0002	SIMONDS INDUSTRIES
MA	Worcester	25027	1180030	02	0101	10300401	13.00	MANEVU2002	3.0000	0.0000	0.0016	SIMONDS INDUSTRIES
MA	Worcester	25027	1180032	01	0101	10300401	22.00	MANEVU2002	7.0000	0.0000	0.0462	NORTH CENTRAL CORRECTIONAL INSTITUTE
MA	Worcester	25027	1180032	03	0102	10300401	43.00	MANEVU2002	7.0000	0.0000	0.0308	NORTH CENTRAL CORRECTIONAL INSTITUTE
MA	Worcester	25027	1180032	04	0102	10300401	43.00	MANEVU2002	4.0000	0.0000	0.0000	NORTH CENTRAL CORRECTIONAL INSTITUTE
MA	Worcester	25027	1180033	01	0101	10300401	13.00	MANEVU2002	2.0000	0.0000	0.0035	HEYWOOD HOSPITAL
MA	Worcester	25027	1180033	02	0101	10300401	10.00	MANEVU2002	2.0000	0.0000	0.0092	HEYWOOD HOSPITAL
MA	Worcester	25027	1180033	03	0101	10300401	10.00	MANEVU2002	3.0000	0.0000	0.0082	HEYWOOD HOSPITAL
MA	Worcester	25027	1180035	02	0201	10200401	63.00	MANEVU2002	46.0000	0.0000	0.1163	SEAMAN PAPER COMPANY
MA	Worcester	25027	1180035	03	0101	10200401	33.00	MANEVU2002	2.0000	0.0000	0.0033	SEAMAN PAPER COMPANY
MA	Worcester	25027	1180039	02	0102	10200602	15.00	MANEVU2002	4.0000	0.0000	0.0145	WYMAN GORDON COMPANY
MA	Worcester	25027	1180039	03	0103	10200602	15.00	MANEVU2002	2.0000	0.0000	0.0000	WYMAN GORDON COMPANY
MA	Worcester	25027	1180039	19	0117	10200603	4.00	MANEVU2002	1.7400	0.0000	0.0048	WYMAN GORDON COMPANY
MA	Worcester	25027	1180041	01	0101	10300602	13.00	MANEVU2002	2.0000	0.0000	0.0055	ISOMEDIX INCORPORATED
MA	Worcester	25027	1180043	01	0101	10200603	2.00	MANEVU2002	1.0000	0.0000	0.0027	FP INTERNATIONAL
MA	Worcester	25027	1180045	01	0101	10300401	26.00	MANEVU2002	9.0000	0.0000	0.0000	ATLANTIC UNION COLLEGE
MA	Worcester	25027	1180049	01	0101	10200504	4.00	MANEVU2002	1.0000	0.0000	0.0027	ALPHA GARY CORP
MA	Worcester	25027	1180055	01	0201	10200401	25.00	MANEVU2002	6.0000	0.0000	0.0165	CROCKER TECHNICAL PAPERS INC
MA	Worcester	25027	1180055	01	0101	10200602	25.00	MANEVU2002	2.0000	0.0000	0.0055	CROCKER TECHNICAL PAPERS INC
MA	Worcester	25027	1180055	02	0201	10200401	25.00	MANEVU2002	6.0000	0.0000	0.0165	CROCKER TECHNICAL PAPERS INC
MA	Worcester	25027	1180055	02	0101	10200602	25.00	MANEVU2002	2.0000	0.0000	0.0055	CROCKER TECHNICAL PAPERS INC
MA	Worcester	25027	1180064	01	0101	10200401	8.00	MANEVU2002	4.0000	0.0000	0.0110	QUABAUG CORPORATION
MA	Worcester	25027	1180064	02	0101	10200401	8.00	MANEVU2002	4.0000	0.0000	0.0044	QUABAUG CORPORATION
MA	Worcester	25027	1180066	02	0201	10200501	0.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN RECLAMATION
MA	Worcester	25027	1180071	01	0101	10200602	21.00	MANEVU2002	13.0000	0.0000	0.0357	TUTHILL ENERGY SYSTEMS/COPPUS TURBINE
MA	Worcester	25027	1180075	01	0101	10300603	3.00	MANEVU2002	1.0000	0.0000	0.0011	UNIVERSITY OF MASS MEDICAL SCHOOL
MA	Worcester	25027	1180075	02	0102	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0027	UNIVERSITY OF MASS MEDICAL SCHOOL
MA	Worcester	25027	1180076	01	0101	10300401	11.00	MANEVU2002	3.0000	0.0000	0.0082	RUSSELL HARRINGTON
MA	Worcester	25027	1180084	01	0101	10300602	29.00	MANEVU2002	1.0000	0.0000	0.0011	DEPOT STREET ASSOCIATES
MA	Worcester	25027	1180087	01	0101	10200401	21.00	MANEVU2002	3.0000	0.0000	0.0082	CUMBERLAND FARMS INC
MA	Worcester	25027	1180087	02	0101	10200401	3.00	MANEVU2002	1.0000	0.0000	0.0027	CUMBERLAND FARMS INC
MA	Worcester	25027	1180087	04	0103	10200603	1.00	MANEVU2002	0.1470	0.0000	0.0004	CUMBERLAND FARMS INC
MA	Worcester	25027	1180088	01	0101	10200401	29.00	MANEVU2002	8.0000	0.0000	0.0220	HARDWICK KNITTED FABRIC
MA	Worcester	25027	1180088	02	0101	10200401	5.00	MANEVU2002	1.0000	0.0000	0.0005	HARDWICK KNITTED FABRIC
MA	Worcester	25027	1180089	02	0101	10200401	14.00	MANEVU2002	2.0000	0.0000	0.0022	WARREN PUMPS INC
MA	Worcester	25027	1180090	01	0101	10200401	25.00	MANEVU2002	4.0000	0.0000	0.0110	WILLIAM WRIGHT COMPANY
MA	Worcester	25027	1180090	02	0101	10200401	12.00	MANEVU2002	2.0000	0.0000	0.0055	WILLIAM WRIGHT COMPANY
MA	Worcester	25027	1180090	03	0101	10200501	1.00	MANEVU2002	0.0025	0.0000	0.0000	WILLIAM WRIGHT COMPANY
MA	Worcester	25027	1180090	07	0104	10200501	1.00	MANEVU2002	0.1010	0.0000	0.0003	WILLIAM WRIGHT COMPANY
MA	Worcester	25027	1180092	01	0101	10200401	33.00	MANEVU2002	8.0000	0.0000	0.0193	CRANSTON PRINT WORKS
MA	Worcester	25027	1180092	02	0101	10200401	100.00	MANEVU2002	14.0000	0.0000	0.0246	CRANSTON PRINT WORKS
MA	Worcester	25027	1180092	03	0101	10200401	111.00	MANEVU2002	28.0000	0.0000	0.0769	CRANSTON PRINT WORKS
MA	Worcester	25027	1180094	03	0101	10300401	57.00	MANEVU2002	16.0000	0.0000	0.0000	WESTBOROUGH STATE HOSPITAL
MA	Worcester	25027	1180094	04	0101	10300401	57.00	MANEVU2002	16.0000	0.0000	0.0440	WESTBOROUGH STATE HOSPITAL
MA	Worcester	25027	1180101	01	0101	10200602	20.00	MANEVU2002	0.1920	0.0000	0.0021	CHEMDESIGN CORP
MA	Worcester	25027	1180101	04	0103	10200602	33.00	MANEVU2002	2.1815	0.0000	0.0060	CHEMDESIGN CORP

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MA	Worcester	25027	1180102	01	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0000	ASSUMPTION COLLEGE
MA	Worcester	25027	1180102	02	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0000	ASSUMPTION COLLEGE
MA	Worcester	25027	1180103	01	0101	10300602	26.00	MANEVU2002	3.0000	0.0000	0.0082	ASTRAZENECA L.P.
MA	Worcester	25027	1180103	02	0101	10300602	26.00	MANEVU2002	3.0000	0.0000	0.0082	ASTRAZENECA L.P.
MA	Worcester	25027	1180103	04	0103	10200603	3.00	MANEVU2002	0.2465	0.0000	0.0007	ASTRAZENECA L.P.
MA	Worcester	25027	1180103	05	0103	10300603	3.00	MANEVU2002	0.2465	0.0000	0.0007	ASTRAZENECA L.P.
MA	Worcester	25027	1180105	01	0101	10300401	21.00	MANEVU2002	2.0000	0.0000	0.0022	CLARK UNIVERSITY
MA	Worcester	25027	1180105	01	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0011	CLARK UNIVERSITY
MA	Worcester	25027	1180105	02	0101	10300401	21.00	MANEVU2002	2.0000	0.0000	0.0022	CLARK UNIVERSITY
MA	Worcester	25027	1180105	02	0201	10300602	21.00	MANEVU2002	1.0000	0.0000	0.0011	CLARK UNIVERSITY
MA	Worcester	25027	1180105	03	0102	10300401	29.00	MANEVU2002	7.0000	0.0000	0.0077	CLARK UNIVERSITY
MA	Worcester	25027	1180105	03	0202	10300602	29.00	MANEVU2002	10.0000	0.0000	0.0110	CLARK UNIVERSITY
MA	Worcester	25027	1180106	01	0101	10300401	24.00	MANEVU2002	4.0000	0.0000	0.0044	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	01	0201	10300602	24.00	MANEVU2002	0.5000	0.0000	0.0005	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	02	0101	10300401	24.00	MANEVU2002	4.0000	0.0000	0.0057	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	02	0201	10300602	24.00	MANEVU2002	0.5000	0.0000	0.0007	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	03	0101	10300401	24.00	MANEVU2002	3.0000	0.0000	0.0036	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	03	0201	10300602	24.00	MANEVU2002	0.4000	0.0000	0.0005	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	04	0101	10300401	24.00	MANEVU2002	3.0000	0.0000	0.0046	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180106	04	0201	10300602	24.00	MANEVU2002	0.4000	0.0000	0.0006	COLLEGE OF THE HOLY CROSS
MA	Worcester	25027	1180107	01	0101	10300401	25.00	MANEVU2002	2.0000	0.0000	0.0055	GRAND REALTY TRUST
MA	Worcester	25027	1180108	01	0101	10200401	15.00	MANEVU2002	2.0000	0.0000	0.0000	DAVID CLARK COMPANY
MA	Worcester	25027	1180115	01	0201	10200601	70.00	MANEVU2002	4.0000	0.0000	0.0044	ST GOBAIN
MA	Worcester	25027	1180115	02	0201	10200601	70.00	MANEVU2002	5.0000	0.0000	0.0055	ST GOBAIN
MA	Worcester	25027	1180115	03	0201	10200601	70.00	MANEVU2002	2.0000	0.0000	0.0022	ST GOBAIN
MA	Worcester	25027	1180115	04	0301	10200222	230.00	MANEVU2002	9.0000	0.0000	0.0099	ST GOBAIN
MA	Worcester	25027	1180115	04	0201	10200601	230.00	MANEVU2002	19.0000	0.0000	0.0209	ST GOBAIN
MA	Worcester	25027	1180115	11	0306	10200603	8.00	MANEVU2002	0.0470	0.0000	0.0001	ST GOBAIN
MA	Worcester	25027	1180115	11	0106	10200603	8.00	MANEVU2002	0.0975	0.0000	0.0003	ST GOBAIN
MA	Worcester	25027	1180115	11	0206	10200603	8.00	MANEVU2002	1.2560	0.0000	0.0035	ST GOBAIN
MA	Worcester	25027	1180117	01	0101	10200401	9.00	MANEVU2002	2.0000	0.0000	0.0055	RAND WHITNEY CONTAINER
MA	Worcester	25027	1180117	01	0201	10200603	9.00	MANEVU2002	2.0000	0.0000	0.0055	RAND WHITNEY CONTAINER
MA	Worcester	25027	1180117	02	0102	10300401	10.00	MANEVU2002	1.0000	0.0000	0.0000	RAND WHITNEY CONTAINER
MA	Worcester	25027	1180117	02	0202	10200602	10.00	MANEVU2002	0.1900	0.0000	0.0000	RAND WHITNEY CONTAINER
MA	Worcester	25027	1180121	01	0101	10300504	6.00	MANEVU2002	1.0000	0.0000	0.0000	UMASS MEDICAL CENTER
MA	Worcester	25027	1180121	02	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0000	UMASS MEDICAL CENTER
MA	Worcester	25027	1180121	03	0101	10300504	12.00	MANEVU2002	2.0000	0.0000	0.0000	UMASS MEDICAL CENTER
MA	Worcester	25027	1180122	01	0101	10300401	13.00	MANEVU2002	5.0000	0.0000	0.0187	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180122	02	0101	10300401	13.00	MANEVU2002	5.0000	0.0000	0.0187	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180127	01	0101	10300401	18.00	MANEVU2002	6.0000	0.0000	0.0000	WORCESTER POLYTECHNICAL INSTITUTE
MA	Worcester	25027	1180127	02	0101	10300401	18.00	MANEVU2002	6.0000	0.0000	0.0000	WORCESTER POLYTECHNICAL INSTITUTE
MA	Worcester	25027	1180127	03	0101	10300401	20.00	MANEVU2002	6.0000	0.0000	0.0000	WORCESTER POLYTECHNICAL INSTITUTE
MA	Worcester	25027	1180127	04	0102	10300603	6.00	MANEVU2002	0.2030	0.0000	0.0002	WORCESTER POLYTECHNICAL INSTITUTE
MA	Worcester	25027	1180128	02	0101	10300401	25.00	MANEVU2002	7.0000	0.0000	0.0162	WORCESTER STATE HOSPITAL
MA	Worcester	25027	1180128	03	0101	10300401	25.00	MANEVU2002	7.0000	0.0000	0.0154	WORCESTER STATE HOSPITAL
MA	Worcester	25027	1180128	04	0101	10300401	15.00	MANEVU2002	4.0000	0.0000	0.0004	WORCESTER STATE HOSPITAL
MA	Worcester	25027	1180130	01	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0027	YMCA CENTRAL BRANCH
MA	Worcester	25027	1180130	02	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0027	YMCA CENTRAL BRANCH
MA	Worcester	25027	1180144	01	0101	10300501	10.00	MANEVU2002	1.0000	0.0000	0.0011	ATHOL HIGH SCHOOL
MA	Worcester	25027	1180148	04	0101	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0011	AUBURN HIGH SCHOOL
MA	Worcester	25027	1180151	01	0101	10200501	6.00	MANEVU2002	1.0000	0.0000	0.0027	GITTO GLOBAL CORP
MA	Worcester	25027	1180160	01	0101	10300504	16.00	MANEVU2002	1.0000	0.0000	0.0000	BF BROWN MIDDLE SCHOOL

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MA	Worcester	25027	1180166	01	0101	10300504	9.00	MANEVU2002	2.0000	0.0000	0.0022	MEMORIAL MIDDLE SCHOOL
MA	Worcester	25027	1180176	04	0204	10300701	2.00	MANEVU2002	0.4000	0.0000	0.0004	MWRA CLINTON WWTP
MA	Worcester	25027	1180176	05	0205	10300701	2.00	MANEVU2002	0.4000	0.0000	0.0012	MWRA CLINTON WWTP
MA	Worcester	25027	1180177	01	0101	10300903	6.00	MANEVU2002	0.6200	0.0000	0.0007	FW LOMBARD COMPANY
MA	Worcester	25027	1180186	01	0101	10300401	34.00	MANEVU2002	2.0000	0.0000	0.0055	ABBOTT BIORESEARCH CENTER INC
MA	Worcester	25027	1180186	01	0201	10300602	34.00	MANEVU2002	3.0000	0.0000	0.0082	ABBOTT BIORESEARCH CENTER INC
MA	Worcester	25027	1180186	02	0101	10300401	34.00	MANEVU2002	2.0000	0.0000	0.0055	ABBOTT BIORESEARCH CENTER INC
MA	Worcester	25027	1180186	02	0201	10300602	34.00	MANEVU2002	3.0000	0.0000	0.0082	ABBOTT BIORESEARCH CENTER INC
MA	Worcester	25027	1180193	01	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0011	LEOMINSTER HIGH SCHOOL
MA	Worcester	25027	1180193	02	0101	10300501	7.00	MANEVU2002	1.0000	0.0000	0.0011	LEOMINSTER HIGH SCHOOL
MA	Worcester	25027	1180199	01	0101	10201002	14.00	MANEVU2002	1.0000	0.0000	0.0011	OFS FITEL-STURBRIDGE
MA	Worcester	25027	1180214	01	0101	10300602	10.00	MANEVU2002	0.1725	0.0000	0.0004	INNER TITE CORPORATION
MA	Worcester	25027	1180214	02	0101	10300603	4.00	MANEVU2002	0.0690	0.0000	0.0001	INNER TITE CORPORATION
MA	Worcester	25027	1180215	01	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0000	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	02	0101	10300504	12.00	MANEVU2002	1.0000	0.0000	0.0000	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	04	0103	10300501	1.00	MANEVU2002	0.1980	0.0000	0.0003	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	05	0104	10300501	1.00	MANEVU2002	0.0390	0.0000	0.0000	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	17	0108	10300501	1.00	MANEVU2002	0.0190	0.0000	0.0001	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	19	0110	10300501	0.00	MANEVU2002	0.0170	0.0000	0.0000	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180215	20	0111	10300501	1.00	MANEVU2002	0.0030	0.0000	0.0000	LANCASTER DCAM STATE COMPLEX
MA	Worcester	25027	1180225	01	0201	10200603	10.00	MANEVU2002	1.0000	0.0000	0.0027	NEW ENGLAND WOODEN W
MA	Worcester	25027	1180225	02	0202	10200603	7.00	MANEVU2002	0.3500	0.0000	0.0000	NEW ENGLAND WOODEN W
MA	Worcester	25027	1180227	02	0102	10200602	25.00	MANEVU2002	3.0000	0.0000	0.0082	NEW CORR PACKAGING
MA	Worcester	25027	1180233	01	0101	10300501	3.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180233	02	0101	10300501	3.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180233	03	0101	10300501	3.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180233	04	0102	10300603	1.00	MANEVU2002	3.0000	0.0000	0.0082	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180233	05	0103	10300603	1.00	MANEVU2002	2.0000	0.0000	0.0055	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180233	06	0104	10300603	1.00	MANEVU2002	2.0000	0.0000	0.0055	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180240	01	0101	10300401	18.00	MANEVU2002	2.0000	0.0000	0.0055	COYNE TEXTILE SERVIC
MA	Worcester	25027	1180241	02	0101	10300501	18.00	MANEVU2002	1.0000	0.0000	0.0011	UNUM-PROVIDENT COMPANY
MA	Worcester	25027	1180242	01	0101	10300603	1.00	MANEVU2002	0.0055	0.0000	0.0000	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180242	02	0102	10300501	3.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180242	03	0102	10300501	3.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180242	04	0102	10300501	2.00	MANEVU2002	0.3300	0.0000	0.0004	CHARLES RIVER LABORATORIES
MA	Worcester	25027	1180243	01	0101	10200603	5.00	MANEVU2002	0.4805	0.0000	0.0013	QUANTUM CORPORATION
MA	Worcester	25027	1180243	02	0102	10300603	5.00	MANEVU2002	0.0050	0.0000	0.0000	QUANTUM CORPORATION
MA	Worcester	25027	1180243	03	0103	10300603	2.00	MANEVU2002	0.1970	0.0000	0.0005	QUANTUM CORPORATION
MA	Worcester	25027	1180246	01	0101	10200501	5.00	MANEVU2002	0.3200	0.0000	0.0004	MADIX INCORPORATED
MA	Worcester	25027	1180247	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	PAN-GLO
MA	Worcester	25027	1180249	01	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0004	US POSTAL SERVICE
MA	Worcester	25027	1180249	02	0101	10200503	8.00	MANEVU2002	4.0000	0.0000	0.0018	US POSTAL SERVICE
MA	Worcester	25027	1180249	04	0101	10200603	1.00	MANEVU2002	0.0085	0.0000	0.0000	US POSTAL SERVICE
MA	Worcester	25027	1180254	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0000	WORCESTER REGIONAL TRANSIT AUTHORITY
MA	Worcester	25027	1180254	02	0102	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0000	WORCESTER REGIONAL TRANSIT AUTHORITY
MA	Worcester	25027	1180257	01	0101	10200501	7.00	MANEVU2002	0.2900	0.0000	0.0003	SOUTHBRIDGE SHEET METAL WORKS
MA	Worcester	25027	1180262	02	0101	10300501	4.00	MANEVU2002	3.0000	0.0000	0.0033	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	04	0103	10300501	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	09	0107	10300603	1.00	MANEVU2002	0.0185	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	10	0108	10300603	1.00	MANEVU2002	0.0185	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	12	0110	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	15	0113	10300501	1.00	MANEVU2002	0.0060	0.0000	0.0000	TUFTS UNIVERSITY

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MA	Worcester	25027	1180262	16	0114	10300501	1.00	MANEVU2002	0.0070	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	17	0115	10300603	1.00	MANEVU2002	0.0225	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	18	0115	10300603	1.00	MANEVU2002	0.0225	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	19	0116	10300603	1.00	MANEVU2002	0.0225	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	25	0120	10300603	1.00	MANEVU2002	0.0465	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	26	0121	10300603	1.00	MANEVU2002	0.0465	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	28	0123	10300501	1.00	MANEVU2002	0.0035	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	29	0123	10300501	1.00	MANEVU2002	0.0035	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	30	0124	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	31	0125	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	32	0126	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	33	0127	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	34	0128	10300603	1.00	MANEVU2002	0.0030	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	38	0132	10300603	1.00	MANEVU2002	0.0070	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	40	0134	10300501	1.00	MANEVU2002	0.0045	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	41	0135	10300501	1.00	MANEVU2002	0.0045	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	42	0136	10300501	1.00	MANEVU2002	0.0105	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	43	0136	10300603	1.00	MANEVU2002	0.0260	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	48	0141	10301002	1.00	MANEVU2002	0.0725	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	50	0143	10300603	1.00	MANEVU2002	0.0015	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	53	0112	10300603	1.00	MANEVU2002	0.0470	0.0000	0.0001	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	54	0103	10300501	0.00	MANEVU2002	0.0025	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	65	0141	10301002	0.00	MANEVU2002	0.0080	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	66	0146	10300501	1.00	MANEVU2002	0.0095	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	67	0148	10301002	0.00	MANEVU2002	0.0055	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	68	0149	10301002	1.00	MANEVU2002	0.0075	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180262	69	0149	10301002	0.00	MANEVU2002	0.0665	0.0000	0.0000	TUFTS UNIVERSITY
MA	Worcester	25027	1180265	01	0101	10200603	3.00	MANEVU2002	0.1075	0.0000	0.0003	NYLCO CORPORATION
MA	Worcester	25027	1180265	10	0101	10300603	2.00	MANEVU2002	0.1535	0.0000	0.0004	NYLCO CORPORATION
MA	Worcester	25027	1180265	11	0109	10300501	2.00	MANEVU2002	0.1090	0.0000	0.0003	NYLCO CORPORATION
MA	Worcester	25027	1180284	01	0101	10300603	15.00	MANEVU2002	0.0015	0.0000	0.0000	ROYAL INSTITUTIONAL SERVICES, INC
MA	Worcester	25027	1180285	01	0201	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0036	HEALTHALLIANCE LEOMINSTER CAMPUS
MA	Worcester	25027	1180285	02	0101	10300501	17.00	MANEVU2002	1.0000	0.0000	0.0031	HEALTHALLIANCE LEOMINSTER CAMPUS
MA	Worcester	25027	1180285	02	0201	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0031	HEALTHALLIANCE LEOMINSTER CAMPUS
MA	Worcester	25027	1180285	03	0201	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0015	HEALTHALLIANCE LEOMINSTER CAMPUS
MA	Worcester	25027	1180291	01	0101	10200603	4.00	MANEVU2002	0.0010	0.0000	0.0000	TIRE CENTERS LLC
MA	Worcester	25027	1180294	01	0101	10200501	2.00	MANEVU2002	0.2570	0.0000	0.0007	NOVEON INCH SPECIALT
MA	Worcester	25027	1180294	02	0102	10200603	4.00	MANEVU2002	0.0105	0.0000	0.0000	NOVEON INCH SPECIALT
MA	Worcester	25027	1180294	10	0105	10200603	4.00	MANEVU2002	0.1200	0.0000	0.0003	NOVEON INCH SPECIALT
MA	Worcester	25027	1180295	02	0101	10300602	34.00	MANEVU2002	2.0000	0.0000	0.0055	ST VINCENT HOSP @ WORC MED CTR
MA	Worcester	25027	1180295	03	0101	10300602	17.00	MANEVU2002	2.0000	0.0000	0.0055	ST VINCENT HOSP @ WORC MED CTR
MA	Worcester	25027	1180300	01	0101	10200501	1.00	MANEVU2002	0.0510	0.0000	0.0000	ASHBURNHAM FINISHING
MA	Worcester	25027	1180303	05	0104	10200603	10.00	MANEVU2002	3.0000	0.0000	0.0082	POLYFOAM CORPORATION
MA	Worcester	25027	1180318	02	0101	10200401	18.00	MANEVU2002	1.0000	0.0000	0.0011	MYLEC INC
MA	Worcester	25027	1180321	01	0101	10200906	13.00	MANEVU2002	1.0000	0.0000	0.0022	HARDWICK KILNS
MA	Worcester	25027	1180321	02	0102	10200504	13.00	MANEVU2002	1.0000	0.0000	0.0022	HARDWICK KILNS
MA	Worcester	25027	1180322	01	0101	10300504	3.00	MANEVU2002	1.0000	0.0000	0.0000	MORGAN CONSTRUCTION
MA	Worcester	25027	1180322	02	0101	10300504	15.00	MANEVU2002	1.0000	0.0000	0.0000	MORGAN CONSTRUCTION
MA	Worcester	25027	1180327	02	0102	10200504	13.00	MANEVU2002	1.2300	0.0000	0.0000	MORGAN CONSTRUCTION
MA	Worcester	25027	1180327	03	0103	10200504	15.00	MANEVU2002	0.1540	0.0000	0.0000	MORGAN CONSTRUCTION
MA	Worcester	25027	1180327	04	0104	10200504	15.00	MANEVU2002	0.1540	0.0000	0.0000	MORGAN CONSTRUCTION
MA	Worcester	25027	1180327	05	0105	10200501	1.00	MANEVU2002	0.0585	0.0000	0.0000	MORGAN CONSTRUCTION

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MA	Worcester	25027	1180334	01	0101	10300401	143.00	MANEVU2002	18.0000	0.0000	0.0000	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	01	0201	10300601	143.00	MANEVU2002	23.0000	0.0000	0.0000	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	02	0101	10300401	141.00	MANEVU2002	18.0000	0.0000	0.0673	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	02	0201	10300601	141.00	MANEVU2002	29.0000	0.0000	0.1084	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	03	0102	10300401	145.00	MANEVU2002	4.0000	0.0000	0.0110	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	03	0202	10300601	145.00	MANEVU2002	3.0000	0.0000	0.0082	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	04	0103	10300401	147.00	MANEVU2002	5.0000	0.0000	0.0137	UMASS MEDICAL CENTER
MA	Worcester	25027	1180334	04	0203	10300601	147.00	MANEVU2002	2.0000	0.0000	0.0055	UMASS MEDICAL CENTER
MA	Worcester	25027	1180337	02	0101	10300504	11.00	MANEVU2002	0.0065	0.0000	0.0000	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180337	04	0102	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180337	05	0103	10300603	4.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180337	06	0103	10300603	4.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180337	07	0103	10300603	3.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180337	17	0109	10300602	10.00	MANEVU2002	0.0045	0.0000	0.0000	WORCESTER STATE COLLEGE
MA	Worcester	25027	1180339	01	0101	10300603	8.00	MANEVU2002	3.0000	0.0000	0.0000	WORCESTER TELEGRAM & GAZETT
MA	Worcester	25027	1180342	01	0101	10300603	1.00	MANEVU2002	0.2300	0.0000	0.0006	WAKEFIELD MATERIALS CORP
MA	Worcester	25027	1180347	01	0101	10300501	3.00	MANEVU2002	0.0840	0.0000	0.0001	KILLEEN MACHINE TOOL CO
MA	Worcester	25027	1180347	02	0102	10300501	3.00	MANEVU2002	0.0840	0.0000	0.0001	KILLEEN MACHINE TOOL CO
MA	Worcester	25027	1180352	01	0101	10200603	2.00	MANEVU2002	0.0610	0.0000	0.0001	OMNOVA SOLUTIONS INC
MA	Worcester	25027	1180352	02	0102	10200603	6.00	MANEVU2002	0.3500	0.0000	0.0008	OMNOVA SOLUTIONS INC
MA	Worcester	25027	1180355	02	0101	10200501	230.00	MANEVU2002	12.0000	0.0000	0.0330	NEWARK AMERICA
MA	Worcester	25027	1180358	01	0101	10200504	15.00	MANEVU2002	0.0870	0.0000	0.0001	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180358	01	0201	10200602	15.00	MANEVU2002	2.0000	0.0000	0.0033	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180358	02	0102	10200504	15.00	MANEVU2002	0.0870	0.0000	0.0001	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180358	02	0202	10200602	15.00	MANEVU2002	2.0000	0.0000	0.0033	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180358	04	0104	10300603	4.00	MANEVU2002	0.3150	0.0000	0.0003	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180358	05	0105	10300603	4.00	MANEVU2002	0.3150	0.0000	0.0003	ALLEGRO MICROSYSTEMS
MA	Worcester	25027	1180360	01	0101	10300504	6.00	MANEVU2002	1.0000	0.0000	0.0011	SLATER BUILDING
MA	Worcester	25027	1180368	01	0101	10200602	29.00	MANEVU2002	10.0000	0.0000	0.0275	CREATIVE PAPER INC
MA	Worcester	25027	1180368	02	0102	10200602	29.00	MANEVU2002	10.0000	0.0000	0.0275	CREATIVE PAPER INC
MA	Worcester	25027	1180381	01	0101	10300504	8.00	MANEVU2002	1.0000	0.0000	0.0011	MASONIC HOME
MA	Worcester	25027	1180381	02	0101	10300504	5.00	MANEVU2002	1.0000	0.0000	0.0011	MASONIC HOME
MA	Worcester	25027	1180386	01	0101	10200603	6.00	MANEVU2002	0.3550	0.0000	0.0010	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	03	0102	10200603	6.00	MANEVU2002	4.3000	0.0000	0.0118	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	04	0103	10200603	8.00	MANEVU2002	0.3550	0.0000	0.0010	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	05	0104	10200603	8.00	MANEVU2002	0.8460	0.0000	0.0009	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	21	0119	10200603	5.00	MANEVU2002	0.0660	0.0000	0.0002	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	24	0121	10200603	1.00	MANEVU2002	0.0260	0.0000	0.0001	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	25	0121	10200603	1.00	MANEVU2002	0.0090	0.0000	0.0000	WEETABIX COMPANY INC
MA	Worcester	25027	1180386	26	0121	10200603	1.00	MANEVU2002	0.0050	0.0000	0.0000	WEETABIX COMPANY INC
MA	Worcester	25027	1180396	01	0101	10200603	3.00	MANEVU2002	0.0470	0.0000	0.0001	HUB FABRIC LEATHER
MA	Worcester	25027	1180403	01	0101	10300501	3.00	MANEVU2002	0.3750	0.0000	0.0010	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	02	0102	10300501	2.00	MANEVU2002	0.1810	0.0000	0.0005	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	03	0103	10300501	1.00	MANEVU2002	0.0200	0.0000	0.0001	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	04	0104	10300501	2.00	MANEVU2002	0.2940	0.0000	0.0008	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	05	0104	10300501	2.00	MANEVU2002	0.2940	0.0000	0.0008	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	06	0104	10300501	2.00	MANEVU2002	0.2940	0.0000	0.0008	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	07	0105	10300501	1.00	MANEVU2002	0.0500	0.0000	0.0001	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	08	0106	10300501	1.00	MANEVU2002	0.0190	0.0000	0.0001	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180403	09	0107	10300501	1.00	MANEVU2002	0.0200	0.0000	0.0001	STURBRIDGE BUSINESS PARK
MA	Worcester	25027	1180411	01	0101	10300501	4.00	MANEVU2002	0.2975	0.0000	0.0003	H&R 1871 INCORPORATE
MA	Worcester	25027	1180415	01	0201	10200906	12.00	MANEVU2002	1.0000	0.0000	0.0027	NICHOLS & STONE CO

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MA	Worcester	25027	1180415	01	0101	10200501	12.00	MANEVU2002	2.0000	0.0000	0.0055	NICHOLS & STONE CO
MA	Worcester	25027	1180416	02	0101	10200501	1.00	MANEVU2002	0.0985	0.0000	0.0000	FWL INDUSTRIES
MA	Worcester	25027	1180422	01	0201	10200602	15.00	MANEVU2002	0.2560	0.0000	0.0000	URQUHART FAMILY LLC
MA	Worcester	25027	1180427	01	0101	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0011	CLARIANT-MASTERBATCHES DIVISION
MA	Worcester	25027	1180429	01	0101	10200501	3.00	MANEVU2002	0.1760	0.0000	0.0000	ROSENFELD CONCRETE COMPANY
MA	Worcester	25027	1180429	02	0101	10200501	2.00	MANEVU2002	0.1585	0.0000	0.0000	ROSENFELD CONCRETE COMPANY
MA	Worcester	25027	1180445	01	0101	10200501	1.00	MANEVU2002	0.0500	0.0000	0.0001	MODERN DISPERSION
MA	Worcester	25027	1180445	03	0103	10200501	1.00	MANEVU2002	0.0250	0.0000	0.0000	MODERN DISPERSION
MA	Worcester	25027	1180445	04	0103	10200501	1.00	MANEVU2002	0.0250	0.0000	0.0000	MODERN DISPERSION
MA	Worcester	25027	1180455	01	0101	10200602	13.00	MANEVU2002	0.0860	0.0000	0.0002	POLYCLAD LAMINATES
MA	Worcester	25027	1180467	01	0101	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN POLYMERS
MA	Worcester	25027	1180467	02	0101	10200501	5.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN POLYMERS
MA	Worcester	25027	1180467	03	0101	10200504	3.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN POLYMERS
MA	Worcester	25027	1180467	04	0102	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0027	AMERICAN POLYMERS
MA	Worcester	25027	1180501	01	0101	10200501	6.00	MANEVU2002	0.4330	0.0000	0.0023	ADVANCE COATINGS COMPANY
MA	Worcester	25027	1180517	01	0101	10300501	16.00	MANEVU2002	1.0000	0.0000	0.0011	JUNIOR SENIOR HIGH SCHOOL
MA	Worcester	25027	1180519	01	0201	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0044	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180519	02	0201	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0044	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180519	03	0201	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0044	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180519	04	0102	10200603	3.00	MANEVU2002	0.5000	0.0000	0.0014	UMASS MEMORIAL MEDICAL CENTER
MA	Worcester	25027	1180520	01	0101	10300504	21.00	MANEVU2002	2.0000	0.0000	0.0022	BRUSSELS DEVELOPMENT
MA	Worcester	25027	1180533	01	0101	10300401	25.00	MANEVU2002	4.0000	0.0000	0.0044	COMMERCE BUILDING ASSOCIATES
MA	Worcester	25027	1180538	01	0101	10300504	14.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER VOCATIONAL TECH HIGH SCHOOL
MA	Worcester	25027	1180538	02	0102	10300504	14.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER VOCATIONAL TECH HIGH SCHOOL
MA	Worcester	25027	1180540	01	0201	10200603	8.00	MANEVU2002	1.0000	0.0000	0.0011	CONCORD WIRE COMPANY
MA	Worcester	25027	1180541	01	0101	10200602	15.00	MANEVU2002	2.0000	0.0000	0.0000	WYMAN GORDON COMPANY
MA	Worcester	25027	1180544	01	0101	10200401	21.00	MANEVU2002	1.0000	0.0000	0.0018	WORCESTER MFG INC
MA	Worcester	25027	1180544	01	0201	10200602	21.00	MANEVU2002	0.0590	0.0000	0.0001	WORCESTER MFG INC
MA	Worcester	25027	1180544	02	0102	10200401	30.00	MANEVU2002	4.0000	0.0000	0.0070	WORCESTER MFG INC
MA	Worcester	25027	1180544	02	0202	10200602	30.00	MANEVU2002	1.0000	0.0000	0.0018	WORCESTER MFG INC
MA	Worcester	25027	1180557	01	0101	10200603	3.00	MANEVU2002	1.0000	0.0000	0.0027	BROOKFIELD WIRE COMPANY
MA	Worcester	25027	1180557	02	0102	10200603	4.00	MANEVU2002	1.0000	0.0000	0.0027	BROOKFIELD WIRE COMPANY
MA	Worcester	25027	1180558	01	0101	10300501	8.00	MANEVU2002	1.0000	0.0000	0.0022	BANCROFT BUILDING
MA	Worcester	25027	1180560	01	0101	10300401	12.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER MILLBROOK LLC
MA	Worcester	25027	1180569	01	0101	10300602	5.00	MANEVU2002	1.0000	0.0000	0.0011	KOPIN CORPORATION
MA	Worcester	25027	1180569	02	0101	10300602	5.00	MANEVU2002	1.0000	0.0000	0.0027	KOPIN CORPORATION
MA	Worcester	25027	1180586	01	0101	10200501	3.00	MANEVU2002	1.0000	0.0000	0.0008	VELLUMOID INC
MA	Worcester	25027	1180593	01	0101	10300602	10.00	MANEVU2002	1.0000	0.0000	0.0011	GUARANTY BUILDING
MA	Worcester	25027	1180593	02	0102	10300602	10.00	MANEVU2002	1.0000	0.0000	0.0011	GUARANTY BUILDING
MA	Worcester	25027	1180619	02	0202	10300602	13.00	MANEVU2002	1.1205	0.0000	0.0000	SIMPLEX TIME RECORDED COMPANY
MA	Worcester	25027	1180619	03	0203	10200602	10.00	MANEVU2002	0.2600	0.0000	0.0007	SIMPLEX TIME RECORDED COMPANY
MA	Worcester	25027	1180636	01	0101	10300501	3.00	MANEVU2002	0.1000	0.0000	0.0000	WORCESTER ARMY NATIONAL GUARD
MA	Worcester	25027	1180636	02	0101	10300501	3.00	MANEVU2002	0.1000	0.0000	0.0000	WORCESTER ARMY NATIONAL GUARD
MA	Worcester	25027	1180636	03	0102	10300501	1.00	MANEVU2002	0.0030	0.0000	0.0000	WORCESTER ARMY NATIONAL GUARD
MA	Worcester	25027	1180636	04	0103	10300501	1.00	MANEVU2002	0.0140	0.0000	0.0000	WORCESTER ARMY NATIONAL GUARD
MA	Worcester	25027	1180636	06	0104	10300501	0.00	MANEVU2002	0.0070	0.0000	0.0000	WORCESTER ARMY NATIONAL GUARD
MA	Worcester	25027	1180637	01	0201	10300501	34.00	MANEVU2002	0.8700	0.0000	0.0000	WORCESTER COMMON OUTLETS
MA	Worcester	25027	1180637	02	0201	10300501	34.00	MANEVU2002	0.8700	0.0000	0.0000	WORCESTER COMMON OUTLETS
MA	Worcester	25027	1180637	03	0201	10300501	26.00	MANEVU2002	0.9000	0.0000	0.0000	WORCESTER COMMON OUTLETS
MA	Worcester	25027	1180640	01	0101	10300504	17.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER SUPERIOR COURT
MA	Worcester	25027	1180640	02	0101	10300504	16.00	MANEVU2002	0.0005	0.0000	0.0000	WORCESTER SUPERIOR COURT
MA	Worcester	25027	1180640	03	0101	10300603	1.00	MANEVU2002	0.0010	0.0000	0.0000	WORCESTER SUPERIOR COURT

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MA	Worcester	25027	1180644	01	0101	10300504	70.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER MEMORIAL AUDITORIUM
MA	Worcester	25027	1180654	01	0101	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0011	ECOTARIUM
MA	Worcester	25027	1180654	02	0101	10300603	6.00	MANEVU2002	1.0000	0.0000	0.0011	ECOTARIUM
MA	Worcester	25027	1180661	02	0102	10200504	6.00	MANEVU2002	1.0000	0.0000	0.0011	WORCESTER COUNTY JAIL
MA	Worcester	25027	1180662	01	0201	10300602	29.00	MANEVU2002	4.0000	0.0000	0.0000	VERNON HILL DEVELOPMENT LLC
MA	Worcester	25027	1180662	02	0202	10300602	29.00	MANEVU2002	2.0000	0.0000	0.0055	VERNON HILL DEVELOPMENT LLC
MA	Worcester	25027	1180677	01	0101	10300501	3.00	MANEVU2002	1.0000	0.0000	0.0011	CITY CLEANERS INCORPORATED
MA	Worcester	25027	1180679	01	0101	10300504	12.00	MANEVU2002	1.0000	0.0000	0.0011	PARKHILL MANUFACTURING CENTER
MA	Worcester	25027	1180689	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0011	MSF INCORPORATED COMEPLAY
MA	Worcester	25027	1180693	01	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0011	OAKMONT REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180693	02	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0011	OAKMONT REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180693	03	0101	10300501	5.00	MANEVU2002	1.0000	0.0000	0.0011	OAKMONT REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180695	02	0101	10300501	9.00	MANEVU2002	1.0000	0.0000	0.0011	QUABOAG REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180696	02	0101	10300504	23.00	MANEVU2002	2.0000	0.0000	0.0022	WACHUSETT REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180696	03	0102	10300504	5.00	MANEVU2002	3.0000	0.0000	0.0033	WACHUSETT REGIONAL HIGH SCHOOL
MA	Worcester	25027	1180701	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0000	TANTASQUA REG HIGH SCHOOL
MA	Worcester	25027	1180701	02	0101	10300504	3.00	MANEVU2002	1.0000	0.0000	0.0000	TANTASQUA REG HIGH SCHOOL
MA	Worcester	25027	1180710	01	0101	10300602	20.00	MANEVU2002	1.0000	0.0000	0.0011	BURNCOAT SENIOR HIGH
MA	Worcester	25027	1180711	01	0101	10300504	11.00	MANEVU2002	1.0000	0.0000	0.0011	DOHERTY HIGH SCHOOL
MA	Worcester	25027	1180714	01	0101	10300602	17.00	MANEVU2002	1.0000	0.0000	0.0011	BURNCOAT MIDDLE SCHO
MA	Worcester	25027	1180719	01	0101	10301002	8.00	MANEVU2002	1.0000	0.0000	0.0011	NORTH HIGH SCHOOL
MA	Worcester	25027	1180720	01	0101	10300404	14.00	MANEVU2002	1.0000	0.0000	0.0011	VERNON HILL SCHOOL
MA	Worcester	25027	1180720	02	0101	10300404	13.00	MANEVU2002	1.0000	0.0000	0.0011	VERNON HILL SCHOOL
MA	Worcester	25027	1180721	01	0101	10300404	8.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER EAST MIDDLE
MA	Worcester	25027	1180721	02	0101	10300404	11.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER EAST MIDDLE
MA	Worcester	25027	1180763	01	0101	10300401	9.00	MANEVU2002	1.0000	0.0000	0.0027	GODDARD SCHOOL OF SCIENCE + TECHNOLOGY
MA	Worcester	25027	1180763	02	0102	10300401	11.00	MANEVU2002	1.0000	0.0000	0.0011	GODDARD SCHOOL OF SCIENCE + TECHNOLOGY
MA	Worcester	25027	1180779	01	0101	10300602	20.00	MANEVU2002	4.0000	0.0000	0.0044	WORCESTER HOUSING AUTHORITY
MA	Worcester	25027	1180784	01	0101	10300401	11.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER ACADEMY
MA	Worcester	25027	1180784	02	0101	10300401	11.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER ACADEMY
MA	Worcester	25027	1180784	03	0101	10300401	11.00	MANEVU2002	2.0000	0.0000	0.0022	WORCESTER ACADEMY
MA	Worcester	25027	1180803	01	0101	10200501	17.00	MANEVU2002	0.2070	0.0000	0.0002	SALOOM FURNITURE COMPANY, INC.
MA	Worcester	25027	1180809	01	0101	10300504	4.00	MANEVU2002	2.0000	0.0000	0.0022	NOTRE DAME DULAC INSTITUTE
MA	Worcester	25027	1180809	02	0101	10300504	4.00	MANEVU2002	1.0000	0.0000	0.0011	NOTRE DAME DULAC INSTITUTE
MA	Worcester	25027	1180899	01	0101	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0011	JUNIOR SENIOR HIGH SCHOOL
MA	Worcester	25027	1180899	02	0102	10300504	10.00	MANEVU2002	1.0000	0.0000	0.0011	JUNIOR SENIOR HIGH SCHOOL
MA	Worcester	25027	1180907	01	0101	10200504	6.00	MANEVU2002	1.0000	0.0000	0.0027	WARREN LAUNDRY
MA	Worcester	25027	1180908	01	0101	10200603	4.00	MANEVU2002	0.8045	0.0000	0.0009	ECC CORPORATION
MA	Worcester	25027	1180908	02	0101	10200603	4.00	MANEVU2002	0.3045	0.0000	0.0003	ECC CORPORATION
MA	Worcester	25027	1180908	03	0101	10300603	1.00	MANEVU2002	0.1035	0.0000	0.0001	ECC CORPORATION
MA	Worcester	25027	1180911	01	0101	10200603	8.00	MANEVU2002	0.7600	0.0000	0.0021	CLAREMONT FLOCK CORP
MA	Worcester	25027	1180911	02	0102	10200603	6.00	MANEVU2002	3.0000	0.0000	0.0082	CLAREMONT FLOCK CORP
MA	Worcester	25027	1180913	01	0101	10200603	1.00	MANEVU2002	0.1010	0.0000	0.0003	SPECTRO COATING CORP
MA	Worcester	25027	1180925	03	0203	10200603	3.00	MANEVU2002	0.0925	0.0000	0.0000	RILEY POWER INC
MA	Worcester	25027	1180925	04	0304	10200202	3.00	MANEVU2002	0.0805	0.0000	0.0009	RILEY POWER INC
MA	Worcester	25027	1180925	07	0106	10200603	1.00	MANEVU2002	0.0040	0.0000	0.0000	RILEY POWER INC
MA	Worcester	25027	1180939	02	0101	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	FOAM CONCEPTS INC
MA	Worcester	25027	1180944	01	0101	10200401	12.00	MANEVU2002	3.0000	0.0000	0.0082	VOGUE WALLCOVERINGS
MA	Worcester	25027	1181022	02	0101	10200603	5.00	MANEVU2002	1.0000	0.0000	0.0027	FITCHBURG GAS & ELECTRIC-LPGA
MA	Worcester	25027	1181032	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0027	CONCRETE BLOCK INSULATION
MA	Worcester	25027	1181059	03	0203	10200603	2.00	MANEVU2002	0.1705	0.0000	0.0005	SHIELD PACKAGING
MA	Worcester	25027	1181081	03	0102	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	LINCOLN VILLAGE

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MA	Worcester	25027	1181081	04	0102	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0027	LINCOLN VILLAGE
MA	Worcester	25027	1181081	05	0103	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0027	LINCOLN VILLAGE
MA	Worcester	25027	1181081	06	0103	10300602	12.00	MANEVU2002	1.0000	0.0000	0.0027	LINCOLN VILLAGE
MA	Worcester	25027	1181081	08	0104	10300603	7.00	MANEVU2002	1.0000	0.0000	0.0027	LINCOLN VILLAGE
MA	Worcester	25027	1181258	01	0101	10300903	9.00	MANEVU2002	1.0000	0.0000	0.0011	ST JOSEPHS ABBEY
MA	Worcester	25027	1190916	01	0101	10300602	13.00	MANEVU2002	0.4700	0.0000	0.0015	NEW ENGLAND REGIONAL
MA	Worcester	25027	1190916	02	0101	10300602	13.00	MANEVU2002	1.1800	0.0000	0.0038	NEW ENGLAND REGIONAL
MA	Worcester	25027	1190944	02	0201	10300602	14.00	MANEVU2002	1.0000	0.0000	0.0011	ST MARKS SCHOOL
MA	Worcester	25027	1190992	01	0101	10300501	6.00	MANEVU2002	1.0000	0.0000	0.0011	NASHOBA REGIONAL SCHOOL DISTRICT
MA	Worcester	25027	1191317	01	0101	10300603	1.00	MANEVU2002	0.0500	0.0000	0.0000	MWRA SOUTHBORO SHAFT
MA	Worcester	25027	1191317	02	0102	10300603	1.00	MANEVU2002	0.0190	0.0000	0.0000	MWRA SOUTHBORO SHAFT
MA	Worcester	25027	1194006	07	0107	10200603	8.00	MANEVU2002	0.2165	0.0000	0.0002	NSTAR GAS
MA	Worcester	25027	1200134	01	0101	10200401	8.00	MANEVU2002	3.0000	0.0000	0.0082	ARCHER RUBBER COMPANY
MA	Worcester	25027	1200134	02	0101	10200401	8.00	MANEVU2002	3.0000	0.0000	0.0082	ARCHER RUBBER COMPANY
MA	Worcester	25027	1200135	01	0101	10300504	4.00	MANEVU2002	1.0000	0.0000	0.0044	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	01	0201	10300603	4.00	MANEVU2002	1.0000	0.0000	0.0044	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	02	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	03	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	04	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	05	0101	10300603	1.00	MANEVU2002	1.0000	0.0000	0.0027	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	06	0101	10300504	13.00	MANEVU2002	1.0000	0.0000	0.0016	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200135	07	0201	10300602	13.00	MANEVU2002	1.0000	0.0000	0.0016	MILFORD WHITINSVILLE REGIONAL HOSPITAL
MA	Worcester	25027	1200280	02	0102	10200501	5.00	MANEVU2002	0.4320	0.0000	0.0005	WATERS CORPORATION
MA	Worcester	25027	1200280	04	0104	10200501	4.00	MANEVU2002	1.0000	0.0000	0.0027	WATERS CORPORATION
MA	Worcester	25027	1200280	06	0106	10200501	3.00	MANEVU2002	0.0290	0.0000	0.0001	WATERS CORPORATION
MA	Worcester	25027	1200280	07	0107	10200501	3.00	MANEVU2002	0.0290	0.0000	0.0001	WATERS CORPORATION
MA	Worcester	25027	1200280	09	0109	10200501	1.00	MANEVU2002	0.0480	0.0000	0.0001	WATERS CORPORATION
MA	Worcester	25027	1200615	01	0101	10300404	13.00	MANEVU2002	1.0000	0.0000	0.0011	MILFORD HIGH SCHOOL
MA	Worcester	25027	1200615	02	0101	10300404	13.00	MANEVU2002	1.0000	0.0000	0.0011	MILFORD HIGH SCHOOL
MA	Worcester	25027	1200615	03	0101	10300404	13.00	MANEVU2002	1.0000	0.0000	0.0011	MILFORD HIGH SCHOOL
MA	Worcester	25027	1200623	01	0101	10300501	8.00	MANEVU2002	0.2100	0.0000	0.0000	EAST MIDDLE SCHOOL
MA	Worcester	25027	1200856	06	0105	10200603	6.00	MANEVU2002	0.4480	0.0000	0.0000	ST GOBAIN CONTAINERS
MA	Worcester	25027	1200856	07	0106	10200602	3.00	MANEVU2002	0.1820	0.0000	0.0003	ST GOBAIN CONTAINERS
NH	Cheshire	33005	3300500003	001	1	10300402	12.50	MANEVU2002	6.2724	0.0706	0.0706	KEENE STATE COLLEGE
NH	Cheshire	33005	3300500003	002	1	10300402	23.50	MANEVU2002	6.2724	0.0806	0.0806	KEENE STATE COLLEGE
NH	Cheshire	33005	3300500003	003	1	10300402	25.10	MANEVU2002	6.2724	0.0706	0.0706	KEENE STATE COLLEGE
NH	Coos	33007	3300700001	001	1	10200401	128.60	MANEVU2002	43.8497	0.2923	0.2923	FRASER NH LLC
NH	Coos	33007	3300700001	002	1	10200401	162.40	MANEVU2002	59.5915	0.3235	0.3235	FRASER NH LLC
NH	Coos	33007	3300700001	003	1	10200402	68.60	MANEVU2002	15.5011	0.1772	0.1772	FRASER NH LLC
NH	Coos	33007	3300700001	009	1	10200401	238.00	MANEVU2002	0.0705	0.0000	0.0000	FRASER NH LLC
NH	Coos	33007	3300700001	012	1	10200401	155.00	MANEVU2002	3.2948	0.0000	0.0000	FRASER NH LLC
NH	Coos	33007	3300700001	014	1	10200901	324.00	MANEVU2002	18.2801	0.0000	0.0000	FRASER NH LLC
NH	Coos	33007	3300700006	001	1	10200403	8.50	MANEVU2002	0.5457	0.0304	0.0304	TILLOTSON RUBBER CORPORATION
NH	Coos	33007	3300700006	002	1	10200403	8.50	MANEVU2002	0.5795	0.0270	0.0270	TILLOTSON RUBBER CORPORATION
NH	Coos	33007	3300700006	003	1	10200905	52.80	MANEVU2002	22.1580	0.1108	0.1108	TILLOTSON RUBBER CORPORATION
NH	Coos	33007	3300700006	004	1	10200402	33.20	MANEVU2002	4.0879	0.0934	0.0934	TILLOTSON RUBBER CORPORATION
NH	Coos	33007	3300700092	002	1	10200401	249.00	MANEVU2002	0.3549	0.0020	0.0020	WAUSAU PAPERS OF NH INC
NH	Coos	33007	3300700092	002	2	10200501	249.00	MANEVU2002	0.2371	0.0013	0.0013	WAUSAU PAPERS OF NH INC
NH	Coos	33007	3300700092	002	3	10200601	249.00	MANEVU2002	11.9396	0.0663	0.0663	WAUSAU PAPERS OF NH INC
NH	Coos	33007	3300700092	012	1	10200601	179.00	MANEVU2002	35.7297	0.1060	0.1060	WAUSAU PAPERS OF NH INC
NH	Coos	33007	3300700093	007	2	10200601	84.50	MANEVU2002	0.3600	0.0000	0.0000	GROVETON PAPER BOARD, INC
NH	Coos	33007	3300700093	008	2	10200601	84.50	MANEVU2002	0.4485	0.0000	0.0000	GROVETON PAPER BOARD, INC

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NH	Grafton	33009	3300900003	001	1	10300402	47.00	MANEVU2002	11.3076	0.0777	0.0777	DARTMOUTH-HITCHCOCK MEDICAL CENTER
NH	Grafton	33009	3300900003	002	1	10300402	47.00	MANEVU2002	17.4349	0.1046	0.1046	DARTMOUTH-HITCHCOCK MEDICAL CENTER
NH	Grafton	33009	3300900003	003	1	10300402	47.00	MANEVU2002	4.5581	0.0617	0.0617	DARTMOUTH-HITCHCOCK MEDICAL CENTER
NH	Grafton	33009	3300900020	001	1	10300401	120.00	MANEVU2002	59.0213	0.3443	0.3443	DARTMOUTH COLLEGE
NH	Grafton	33009	3300900020	002	1	10300402	36.00	MANEVU2002	4.4312	0.0782	0.0782	DARTMOUTH COLLEGE
NH	Grafton	33009	3300900020	003	1	10300402	60.00	MANEVU2002	34.1046	0.2099	0.2099	DARTMOUTH COLLEGE
NH	Grafton	33009	3300900020	004	1	10300402	93.00	MANEVU2002	45.4900	0.2481	0.2481	DARTMOUTH COLLEGE
NH	Grafton	33009	3300900020	006	2	10300502	55.00	SCC Descriptio	0.4320	0.0023	0.0023	DARTMOUTH COLLEGE
NH	Grafton	33009	3300900020	010	1	10300401	85.50	MANEVU2002	2.7029	0.0901	0.0901	DARTMOUTH COLLEGE
NH	Hillsborough	33011	3301100017	001	1	10200401	137.00	MANEVU2002	19.1669	0.0681	0.0681	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100017	001	3	10200601	137.00	MANEVU2002	10.4999	0.0373	0.0373	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100017	002	1	10200401	137.00	MANEVU2002	18.5314	0.0906	0.0906	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100017	002	3	10200601	137.00	MANEVU2002	9.3220	0.0456	0.0456	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100017	003	1	10200401	137.00	MANEVU2002	15.2513	0.0644	0.0644	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100017	003	3	10200601	137.00	MANEVU2002	10.9392	0.0462	0.0462	ANHEUSER-BUSCH INC
NH	Hillsborough	33011	3301100034	001	1	10300501	10.00	MANEVU2002	0.0935	0.0234	0.0234	CROTCHED MOUNTAIN REHAB CENTER
NH	Hillsborough	33011	3301100070	001	1	10200402	37.50	MANEVU2002	26.8372	0.0855	0.0855	MONADNOCK PAPER MILLS INC
NH	Hillsborough	33011	3301100070	002	1	10200402	37.50	MANEVU2002	24.9268	0.0800	0.0800	MONADNOCK PAPER MILLS INC
NH	Hillsborough	33011	3301100072	001	1	10200402	60.00	MANEVU2002	17.7308	0.0869	0.0869	NASHUA CORPORATION
NH	Hillsborough	33011	3301100072	001	3	10200602	60.00	MANEVU2002	2.1950	0.0108	0.0108	NASHUA CORPORATION
NH	Hillsborough	33011	3301100072	003	1	10200402	60.00	MANEVU2002	10.5106	0.0000	0.0000	NASHUA CORPORATION
NH	Hillsborough	33011	3301100072	007	2	10200603	5.00	SCC Descriptio	0.1000	0.0006	0.0006	NASHUA CORPORATION
NH	Hillsborough	33011	3301100072	011	1	10200603	9.00	MANEVU2002	0.0525	0.0013	0.0013	NASHUA CORPORATION
NH	Hillsborough	33011	3301100076	008	1	10200504	5.00	SCC Descriptio	0.2319	0.0012	0.0012	KALWALL PANELS & ACCESSORIES
NH	Hillsborough	33011	3301100076	008	2	10200501	5.00	SCC Descriptio	0.1012	0.0005	0.0005	KALWALL PANELS & ACCESSORIES
NH	Hillsborough	33011	3301100076	008	3	10200603	5.00	SCC Descriptio	0.0011	0.0000	0.0000	KALWALL PANELS & ACCESSORIES
NH	Hillsborough	33011	3301100076	008	4	10201003	5.00	SCC Descriptio	0.4368	0.0022	0.0022	KALWALL PANELS & ACCESSORIES
NH	Hillsborough	33011	3301100093	001	1	10200501	5.00	MANEVU2002	0.4051	0.0000	0.0000	BATESVILLE MANUFACTURING INC
NH	Hillsborough	33011	3301100093	002	1	10200501	5.00	MANEVU2002	0.4051	0.0000	0.0000	BATESVILLE MANUFACTURING INC
NH	Hillsborough	33011	3301100109	001	1	10200905	2.90	MANEVU2002	2.4867	0.0094	0.0094	PETERBORO BASKET COMPANY
NH	Merrimack	33013	3301300032	002	1	10200402	40.00	MANEVU2002	18.8619	0.0251	0.0251	CONCORD STEAM CORPORATION
NH	Merrimack	33013	3301300032	002	3	10200602	40.00	MANEVU2002	14.9052	0.0199	0.0199	CONCORD STEAM CORPORATION
NH	Merrimack	33013	3301300032	003	1	10200402	48.40	MANEVU2002	3.2376	0.0162	0.0162	CONCORD STEAM CORPORATION
NH	Merrimack	33013	3301300032	003	3	10200602	48.40	MANEVU2002	1.6849	0.0084	0.0084	CONCORD STEAM CORPORATION
NH	Merrimack	33013	3301300032	005	1	10200402	40.00	MANEVU2002	0.8346	0.0083	0.0083	CONCORD STEAM CORPORATION
NH	Merrimack	33013	3301300111	009	1	10300501	2.00	MANEVU2002	0.3525	0.0013	0.0013	ELEKTRISOLA INC
NH	Merrimack	33013	3301300125	002	1	10200903	4.10	MANEVU2002	0.4954	0.0024	0.0024	BOYCE HIGHLANDS, INC
NH	Rockingham	33015	3301500004	001	1	10300402	67.50	MANEVU2002	0.1662	0.0000	0.0000	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	003	1	10300402	21.00	MANEVU2002	2.9796	0.0489	0.0489	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	003	2	10300602	21.00	MANEVU2002	0.8260	0.0135	0.0135	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	004	1	10300402	21.00	MANEVU2002	2.9796	0.0489	0.0489	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	004	2	10300602	21.00	MANEVU2002	0.8260	0.0135	0.0135	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	005	1	10300402	78.00	MANEVU2002	28.2330	0.0000	0.0000	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	005	2	10300603	78.00	MANEVU2002	0.1580	0.0000	0.0000	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	006	1	10300503	1.00	MANEVU2002	0.2857	0.0023	0.0023	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500004	006	2	10300603	1.00	MANEVU2002	0.2995	0.0024	0.0024	PHILLIPS EXETER ACADEMY
NH	Rockingham	33015	3301500041	008	1	10200503	17.90	MANEVU2002	3.6651	0.0147	0.0147	SPRAGUE ENERGY
NH	Rockingham	33015	3301500058	003	2	10200602	15.00	MANEVU2002	1.7700	0.0170	0.0170	VENTURE - SEABROOK
NH	Rockingham	33015	3301500076	009	1	10200602	16.00	MANEVU2002	12.8135	0.0366	0.0366	FOSS MANUFACTURING COMPANY INC
NH	Rockingham	33015	3301500076	010	1	10300603	3.00	MANEVU2002	0.0225	0.0002	0.0002	FOSS MANUFACTURING COMPANY INC
NH	Rockingham	33015	3301500076	011	1	10300602	4.00	MANEVU2002	0.0235	0.0059	0.0059	FOSS MANUFACTURING COMPANY INC
NH	Rockingham	33015	3301500076	013	1	10200602	15.00	MANEVU2002	0.2103	0.0019	0.0019	FOSS MANUFACTURING COMPANY INC

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NH	Rockingham	33015	3301590793	004	1	10200602	25.20	MANEVU2002	0.0010	0.0003	0.0003	NEWINGTON ENERGY LLC
NH	Strafford	33017	3301700003	009	1	10300811	1.50	MANEVU2002	0.1950	0.0000	0.0000	TURNKEY RECYCLING & ENVIRONMENTAL ENTERP
NH	Strafford	33017	3301700003	010	2	10301002	0.00		0.1357	0.0011	0.0011	TURNKEY RECYCLING & ENVIRONMENTAL ENTERP
NH	Strafford	33017	3301700009	001	1	10300402	47.30	MANEVU2002	22.8308	0.0074	0.0074	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	001	2	10300602	47.30	MANEVU2002	0.5460	0.0002	0.0002	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	002	1	10300402	47.30	MANEVU2002	10.2281	0.0311	0.0311	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	002	2	10300602	47.30	MANEVU2002	1.3235	0.0040	0.0040	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	003	1	10300402	47.30	MANEVU2002	16.5158	0.0000	0.0000	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	004	1	10300402	47.30	MANEVU2002	2.0350	0.0000	0.0000	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	005	1	10300402	16.70	MANEVU2002	0.3406	0.0026	0.0026	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	005	2	10300602	16.70	MANEVU2002	0.0210	0.0002	0.0002	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	007	2	10300602	12.60	MANEVU2002	1.0880	0.0080	0.0080	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	015	3	10300603	5.00	SCC Descriptio	2.8750	0.0359	0.0359	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	015	1	10300503	5.00	SCC Descriptio	1.6644	0.0208	0.0208	UNIVERSITY OF NEW HAMPSHIRE
NH	Strafford	33017	3301700009	015	2	10301003	5.00	SCC Descriptio	0.6501	0.0081	0.0081	UNIVERSITY OF NEW HAMPSHIRE
NH	Sullivan	33019	3301900001	001	1	10200402	27.00	MANEVU2002	19.5839	0.0563	0.0563	APC PAPER COMPANY INC
NH	Sullivan	33019	3301900001	002	1	10200402	27.00	MANEVU2002	19.5839	0.0563	0.0563	APC PAPER COMPANY INC
NH	Sullivan	33019	3301900030	001	1	10200906	10.00	MANEVU2002	9.6395	0.0328	0.0328	DURGIN & CROWELL LUMBER COMPANY
NH	Sullivan	33019	3301900030	008	1	10200403	9.90	MANEVU2002	0.4979	0.0066	0.0066	DURGIN & CROWELL LUMBER COMPANY
NH	Sullivan	33019	3301900030	009	1	10200403	8.40	MANEVU2002	0.4207	0.0056	0.0056	DURGIN & CROWELL LUMBER COMPANY
NJ	Atlantic	34001	70192	U10	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U11	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U2	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0001	0.0001	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U3	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0001	0.0001	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U4	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U5	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U6	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U7	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U8	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70192	U9	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0000	177 FIGHTER Wing (NJANG)
NJ	Atlantic	34001	70324	U5	OS1	10300502	55.00	SCC Descriptio	0.3500	0.0000	0.0010	MASSARELLI'S LAWN ORNAMENTS, INC.
NJ	Atlantic	34001	70491	U7	OS11	10300602	55.00	SCC Descriptio	1.4800	0.0150	0.0150	Resorts Atlantic City
NJ	Atlantic	34001	70491	U7	OS3	10300602	55.00	SCC Descriptio	1.6000	0.0139	0.0139	Resorts Atlantic City
NJ	Atlantic	34001	70491	U7	OS7	10300602	55.00	SCC Descriptio	0.9100	0.0026	0.0026	Resorts Atlantic City
NJ	Atlantic	34001	70491	U7	OS4	10300501	55.00	SCC Descriptio	0.0700	0.0000	0.0002	Resorts Atlantic City
NJ	Atlantic	34001	70491	U7	OS1	10300602	55.00	SCC Descriptio	11.4500	0.0003	0.0003	Resorts Atlantic City
NJ	Atlantic	34001	70496	U14	OS1	10300602	1.67	EU DESCRIPT	0.1700	0.0000	0.0004	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U17	OS1	10300602	1.08	EU DESCRIPT	0.0600	0.0000	0.0001	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U19	OS1	10300602	1.68	EU DESCRIPT	0.0800	0.0000	0.0002	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U20	OS1	10300602	1.50	EU DESCRIPT	0.1200	0.0000	0.0003	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U25	OS1	10300602	12.54	EU DESCRIPT	2.6700	0.0000	0.0066	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U28	OS1	10300602	2.80	EU DESCRIPT	0.0200	0.0000	0.0000	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U29	OS1	10300602	2.80	EU DESCRIPT	0.0200	0.0000	0.0000	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U36	OS1	10300602	4.18	EU DESCRIPT	0.0300	0.0000	0.0001	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U4	OS1	10300602	1.36	EU DESCRIPT	0.0800	0.0000	0.0002	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U5	OS1	10300602	1.25	EU DESCRIPT	0.1100	0.0000	0.0003	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U7	OS1	10300602	2.50	EU DESCRIPT	0.1200	0.0000	0.0003	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70496	U8	OS1	10300502	1.05	EU DESCRIPT	0.0100	0.0000	0.0000	FAA William J. Hughes Technical Center
NJ	Atlantic	34001	70497	U1	OS1	10300602	6.57	EU DESCRIPT	0.3200	0.0000	0.0008	Bacharach Institute for Rehabilitation
NJ	Atlantic	34001	70497	U6	OS1	10300602	1.50	EU DESCRIPT	0.1000	0.0001	0.0001	Bacharach Institute for Rehabilitation
NJ	Atlantic	34001	70497	U7	OS1	10300602	1.50	EU DESCRIPT	0.0800	0.0001	0.0001	Bacharach Institute for Rehabilitation
NJ	Atlantic	34001	70497	U8	OS1	10300602	1.50	EU DESCRIPT	0.0800	0.0001	0.0001	Bacharach Institute for Rehabilitation

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NJ	Atlantic	34001	70502	U2	OS5	10300602	29.30	EU DESCRIPT	2.5500	0.0264	0.0264	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS15	10300602	29.30	EU DESCRIPT	0.9600	0.0216	0.0216	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS13	10300602	29.30	EU DESCRIPT	5.7700	0.0205	0.0205	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS7	10300602	29.30	EU DESCRIPT	3.6400	0.0178	0.0178	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS3	10300602	29.30	EU DESCRIPT	0.7800	0.0146	0.0146	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS11	10300602	29.30	EU DESCRIPT	0.6600	0.0134	0.0134	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS1	10300602	29.30	EU DESCRIPT	2.0200	0.0131	0.0131	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS2	10300501	29.30	EU DESCRIPT	0.0500	0.0000	0.0003	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS12	10300501	29.30	EU DESCRIPT	0.0300	0.0000	0.0000	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS14	10300501	29.30	EU DESCRIPT	0.1000	0.0000	0.0000	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS4	10300501	29.30	EU DESCRIPT	0.0800	0.0000	0.0003	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS8	10300501	29.30	EU DESCRIPT	0.0100	0.0000	0.0000	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70502	U2	OS9	10300602	29.30	EU DESCRIPT	0.5000	0.0000	0.0000	TRUMP TAJ MAHAL CASINO RESORT
NJ	Atlantic	34001	70513	U12	OS1	10200602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	South Jersey Gas Company (formerly ID 70109)
NJ	Atlantic	34001	70513	U12	OS2	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0000	South Jersey Gas Company (formerly ID 70109)
NJ	Atlantic	34001	70513	U9	OS1	10200602	22.00	EU DESCRIPT	0.0200	0.0000	0.0000	South Jersey Gas Company (formerly ID 70109)
NJ	Atlantic	34001	70525	U1	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0000	0.0002	Missouri Avenue Generating Station
NJ	Atlantic	34001	70525	U1	OS5	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Missouri Avenue Generating Station
NJ	Atlantic	34001	70525	U1	OS3	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Missouri Avenue Generating Station
NJ	Atlantic	34001	70539	U12	OS2	10300602	8.37	EU DESCRIPT	0.6300	0.0017	0.0017	Shore Memorial Hospital
NJ	Atlantic	34001	70539	U13	OS2	10300602	5.00	EU DESCRIPT	0.6300	0.0017	0.0017	Shore Memorial Hospital
NJ	Atlantic	34001	70539	U5	OS2	10200602	14.65	EU DESCRIPT	0.0900	0.0003	0.0003	Shore Memorial Hospital
NJ	Atlantic	34001	70539	U5	OS1	10200502	14.65	EU DESCRIPT	0.0400	0.0000	0.0001	Shore Memorial Hospital
NJ	Atlantic	34001	70539	U7	OS2	10300602	1.50	EU DESCRIPT	0.6300	0.0017	0.0017	Shore Memorial Hospital
NJ	Bergen	34003	00004	U32	OS1	10300602	55.00	SCC Descriptio	2.4500	0.0089	0.0089	Honeywell International, Inc.
NJ	Bergen	34003	00004	U8	OS1	10300602	55.00	SCC Descriptio	1.4100	0.0101	0.0101	Honeywell International, Inc.
NJ	Bergen	34003	00009	U67	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0002	0.0002	STEPAN COMPANY
NJ	Bergen	34003	00009	U82	OS1	10300602	55.00	SCC Descriptio	0.6600	0.0017	0.0017	STEPAN COMPANY
NJ	Bergen	34003	00009	U93	OS1	10300602	55.00	SCC Descriptio	0.3300	0.0008	0.0008	STEPAN COMPANY
NJ	Bergen	34003	00009	U95	OS1	10300602	55.00	SCC Descriptio	0.8200	0.0021	0.0021	STEPAN COMPANY
NJ	Bergen	34003	00009	U96	OS1	10300602	55.00	SCC Descriptio	9.5600	0.0238	0.0238	STEPAN COMPANY
NJ	Bergen	34003	00009	U9601	OS1	10300602	55.00	SCC Descriptio	0.7100	0.0053	0.0053	STEPAN COMPANY
NJ	Bergen	34003	00009	U9601	OS2	10300501	55.00	SCC Descriptio	0.0800	0.0000	0.0001	STEPAN COMPANY
NJ	Bergen	34003	00089	U4	OS0	10300402	55.00	SCC Descriptio	4.3300	0.0046	0.0046	Amerada Hess - Edgewater Terminal
NJ	Bergen	34003	00122	U1	OS1	10200602	55.00	SCC Descriptio	3.7500	0.0000	0.0101	BERGEN REGIONAL MEDICAL CENTER
NJ	Bergen	34003	00122	U2	OS1	10200602	55.00	SCC Descriptio	6.2500	0.0000	0.0169	BERGEN REGIONAL MEDICAL CENTER
NJ	Bergen	34003	00122	U3	OS1	10200602	55.00	SCC Descriptio	3.5500	0.0592	0.0592	BERGEN REGIONAL MEDICAL CENTER
NJ	Bergen	34003	00122	U4	OS1	10200602	55.00	SCC Descriptio	4.2500	0.0542	0.0542	BERGEN REGIONAL MEDICAL CENTER
NJ	Bergen	34003	00205	U2	OS2	10300602	55.00	SCC Descriptio	0.1200	0.0000	0.0003	Len-Ron Manufacturing, A Division of Aramis
NJ	Bergen	34003	00205	U3	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Len-Ron Manufacturing, A Division of Aramis
NJ	Bergen	34003	00228	U4	OS1	10300602	55.00	SCC Descriptio	0.1400	0.0025	0.0025	Fisher Scientific Company
NJ	Bergen	34003	00228	U4	OS2	10300602	55.00	SCC Descriptio	1.4700	0.0025	0.0025	Fisher Scientific Company
NJ	Bergen	34003	00228	U4	OS3	10300402	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Fisher Scientific Company
NJ	Bergen	34003	00243	U8	OS1	10200602	19.80	EU DESCRIPT	1.4300	0.0040	0.0040	Novus Fine Chemicals
NJ	Bergen	34003	00243	U9	OS1	10200502	11.55	EU DESCRIPT	0.6200	0.0111	0.0111	Novus Fine Chemicals
NJ	Bergen	34003	00253	U1	OS1	10200602	11.55	EU DESCRIPT	1.6000	0.0334	0.0334	GIBRALTAR PLASTICS CORPORATION
NJ	Bergen	34003	00253	U1	OS2	10200502	11.55	EU DESCRIPT	0.4400	0.0000	0.0012	GIBRALTAR PLASTICS CORPORATION
NJ	Bergen	34003	00263	U1	OS5	10200602	55.00	SCC Descriptio	2.5900	0.0100	0.0100	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS2	10300602	55.00	SCC Descriptio	1.7200	0.0067	0.0067	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS3	10300602	55.00	SCC Descriptio	1.7000	0.0066	0.0066	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS4	10300602	55.00	SCC Descriptio	1.4800	0.0057	0.0057	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS6	10300402	55.00	SCC Descriptio	1.1800	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER

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NJ	Bergen	34003	00263	U1	OS7	10300402	55.00	SCC Descriptio	1.1800	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS8	10300402	55.00	SCC Descriptio	1.0200	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U1	OS9	10300402	55.00	SCC Descriptio	1.7900	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS2	10300602	55.00	SCC Descriptio	1.0000	0.0059	0.0059	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS1	10300602	55.00	SCC Descriptio	1.0000	0.0051	0.0051	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS10	10300602	55.00	SCC Descriptio	0.3900	0.0018	0.0018	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS15	10300602	55.00	SCC Descriptio	0.3700	0.0018	0.0018	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS16	10300602	55.00	SCC Descriptio	0.3700	0.0018	0.0018	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS9	10300602	55.00	SCC Descriptio	0.3900	0.0017	0.0017	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS14	10300602	55.00	SCC Descriptio	0.2700	0.0014	0.0014	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS13	10300602	55.00	SCC Descriptio	0.2700	0.0010	0.0010	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS17	10300501	55.00	SCC Descriptio	0.1800	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS18	10300501	55.00	SCC Descriptio	0.1800	0.0000	0.0005	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS19	10300501	55.00	SCC Descriptio	0.2500	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U2	OS20	10300501	55.00	SCC Descriptio	0.2500	0.0000	0.0007	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U3	OS1	10300602	55.00	SCC Descriptio	0.7200	0.0103	0.0103	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS5	10300602	55.00	SCC Descriptio	0.1300	0.0032	0.0032	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS6	10300602	55.00	SCC Descriptio	0.1300	0.0031	0.0031	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS3	10300602	55.00	SCC Descriptio	0.2900	0.0011	0.0011	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS4	10300602	55.00	SCC Descriptio	0.2900	0.0011	0.0011	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0005	0.0005	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U4	OS2	10300602	55.00	SCC Descriptio	0.1000	0.0004	0.0004	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U5	OS3	10300602	55.00	SCC Descriptio	0.3000	0.0009	0.0009	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U5	OS4	10300602	55.00	SCC Descriptio	0.3000	0.0009	0.0009	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U5	OS5	10300602	55.00	SCC Descriptio	0.1500	0.0006	0.0006	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U5	OS2	10300602	55.00	SCC Descriptio	0.0500	0.0002	0.0002	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U5	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U9	OS1	10300602	55.00	SCC Descriptio	0.2300	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00263	U9	OS2	10300602	55.00	SCC Descriptio	0.2400	0.0000	0.0000	HACKENSACK UNIVERSITY MEDICAL CENTER
NJ	Bergen	34003	00381	U53	OS1	10200602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Pfister Chemical, Inc.
NJ	Bergen	34003	00381	U54	OS1	10200504	0.00		0.3800	0.0000	0.0007	Pfister Chemical, Inc.
NJ	Bergen	34003	00430	U3	OS1	10200602	55.00	SCC Descriptio	0.5600	0.0015	0.0015	SIKA CORP
NJ	Bergen	34003	00430	U32	OS1	10300602	55.00	SCC Descriptio	0.3800	0.0011	0.0011	SIKA CORP
NJ	Bergen	34003	00523	U101	OS0	10300402	55.00	SCC Descriptio	1.2900	0.0014	0.0014	Amerada Hess - Bogota Terminal
NJ	Bergen	34003	00649	U6	OS1	10200602	55.00	SCC Descriptio	0.0700	0.0000	0.0002	Advance Fiber Technologies Corp.
NJ	Bergen	34003	00650	U22	OS1	10200602	55.00	SCC Descriptio	0.3200	0.0000	0.0009	WECHSLER COFFEE CORPORATION
NJ	Bergen	34003	01157	U3	OS1	10200602	55.00	SCC Descriptio	0.0500	0.0003	0.0003	CROWN FINISHING CORP.
NJ	Bergen	34003	01498	U2	OS1	10200602	55.00	SCC Descriptio	1.9800	0.0057	0.0057	Weyerhaeuser Company
NJ	Bergen	34003	01498	U2	OS2	10200502	55.00	SCC Descriptio	0.2900	0.0000	0.0008	Weyerhaeuser Company
NJ	Bergen	34003	01521	U3	OS1	10200602	55.00	SCC Descriptio	0.0800	0.0004	0.0004	TUNNEL BARREL & DRUM CO., INC
NJ	Bergen	34003	01600	U7	OS3	10300602	55.00	SCC Descriptio	0.1100	0.0002	0.0002	Solgar Vitamin and Herb
NJ	Bergen	34003	01600	U7	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0001	0.0001	Solgar Vitamin and Herb
NJ	Bergen	34003	01600	U7	OS2	10300602	55.00	SCC Descriptio	0.0700	0.0001	0.0001	Solgar Vitamin and Herb
NJ	Bergen	34003	02101	U1201	OS1	10300602	55.00	SCC Descriptio	15.0200	0.0546	0.0546	Simkins Industries, Inc.
NJ	Bergen	34003	02101	U1201	OS2	10300402	55.00	SCC Descriptio	12.6500	0.0000	0.0000	Simkins Industries, Inc.
NJ	Bergen	34003	02101	U3001	OS2	10300602	55.00	SCC Descriptio	1.6600	0.0055	0.0055	Simkins Industries, Inc.
NJ	Bergen	34003	02102	U1	OS3	10200602	55.00	SCC Descriptio	17.5900	0.0000	0.0155	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U1	OS1	10200602	55.00	SCC Descriptio	3.4700	0.0000	0.0031	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U1	OS2	10200502	55.00	SCC Descriptio	0.0300	0.0000	0.0000	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U1	OS4	10200502	55.00	SCC Descriptio	0.0300	0.0000	0.0000	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U18	OS1	10200504	0.00		0.6000	0.0000	0.0001	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U18	OS2	10200504	0.00		0.6000	0.0000	0.0001	MARCAL PAPER MILLS, INC.

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NJ	Bergen	34003	02102	U18	OS3	10200504	0.00		0.2400	0.0000	0.0001	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U18	OS4	10200504	0.00		0.2400	0.0000	0.0001	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02102	U20	OS1	10200502	1.36	EU DESCRIPT	0.0500	0.0000	0.0000	MARCAL PAPER MILLS, INC.
NJ	Bergen	34003	02620	U18	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0003	0.0003	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U18	OS2	10300602	55.00	SCC Descriptio	0.0200	0.0003	0.0003	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U18	OS3	10300602	55.00	SCC Descriptio	0.0500	0.0001	0.0001	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U2	OS1	10300501	0.00		0.0300	0.0000	0.0000	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U35	OS1	10300501	0.00		0.0800	0.0000	0.0000	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U6	OS2	10300799	0.00		4.4400	0.0323	0.0323	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U6	OS1	10300501	0.00		0.0300	0.0000	0.0001	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U7	OS2	10300799	0.00		5.5300	0.0337	0.0337	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02620	U7	OS1	10300501	0.00		0.1100	0.0183	0.0183	BCUA Wastewater Treatment Plant
NJ	Bergen	34003	02621	U9	OS1	10300602	55.00	SCC Descriptio	0.4400	0.0010	0.0010	J. Josephson, Inc.
NJ	Bergen	34003	02621	U9	OS2	10300602	55.00	SCC Descriptio	0.4400	0.0010	0.0010	J. Josephson, Inc.
NJ	Bergen	34003	02626	U10	OS14	10200602	83.80	EU DESCRIPT	0.4300	0.0000	0.0004	Transco LNG Plant - Station 240
NJ	Bergen	34003	02626	U13	OS17	10200602	4.28	EU DESCRIPT	1.2500	0.0000	0.0005	Transco LNG Plant - Station 240
NJ	Bergen	34003	02626	U7	OS11	10200602	83.80	EU DESCRIPT	0.4100	0.0000	0.0006	Transco LNG Plant - Station 240
NJ	Bergen	34003	02626	U8	OS12	10200602	83.80	EU DESCRIPT	0.3800	0.0000	0.0005	Transco LNG Plant - Station 240
NJ	Bergen	34003	02626	U9	OS13	10200602	83.80	EU DESCRIPT	0.3400	0.0000	0.0003	Transco LNG Plant - Station 240
NJ	Bergen	34003	02653	U5	OS0	10300602	55.00	SCC Descriptio	0.1200	0.0000	0.0003	FDU - Teaneck/Hackensack Campus
NJ	Burlington	34005	45037	U1001	OS1	10300602	55.00	SCC Descriptio	3.6900	0.0101	0.0101	Stepan Company
NJ	Burlington	34005	45037	U1001	OS3	10300602	55.00	SCC Descriptio	3.6900	0.0101	0.0101	Stepan Company
NJ	Burlington	34005	45037	U1001	OS2	10300501	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Stepan Company
NJ	Burlington	34005	45037	U1001	OS4	10300501	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Stepan Company
NJ	Burlington	34005	45077	U3	OS2	10200602	55.00	SCC Descriptio	1.6300	0.0027	0.0027	LOCKHEED MARTIN COMPANY
NJ	Burlington	34005	45077	U4	OS2	10200602	55.00	SCC Descriptio	1.5200	0.0027	0.0027	LOCKHEED MARTIN COMPANY
NJ	Burlington	34005	45077	U5	OS2	10200602	55.00	SCC Descriptio	1.6300	0.0027	0.0027	LOCKHEED MARTIN COMPANY
NJ	Burlington	34005	45198	U1	OS1	10200602	55.00	SCC Descriptio	6.7600	0.0193	0.0193	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U11	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0002	0.0002	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U2	OS1	10200602	55.00	SCC Descriptio	1.3600	0.0029	0.0029	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U3	OS1	10200602	55.00	SCC Descriptio	0.1500	0.0004	0.0004	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U6	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0003	0.0003	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U7	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0003	0.0003	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45198	U8	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0003	0.0003	OCEAN SPRAY CRANBERRIES INC
NJ	Burlington	34005	45207	U1	OS1	10200602	4.12	EU DESCRIPT	0.2200	0.0168	0.0168	Rancocas Hospital
NJ	Burlington	34005	45207	U2	OS1	10200602	4.95	EU DESCRIPT	0.3200	0.0000	0.0000	Rancocas Hospital
NJ	Burlington	34005	45207	U3	OS1	10200602	4.12	EU DESCRIPT	0.1600	0.0000	0.0000	Rancocas Hospital
NJ	Burlington	34005	45207	U4	OS1	10200602	4.95	EU DESCRIPT	0.5200	0.0000	0.0013	Rancocas Hospital
NJ	Burlington	34005	45835	U1	OS1	10300402	33.90	EU DESCRIPT	0.0200	0.0010	0.0010	NEW LISBON DEVELOPMENTAL CENTER
NJ	Burlington	34005	45835	U2	OS2	10300402	55.00	SCC Descriptio	15.3600	0.0282	0.0282	NEW LISBON DEVELOPMENTAL CENTER
NJ	Burlington	34005	45835	U3	OS3	10300402	19.40	EU DESCRIPT	6.7100	0.0501	0.0501	NEW LISBON DEVELOPMENTAL CENTER
NJ	Burlington	34005	45835	U4	OS4	10300501	1.56	EU DESCRIPT	0.0800	0.0000	0.0000	NEW LISBON DEVELOPMENTAL CENTER
NJ	Burlington	34005	45897	U1	OS1	10300602	50.00	EU DESCRIPT	1.5300	0.0000	0.0038	McGuire Air Force Base
NJ	Burlington	34005	45897	U100	OS106	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U101	OS107	10300602	2.07	EU DESCRIPT	0.2800	0.0000	0.0007	McGuire Air Force Base
NJ	Burlington	34005	45897	U102	OS108	10300602	3.65	EU DESCRIPT	0.1700	0.0000	0.0004	McGuire Air Force Base
NJ	Burlington	34005	45897	U103	OS109	10300602	3.65	EU DESCRIPT	0.2200	0.0000	0.0005	McGuire Air Force Base
NJ	Burlington	34005	45897	U104	OS110	10300602	2.50	EU DESCRIPT	0.1200	0.0000	0.0003	McGuire Air Force Base
NJ	Burlington	34005	45897	U105	OS111	10300602	3.65	EU DESCRIPT	0.2400	0.0000	0.0006	McGuire Air Force Base
NJ	Burlington	34005	45897	U106	OS112	10300602	3.65	EU DESCRIPT	0.1600	0.0000	0.0004	McGuire Air Force Base
NJ	Burlington	34005	45897	U107	OS113	10300602	2.71	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U12	OS16	10300602	5.23	EU DESCRIPT	0.0100	0.0000	0.0000	McGuire Air Force Base

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NJ	Burlington	34005	45897	U14	OS20	10300501	2.73	EU DESCRIPT	0.1700	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U15	OS21	10300501	2.73	EU DESCRIPT	0.1700	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U16	OS22	10300501	1.62	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U17	OS23	10300501	1.62	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U2	OS3	10300602	61.80	EU DESCRIPT	5.1400	0.0275	0.0275	McGuire Air Force Base
NJ	Burlington	34005	45897	U2	OS4	10300501	61.80	EU DESCRIPT	0.2900	0.0000	0.0008	McGuire Air Force Base
NJ	Burlington	34005	45897	U20	OS26	10300501	2.12	EU DESCRIPT	0.2200	0.0000	0.0006	McGuire Air Force Base
NJ	Burlington	34005	45897	U21	OS27	10300501	2.12	EU DESCRIPT	0.2100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U22	OS28	10300501	2.12	EU DESCRIPT	0.2100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U23	OS29	10300501	2.73	EU DESCRIPT	0.2200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U24	OS30	10300501	2.05	EU DESCRIPT	0.1700	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U25	OS31	10300602	6.28	EU DESCRIPT	0.2500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U26	OS32	10300602	6.28	EU DESCRIPT	0.2500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U28	OS34	10300602	5.25	EU DESCRIPT	0.0100	0.0000	0.0000	McGuire Air Force Base
NJ	Burlington	34005	45897	U3	OS5	10300602	61.80	EU DESCRIPT	7.8600	0.0300	0.0300	McGuire Air Force Base
NJ	Burlington	34005	45897	U3	OS6	10300501	61.80	EU DESCRIPT	0.5600	0.0000	0.0015	McGuire Air Force Base
NJ	Burlington	34005	45897	U31	OS37	10300602	3.21	EU DESCRIPT	0.1500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U32	OS38	10300602	3.21	EU DESCRIPT	0.2500	0.0006	0.0006	McGuire Air Force Base
NJ	Burlington	34005	45897	U333	OS339	10300501	2.73	EU DESCRIPT	0.2200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U334	OS340	10300501	2.73	EU DESCRIPT	0.2200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U335	OS341	10300501	2.05	EU DESCRIPT	0.1700	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U336	OS342	10300602	1.36	EU DESCRIPT	0.0600	0.0000	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U339	OS345	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U34	OS40	10300602	2.50	EU DESCRIPT	0.1500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U35	OS41	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U352	OS358	10300501	1.96	EU DESCRIPT	0.0200	0.0000	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U353	OS359	10300501	1.05	EU DESCRIPT	0.0800	0.0000	0.0002	McGuire Air Force Base
NJ	Burlington	34005	45897	U356	OS362	10300602	2.08	EU DESCRIPT	0.0900	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U357	OS363	10300602	2.08	EU DESCRIPT	0.0900	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U358	OS364	10300602	2.50	EU DESCRIPT	0.0900	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U359	OS365	10300602	3.51	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U360	OS366	10300602	3.51	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U38	OS44	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U385	OS391	10300602	3.50	EU DESCRIPT	0.5100	0.0010	0.0010	McGuire Air Force Base
NJ	Burlington	34005	45897	U386	OS392	10300602	3.50	EU DESCRIPT	0.5100	0.0010	0.0010	McGuire Air Force Base
NJ	Burlington	34005	45897	U39	OS45	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U4	OS7	10300602	61.80	EU DESCRIPT	6.2200	0.0000	0.0154	McGuire Air Force Base
NJ	Burlington	34005	45897	U4	OS8	10300501	61.80	EU DESCRIPT	0.4800	0.0000	0.0013	McGuire Air Force Base
NJ	Burlington	34005	45897	U40	OS46	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U41	OS47	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U43	OS49	10300602	2.38	EU DESCRIPT	0.0600	0.0000	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U44	OS50	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U45	OS51	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U46	OS52	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U47	OS53	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U48	OS54	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U49	OS55	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U50	OS56	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U51	OS57	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U52	OS58	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U53	OS59	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U54	OS60	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base

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NJ	Burlington	34005	45897	U55	OS61	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U56	OS62	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U57	OS63	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U58	OS64	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U59	OS65	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U60	OS66	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U61	OS67	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U62	OS68	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U63	OS69	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U64	OS70	10300602	2.50	EU DESCRIPT	0.1400	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U65	OS71	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U66	OS72	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U67	OS73	10300602	2.50	EU DESCRIPT	0.1400	0.0002	0.0002	McGuire Air Force Base
NJ	Burlington	34005	45897	U68	OS74	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U69	OS75	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U7	OS13	10300501	1.75	EU DESCRIPT	0.0500	0.0000	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U70	OS76	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U71	OS77	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U72	OS78	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U73	OS79	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U74	OS80	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U75	OS81	10300602	2.50	EU DESCRIPT	0.0900	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U76	OS82	10300602	2.50	EU DESCRIPT	0.1100	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U77	OS83	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U78	OS84	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U79	OS85	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U80	OS86	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U81	OS87	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U82	OS88	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U83	OS89	10300602	2.50	EU DESCRIPT	0.1000	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U84	OS90	10300602	2.07	EU DESCRIPT	0.0100	0.0000	0.0000	McGuire Air Force Base
NJ	Burlington	34005	45897	U86	OS92	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U87	OS93	10300602	1.44	EU DESCRIPT	0.1400	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U88	OS94	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U89	OS95	10300602	1.44	EU DESCRIPT	0.2100	0.0003	0.0003	McGuire Air Force Base
NJ	Burlington	34005	45897	U90	OS96	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U91	OS97	10300602	1.44	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U92	OS98	10300602	2.50	EU DESCRIPT	0.1300	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U93	OS99	10300602	2.50	EU DESCRIPT	0.1500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U94	OS100	10300602	2.50	EU DESCRIPT	0.1400	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U95	OS101	10300602	2.50	EU DESCRIPT	0.1400	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U96	OS102	10300602	2.50	EU DESCRIPT	0.1200	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U97	OS103	10300602	2.50	EU DESCRIPT	0.1500	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45897	U98	OS104	10300602	2.50	EU DESCRIPT	0.1300	0.0000	0.0003	McGuire Air Force Base
NJ	Burlington	34005	45897	U99	OS115	10300602	2.50	EU DESCRIPT	0.1400	0.0001	0.0001	McGuire Air Force Base
NJ	Burlington	34005	45924	U134	OS1	10300501	1.32	EU DESCRIPT	0.0400	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U136	OS1	10300501	1.16	EU DESCRIPT	0.0900	0.0008	0.0008	US Army Fort Dix
NJ	Burlington	34005	45924	U142	OS1	10300602	10.50	EU DESCRIPT	0.1500	0.0005	0.0005	US Army Fort Dix
NJ	Burlington	34005	45924	U143	OS1	10300602	3.50	EU DESCRIPT	0.4900	0.0013	0.0013	US Army Fort Dix
NJ	Burlington	34005	45924	U145	OS1	10300602	1.39	EU DESCRIPT	0.0400	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U145	OS2	10300602	1.39	EU DESCRIPT	0.0400	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U147	OS1	10300602	1.67	EU DESCRIPT	0.0300	0.0000	0.0000	US Army Fort Dix

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NJ	Burlington	34005	45924	U147	OS2	10300602	1.67	EU DESCRIPT	0.0300	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U147	OS3	10300602	1.67	EU DESCRIPT	0.0300	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U15	OS1	10300602	49.90	EU DESCRIPT	0.7000	0.0000	0.0006	US Army Fort Dix
NJ	Burlington	34005	45924	U150	OS1	10300602	1.40	EU DESCRIPT	0.0300	0.0002	0.0002	US Army Fort Dix
NJ	Burlington	34005	45924	U150	OS2	10300602	1.40	EU DESCRIPT	0.0300	0.0002	0.0002	US Army Fort Dix
NJ	Burlington	34005	45924	U152	OS1	10300602	1.40	EU DESCRIPT	0.0300	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U152	OS2	10300602	1.40	EU DESCRIPT	0.0300	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U154	OS2	10300602	1.40	EU DESCRIPT	0.0200	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U154	OS1	10300602	1.40	EU DESCRIPT	0.0200	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U156	OS1	10300602	1.40	EU DESCRIPT	0.0400	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U156	OS2	10300602	1.40	EU DESCRIPT	0.0400	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U158	OS1	10300602	1.40	EU DESCRIPT	0.0600	0.0002	0.0002	US Army Fort Dix
NJ	Burlington	34005	45924	U158	OS2	10300602	1.40	EU DESCRIPT	0.0600	0.0002	0.0002	US Army Fort Dix
NJ	Burlington	34005	45924	U16	OS1	10300602	49.90	EU DESCRIPT	0.7000	0.0000	0.0006	US Army Fort Dix
NJ	Burlington	34005	45924	U162	OS1	10300602	1.40	EU DESCRIPT	0.0200	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U162	OS2	10300602	1.40	EU DESCRIPT	0.0200	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U164	OS1	10300602	3.10	EU DESCRIPT	0.0600	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U165	OS1	10300602	3.10	EU DESCRIPT	0.0500	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U17	OS1	10300602	49.90	EU DESCRIPT	0.7000	0.0000	0.0006	US Army Fort Dix
NJ	Burlington	34005	45924	U22	OS1	10300602	45.90	EU DESCRIPT	0.1500	0.0001	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U24	OS1	10300501	2.70	EU DESCRIPT	0.1800	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U25	OS1	10300501	3.30	EU DESCRIPT	0.2000	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U26	OS1	10300501	3.30	EU DESCRIPT	0.1100	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U26	OS2	10300602	3.30	EU DESCRIPT	0.0600	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U27	OS1	10300501	3.30	EU DESCRIPT	0.1800	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U33	OS1	10300501	3.00	EU DESCRIPT	0.1200	0.0006	0.0006	US Army Fort Dix
NJ	Burlington	34005	45924	U34	OS1	10300501	3.00	EU DESCRIPT	0.1200	0.0006	0.0006	US Army Fort Dix
NJ	Burlington	34005	45924	U42	OS1	10300501	2.00	EU DESCRIPT	0.2200	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U70	OS1	10300501	1.00	EU DESCRIPT	0.0400	0.0007	0.0007	US Army Fort Dix
NJ	Burlington	34005	45924	U75	OS1	10300501	2.39	EU DESCRIPT	0.1300	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U81	OS1	10300501	2.63	EU DESCRIPT	0.2300	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U82	OS1	10300501	1.70	EU DESCRIPT	0.1100	0.0012	0.0012	US Army Fort Dix
NJ	Burlington	34005	45924	U87	OS1	10300501	1.70	EU DESCRIPT	0.1000	0.0012	0.0012	US Army Fort Dix
NJ	Burlington	34005	45924	U88	OS1	10300501	1.70	EU DESCRIPT	0.0500	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U89	OS1	10300501	1.08	EU DESCRIPT	0.0600	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45924	U90	OS1	10300501	2.10	EU DESCRIPT	0.4900	0.0015	0.0015	US Army Fort Dix
NJ	Burlington	34005	45924	U91	OS1	10300602	2.70	EU DESCRIPT	0.2200	0.0013	0.0013	US Army Fort Dix
NJ	Burlington	34005	45924	U92	OS1	10300602	2.05	EU DESCRIPT	0.1700	0.0010	0.0010	US Army Fort Dix
NJ	Burlington	34005	45924	U93	OS1	10300501	3.18	EU DESCRIPT	0.1200	0.0000	0.0001	US Army Fort Dix
NJ	Burlington	34005	45924	U94	OS1	10300501	1.56	EU DESCRIPT	0.0600	0.0000	0.0000	US Army Fort Dix
NJ	Burlington	34005	45940	U68	OS2	10200401	55.00	SCC Descriptio	25.5900	0.0501	0.0501	Colorite Specialty Resins
NJ	Burlington	34005	45940	U68	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0006	0.0006	Colorite Specialty Resins
NJ	Burlington	34005	45940	U69	OS2	10200401	55.00	SCC Descriptio	29.8500	0.0583	0.0583	Colorite Specialty Resins
NJ	Burlington	34005	45940	U69	OS1	10200602	55.00	SCC Descriptio	0.2800	0.0018	0.0018	Colorite Specialty Resins
NJ	Burlington	34005	45940	U70	OS2	10200401	55.00	SCC Descriptio	1.2900	0.0000	0.0004	Colorite Specialty Resins
NJ	Burlington	34005	45940	U70	OS1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Colorite Specialty Resins
NJ	Burlington	34005	45949	U2	OS2	10300799	55.00	SCC Descriptio	0.1500	0.0000	0.0001	Burlington County Resource Recovery Complex
NJ	Burlington	34005	45949	U2	OS3	10300602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Burlington County Resource Recovery Complex
NJ	Burlington	34005	45968	U37	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0008	0.0008	U.S. PIPE & FOUNDRY COMPANY, INC.
NJ	Burlington	34005	45977	U16	OS2	10200401	0.00		9.6400	0.0249	0.0249	Sybron Chemicals Inc.
NJ	Burlington	34005	45977	U16	OS4	10200401	0.00		9.6400	0.0249	0.0249	Sybron Chemicals Inc.
NJ	Burlington	34005	45977	U16	OS6	10200401	0.00		6.4300	0.0166	0.0166	Sybron Chemicals Inc.

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NJ	Burlington	34005	45978	U10	OS1	10200502	55.00	SCC Descriptio	0.5700	0.0000	0.0016	Viking Yacht Company
NJ	Burlington	34005	45978	U11	OS1	10200906	0.00		0.3200	0.0000	0.0009	Viking Yacht Company
NJ	Burlington	34005	45978	U15	OS1	10200502	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Viking Yacht Company
NJ	Burlington	34005	45978	U2	OS1	10200906	0.00		0.2800	0.0000	0.0008	Viking Yacht Company
NJ	Burlington	34005	45978	U4	OS1	10200502	55.00	SCC Descriptio	0.5400	0.0000	0.0015	Viking Yacht Company
NJ	Burlington	34005	45978	U6	OS1	10200502	55.00	SCC Descriptio	0.6100	0.0000	0.0017	Viking Yacht Company
NJ	Burlington	34005	45978	U6	OS2	10200502	55.00	SCC Descriptio	0.3000	0.0000	0.0008	Viking Yacht Company
NJ	Burlington	34005	45979	U3	OS1	10300502	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Burlington Generating Station
NJ	Burlington	34005	45983	U801	O80112	10200401	55.00	SCC Descriptio	6.0300	0.0286	0.0286	PolyOne Corporation
NJ	Burlington	34005	45983	U801	O80122	10200401	55.00	SCC Descriptio	6.0300	0.0286	0.0286	PolyOne Corporation
NJ	Burlington	34005	45983	U801	O80111	10200602	55.00	SCC Descriptio	0.2300	0.0034	0.0034	PolyOne Corporation
NJ	Burlington	34005	45983	U801	O80121	10200602	55.00	SCC Descriptio	0.2300	0.0034	0.0034	PolyOne Corporation
NJ	Burlington	34005	45983	U831	O83111	10200602	55.00	SCC Descriptio	0.1400	0.0005	0.0005	PolyOne Corporation
NJ	Burlington	34005	45983	U831	O83112	10200502	55.00	SCC Descriptio	0.2200	0.0000	0.0000	PolyOne Corporation
NJ	Burlington	34005	45983	U832	O83221	10200602	55.00	SCC Descriptio	0.1200	0.0003	0.0003	PolyOne Corporation
NJ	Burlington	34005	45983	U832	O83222	10200502	55.00	SCC Descriptio	0.2200	0.0000	0.0000	PolyOne Corporation
NJ	Camden	34007	50035	U4	OS1	10200602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	SAR INDUSTRIAL FINISHING
NJ	Camden	34007	50047	U14	OS1	10300602	55.00	SCC Descriptio	3.3000	0.0183	0.0183	ANCORA PSYCHIATRIC HOSPITAL
NJ	Camden	34007	50047	U14	OS2	10300602	55.00	SCC Descriptio	2.6700	0.0135	0.0135	ANCORA PSYCHIATRIC HOSPITAL
NJ	Camden	34007	50047	U15	OS3	10300602	55.00	SCC Descriptio	2.5900	0.0127	0.0127	ANCORA PSYCHIATRIC HOSPITAL
NJ	Camden	34007	50047	U26	OS1	10300602	55.00	SCC Descriptio	1.2800	0.0062	0.0062	ANCORA PSYCHIATRIC HOSPITAL
NJ	Camden	34007	50054	U10	OS1	10200502	55.00	SCC Descriptio	0.1700	0.0005	0.0005	COOK COMPOSITES & POLYMERS CO
NJ	Camden	34007	50054	U9	OS1	10200602	55.00	SCC Descriptio	0.5300	0.0015	0.0015	COOK COMPOSITES & POLYMERS CO
NJ	Camden	34007	50062	U5	OS1	10200602	55.00	SCC Descriptio	1.5300	0.0061	0.0061	Weyerhaeuser INDUSTRIES, INC.
NJ	Camden	34007	50063	U3	OS2	10200401	55.00	SCC Descriptio	7.1000	0.0045	0.0045	Weyerhaeuser Company
NJ	Camden	34007	50063	U3	OS1	10200602	55.00	SCC Descriptio	1.7600	0.0069	0.0069	Weyerhaeuser Company
NJ	Camden	34007	50415	U16	OS1	10200602	2.64	EU DESCRIPT	0.4200	0.0008	0.0008	PRC-DeSoto International, Inc
NJ	Camden	34007	50487	U19	OS1	10200602	4.95	EU DESCRIPT	0.2200	0.0074	0.0074	BARRY CALLEBAUT USA INC
NJ	Camden	34007	50487	U20	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0001	0.0001	BARRY CALLEBAUT USA INC
NJ	Camden	34007	50487	U21	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0003	0.0003	BARRY CALLEBAUT USA INC
NJ	Camden	34007	50487	U22	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0003	0.0003	BARRY CALLEBAUT USA INC
NJ	Camden	34007	50487	U23	OS1	10200602	55.00	SCC Descriptio	0.0600	0.0013	0.0013	BARRY CALLEBAUT USA INC
NJ	Camden	34007	50519	U16	OS1	10300501	5.00	EU DESCRIPT	0.3000	0.0011	0.0011	Koch Materials Company - Gloucester City
NJ	Camden	34007	50519	U2	OS1	10300501	10.00	EU DESCRIPT	0.8100	0.0000	0.0005	Koch Materials Company - Gloucester City
NJ	Camden	34007	50580	U8	OS5	10200502	55.00	SCC Descriptio	1.6800	0.0062	0.0062	KOCH MATERIALS COMPANY
NJ	Camden	34007	50580	U8	OS7	10200502	55.00	SCC Descriptio	1.6800	0.0062	0.0062	KOCH MATERIALS COMPANY
NJ	Camden	34007	50580	U8	OS1	10200502	55.00	SCC Descriptio	0.3200	0.0012	0.0012	KOCH MATERIALS COMPANY
NJ	Camden	34007	50580	U8	OS2	10200502	55.00	SCC Descriptio	0.4200	0.0012	0.0012	KOCH MATERIALS COMPANY
NJ	Camden	34007	50580	U8	OS6	10200502	55.00	SCC Descriptio	0.1100	0.0003	0.0003	KOCH MATERIALS COMPANY
NJ	Camden	34007	50704	U8	OS1	10200502	55.00	SCC Descriptio	0.0700	0.0007	0.0007	Colonial Processing
NJ	Camden	34007	50790	U1	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	MOUNTAIN PRINTING CO INC
NJ	Camden	34007	51486	U3	OS2	10200401	0.00		26.9300	0.1519	0.1519	Pneumo Abex Company D.B.A. - MAFCO Worldwide
NJ	Camden	34007	51486	U3	OS1	10200401	0.00		21.6600	0.1191	0.1191	Pneumo Abex Company D.B.A. - MAFCO Worldwide
NJ	Camden	34007	51486	U5	OS1	10200401	0.00		0.6100	0.0038	0.0038	Pneumo Abex Company D.B.A. - MAFCO Worldwide
NJ	Camden	34007	51595	U10	OS1	10200602	55.00	SCC Descriptio	1.2100	0.0090	0.0090	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U11	OS1	10200602	55.00	SCC Descriptio	0.6300	0.0058	0.0058	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U12	OS1	10200602	55.00	SCC Descriptio	0.3800	0.0004	0.0004	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U13	OS1	10200602	55.00	SCC Descriptio	0.2100	0.0013	0.0013	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U14	OS1	10200602	55.00	SCC Descriptio	0.3000	0.0052	0.0052	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U15	OS1	10200602	55.00	SCC Descriptio	0.5900	0.0057	0.0057	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U19	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0016	0.0016	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U20	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0012	0.0012	CAMPBELL SOUP COMPANY

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NJ	Camden	34007	51595	U25	OS1	10200602	55.00	SCC Descriptio	0.7000	0.0054	0.0054	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U26	OS1	10200602	55.00	SCC Descriptio	0.8400	0.0069	0.0069	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U27	OS1	10200602	55.00	SCC Descriptio	0.8100	0.0078	0.0078	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U28	OS1	10200602	55.00	SCC Descriptio	0.0600	0.0020	0.0020	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U29	OS1	10200602	55.00	SCC Descriptio	0.2300	0.0018	0.0018	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U31	OS1	10200602	55.00	SCC Descriptio	0.0500	0.0003	0.0003	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51595	U9	OS1	10300602	26.40	EU DESCRIPT	0.8400	0.0012	0.0012	CAMPBELL SOUP COMPANY
NJ	Camden	34007	51606	U6	OS0	10300402	55.00	SCC Descriptio	18.2200	0.0248	0.0248	Amerada Hess - Pennsauken Terminal
NJ	Camden	34007	51607	U1	OS2	10300501	55.00	SCC Descriptio	0.0200	0.0117	0.0117	NGC Industries Paperboard Plant
NJ	Camden	34007	51607	U1	OS4	10300501	55.00	SCC Descriptio	0.0200	0.0117	0.0117	NGC Industries Paperboard Plant
NJ	Camden	34007	51607	U1	OS3	10300602	55.00	SCC Descriptio	3.1100	0.0526	0.0526	NGC Industries Paperboard Plant
NJ	Camden	34007	51607	U1	OS1	10300602	55.00	SCC Descriptio	7.1100	0.0349	0.0349	NGC Industries Paperboard Plant
NJ	Camden	34007	51608	U2202	OS1	10200602	55.00	SCC Descriptio	0.9000	0.0001	0.0001	Camden Cogen, L.P.
NJ	Camden	34007	51609	U26	OS4	10200602	55.00	SCC Descriptio	0.5100	0.0012	0.0012	ALUMINUM SHAPES LLC
NJ	Camden	34007	51609	U26	OS5	10200602	55.00	SCC Descriptio	0.4400	0.0011	0.0011	ALUMINUM SHAPES LLC
NJ	Camden	34007	51609	U26	OS1	10200602	55.00	SCC Descriptio	0.1000	0.0000	0.0003	ALUMINUM SHAPES LLC
NJ	Camden	34007	51609	U26	OS2	10200602	55.00	SCC Descriptio	0.5300	0.0000	0.0015	ALUMINUM SHAPES LLC
NJ	Camden	34007	51609	U26	OS6	10200602	55.00	SCC Descriptio	0.1000	0.0000	0.0000	ALUMINUM SHAPES LLC
NJ	Cape May	34009	73236	U1	OS1	10200401	48.00	EU DESCRIPT	3.6000	0.0000	0.0000	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73236	U2	OS1	10200401	24.00	EU DESCRIPT	7.1300	0.0000	0.0047	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73236	U21	OS1	10300602	1.00	EU DESCRIPT	0.1100	0.0001	0.0001	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73236	U3	OS1	10200401	24.00	EU DESCRIPT	5.0700	0.0263	0.0263	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73236	U5	OS1	10300501	1.46	EU DESCRIPT	0.0300	0.0000	0.0000	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73236	U6	OS1	10300501	1.45	EU DESCRIPT	0.0300	0.0000	0.0000	USDOT COAST GUARD TRAINING CTR
NJ	Cape May	34009	73241	U1	OS2	10300799	55.00	SCC Descriptio	8.3200	0.0582	0.0582	WOODBINE DEVELOPMENTAL CENTER
NJ	Cape May	34009	73241	U1	OS6	10300799	55.00	SCC Descriptio	3.7600	0.0303	0.0303	WOODBINE DEVELOPMENTAL CENTER
NJ	Cape May	34009	73241	U1	OS5	10300504	55.00	SCC Descriptio	1.3400	0.0084	0.0084	WOODBINE DEVELOPMENTAL CENTER
NJ	Cape May	34009	73241	U1	OS4	10300799	55.00	SCC Descriptio	1.0700	0.0090	0.0090	WOODBINE DEVELOPMENTAL CENTER
NJ	Cape May	34009	73241	U1	OS3	10300504	55.00	SCC Descriptio	0.4500	0.0000	0.0012	WOODBINE DEVELOPMENTAL CENTER
NJ	Cape May	34009	73241	U1	OS1	10300402	55.00	SCC Descriptio	0.3100	0.0162	0.0162	WOODBINE DEVELOPMENTAL CENTER
NJ	Cumberland	34011	75015	U1	OS6	10200502	55.00	SCC Descriptio	1.3500	0.0188	0.0188	SOUTH JERSEY HOSPITAL SYSTEM - NEWCOMB
NJ	Cumberland	34011	75015	U1	OS5	10200502	55.00	SCC Descriptio	1.9800	0.0000	0.0091	SOUTH JERSEY HOSPITAL SYSTEM - NEWCOMB
NJ	Cumberland	34011	75113	U35	OS1	10200602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	DALLAS AIRMOTIVE
NJ	Cumberland	34011	75113	U65	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0000	0.0000	DALLAS AIRMOTIVE
NJ	Cumberland	34011	75113	U66	OS1	10200602	55.00	SCC Descriptio	0.1600	0.0000	0.0003	DALLAS AIRMOTIVE
NJ	Cumberland	34011	75113	U67	OS1	10200602	55.00	SCC Descriptio	0.1600	0.0006	0.0006	DALLAS AIRMOTIVE
NJ	Cumberland	34011	75113	U84	OS1	10200602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	DALLAS AIRMOTIVE
NJ	Cumberland	34011	75262	U10	OS1	10300602	55.00	SCC Descriptio	1.1000	0.0393	0.0393	UNITED STATES GOVERNMENT
NJ	Cumberland	34011	75262	U4	OS1	10300602	55.00	SCC Descriptio	0.5300	0.0179	0.0179	UNITED STATES GOVERNMENT
NJ	Cumberland	34011	75262	U7	OS1	10300602	55.00	SCC Descriptio	0.4700	0.0164	0.0164	UNITED STATES GOVERNMENT
NJ	Cumberland	34011	75478	U1	OS2	10300602	31.00	EU DESCRIPT	0.3100	0.0000	0.0009	Vineland Developmental Center-East Campus
NJ	Cumberland	34011	75478	U3	OS2	10300602	60.00	EU DESCRIPT	0.7300	0.0023	0.0023	Vineland Developmental Center-East Campus
NJ	Cumberland	34011	75487	U15	OS3	10200602	55.00	SCC Descriptio	0.9800	0.0033	0.0033	Casie Ecology Oil Salvage, Inc.
NJ	Cumberland	34011	75487	U9	OS1	10300501	0.00		0.4700	0.0039	0.0039	Casie Ecology Oil Salvage, Inc.
NJ	Cumberland	34011	75499	U1004	OS1502	10300502	33.50	EU DESCRIPT	0.4500	0.0000	0.0011	Bayside and Southern State Prison Complex
NJ	Cumberland	34011	75499	U1004	OS602	10300502	33.50	EU DESCRIPT	0.1300	0.0000	0.0004	Bayside and Southern State Prison Complex
NJ	Cumberland	34011	75499	U1004	OS1501	10300602	33.50	EU DESCRIPT	0.7000	0.0000	0.0017	Bayside and Southern State Prison Complex
NJ	Cumberland	34011	75499	U1004	OS601	10300602	33.50	EU DESCRIPT	0.3300	0.0017	0.0017	Bayside and Southern State Prison Complex
NJ	Cumberland	34011	75499	U901	OS901	10300602	2.50	EU DESCRIPT	8.0900	0.0037	0.0037	Bayside and Southern State Prison Complex
NJ	Cumberland	34011	75503	U17	OS1	10200602	55.00	SCC Descriptio	0.6100	0.0000	0.0000	Kimble Glass Inc.
NJ	Cumberland	34011	75505	U103	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U104	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Wheaton, Inc.

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Plant Name
NJ	Cumberland	34011	75505	U155	OS1	10300602	55.00	SCC Descriptio	0.1400	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U76	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U77	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U78	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U79	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U80	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U95	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75505	U96	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Wheaton, Inc.
NJ	Cumberland	34011	75510	U4	OS1	10300501	1.38	EU DESCRIPT	0.0400	0.0000	0.0000	Cumberland County Solid Waste Facility
NJ	Cumberland	34011	75510	U5	OS1	10300501	1.38	EU DESCRIPT	0.0400	0.0000	0.0000	Cumberland County Solid Waste Facility
NJ	Cumberland	34011	75511	U1	OS0	10200602	55.00	SCC Descriptio	6.8800	0.0190	0.0190	U.S. Silica Company - Newport Plant
NJ	Essex	34013	05031	U15	OS1	10300602	55.00	SCC Descriptio	1.6800	0.0139	0.0139	VA Medical Center, East Orange,
NJ	Essex	34013	05031	U3	OS1	10300602	55.00	SCC Descriptio	1.8400	0.0141	0.0141	VA Medical Center, East Orange,
NJ	Essex	34013	05031	U7	OS1	10300602	55.00	SCC Descriptio	2.1100	0.0148	0.0148	VA Medical Center, East Orange,
NJ	Essex	34013	05031	U8	OS1	10300602	55.00	SCC Descriptio	1.3200	0.0154	0.0154	VA Medical Center, East Orange,
NJ	Essex	34013	05067	U1	OS1	10300504	55.00	SCC Descriptio	0.8000	0.0000	0.0003	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U1	OS2	10300504	55.00	SCC Descriptio	0.8000	0.0000	0.0003	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U1	OS4	10300602	55.00	SCC Descriptio	0.0700	0.0003	0.0003	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U1	OS3	10300602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U18	OS1	10300602	55.00	SCC Descriptio	0.3000	0.0011	0.0011	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U19	OS1	10300602	55.00	SCC Descriptio	0.3000	0.0011	0.0011	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U24	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0004	0.0004	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U91	OS1	10300602	55.00	SCC Descriptio	0.1700	0.0000	0.0003	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05067	U92	OS1	10300602	55.00	SCC Descriptio	0.4700	0.0000	0.0004	BENJAMIN MOORE & CO., INC.
NJ	Essex	34013	05086	U201	OS1	10300501	0.00		1.3200	0.0034	0.0034	BP Products North America Inc.
NJ	Essex	34013	05086	U202	OS1	10300501	0.00		0.0700	0.0000	0.0000	BP Products North America Inc.
NJ	Essex	34013	05111	U100	OS1	10300602	55.00	SCC Descriptio	0.5500	0.0014	0.0014	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U100	OS2	10300602	55.00	SCC Descriptio	0.5500	0.0014	0.0014	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U100	OS3	10300602	55.00	SCC Descriptio	0.5500	0.0014	0.0014	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U22	OS1	10200602	55.00	SCC Descriptio	1.2200	0.0122	0.0122	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U95	OS1	10200602	55.00	SCC Descriptio	0.6100	0.0057	0.0057	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U95	OS2	10200504	55.00	SCC Descriptio	0.6100	0.0000	0.0002	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U96	OS1	10300504	0.00		0.5300	0.0000	0.0004	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05111	U97	OS1	10300504	0.00		1.3500	0.0000	0.0010	ELAN CHEMICAL CO., INC.
NJ	Essex	34013	05171	U9	OS1	10300602	55.00	SCC Descriptio	0.3800	0.0000	0.0002	NATIONAL LIGHTING COMPANY, INC.
NJ	Essex	34013	05255	U7	OS1	10200602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	ADCO CHEMICAL CO
NJ	Essex	34013	05255	U8	OS1	10200602	55.00	SCC Descriptio	1.0500	0.0046	0.0046	ADCO CHEMICAL CO
NJ	Essex	34013	05255	U8	OS2	10200502	55.00	SCC Descriptio	0.1400	0.0000	0.0004	ADCO CHEMICAL CO
NJ	Essex	34013	05332	U16	OS1	10200402	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Handy Store Fixtures Inc.
NJ	Essex	34013	05392	U1	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U18	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Newark International Airport
NJ	Essex	34013	05392	U19	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U2	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U20	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U21	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U3	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U34	OS1	10300602	55.00	SCC Descriptio	0.2100	0.0000	0.0002	Newark International Airport
NJ	Essex	34013	05392	U4	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05392	U41	OS1	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0002	Newark International Airport
NJ	Essex	34013	05392	U42	OS1	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0002	Newark International Airport
NJ	Essex	34013	05392	U49	OS1	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0002	Newark International Airport
NJ	Essex	34013	05392	U5	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Newark International Airport

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NJ	Essex	34013	05392	U50	OS1	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0002	Newark International Airport
NJ	Essex	34013	05392	U6	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	Newark International Airport
NJ	Essex	34013	05393	U1	OS2	10300602	55.00	SCC Descriptio	1.9300	0.0127	0.0127	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U1	OS5	10300504	55.00	SCC Descriptio	0.1600	0.0000	0.0004	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U1	OS1	10300602	55.00	SCC Descriptio	1.0600	0.0000	0.0029	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS3	10300602	55.00	SCC Descriptio	1.0500	0.0042	0.0042	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS1	10300602	55.00	SCC Descriptio	0.6700	0.0028	0.0028	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS4	10300501	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS5	10300501	55.00	SCC Descriptio	0.0100	0.0000	0.0001	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS2	10300602	55.00	SCC Descriptio	0.2700	0.0000	0.0020	Newerk Beth Israel Medical Center
NJ	Essex	34013	05393	U3	OS6	10300501	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Newerk Beth Israel Medical Center
NJ	Essex	34013	05442	U1	OS2	10300501	55.00	SCC Descriptio	0.3700	0.0114	0.0114	Saint Michael's Medical Center
NJ	Essex	34013	05442	U1	OS4	10300501	55.00	SCC Descriptio	0.3900	0.0111	0.0111	Saint Michael's Medical Center
NJ	Essex	34013	05442	U1	OS5	10300602	55.00	SCC Descriptio	2.5400	0.0165	0.0165	Saint Michael's Medical Center
NJ	Essex	34013	05442	U1	OS1	10300602	55.00	SCC Descriptio	0.7200	0.0163	0.0163	Saint Michael's Medical Center
NJ	Essex	34013	05442	U1	OS3	10300602	55.00	SCC Descriptio	0.6400	0.0132	0.0132	Saint Michael's Medical Center
NJ	Essex	34013	05442	U1	OS6	10300501	55.00	SCC Descriptio	0.3700	0.0000	0.0000	Saint Michael's Medical Center
NJ	Essex	34013	05459	U3001	OS2	10200602	55.00	SCC Descriptio	1.0500	0.0069	0.0069	TROY CHEMICAL CORP
NJ	Essex	34013	05459	U3001	OS1	10200502	55.00	SCC Descriptio	0.2300	0.0000	0.0005	TROY CHEMICAL CORP
NJ	Essex	34013	05459	U3002	OS2	10200602	55.00	SCC Descriptio	1.1900	0.0067	0.0067	TROY CHEMICAL CORP
NJ	Essex	34013	05459	U3002	OS1	10200502	55.00	SCC Descriptio	0.1300	0.0000	0.0002	TROY CHEMICAL CORP
NJ	Essex	34013	05459	U3603	OS2	10200602	55.00	SCC Descriptio	0.6100	0.0067	0.0067	TROY CHEMICAL CORP
NJ	Essex	34013	05459	U3603	OS1	10200502	55.00	SCC Descriptio	0.1300	0.0000	0.0003	TROY CHEMICAL CORP
NJ	Essex	34013	05467	U32	OS1	10300602	55.00	SCC Descriptio	0.1600	0.0000	0.0001	Equistar Chemicals-Newark Plant
NJ	Essex	34013	05530	U7	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0000	0.0000	C.D.I. DISPERSIONS
NJ	Essex	34013	05530	U8	OS1	10300602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	C.D.I. DISPERSIONS
NJ	Essex	34013	05530	U9	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0000	0.0000	C.D.I. DISPERSIONS
NJ	Essex	34013	05569	U90	OS1	10300501	0.00		0.0400	0.0004	0.0004	WAS Terminals Corporation
NJ	Essex	34013	05588	U101	OS1	10200602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	ESKIMO PIE CORPORATION
NJ	Essex	34013	05620	U2	OS5	10300602	55.00	SCC Descriptio	0.3600	0.0010	0.0010	IRVINGTON GENERAL HOSPITAL
NJ	Essex	34013	05620	U2	OS3	10300602	55.00	SCC Descriptio	0.2700	0.0007	0.0007	IRVINGTON GENERAL HOSPITAL
NJ	Essex	34013	05620	U2	OS4	10300602	55.00	SCC Descriptio	0.2800	0.0003	0.0003	IRVINGTON GENERAL HOSPITAL
NJ	Essex	34013	06104	U2	OS1	10200602	55.00	SCC Descriptio	0.4400	0.0079	0.0079	POLAROME MFG CO INC
NJ	Essex	34013	06104	U801	OS1	10200602	55.00	SCC Descriptio	1.1300	0.0507	0.0507	POLAROME MFG CO INC
NJ	Essex	34013	06236	U1	OS1	10200602	55.00	SCC Descriptio	7.7900	0.0268	0.0268	AMROD CORPORATION
NJ	Essex	34013	06236	U2	OS1	10200602	55.00	SCC Descriptio	1.6500	0.0057	0.0057	AMROD CORPORATION
NJ	Essex	34013	06236	U3	OS1	10200602	55.00	SCC Descriptio	0.6100	0.0021	0.0021	AMROD CORPORATION
NJ	Essex	34013	06236	U5	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0005	0.0005	AMROD CORPORATION
NJ	Essex	34013	06265	U46	OS2	10200602	55.00	SCC Descriptio	7.3100	0.2147	0.2147	PENICK CORP
NJ	Essex	34013	06265	U46	OS1	10200401	55.00	SCC Descriptio	1.7500	0.0000	0.0047	PENICK CORP
NJ	Essex	34013	06265	U86	OS1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	PENICK CORP
NJ	Essex	34013	06386	U4	OS1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Newark Industrial Spray, Inc.
NJ	Essex	34013	06563	U14	OS3	10300602	55.00	SCC Descriptio	1.8900	0.0043	0.0043	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U14	OS2	10300602	55.00	SCC Descriptio	0.9700	0.0022	0.0022	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U14	OS1	10300602	55.00	SCC Descriptio	0.8000	0.0018	0.0018	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U15	OS1	10200602	55.00	SCC Descriptio	2.3500	0.0053	0.0053	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U15	OS2	10200602	55.00	SCC Descriptio	0.3900	0.0009	0.0009	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U2	OS1	10300602	55.00	SCC Descriptio	1.0500	0.0024	0.0024	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06563	U3	OS1	10300602	55.00	SCC Descriptio	2.1300	0.0048	0.0048	Lohmann Therapy Systems Corporation
NJ	Essex	34013	06618	U1	OS1	10200602	55.00	SCC Descriptio	9.7300	0.0430	0.0430	Newark Boxboard Company
NJ	Essex	34013	07167	U311	OS1370	10200602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Hoffmann-La Roche
NJ	Essex	34013	07167	U313	OS1373	10200602	55.00	SCC Descriptio	2.4700	0.0097	0.0097	Hoffmann-La Roche

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NJ	Essex	34013	07167	U313	OS1377	10200602	55.00	SCC Descriptio	8.7700	0.0031	0.0031	Hoffmann-La Roche
NJ	Essex	34013	07167	U313	OS1375	10200602	55.00	SCC Descriptio	1.3000	0.0000	0.0000	Hoffmann-La Roche
NJ	Essex	34013	07167	U313	OS1379	10200602	55.00	SCC Descriptio	0.2300	0.0000	0.0000	Hoffmann-La Roche
NJ	Essex	34013	07167	U313	OS1381	10200602	55.00	SCC Descriptio	1.0800	0.0000	0.0024	Hoffmann-La Roche
NJ	Essex	34013	07167	U313	OS1376	10200402	55.00	SCC Descriptio	0.1500	0.0000	0.0001	Hoffmann-La Roche
NJ	Essex	34013	07167	U320	OS1582	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Hoffmann-La Roche
NJ	Essex	34013	07167	U45	OS120	10200602	55.00	SCC Descriptio	1.1800	0.0026	0.0026	Hoffmann-La Roche
NJ	Essex	34013	07331	U4	OS2	10300602	55.00	SCC Descriptio	0.6700	0.0032	0.0032	Sun Chemical Corporation - Pigments Division
NJ	Essex	34013	07331	U4	OS1	10300602	55.00	SCC Descriptio	0.6800	0.0001	0.0001	Sun Chemical Corporation - Pigments Division
NJ	Essex	34013	07349	U1	OS1	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U1	OS3	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U11	OS1	10200602	55.00	SCC Descriptio	0.7300	0.0000	0.0020	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U11	OS3	10200602	55.00	SCC Descriptio	0.7300	0.0000	0.0020	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U11	OS5	10200602	55.00	SCC Descriptio	0.7300	0.0000	0.0020	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U20	OS1	10200602	55.00	SCC Descriptio	4.3800	0.0132	0.0132	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U20	OS2	10200602	55.00	SCC Descriptio	4.3800	0.0132	0.0132	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U20	OS3	10200602	55.00	SCC Descriptio	4.3800	0.0132	0.0132	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U20	OS4	10200602	55.00	SCC Descriptio	4.3800	0.0132	0.0132	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U5	OS1	10200602	55.00	SCC Descriptio	0.1100	0.0003	0.0003	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U5	OS3	10200602	55.00	SCC Descriptio	0.1100	0.0003	0.0003	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U7	OS1	10200602	55.00	SCC Descriptio	0.1600	0.0000	0.0004	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U7	OS2	10200602	55.00	SCC Descriptio	0.1600	0.0000	0.0004	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U8	OS1	10200602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07349	U8	OS3	10200602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Passaic Valley Sewerage Commissioners
NJ	Essex	34013	07666	U101	OS103	10300602	55.00	SCC Descriptio	4.4700	0.0088	0.0088	Clara Maass Medical Center
NJ	Essex	34013	07666	U101	OS101	10300501	55.00	SCC Descriptio	0.4200	0.0000	0.0000	Clara Maass Medical Center
NJ	Essex	34013	07666	U101	OS102	10300501	55.00	SCC Descriptio	0.1600	0.0000	0.0005	Clara Maass Medical Center
NJ	Essex	34013	07726	U2107	OS17	10300602	55.00	SCC Descriptio	6.0700	0.0384	0.0384	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07726	U2107	OS13	10300602	55.00	SCC Descriptio	4.2200	0.0382	0.0382	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07726	U2107	OS9	10300602	55.00	SCC Descriptio	2.0500	0.0365	0.0365	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07726	U2203	OS5	10300602	12.60	EU DESCRIPT	0.3700	0.0000	0.0000	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07726	U2203	OS1	10300602	12.60	EU DESCRIPT	0.5400	0.0000	0.0000	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07726	U2203	OS3	10300602	12.60	EU DESCRIPT	0.4600	0.0000	0.0006	University of Medicine & Dentistry of NJ
NJ	Essex	34013	07727	U37	OS1	10200502	9.00	EU DESCRIPT	0.4600	0.0000	0.0000	Continental Airlines, Inc.
NJ	Essex	34013	07727	U37	OS2	10200502	9.00	EU DESCRIPT	0.4600	0.0000	0.0000	Continental Airlines, Inc.
NJ	Essex	34013	07727	U4	OS7	10300602	5.23	EU DESCRIPT	1.1200	0.0028	0.0028	Continental Airlines, Inc.
NJ	Essex	34013	07727	U5	OS8	10300602	5.23	EU DESCRIPT	1.1200	0.0028	0.0028	Continental Airlines, Inc.
NJ	Essex	34013	07727	U7	OS10	10300602	1.60	EU DESCRIPT	0.3500	0.0009	0.0009	Continental Airlines, Inc.
NJ	Essex	34013	07727	U8	OS11	10300602	1.60	EU DESCRIPT	0.3500	0.0009	0.0009	Continental Airlines, Inc.
NJ	Essex	34013	07730	U13	OS1	10200602	1.00	EU DESCRIPT	0.1500	0.0007	0.0007	Seton Company
NJ	Essex	34013	07730	U14	OS1	10200602	1.00	EU DESCRIPT	0.0900	0.0006	0.0006	Seton Company
NJ	Essex	34013	07730	U15	OS1	10200602	1.00	EU DESCRIPT	0.1500	0.0006	0.0006	Seton Company
NJ	Essex	34013	07730	U2	OS1	10200401	8.38	EU DESCRIPT	2.1900	0.0082	0.0082	Seton Company
NJ	Essex	34013	07730	U3	OS1	10200401	20.92	EU DESCRIPT	5.0600	0.0061	0.0061	Seton Company
NJ	Essex	34013	07730	U4	OS1	10200401	20.92	EU DESCRIPT	4.2000	0.0073	0.0073	Seton Company
NJ	Essex	34013	07730	U5	OS1	10200401	27.20	EU DESCRIPT	5.9000	0.0065	0.0065	Seton Company
NJ	Essex	34013	07976	U1	OS2302	10300402	55.00	SCC Descriptio	1.1400	0.0007	0.0007	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS2502	10300402	55.00	SCC Descriptio	1.1400	0.0007	0.0007	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS52	10300402	55.00	SCC Descriptio	1.1400	0.0007	0.0007	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS652	10300402	55.00	SCC Descriptio	1.1400	0.0007	0.0007	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS352	10300402	55.00	SCC Descriptio	3.6400	0.0008	0.0008	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS2301	10300402	55.00	SCC Descriptio	4.0900	0.0009	0.0009	Ivy Hill Park Apartments

									2002 NOx Emissions			
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NJ	Essex	34013	07976	U1	OS2501	10300402	55.00	SCC Descriptio	4.0900	0.0009	0.0009	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS351	10300402	55.00	SCC Descriptio	4.0900	0.0009	0.0009	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS51	10300402	55.00	SCC Descriptio	4.0900	0.0009	0.0009	Ivy Hill Park Apartments
NJ	Essex	34013	07976	U1	OS651	10300402	55.00	SCC Descriptio	4.0900	0.0009	0.0009	Ivy Hill Park Apartments
NJ	Gloucester	34015	55057	U1	OS1	10200502	55.00	SCC Descriptio	0.5400	0.0003	0.0003	EMD Chemicals Inc.
NJ	Gloucester	34015	55057	U2	OS1	10200502	55.00	SCC Descriptio	0.2600	0.0000	0.0001	EMD Chemicals Inc.
NJ	Gloucester	34015	55057	U3	OS1	10200502	55.00	SCC Descriptio	0.1900	0.0005	0.0005	EMD Chemicals Inc.
NJ	Gloucester	34015	55057	U47	OS1	10200502	55.00	SCC Descriptio	0.2000	0.0008	0.0008	EMD Chemicals Inc.
NJ	Gloucester	34015	55102	U11	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0005	0.0005	Gloucester County Utilities Authority
NJ	Gloucester	34015	55102	U12	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0007	0.0007	Gloucester County Utilities Authority
NJ	Gloucester	34015	55457	U2	OS1	10301002	0.00		0.1100	0.0006	0.0006	Superior Barrel & Drum Co., Inc.
NJ	Gloucester	34015	55727	U63	OS4	10200602	55.00	SCC Descriptio	7.8600	0.0161	0.0161	GEO Specialty Chemicals
NJ	Gloucester	34015	55727	U64	OS4	10200602	55.00	SCC Descriptio	0.5800	0.0006	0.0006	GEO Specialty Chemicals
NJ	Gloucester	34015	55727	U64	OS3	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	GEO Specialty Chemicals
NJ	Gloucester	34015	55779	U1	OS1	10200602	55.00	SCC Descriptio	2.3800	0.0161	0.0161	Rowan University
NJ	Gloucester	34015	55779	U3	OS1	10200602	55.00	SCC Descriptio	3.4300	0.0337	0.0337	Rowan University
NJ	Gloucester	34015	55779	U4	OS2	10200602	55.00	SCC Descriptio	4.4000	0.0161	0.0161	Rowan University
NJ	Gloucester	34015	55779	U8	OS1	10200602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Rowan University
NJ	Gloucester	34015	55779	U9	OS1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Rowan University
NJ	Gloucester	34015	55779	U9	OS2	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Rowan University
NJ	Gloucester	34015	55779	U9	OS3	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Rowan University
NJ	Gloucester	34015	55781	U110	OS3	10200799	55.00	SCC Descriptio	0.6500	0.0000	0.0018	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS4	10200502	55.00	SCC Descriptio	0.6500	0.0000	0.0018	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS5	10200799	55.00	SCC Descriptio	0.6800	0.0000	0.0019	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS6	10200502	55.00	SCC Descriptio	0.6800	0.0000	0.0019	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS7	10200799	55.00	SCC Descriptio	0.7100	0.0000	0.0020	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS8	10200502	55.00	SCC Descriptio	0.7100	0.0000	0.0020	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS1	10200799	55.00	SCC Descriptio	0.7800	0.0000	0.0021	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U110	OS2	10200502	55.00	SCC Descriptio	0.7800	0.0000	0.0021	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55781	U6	OS1	10200799	146.70	Title V Permit	37.9900	0.1328	0.1328	COASTAL EAGLE POINT OIL COMPANY
NJ	Gloucester	34015	55788	U2	OS1	10200602	55.00	SCC Descriptio	2.1700	0.0044	0.0044	Johnson Matthey Inc.
NJ	Gloucester	34015	55788	U2	OS2	10200502	55.00	SCC Descriptio	2.1100	0.0000	0.0058	Johnson Matthey Inc.
NJ	Gloucester	34015	55788	U48	OS1	10300602	55.00	SCC Descriptio	0.3200	0.0000	0.0000	Johnson Matthey Inc.
NJ	Gloucester	34015	55796	U1	OS5	10200602	55.00	SCC Descriptio	0.4300	0.0012	0.0012	Revere Industries, LLC; EKCO Products Div.
NJ	Gloucester	34015	55796	U1	OS2	10200602	55.00	SCC Descriptio	0.3400	0.0009	0.0009	Revere Industries, LLC; EKCO Products Div.
NJ	Gloucester	34015	55796	U1	OS3	10200602	55.00	SCC Descriptio	0.3400	0.0009	0.0009	Revere Industries, LLC; EKCO Products Div.
NJ	Gloucester	34015	55796	U1	OS1	10200602	55.00	SCC Descriptio	0.1000	0.0000	0.0000	Revere Industries, LLC; EKCO Products Div.
NJ	Gloucester	34015	55796	U1	OS4	10200602	55.00	SCC Descriptio	0.1000	0.0000	0.0003	Revere Industries, LLC; EKCO Products Div.
NJ	Gloucester	34015	55798	U7000	OS7001	10200602	55.00	SCC Descriptio	9.4300	0.0262	0.0262	Solvay Solexis, Inc.
NJ	Gloucester	34015	55798	U7000	OS7003	10200602	55.00	SCC Descriptio	9.4300	0.0262	0.0262	Solvay Solexis, Inc.
NJ	Gloucester	34015	55800	U1	OS1	10200602	55.00	SCC Descriptio	2.7600	0.0052	0.0052	Repauno Products, LLC
NJ	Gloucester	34015	55800	U1	OS2	10200602	55.00	SCC Descriptio	2.7600	0.0052	0.0052	Repauno Products, LLC
NJ	Gloucester	34015	55826	U15	OS1	10300602	2.40	EU DESCRIPT	0.5000	0.0014	0.0014	Air Products and Chemicals, Inc.
NJ	Gloucester	34015	55826	U4	OS1	10300602	55.00	SCC Descriptio	4.0700	0.0114	0.0114	Air Products and Chemicals, Inc.
NJ	Gloucester	34015	55826	U4	OS2	10300501	55.00	SCC Descriptio	0.2800	0.0000	0.0000	Air Products and Chemicals, Inc.
NJ	Gloucester	34015	55829	U20	OS3	10200799	484.00	Title V Permit	85.3000	0.2578	0.2578	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55829	U20	OS2	10200799	484.00	Title V Permit	75.9000	0.2406	0.2406	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55829	U20	OS1	10200799	484.00	Title V Permit	76.2000	0.2258	0.2258	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55829	U20	OS6	10200502	484.00	Title V Permit	3.5000	0.0000	0.0096	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55829	U20	OS8	10200502	484.00	Title V Permit	5.0000	0.0000	0.0137	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55829	U20	OS7	10200502	484.00	Title V Permit	6.9000	0.0000	0.0190	Valero Refining Co.- N.J.
NJ	Gloucester	34015	55831	U10	OS1	10200502	55.00	SCC Descriptio	0.1000	0.0000	0.0000	CITGO Asphalt Refining Company

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NJ	Gloucester	34015	55831	U11	OS1	10200602	55.00	SCC Descriptio	37.7200	0.1266	0.1266	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U11	OS3	10200602	55.00	SCC Descriptio	37.7200	0.1266	0.1266	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U12	OS1	10200602	55.00	SCC Descriptio	22.6300	0.1157	0.1157	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS10	10200602	55.00	SCC Descriptio	7.8400	0.0277	0.0277	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS2	10200602	55.00	SCC Descriptio	4.0300	0.0119	0.0119	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS4	10200602	55.00	SCC Descriptio	3.7200	0.0106	0.0106	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS8	10200602	55.00	SCC Descriptio	5.7700	0.0103	0.0103	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS6	10200602	55.00	SCC Descriptio	4.1300	0.0099	0.0099	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS1	10200502	55.00	SCC Descriptio	0.1100	0.0000	0.0000	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS3	10200502	55.00	SCC Descriptio	0.0900	0.0000	0.0003	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS5	10200502	55.00	SCC Descriptio	0.1400	0.0000	0.0000	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS7	10200502	55.00	SCC Descriptio	0.3300	0.0000	0.0008	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U13	OS9	10200502	55.00	SCC Descriptio	0.4200	0.0000	0.0000	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U16	OS2	10200602	55.00	SCC Descriptio	0.2200	0.0441	0.0441	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U16	OS4	10200602	55.00	SCC Descriptio	7.9100	0.0080	0.0080	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U16	OS6	10200602	55.00	SCC Descriptio	7.9100	0.0080	0.0080	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U2	OS1	10200799	55.00	SCC Descriptio	0.2100	0.0224	0.0224	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U2	OS2	10200602	55.00	SCC Descriptio	0.0800	0.0155	0.0155	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U30	OS12	10300602	55.00	SCC Descriptio	0.2800	0.0010	0.0010	CITGO Asphalt Refining Company
NJ	Gloucester	34015	55831	U7	OS3	10200502	55.00	SCC Descriptio	0.7800	0.0000	0.0000	CITGO Asphalt Refining Company
NJ	Hudson	34017	10070	U62	OS1	10200602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	CASCHEM INC
NJ	Hudson	34017	10131	U2	OS1	10300602	55.00	SCC Descriptio	1.1200	0.0067	0.0067	BAYONNE HOSPITAL
NJ	Hudson	34017	10131	U7	OS3	10300602	55.00	SCC Descriptio	0.0800	0.0074	0.0074	BAYONNE HOSPITAL
NJ	Hudson	34017	10131	U7	OS1	10300602	55.00	SCC Descriptio	1.6700	0.0055	0.0055	BAYONNE HOSPITAL
NJ	Hudson	34017	10162	U2	OS59	10200799	0.00		0.8800	0.0024	0.0024	ELEMENTIS SPECIALTIES
NJ	Hudson	34017	10162	U23	OS1	10200602	55.00	SCC Descriptio	0.4400	0.0012	0.0012	ELEMENTIS SPECIALTIES
NJ	Hudson	34017	10162	U3	OS1	10200602	55.00	SCC Descriptio	0.5000	0.0000	0.0007	ELEMENTIS SPECIALTIES
NJ	Hudson	34017	10162	U5	OS1	10200602	55.00	SCC Descriptio	0.8900	0.0000	0.0013	ELEMENTIS SPECIALTIES
NJ	Hudson	34017	10269	U1	OS1	10300602	55.00	SCC Descriptio	0.8900	0.0025	0.0025	New Jersey City University
NJ	Hudson	34017	10269	U2	OS1	10300602	55.00	SCC Descriptio	1.6900	0.0069	0.0069	New Jersey City University
NJ	Hudson	34017	10269	U3	OS1	10300602	55.00	SCC Descriptio	1.2000	0.0042	0.0042	New Jersey City University
NJ	Hudson	34017	10269	U4	OS1	10300602	55.00	SCC Descriptio	1.0000	0.0045	0.0045	New Jersey City University
NJ	Hudson	34017	10358	U1	OS1	10200602	14.85	EU DESCRIPT	1.5900	0.0000	0.0000	St. Francis Hospital
NJ	Hudson	34017	10358	U2	OS1	10200602	14.85	EU DESCRIPT	1.0100	0.0067	0.0067	St. Francis Hospital
NJ	Hudson	34017	10360	U1	OS1	10300602	26.40	EU DESCRIPT	0.8600	0.0009	0.0009	St. Mary's hospital
NJ	Hudson	34017	10360	U2	OS1	10300602	26.40	EU DESCRIPT	0.8200	0.0008	0.0008	St. Mary's hospital
NJ	Hudson	34017	10419	U10	OS1	10200602	55.00	SCC Descriptio	0.1600	0.0009	0.0009	Engelhard Corporation
NJ	Hudson	34017	10419	U6	OS1	10200602	4.95	EU DESCRIPT	1.0200	0.0000	0.0000	Engelhard Corporation
NJ	Hudson	34017	10419	U9	OS1	10200602	6.60	EU DESCRIPT	0.1500	0.0011	0.0011	Engelhard Corporation
NJ	Hudson	34017	10511	U4	OS1	10200602	55.00	SCC Descriptio	0.2000	0.0000	0.0005	W.R. Grace & Co.-Conn., Grace Const. Prod.
NJ	Hudson	34017	10759	U2	OS1	10200602	55.00	SCC Descriptio	0.5500	0.0023	0.0023	FRUTAROM INCORPORATED
NJ	Hudson	34017	11171	U6	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0004	0.0004	BRUNSWICK HOT MIX CORP. T/A WELDON ASPHALT CO
NJ	Hudson	34017	11248	U4	OS1	10200602	55.00	SCC Descriptio	3.2400	0.0000	0.0014	UNIVERSAL FOLDING BOX CO. INC.
NJ	Hudson	34017	11409	U1	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11409	U2	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11409	U3	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11409	U4	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11409	U5	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11409	U6	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	DAILY NEWS LP
NJ	Hudson	34017	11975	U3000	OS3001	10200602	55.00	SCC Descriptio	0.4100	0.0000	0.0007	Occidental Chemical Corporation
NJ	Hudson	34017	12047	U1	OS1	10300402	8.25	EU DESCRIPT	4.9000	0.0240	0.0240	Jersey City Medical Center
NJ	Hudson	34017	12047	U13	OS1	10300402	13.53	EU DESCRIPT	0.3500	0.0000	0.0000	Jersey City Medical Center

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NJ	Hudson	34017	12047	U2	OS1	10300402	8.25	EU DESCRIPT	4.9000	0.0240	0.0240	Jersey City Medical Center
NJ	Hudson	34017	12047	U3	OS1	10300402	14.85	EU DESCRIPT	9.8100	0.0016	0.0016	Jersey City Medical Center
NJ	Hudson	34017	12047	U4	OS1	10300402	16.83	EU DESCRIPT	14.7100	0.0000	0.0000	Jersey City Medical Center
NJ	Hudson	34017	12047	U5	OS1	10300402	16.83	EU DESCRIPT	14.7100	0.0000	0.0000	Jersey City Medical Center
NJ	Hudson	34017	12070	U1	OS4	10200602	55.00	SCC Descriptio	1.5900	0.0079	0.0079	Summit Plaza Total Energy Plant
NJ	Hudson	34017	12070	U1	OS2	10200602	55.00	SCC Descriptio	0.8500	0.0055	0.0055	Summit Plaza Total Energy Plant
NJ	Hudson	34017	12070	U1	OS1	10200502	55.00	SCC Descriptio	0.1900	0.0000	0.0000	Summit Plaza Total Energy Plant
NJ	Hudson	34017	12070	U1	OS3	10200502	55.00	SCC Descriptio	0.3600	0.0000	0.0014	Summit Plaza Total Energy Plant
NJ	Hudson	34017	12099	U1	OS2	10300602	55.00	SCC Descriptio	1.0300	0.0024	0.0024	Stevens Institute of Technology
NJ	Hudson	34017	12099	U1	OS4	10300602	55.00	SCC Descriptio	1.0300	0.0024	0.0024	Stevens Institute of Technology
NJ	Hudson	34017	12099	U10	OS2	10300602	55.00	SCC Descriptio	0.1400	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U11	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U11	OS2	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U12	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U13	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U14	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U15	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0000	0.0002	Stevens Institute of Technology
NJ	Hudson	34017	12099	U16	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Stevens Institute of Technology
NJ	Hudson	34017	12099	U17	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U18	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U19	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	Stevens Institute of Technology
NJ	Hudson	34017	12099	U2	OS2	10300602	55.00	SCC Descriptio	0.3300	0.0013	0.0013	Stevens Institute of Technology
NJ	Hudson	34017	12099	U2	OS4	10300602	55.00	SCC Descriptio	0.3300	0.0013	0.0013	Stevens Institute of Technology
NJ	Hudson	34017	12099	U2	OS5	10300602	55.00	SCC Descriptio	0.1800	0.0012	0.0012	Stevens Institute of Technology
NJ	Hudson	34017	12099	U20	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	Stevens Institute of Technology
NJ	Hudson	34017	12099	U6	OS2	10300602	55.00	SCC Descriptio	0.1700	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U7	OS2	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U8	OS2	10300602	55.00	SCC Descriptio	0.0700	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12099	U9	OS2	10300602	55.00	SCC Descriptio	0.0700	0.0001	0.0001	Stevens Institute of Technology
NJ	Hudson	34017	12194	U11	OS1	10200602	55.00	SCC Descriptio	1.7300	0.0055	0.0055	IMTT
NJ	Hudson	34017	12194	U11	OS2	10200602	55.00	SCC Descriptio	3.4700	0.0055	0.0055	IMTT
NJ	Hudson	34017	12195	U4	OS1	10200401	25.20	EU DESCRIPT	6.1800	0.0064	0.0064	COASTAL OIL NEW YORK INC
NJ	Hudson	34017	12195	U4	OS3	10200401	25.20	EU DESCRIPT	6.1800	0.0064	0.0064	COASTAL OIL NEW YORK INC
NJ	Hudson	34017	12197	U10	OS1	10200602	55.00	SCC Descriptio	1.5000	0.0045	0.0045	Owens Corning Kearny Plant
NJ	Hudson	34017	12197	U15	OS1	10300602	55.00	SCC Descriptio	0.6100	0.0017	0.0017	Owens Corning Kearny Plant
NJ	Hudson	34017	12197	U18	OS1	10300402	23.35	EU DESCRIPT	16.0400	0.0483	0.0483	Owens Corning Kearny Plant
NJ	Hudson	34017	12197	U63	OS2	10300602	55.00	SCC Descriptio	0.4100	0.0012	0.0012	Owens Corning Kearny Plant
NJ	Hudson	34017	12197	U65	OS1	10300501	0.00		0.3500	0.0010	0.0010	Owens Corning Kearny Plant
NJ	Hudson	34017	12199	U3	OS0	10300402	55.00	SCC Descriptio	15.8000	0.0179	0.0179	Amerada Hess - Bayonne Terminal
NJ	Hudson	34017	12200	U3	OS2	10300402	55.00	SCC Descriptio	1.1900	0.0000	0.0008	Kearny Generating Station
NJ	Hudson	34017	12201	U12	OS1	10200602	55.00	SCC Descriptio	1.0900	0.0070	0.0070	Cognis Corporation
NJ	Hudson	34017	12201	U15	OS1	10200602	55.00	SCC Descriptio	0.0900	0.0002	0.0002	Cognis Corporation
NJ	Hudson	34017	12201	U24	OS1	10200401	0.00		1.0900	0.0070	0.0070	Cognis Corporation
NJ	Hudson	34017	12201	U3	OS1	10200401	0.00		0.1100	0.0005	0.0005	Cognis Corporation
NJ	Hudson	34017	12202	U3	OS1	10200602	55.00	SCC Descriptio	6.2600	0.0409	0.0409	Hudson Generating Station
NJ	Hudson	34017	12202	U3	OS3	10200602	55.00	SCC Descriptio	3.7200	0.0399	0.0399	Hudson Generating Station
NJ	Hunterdon	34019	80002	U2406	OS1	10200502	55.00	SCC Descriptio	3.6900	0.0151	0.0151	Gilbert Generating Station
NJ	Hunterdon	34019	80002	U2420	OS1	10200502	55.00	SCC Descriptio	0.6200	0.0000	0.0000	Gilbert Generating Station
NJ	Hunterdon	34019	80293	U2	OS5	10300602	55.00	SCC Descriptio	4.2500	0.0099	0.0099	Hunterdon Cogeneration Limited Partnership
NJ	Hunterdon	34019	80293	U2	OS7	10300602	55.00	SCC Descriptio	4.2500	0.0099	0.0099	Hunterdon Cogeneration Limited Partnership
NJ	Hunterdon	34019	80351	U5	OS1	10200602	55.00	SCC Descriptio	41.7200	0.1370	0.1370	Curtis Specialty Paper
NJ	Hunterdon	34019	80351	U5	OS2	10200502	55.00	SCC Descriptio	0.2400	0.0000	0.0000	Curtis Specialty Paper

									2002 NOx Emissions			
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NJ	Hunterdon	34019	80351	U6	OS1	10200602	55.00	SCC Descriptio	18.6500	0.0558	0.0558	Curtis Specialty Paper
NJ	Hunterdon	34019	80351	U6	OS2	10200502	55.00	SCC Descriptio	0.1300	0.0000	0.0000	Curtis Specialty Paper
NJ	Hunterdon	34019	80354	U3	OS2	10200602	55.00	SCC Descriptio	38.1600	0.1000	0.1000	Fiber Mark - Warren Glen
NJ	Hunterdon	34019	80354	U3	OS3	10200602	55.00	SCC Descriptio	9.9300	0.0514	0.0514	Fiber Mark - Warren Glen
NJ	Hunterdon	34019	80361	U6	OS1	10200602	55.00	SCC Descriptio	0.3900	0.0015	0.0015	Tekni-Plex Inc.
NJ	Hunterdon	34019	80361	U6	OS2	10200602	55.00	SCC Descriptio	0.3900	0.0015	0.0015	Tekni-Plex Inc.
NJ	Hunterdon	34019	80368	U1	OS2	10200602	55.00	SCC Descriptio	0.1800	0.0103	0.0103	ExxonMobil Research and Engineering Co.
NJ	Hunterdon	34019	80368	U1	OS1	10200602	55.00	SCC Descriptio	0.0800	0.0044	0.0044	ExxonMobil Research and Engineering Co.
NJ	Hunterdon	34019	80368	U25	OS2	10200602	55.00	SCC Descriptio	8.6600	0.0575	0.0575	ExxonMobil Research and Engineering Co.
NJ	Hunterdon	34019	80368	U4	OS1	10300602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	ExxonMobil Research and Engineering Co.
NJ	Mercer	34021	60070	U3	OS4	10300602	55.00	SCC Descriptio	0.1600	0.0063	0.0063	CAPITAL HEALTH SYSTEM @ MERCER
NJ	Mercer	34021	60070	U3	OS3	10300602	55.00	SCC Descriptio	0.0900	0.0032	0.0032	CAPITAL HEALTH SYSTEM @ MERCER
NJ	Mercer	34021	60090	U13	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0000	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U14	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U15	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0002	0.0002	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U16	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0002	0.0002	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U17	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0005	0.0005	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U18	OS1	10300602	55.00	SCC Descriptio	0.1200	0.0005	0.0005	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U7	OS1	10300602	55.00	SCC Descriptio	0.7200	0.0000	0.0002	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U7	OS2	10300501	55.00	SCC Descriptio	0.1200	0.0000	0.0000	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U8	OS1	10300602	55.00	SCC Descriptio	0.7200	0.0000	0.0002	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60090	U8	OS2	10300501	55.00	SCC Descriptio	0.1200	0.0000	0.0000	NJDOT Trenton Headquarters Complex
NJ	Mercer	34021	60245	U1	OS4	10300602	55.00	SCC Descriptio	0.6000	0.0091	0.0091	St. Francis Medical Center
NJ	Mercer	34021	60245	U1	OS3	10300602	55.00	SCC Descriptio	0.5900	0.0030	0.0030	St. Francis Medical Center
NJ	Mercer	34021	60245	U1	OS1	10300602	55.00	SCC Descriptio	0.5400	0.0000	0.0015	St. Francis Medical Center
NJ	Mercer	34021	60245	U1	OS2	10300602	55.00	SCC Descriptio	0.3600	0.0000	0.0011	St. Francis Medical Center
NJ	Mercer	34021	60579	U10	OS1	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Demag Delaval Turbomachinery, Inc.
NJ	Mercer	34021	60579	U11	OS1	10200602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Demag Delaval Turbomachinery, Inc.
NJ	Mercer	34021	60579	U4	OS1	10200602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Demag Delaval Turbomachinery, Inc.
NJ	Mercer	34021	60579	U5	OS1	10200602	55.00	SCC Descriptio	0.4000	0.0001	0.0001	Demag Delaval Turbomachinery, Inc.
NJ	Mercer	34021	60579	U8	OS1	10200602	55.00	SCC Descriptio	0.5400	0.0001	0.0001	Demag Delaval Turbomachinery, Inc.
NJ	Mercer	34021	60623	U2	OS1	10300602	4.20	EU DESCRIPT	0.2400	0.0001	0.0001	THE TIMES OF TRENTON
NJ	Mercer	34021	60623	U3	OS1	10300602	2.52	EU DESCRIPT	0.0600	0.0000	0.0001	THE TIMES OF TRENTON
NJ	Mercer	34021	60976	U15	OS1	10200602	55.00	SCC Descriptio	1.1200	0.0044	0.0044	Homasote Company
NJ	Mercer	34021	60976	U4	OS1	10200401	55.00	SCC Descriptio	31.1400	0.1340	0.1340	Homasote Company
NJ	Mercer	34021	60976	U4	OS3	10200401	55.00	SCC Descriptio	2.8600	0.0000	0.0077	Homasote Company
NJ	Mercer	34021	60976	U4	OS9	10200602	55.00	SCC Descriptio	1.7900	0.0094	0.0094	Homasote Company
NJ	Mercer	34021	60976	U4	OS2	10200602	55.00	SCC Descriptio	2.5000	0.0066	0.0066	Homasote Company
NJ	Mercer	34021	60976	U4	OS4	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Homasote Company
NJ	Mercer	34021	60976	U4	OS7	10200602	55.00	SCC Descriptio	0.7400	0.0000	0.0025	Homasote Company
NJ	Mercer	34021	60976	U8	OS1	10200502	55.00	SCC Descriptio	0.0100	0.0003	0.0003	Homasote Company
NJ	Mercer	34021	61008	U1	OS1	10300501	49.50	EU DESCRIPT	0.1600	0.0225	0.0225	The College of New Jersey
NJ	Mercer	34021	61008	U1	OS2	10300602	49.50	EU DESCRIPT	0.4300	0.0216	0.0216	The College of New Jersey
NJ	Mercer	34021	61008	U2	OS2	10300501	49.50	EU DESCRIPT	0.5200	0.0395	0.0395	The College of New Jersey
NJ	Mercer	34021	61008	U2	OS1	10300602	49.50	EU DESCRIPT	0.3200	0.0213	0.0213	The College of New Jersey
NJ	Mercer	34021	61008	U3	OS1	10300602	24.75	EU DESCRIPT	0.1400	0.0000	0.0000	The College of New Jersey
NJ	Mercer	34021	61036	U60	OS61	10300501	0.00		0.1000	0.0000	0.0000	Stony Brook Regional Sewerage Authority WWTP
NJ	Mercer	34021	61051	U1	OS1	10200401	38.00	EU DESCRIPT	14.8800	0.0624	0.0624	Trenton Psychiatric Hospital
NJ	Mercer	34021	61051	U2	OS1	10200401	45.00	EU DESCRIPT	25.5800	0.0651	0.0651	Trenton Psychiatric Hospital
NJ	Mercer	34021	61051	U3	OS1	10200401	46.00	EU DESCRIPT	2.1900	0.0000	0.0061	Trenton Psychiatric Hospital
NJ	Mercer	34021	61052	U1	OS16	10200602	55.00	SCC Descriptio	2.3200	0.0308	0.0308	E.R. Squibb and Sons, L.L.C.
NJ	Mercer	34021	61052	U1	OS10	10200602	55.00	SCC Descriptio	1.2000	0.0036	0.0036	E.R. Squibb and Sons, L.L.C.

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NJ	Mercer	34021	61052	U1	OS7	10200602	55.00	SCC Descriptio	2.7400	0.0019	0.0019	E.R. Squibb and Sons, L.L.C.
NJ	Mercer	34021	61053	U1	OS6	10200602	55.00	SCC Descriptio	1.4300	0.0025	0.0025	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS8	10200602	55.00	SCC Descriptio	1.4300	0.0025	0.0025	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS5	10200502	55.00	SCC Descriptio	0.7100	0.0037	0.0037	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS2	10200502	55.00	SCC Descriptio	0.2700	0.0015	0.0015	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS4	10200502	55.00	SCC Descriptio	0.2200	0.0013	0.0013	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS1	10200502	55.00	SCC Descriptio	0.2200	0.0011	0.0011	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS18	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U1	OS20	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U4	OS1	10200602	55.00	SCC Descriptio	1.5400	0.0042	0.0042	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U4	OS7	10200602	55.00	SCC Descriptio	1.5400	0.0042	0.0042	Bristol-Myers Squibb Company
NJ	Mercer	34021	61053	U4	OS8	10200502	55.00	SCC Descriptio	0.0100	0.0036	0.0036	Bristol-Myers Squibb Company
NJ	Mercer	34021	61055	U13	OS0	10300602	55.00	SCC Descriptio	0.1800	0.0000	0.0004	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U14	OS0	10300602	55.00	SCC Descriptio	0.0400	0.0003	0.0003	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U15	OS0	10300602	55.00	SCC Descriptio	0.1500	0.0000	0.0004	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U20	OS58	10300602	55.00	SCC Descriptio	0.0700	0.0020	0.0020	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U29	OS2	10300602	55.00	SCC Descriptio	0.0400	0.0009	0.0009	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U4	OS19	10300602	55.00	SCC Descriptio	0.1300	0.0105	0.0105	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U4	OS15	10200602	55.00	SCC Descriptio	0.0200	0.0013	0.0013	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U5	OS19	10200602	55.00	SCC Descriptio	0.5900	0.0000	0.0002	CONGOLEUM CORPORATION
NJ	Mercer	34021	61055	U6	OS21	10300602	55.00	SCC Descriptio	0.0300	0.0015	0.0015	CONGOLEUM CORPORATION
NJ	Mercer	34021	61057	U3	OS1	10200602	55.00	SCC Descriptio	0.5000	0.0051	0.0051	Mercer Generating Station
NJ	Mercer	34021	61057	U4	OS1	10200602	55.00	SCC Descriptio	0.4100	0.0057	0.0057	Mercer Generating Station
NJ	Mercer	34021	61058	U6	OS1	10200602	55.00	SCC Descriptio	0.1200	0.0001	0.0001	Kayline Processing, Inc.
NJ	Mercer	34021	61059	U47	OS76	10300602	55.00	SCC Descriptio	16.8500	0.0000	0.0074	American Standard, Inc.
NJ	Mercer	34021	61059	U47	OS78	10300602	55.00	SCC Descriptio	16.8500	0.0000	0.0074	American Standard, Inc.
NJ	Mercer	34021	61088	U1	OS4	10300501	29.30	EU DESCRIPT	1.4600	0.0000	0.0036	The Lawrenceville School
NJ	Mercer	34021	61088	U1	OS6	10300501	29.30	EU DESCRIPT	0.7900	0.0000	0.0021	The Lawrenceville School
NJ	Mercer	34021	61088	U1	OS2	10300501	29.30	EU DESCRIPT	0.4100	0.0000	0.0010	The Lawrenceville School
NJ	Mercer	34021	61088	U1	OS1	10300602	29.30	EU DESCRIPT	0.3100	0.0000	0.0008	The Lawrenceville School
NJ	Mercer	34021	61088	U1	OS3	10300602	29.30	EU DESCRIPT	0.2200	0.0000	0.0005	The Lawrenceville School
NJ	Mercer	34021	61088	U1	OS5	10300602	29.30	EU DESCRIPT	0.1100	0.0000	0.0003	The Lawrenceville School
NJ	Mercer	34021	61088	U3	OS1	10300602	3.00	EU DESCRIPT	0.1800	0.0004	0.0004	The Lawrenceville School
NJ	Mercer	34021	61088	U4	OS1	10300602	1.35	EU DESCRIPT	0.0600	0.0000	0.0001	The Lawrenceville School
NJ	Mercer	34021	61096	U7	OS1	10200602	14.70	EU DESCRIPT	1.6100	0.0043	0.0043	Capital Health Systems at Fuld Campus
NJ	Mercer	34021	61096	U7	OS3	10200602	14.70	EU DESCRIPT	1.6100	0.0043	0.0043	Capital Health Systems at Fuld Campus
NJ	Mercer	34021	61096	U7	OS5	10200602	14.70	EU DESCRIPT	1.6100	0.0043	0.0043	Capital Health Systems at Fuld Campus
NJ	Middlesex	34023	15020	U32	OS1	10300602	16.00	EU DESCRIPT	1.7400	0.0025	0.0025	PQ Corporation
NJ	Middlesex	34023	15079	U55	OS1	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS2	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS3	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS4	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS5	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS6	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS7	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U55	OS8	10300602	55.00	SCC Descriptio	0.4300	0.0009	0.0009	Degussa Corporation
NJ	Middlesex	34023	15079	U61	OS1	10300602	55.00	SCC Descriptio	0.2900	0.0013	0.0013	Degussa Corporation
NJ	Middlesex	34023	15079	U62	OS1	10300602	55.00	SCC Descriptio	0.2900	0.0013	0.0013	Degussa Corporation
NJ	Middlesex	34023	15088	U14	OS1	10200602	6.60	EU DESCRIPT	1.6300	0.0041	0.0041	ALPHA ASSOCIATES INC
NJ	Middlesex	34023	15130	U1	OS1	10300602	55.00	SCC Descriptio	0.2500	0.0000	0.0007	NEWARK MORNING LEDGER CO
NJ	Middlesex	34023	15130	U5	OS1	10300602	55.00	SCC Descriptio	0.6100	0.0000	0.0005	NEWARK MORNING LEDGER CO
NJ	Middlesex	34023	15130	U9	OS1	10300602	55.00	SCC Descriptio	0.2500	0.0004	0.0004	NEWARK MORNING LEDGER CO

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NJ	Middlesex	34023	15134	U10	OS1	10200602	55.00	SCC Descriptio	1.6200	0.0032	0.0032	AIR PRODUCTS POLYMERS LP
NJ	Middlesex	34023	15134	U10	OS3	10200602	55.00	SCC Descriptio	1.6200	0.0032	0.0032	AIR PRODUCTS POLYMERS LP
NJ	Middlesex	34023	15134	U10	OS2	10200502	55.00	SCC Descriptio	0.0900	0.0000	0.0002	AIR PRODUCTS POLYMERS LP
NJ	Middlesex	34023	15134	U10	OS4	10200502	55.00	SCC Descriptio	0.0900	0.0000	0.0002	AIR PRODUCTS POLYMERS LP
NJ	Middlesex	34023	15194	U1	OS1	10200602	55.00	SCC Descriptio	1.5800	0.0055	0.0055	Armkel, LLC.
NJ	Middlesex	34023	15194	U2	OS1	10200602	55.00	SCC Descriptio	0.4400	0.0243	0.0243	Armkel, LLC.
NJ	Middlesex	34023	15194	U23	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0000	Armkel, LLC.
NJ	Middlesex	34023	15194	U3	OS1	10200602	55.00	SCC Descriptio	0.5600	0.0056	0.0056	Armkel, LLC.
NJ	Middlesex	34023	15194	U4	OS1	10200602	55.00	SCC Descriptio	0.3800	0.0006	0.0006	Armkel, LLC.
NJ	Middlesex	34023	15203	U10	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0002	0.0002	DOLPH CO.,JOHN C.
NJ	Middlesex	34023	15203	U8	OS1	10200602	55.00	SCC Descriptio	0.4400	0.0000	0.0004	DOLPH CO.,JOHN C.
NJ	Middlesex	34023	15203	U9	OS1	10200602	55.00	SCC Descriptio	0.2500	0.0003	0.0003	DOLPH CO.,JOHN C.
NJ	Middlesex	34023	15207	U43	OS1	10200602	55.00	SCC Descriptio	0.2500	0.0090	0.0090	FLINT INK NORTH AMERICA CORPORATION
NJ	Middlesex	34023	15229	U16	OS1	10200602	1.19	EU DESCRIPT	0.1500	0.0002	0.0002	MOHAWK LABORATORIES OF NEW JERSEY
NJ	Middlesex	34023	15229	U17	OS1	10200602	5.18	EU DESCRIPT	0.1000	0.0000	0.0001	MOHAWK LABORATORIES OF NEW JERSEY
NJ	Middlesex	34023	15244	U2	OS1	10300602	1.32	EU DESCRIPT	0.1200	0.0003	0.0003	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	O40999	10300602	55.00	SCC Descriptio	0.8200	0.0026	0.0026	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	O40998	10300602	55.00	SCC Descriptio	0.7300	0.0024	0.0024	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4033	10300602	55.00	SCC Descriptio	0.3500	0.0011	0.0011	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4023	10300602	55.00	SCC Descriptio	0.2100	0.0007	0.0007	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4021	10300602	55.00	SCC Descriptio	0.1900	0.0006	0.0006	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4013	10300602	55.00	SCC Descriptio	0.1700	0.0005	0.0005	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4022	10300602	55.00	SCC Descriptio	0.1400	0.0004	0.0004	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4031	10300602	55.00	SCC Descriptio	0.1100	0.0004	0.0004	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4011	10300602	55.00	SCC Descriptio	0.1100	0.0003	0.0003	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4032	10300602	55.00	SCC Descriptio	0.0800	0.0003	0.0003	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4012	10300602	55.00	SCC Descriptio	0.0800	0.0002	0.0002	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4041	10300602	55.00	SCC Descriptio	0.0800	0.0002	0.0002	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4043	10300602	55.00	SCC Descriptio	0.0700	0.0002	0.0002	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U4	OS4042	10300602	55.00	SCC Descriptio	0.0500	0.0001	0.0001	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U5	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0002	0.0002	Spray-Tek, Inc.
NJ	Middlesex	34023	15244	U8	OS1	10300602	0.99	EU DESCRIPT	0.0200	0.0000	0.0000	Spray-Tek, Inc.
NJ	Middlesex	34023	15280	U14	OS17	10200602	55.00	SCC Descriptio	0.1700	0.0001	0.0001	Ronpak, Inc.
NJ	Middlesex	34023	15299	U11	OS1	10200602	55.00	SCC Descriptio	1.9000	0.0024	0.0024	ENGELHARD CORP
NJ	Middlesex	34023	15299	U12	OS1	10200602	55.00	SCC Descriptio	2.2500	0.0048	0.0048	ENGELHARD CORP
NJ	Middlesex	34023	15299	U13	OS1	10200602	55.00	SCC Descriptio	3.0100	0.0024	0.0024	ENGELHARD CORP
NJ	Middlesex	34023	15312	U5	OS1	10300602	55.00	SCC Descriptio	1.3200	0.0053	0.0053	Henry Heide, Inc.
NJ	Middlesex	34023	15312	U5	OS2	10300602	55.00	SCC Descriptio	1.3200	0.0053	0.0053	Henry Heide, Inc.
NJ	Middlesex	34023	15312	U5	OS4	10300501	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Henry Heide, Inc.
NJ	Middlesex	34023	15326	U1	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0002	0.0002	OHM Laboratories Inc. - Black Horse Lane
NJ	Middlesex	34023	15343	U52	OS1	10200602	55.00	SCC Descriptio	1.3200	0.0032	0.0032	AMERCHOL CORPORATION
NJ	Middlesex	34023	15343	U65	OS1	10200602	55.00	SCC Descriptio	1.3200	0.0032	0.0032	AMERCHOL CORPORATION
NJ	Middlesex	34023	15343	U66	OS1	10200602	55.00	SCC Descriptio	0.5700	0.0000	0.0000	AMERCHOL CORPORATION
NJ	Middlesex	34023	15344	U14	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0001	0.0001	Northeast Products Company
NJ	Middlesex	34023	15344	U8	OS1	10300602	55.00	SCC Descriptio	2.3200	0.0067	0.0067	Northeast Products Company
NJ	Middlesex	34023	15414	U2401	OS1	10200602	55.00	SCC Descriptio	0.8700	0.0018	0.0018	Akcros Chemicals America
NJ	Middlesex	34023	15414	U2401	OS3	10200602	55.00	SCC Descriptio	0.8700	0.0018	0.0018	Akcros Chemicals America
NJ	Middlesex	34023	15414	U2401	OS2	10200502	55.00	SCC Descriptio	0.0500	0.0000	0.0001	Akcros Chemicals America
NJ	Middlesex	34023	15414	U2401	OS4	10200502	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Akcros Chemicals America
NJ	Middlesex	34023	15436	U56	OS1	10200502	55.00	SCC Descriptio	0.6500	0.0017	0.0017	MARISOL INC
NJ	Middlesex	34023	15446	U10	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0001	0.0001	MIELACH COMPANY
NJ	Middlesex	34023	15446	U11	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0001	MIELACH COMPANY

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NJ	Middlesex	34023	15446	U13	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	MIELACH COMPANY
NJ	Middlesex	34023	15486	U1	OS1	10300602	55.00	SCC Descriptio	0.1800	0.0000	0.0004	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U2	OS1	10300602	55.00	SCC Descriptio	0.1700	0.0000	0.0004	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U22	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0000	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U23	OS1	10300602	55.00	SCC Descriptio	0.2300	0.0000	0.0001	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U24	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0000	0.0001	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U3	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0000	0.0004	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U4	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0014	0.0014	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U5	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0000	0.0002	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U6	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U7	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0000	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15486	U8	OS1	10300602	55.00	SCC Descriptio	0.2800	0.0170	0.0170	DOW JONES & COMPANY, INC.
NJ	Middlesex	34023	15524	U21	OS1	10300602	6.60	EU DESCRIPT	0.0800	0.0002	0.0002	ZIEGLER CHEMICAL & MINERAL CORP
NJ	Middlesex	34023	15538	U12	OS1	10200602	55.00	SCC Descriptio	1.6700	0.0067	0.0067	FERRO INDUSTRIES, INC.
NJ	Middlesex	34023	15597	U18	OS1	10200602	55.00	SCC Descriptio	0.1200	0.0004	0.0004	Colgate Palmolive Company
NJ	Middlesex	34023	15597	U3	OS1	10200602	55.00	SCC Descriptio	1.1900	0.0023	0.0023	Colgate Palmolive Company
NJ	Middlesex	34023	15597	U4	OS1	10200602	55.00	SCC Descriptio	1.1900	0.0023	0.0023	Colgate Palmolive Company
NJ	Middlesex	34023	15715	U3	OS3	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	T/A VCT/QUALTEQ Division
NJ	Middlesex	34023	15760	U3	OS1	10200602	55.00	SCC Descriptio	0.9500	0.0030	0.0030	ADM CORPORATION
NJ	Middlesex	34023	15931	U5000	OS1	10300602	55.00	SCC Descriptio	0.2300	0.0000	0.0002	OLD BRIDGE CHEMICALS INC
NJ	Middlesex	34023	15931	U5000	OS2	10300602	55.00	SCC Descriptio	0.2300	0.0000	0.0002	OLD BRIDGE CHEMICALS INC
NJ	Middlesex	34023	16022	U1	OS1	10200602	55.00	SCC Descriptio	1.7400	0.0027	0.0027	NEW YORK TIMES, THE
NJ	Middlesex	34023	16022	U1	OS2	10200602	55.00	SCC Descriptio	1.7400	0.0027	0.0027	NEW YORK TIMES, THE
NJ	Middlesex	34023	16311	U13	OS3	10300602	55.00	SCC Descriptio	0.3000	0.0005	0.0005	Rutgers, The State University of New Jersey
NJ	Middlesex	34023	16311	U13	OS2	10300602	55.00	SCC Descriptio	0.3000	0.0002	0.0002	Rutgers, The State University of New Jersey
NJ	Middlesex	34023	16311	U13	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Rutgers, The State University of New Jersey
NJ	Middlesex	34023	16311	U18	OS1	10300602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Rutgers, The State University of New Jersey
NJ	Middlesex	34023	16311	U7	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	Rutgers, The State University of New Jersey
NJ	Middlesex	34023	16313	U2	OS5	10300602	20.00	EU DESCRIPT	0.7400	0.0016	0.0016	Cook - Douglass Campuses
NJ	Middlesex	34023	16313	U2	OS6	10300602	20.00	EU DESCRIPT	0.7400	0.0016	0.0016	Cook - Douglass Campuses
NJ	Middlesex	34023	16313	U2	OS7	10300602	20.00	EU DESCRIPT	0.7400	0.0016	0.0016	Cook - Douglass Campuses
NJ	Middlesex	34023	16313	U2	OS1	10300602	20.00	EU DESCRIPT	0.7100	0.0000	0.0016	Cook - Douglass Campuses
NJ	Middlesex	34023	16313	U2	OS2	10300602	20.00	EU DESCRIPT	0.7100	0.0000	0.0016	Cook - Douglass Campuses
NJ	Middlesex	34023	16392	U1	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	OHM Laboratories Inc. North Brunswick Facilit
NJ	Middlesex	34023	17699	U3	OS124	10200602	55.00	SCC Descriptio	3.5300	0.0131	0.0131	Crompton Corporation
NJ	Middlesex	34023	17699	U3	OS122	10200502	55.00	SCC Descriptio	9.5900	0.0000	0.0263	Crompton Corporation
NJ	Middlesex	34023	17699	U4	OS125	10200602	55.00	SCC Descriptio	1.3000	0.0473	0.0473	Crompton Corporation
NJ	Middlesex	34023	17699	U4	OS123	10200502	55.00	SCC Descriptio	1.0700	0.0000	0.0039	Crompton Corporation
NJ	Middlesex	34023	17719	U25	OS2	10200602	12.00	EU DESCRIPT	2.9800	0.0079	0.0079	PERMACEL
NJ	Middlesex	34023	17719	U25	OS4	10201002	12.00	EU DESCRIPT	0.0100	0.0084	0.0084	PERMACEL
NJ	Middlesex	34023	17739	U1	OS13	10200602	55.00	SCC Descriptio	0.7000	0.0070	0.0070	E. R. Squibb and Sons, L.L.C.
NJ	Middlesex	34023	17739	U1	OS8	10200602	55.00	SCC Descriptio	3.3500	0.0001	0.0001	E. R. Squibb and Sons, L.L.C.
NJ	Middlesex	34023	17766	U7	OS1	10200602	55.00	SCC Descriptio	4.2900	0.0133	0.0133	Astaris LLC - Carteret Plant
NJ	Middlesex	34023	17766	U7	OS4	10200602	55.00	SCC Descriptio	4.1200	0.0133	0.0133	Astaris LLC - Carteret Plant
NJ	Middlesex	34023	17766	U8	OS1	10200602	55.00	SCC Descriptio	4.5200	0.0330	0.0330	Astaris LLC - Carteret Plant
NJ	Middlesex	34023	17818	U15	OS2	10200401	55.00	SCC Descriptio	9.3100	0.0255	0.0255	BASF Corporation - South Brunswick Plant
NJ	Middlesex	34023	17818	U15	OS1	10200602	55.00	SCC Descriptio	3.5200	0.0096	0.0096	BASF Corporation - South Brunswick Plant
NJ	Middlesex	34023	17818	U9	OS1	10200401	55.00	SCC Descriptio	5.4900	0.0150	0.0150	BASF Corporation - South Brunswick Plant
NJ	Middlesex	34023	17818	U9	OS2	10200602	55.00	SCC Descriptio	3.0200	0.0083	0.0083	BASF Corporation - South Brunswick Plant
NJ	Middlesex	34023	17853	U55	OS1	10300602	4.25	EU DESCRIPT	0.1900	0.0004	0.0004	Kinder Morgan Liquids Terminals LLC
NJ	Middlesex	34023	17853	U57	OS1	10300602	1.40	EU DESCRIPT	0.0900	0.0001	0.0001	Kinder Morgan Liquids Terminals LLC
NJ	Middlesex	34023	17853	U95	OS1	10300602	4.00	EU DESCRIPT	0.2300	0.0005	0.0005	Kinder Morgan Liquids Terminals LLC

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NJ	Middlesex	34023	17867	U4	OS1	10300602	55.00	SCC Descriptio	0.5900	0.0021	0.0021	Electrolux Home Products
NJ	Middlesex	34023	17867	U5	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0007	0.0007	Electrolux Home Products
NJ	Middlesex	34023	17867	U5	OS2	10300602	55.00	SCC Descriptio	0.1900	0.0007	0.0007	Electrolux Home Products
NJ	Middlesex	34023	17867	U6	OS1	10301002	0.00		0.0100	0.0000	0.0000	Electrolux Home Products
NJ	Middlesex	34023	17867	U8	OS1	10300602	55.00	SCC Descriptio	4.3100	0.0000	0.0107	Electrolux Home Products
NJ	Middlesex	34023	17867	U8	OS3	10300602	55.00	SCC Descriptio	5.3800	0.0001	0.0001	Electrolux Home Products
NJ	Middlesex	34023	17884	U4422	OS2	10200602	55.00	SCC Descriptio	1.0000	0.0000	0.0000	Sayreville Generating Station (JCP&L)
NJ	Middlesex	34023	17885	U14	OS1	10200602	55.00	SCC Descriptio	3.3700	0.0107	0.0107	Union Carbide Corporation
NJ	Middlesex	34023	17885	U14	OS7	10200602	55.00	SCC Descriptio	3.8000	0.0026	0.0026	Union Carbide Corporation
NJ	Middlesex	34023	17885	U14	OS8	10200502	55.00	SCC Descriptio	0.1800	0.0001	0.0001	Union Carbide Corporation
NJ	Middlesex	34023	17912	U4	OS1	10300602	55.00	SCC Descriptio	0.7700	0.0016	0.0016	SILGAN CONTAINERS CORPORATION
NJ	Middlesex	34023	17912	U5	OS1	10300602	55.00	SCC Descriptio	0.7700	0.0016	0.0016	SILGAN CONTAINERS CORPORATION
NJ	Middlesex	34023	17912	U6	OS1	10300602	55.00	SCC Descriptio	0.7700	0.0016	0.0016	SILGAN CONTAINERS CORPORATION
NJ	Middlesex	34023	17912	U7	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0003	0.0003	SILGAN CONTAINERS CORPORATION
NJ	Middlesex	34023	17913	U1	OS1	10200602	53.00	EU DESCRIPT	3.9900	0.0219	0.0219	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U1	OS2	10200602	53.00	EU DESCRIPT	3.9900	0.0219	0.0219	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U1	OS3	10200602	53.00	EU DESCRIPT	0.0300	0.0000	0.0000	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U1	OS4	10200602	53.00	EU DESCRIPT	0.0300	0.0000	0.0000	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U10	OS1	10300602	5.10	EU DESCRIPT	0.1800	0.0007	0.0007	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U10	OS2	10300602	5.10	EU DESCRIPT	0.1800	0.0007	0.0007	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U2	OS1	10300602	2.40	EU DESCRIPT	0.4800	0.0010	0.0010	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U2	OS2	10300602	2.40	EU DESCRIPT	0.4800	0.0010	0.0010	St. Peter"s Medical Center
NJ	Middlesex	34023	17913	U8	OS1	10300602	55.00	SCC Descriptio	0.3200	0.0010	0.0010	St. Peter"s Medical Center
NJ	Middlesex	34023	17914	U3001	OS3001	10300602	1.00	EU DESCRIPT	0.1000	0.0000	0.0002	Gentek Building Products
NJ	Middlesex	34023	17958	U1	OS5	10300602	55.00	SCC Descriptio	3.6800	0.0018	0.0018	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U1	OS6	10300602	55.00	SCC Descriptio	3.0200	0.0008	0.0008	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U1	OS8	10300602	55.00	SCC Descriptio	0.9100	0.0005	0.0005	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U1	OS4	10300602	55.00	SCC Descriptio	4.3400	0.0002	0.0002	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U1	OS7	10300602	55.00	SCC Descriptio	0.6800	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U10	OS1	10300602	1.76	EU DESCRIPT	0.0400	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U11	OS1	10300602	1.70	EU DESCRIPT	0.0500	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U12	OS1	10300602	1.00	EU DESCRIPT	0.0300	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U18	OS1	10300602	4.10	EU DESCRIPT	0.1400	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U2	OS2	10300602	10.00	EU DESCRIPT	0.2200	0.0000	0.0004	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U2	OS1	10300602	10.00	EU DESCRIPT	0.2200	0.0004	0.0004	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U3	OS1	10300602	1.87	EU DESCRIPT	0.2700	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U3	OS2	10300602	1.87	EU DESCRIPT	0.2700	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U4	OS1	10300602	1.56	EU DESCRIPT	0.2200	0.0002	0.0002	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U6	OS1	10300602	4.50	EU DESCRIPT	0.2100	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U6	OS2	10300602	4.50	EU DESCRIPT	0.2100	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U7	OS1	10300602	10.00	EU DESCRIPT	0.1800	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U7	OS2	10300602	10.00	EU DESCRIPT	0.2800	0.0001	0.0001	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U8	OS1	10300602	2.01	EU DESCRIPT	0.0300	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17958	U9	OS1	10300602	1.60	EU DESCRIPT	0.0300	0.0000	0.0000	Busch/Livington Campuses
NJ	Middlesex	34023	17965	U7	OS1	10200602	55.00	SCC Descriptio	0.6700	0.0166	0.0166	AES Red Oak Power Generating Facility
NJ	Middlesex	34023	17994	U1	OS1	10300602	64.40	EU DESCRIPT	35.1700	0.0407	0.0407	Woodbridge Developmental Center
NJ	Middlesex	34023	17994	U2	OS1	10300602	64.40	EU DESCRIPT	6.9600	0.0481	0.0481	Woodbridge Developmental Center
NJ	Middlesex	34023	17994	U3	OS1	10300602	64.40	EU DESCRIPT	9.5500	0.0479	0.0479	Woodbridge Developmental Center
NJ	Middlesex	34023	17994	U4	OS1	10300602	64.40	EU DESCRIPT	9.6400	0.0418	0.0418	Woodbridge Developmental Center
NJ	Middlesex	34023	18003	U1	OS3	10300602	55.00	SCC Descriptio	0.3100	0.0016	0.0016	Webcraft, LLC.
NJ	Middlesex	34023	18003	U1	OS9	10300602	55.00	SCC Descriptio	0.3100	0.0007	0.0007	Webcraft, LLC.
NJ	Middlesex	34023	18003	U1	OS6	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.

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NJ	Middlesex	34023	18003	U2	OS9	10300602	55.00	SCC Descriptio	0.3100	0.0018	0.0018	Webcraft, LLC.
NJ	Middlesex	34023	18003	U2	OS12	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.
NJ	Middlesex	34023	18003	U2	OS15	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.
NJ	Middlesex	34023	18003	U2	OS18	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.
NJ	Middlesex	34023	18003	U2	OS3	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.
NJ	Middlesex	34023	18003	U2	OS6	10300602	55.00	SCC Descriptio	0.3100	0.0006	0.0006	Webcraft, LLC.
NJ	Middlesex	34023	18044	U1	OS1	10200602	55.00	SCC Descriptio	11.4300	0.0298	0.0298	Wincup
NJ	Middlesex	34023	18044	U1	OS2	10200602	55.00	SCC Descriptio	7.6200	0.0199	0.0199	Wincup
NJ	Middlesex	34023	18045	U1	OS7	10200602	55.00	SCC Descriptio	14.1000	0.0040	0.0040	Gerdau Ameristeel-Perth Amboy
NJ	Middlesex	34023	18045	U1	OS8	10200602	55.00	SCC Descriptio	13.5000	0.0027	0.0027	Gerdau Ameristeel-Perth Amboy
NJ	Middlesex	34023	18045	U1	OS6	10200602	55.00	SCC Descriptio	6.2000	0.0013	0.0013	Gerdau Ameristeel-Perth Amboy
NJ	Middlesex	34023	18050	U8243	OS1	10300602	97.70	EU DESCRIPT	4.2800	0.1872	0.1872	Hatco Corporation
NJ	Middlesex	34023	18050	U8243	OS2	10300402	97.70	EU DESCRIPT	0.0500	0.0000	0.0002	Hatco Corporation
NJ	Middlesex	34023	18050	U8260	OS1	10300602	97.70	EU DESCRIPT	5.8300	0.0145	0.0145	Hatco Corporation
NJ	Middlesex	34023	18054	U5	OS0	10300402	55.00	SCC Descriptio	10.7100	0.0055	0.0055	Amerada Hess - First Reserve Terminal
NJ	Middlesex	34023	18058	U8	OS1	10200602	55.00	SCC Descriptio	0.9600	0.0256	0.0256	Chevron Products Company
NJ	Middlesex	34023	18058	U8	OS4	10200602	55.00	SCC Descriptio	11.7900	0.0237	0.0237	Chevron Products Company
NJ	Middlesex	34023	18060	U2000	OS4	10200602	55.00	SCC Descriptio	0.2100	0.0025	0.0025	Ferro Corporation
NJ	Middlesex	34023	18060	U2000	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0002	0.0002	Ferro Corporation
NJ	Middlesex	34023	18060	U2000	OS3	10200602	55.00	SCC Descriptio	0.0800	0.0002	0.0002	Ferro Corporation
NJ	Middlesex	34023	18060	U2000	OS2	10200602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	Ferro Corporation
NJ	Middlesex	34023	18065	U5	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Tyco Adhesives, Betham Plant
NJ	Middlesex	34023	18067	U1	OS2	10200602	55.00	SCC Descriptio	3.6000	0.0108	0.0108	AKZO NOBEL POLYMER CHEMICALS LLC
NJ	Middlesex	34023	18067	U1	OS1	10200602	55.00	SCC Descriptio	3.5500	0.0083	0.0083	AKZO NOBEL POLYMER CHEMICALS LLC
NJ	Middlesex	34023	18068	U5	OS1	10200602	55.00	SCC Descriptio	1.6100	0.0572	0.0572	Sewaren Generating Station
NJ	Middlesex	34023	18068	U6	OS1	10200602	55.00	SCC Descriptio	2.8700	0.0140	0.0140	Sewaren Generating Station
NJ	Middlesex	34023	18069	U11	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0005	0.0005	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U12	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0005	0.0005	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U13	OS1	10200602	55.00	SCC Descriptio	0.2800	0.0009	0.0009	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U18	OS1	10200602	55.00	SCC Descriptio	0.3700	0.0012	0.0012	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U19	OS1	10200602	55.00	SCC Descriptio	0.1200	0.0005	0.0005	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U19	OS2	10200602	55.00	SCC Descriptio	0.1000	0.0003	0.0003	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U20	OS2	10200602	55.00	SCC Descriptio	0.3400	0.0011	0.0011	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U20	OS1	10200602	55.00	SCC Descriptio	0.1000	0.0005	0.0005	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U21	OS4	10200602	55.00	SCC Descriptio	1.0800	0.0034	0.0034	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U22	OS3	10200602	55.00	SCC Descriptio	2.7900	0.0086	0.0086	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U22	OS6	10200602	55.00	SCC Descriptio	1.4900	0.0046	0.0046	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U23	OS9	10200602	55.00	SCC Descriptio	4.0100	0.0124	0.0124	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U23	OS5	10200602	55.00	SCC Descriptio	3.5900	0.0111	0.0111	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U23	OS8	10200602	55.00	SCC Descriptio	3.5900	0.0111	0.0111	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U23	OS10	10200602	55.00	SCC Descriptio	2.1000	0.0065	0.0065	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U23	OS11	10200602	55.00	SCC Descriptio	0.1700	0.0005	0.0005	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U24	OS2	10200602	55.00	SCC Descriptio	0.4400	0.0014	0.0014	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U25	OS2	10200602	55.00	SCC Descriptio	0.2600	0.0008	0.0008	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U26	OS2	10200602	55.00	SCC Descriptio	0.3800	0.0012	0.0012	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U34	OS1	10200602	55.00	SCC Descriptio	0.2700	0.0009	0.0009	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U35	OS1	10200602	55.00	SCC Descriptio	0.2700	0.0009	0.0009	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U37	OS3	10200602	55.00	SCC Descriptio	0.3400	0.0011	0.0011	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18069	U39	OS1	10200602	55.00	SCC Descriptio	0.3700	0.0012	0.0012	Ford Motor Company Edison Assembly Plant
NJ	Middlesex	34023	18071	U2	OS1	10300602	55.00	SCC Descriptio	0.2800	0.0006	0.0006	TRANSFER PRINT FOILS, INC.
NJ	Middlesex	34023	18071	U2	OS3	10300602	55.00	SCC Descriptio	0.3000	0.0006	0.0006	TRANSFER PRINT FOILS, INC.
NJ	Middlesex	34023	18071	U2	OS2	10300602	55.00	SCC Descriptio	0.1300	0.0003	0.0003	TRANSFER PRINT FOILS, INC.

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NJ	Middlesex	34023	18071	U20	OS9999	10300602	55.00	SCC Descriptio	7.9500	0.0235	0.0235	TRANSFER PRINT FOILS, INC.
NJ	Middlesex	34023	18093	U3	OS1	10200502	55.00	SCC Descriptio	0.0700	0.0000	0.0002	Middlesex County Utilities Authority
NJ	Middlesex	34023	18093	U4	OS1	10300501	0.00		0.0900	0.0000	0.0002	Middlesex County Utilities Authority
NJ	Middlesex	34023	18093	U5	OS1	10300501	0.00		0.0900	0.0000	0.0002	Middlesex County Utilities Authority
NJ	Monmouth	34025	20025	U20	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0008	0.0008	STAVOLA ASPHALT CO INC
NJ	Monmouth	34025	20025	U21	OS1	10200602	55.00	SCC Descriptio	0.1700	0.0008	0.0008	STAVOLA ASPHALT CO INC
NJ	Monmouth	34025	20085	U1	OS1	10300602	55.00	SCC Descriptio	0.5500	0.0063	0.0063	Jersey Shore Medical Center
NJ	Monmouth	34025	20085	U2	OS1	10300602	55.00	SCC Descriptio	1.1400	0.0080	0.0080	Jersey Shore Medical Center
NJ	Monmouth	34025	20085	U3	OS1	10300602	55.00	SCC Descriptio	0.6200	0.0111	0.0111	Jersey Shore Medical Center
NJ	Monmouth	34025	20148	U10	OS1	10300602	3.05	EU DESCRIPT	0.1500	0.0004	0.0004	AIR CRUISERS COMPANY
NJ	Monmouth	34025	20148	U11	OS1	10300602	1.18	EU DESCRIPT	0.0600	0.0001	0.0001	AIR CRUISERS COMPANY
NJ	Monmouth	34025	20148	U9	OS1	10300602	3.50	EU DESCRIPT	0.1700	0.0004	0.0004	AIR CRUISERS COMPANY
NJ	Monmouth	34025	20171	U2	OS1	10300602	55.00	SCC Descriptio	0.3800	0.0005	0.0005	Asbury Park Press--Neptune
NJ	Monmouth	34025	20198	U1	OS1	10300602	55.00	SCC Descriptio	0.2500	0.0021	0.0021	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1	OS2	10300602	55.00	SCC Descriptio	0.2500	0.0021	0.0021	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1001	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0001	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U101	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0000	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1101	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0019	0.0019	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1201	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1401	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1501	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1601	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1701	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U1801	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0000	0.0000	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U2	OS1	10300501	0.00		0.1500	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U2	OS2	10300501	0.00		0.1500	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U2	OS3	10300501	0.00		0.1500	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U201	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS6	10300602	55.00	SCC Descriptio	0.0500	0.0001	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS3	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS4	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS12	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS13	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS14	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS2	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS5	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS7	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS8	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS10	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS9	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U22	OS11	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U26	OS1	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U26	OS2	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U26	OS3	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U26	OS4	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U3	OS5	10300501	55.00	SCC Descriptio	0.2500	0.0000	0.0010	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U3	OS4	10300501	55.00	SCC Descriptio	0.2500	0.0002	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U3	OS6	10300501	55.00	SCC Descriptio	0.0900	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U301	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0003	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U4	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U4	OS2	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0001	MONMOUTH UNIVERSITY

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NJ	Monmouth	34025	20198	U4	OS3	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0000	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U401	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0000	0.0001	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U601	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0002	0.0002	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U7	OS3	10300501	55.00	SCC Descriptio	0.4400	0.0008	0.0008	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20198	U7	OS4	10300501	55.00	SCC Descriptio	0.4400	0.0000	0.0003	MONMOUTH UNIVERSITY
NJ	Monmouth	34025	20390	U4	OS1	10300602	55.00	SCC Descriptio	0.7200	0.0015	0.0015	CPI Packaging Inc.
NJ	Monmouth	34025	20597	U9	OS1	10200502	55.00	SCC Descriptio	0.1000	0.0000	0.0003	Monmouth County Reclamation Center
NJ	Monmouth	34025	20674	U3	OS1	10300602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	Asbury Park Press Freehold
NJ	Monmouth	34025	21138	U1	OS1	10300602	10.50	EU DESCRIPT	0.2100	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U10	OS1	10300602	2.50	EU DESCRIPT	0.0700	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U11	OS1	10300602	3.20	EU DESCRIPT	0.0400	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U12	OS1	10300602	6.30	EU DESCRIPT	0.1100	0.0003	0.0003	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U12	OS2	10300602	6.30	EU DESCRIPT	0.1100	0.0003	0.0003	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U13	OS1	10300602	5.30	EU DESCRIPT	0.1100	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U13	OS2	10300602	5.30	EU DESCRIPT	0.1100	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U15	OS1	10300602	2.10	EU DESCRIPT	0.0800	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U15	OS2	10300602	2.10	EU DESCRIPT	0.0800	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U16	OS1	10300602	3.40	EU DESCRIPT	0.1000	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U17	OS1	10300602	1.70	EU DESCRIPT	0.1000	0.0000	0.0000	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U18	OS1	10300602	2.10	EU DESCRIPT	0.0900	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U19	OS1	10300602	2.10	EU DESCRIPT	0.0100	0.0000	0.0000	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U2	OS1	10300602	1.40	EU DESCRIPT	0.0700	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U20	OS1	10300501	20.90	EU DESCRIPT	0.3900	0.0015	0.0015	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U21	OS1	10300501	20.90	EU DESCRIPT	1.5100	0.0013	0.0013	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U22	OS1	10300501	19.18	EU DESCRIPT	0.0100	0.0016	0.0016	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U23	OS1	10300501	14.58	EU DESCRIPT	1.0100	0.0021	0.0021	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U24	OS1	10300501	14.58	EU DESCRIPT	0.0400	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U25	OS1	10300501	6.28	EU DESCRIPT	0.0800	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U28	OS1	10300501	2.10	EU DESCRIPT	0.1700	0.0000	0.0002	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U3	OS1	10300602	6.60	EU DESCRIPT	0.1800	0.0002	0.0002	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U34	OS1	10300501	6.60	EU DESCRIPT	0.1200	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U4	OS1	10300602	5.03	EU DESCRIPT	0.1800	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U5	OS1	10300602	2.20	EU DESCRIPT	0.0800	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U6	OS1	10300602	1.22	EU DESCRIPT	0.0400	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U8	OS1	10300602	2.52	EU DESCRIPT	0.0400	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U8	OS2	10300602	2.52	EU DESCRIPT	0.0400	0.0001	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U9	OS1	10300602	3.20	EU DESCRIPT	0.0900	0.0000	0.0001	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U92	OS1	10300502	55.00	SCC Descriptio	0.0800	0.0000	0.0000	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U96	OS1	10300602	2.20	EU DESCRIPT	0.1600	0.0007	0.0007	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U97	OS1	10300602	1.40	EU DESCRIPT	0.0600	0.0000	0.0000	Naval Weapons Station Earle
NJ	Monmouth	34025	21138	U98	OS1	10300501	1.30	EU DESCRIPT	0.0700	0.0000	0.0000	Naval Weapons Station Earle
NJ	Monmouth	34025	21140	U1	OS1	10300602	4.47	EU DESCRIPT	0.0900	0.0004	0.0004	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U10	OS1	10300602	1.48	EU DESCRIPT	0.0600	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U11	OS1	10300602	2.16	EU DESCRIPT	0.0400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U11	OS2	10300602	2.16	EU DESCRIPT	0.0400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U13	OS1	10300602	2.87	EU DESCRIPT	0.1000	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U14	OS1	10300602	2.75	EU DESCRIPT	0.0400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U15	OS1	10300602	1.57	EU DESCRIPT	0.0300	0.0004	0.0004	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U16	OS1	10300602	1.48	EU DESCRIPT	0.0300	0.0005	0.0005	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U17	OS1	10300602	3.10	EU DESCRIPT	0.0300	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U18	OS1	10300602	2.20	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U19	OS1	10300602	1.08	EU DESCRIPT	0.1700	0.0009	0.0009	U.S. Army - Fort Monmouth, Main Post

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NJ	Monmouth	34025	21140	U2	OS1	10300602	4.47	EU DESCRIPT	0.0900	0.0004	0.0004	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U21	OS1	10300602	1.63	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U21	OS2	10300602	1.63	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U24	OS1	10300602	1.48	EU DESCRIPT	0.0200	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U25	OS1	10300602	1.00	EU DESCRIPT	0.0400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U26	OS1	10300602	1.13	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U27	OS1	10300602	1.60	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U27	OS2	10300602	1.60	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U29	OS1	10300602	1.80	EU DESCRIPT	0.0200	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U3	OS1	10300602	2.30	EU DESCRIPT	0.0800	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U30	OS1	10300602	1.15	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U31	OS1	10300602	1.15	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U35	OS1	10300602	1.10	EU DESCRIPT	0.0300	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U36	OS1	10300602	1.10	EU DESCRIPT	0.0300	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U37	OS1	10300602	20.06	EU DESCRIPT	0.1000	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U38	OS1	10300602	20.06	EU DESCRIPT	0.0700	0.0000	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U39	OS1	10300602	7.90	EU DESCRIPT	0.0800	0.0004	0.0004	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U4	OS1	10300602	1.37	EU DESCRIPT	0.0200	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U5	OS1	10300602	1.37	EU DESCRIPT	0.0200	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U6	OS1	10300602	1.85	EU DESCRIPT	0.0400	0.0023	0.0023	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U68	OS1	10300602	1.22	EU DESCRIPT	0.0600	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U71	OS1	10300602	4.00	EU DESCRIPT	0.3500	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U72	OS1	10300602	4.00	EU DESCRIPT	0.1400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U73	OS1	10300602	1.92	EU DESCRIPT	0.3100	0.0017	0.0017	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U74	OS1	10300602	1.92	EU DESCRIPT	0.1300	0.0007	0.0007	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U75	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U78	OS1	10300602	7.30	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U79	OS1	10300602	7.30	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U8	OS1	10300602	2.00	EU DESCRIPT	0.0400	0.0001	0.0001	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21140	U9	OS1	10300602	1.20	EU DESCRIPT	0.0500	0.0002	0.0002	U.S. Army - Fort Monmouth, Main Post
NJ	Monmouth	34025	21141	U2	OS1	10300602	4.52	EU DESCRIPT	0.0300	0.0001	0.0001	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21141	U21	OS1	10300602	9.96	EU DESCRIPT	0.1000	0.0010	0.0010	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21141	U22	OS1	10300602	9.96	EU DESCRIPT	0.4200	0.0000	0.0002	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21141	U24	OS1	10300602	1.92	EU DESCRIPT	0.0600	0.0003	0.0003	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21141	U31	OS1	10300602	1.21	EU DESCRIPT	0.0100	0.0000	0.0000	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21141	U8	OS1	10300602	1.67	EU DESCRIPT	0.1200	0.0002	0.0002	U.S. Army Fort Monmouth -Charles Wood Area
NJ	Monmouth	34025	21146	U12	OS5	10200602	55.00	SCC Descriptio	30.2800	0.0713	0.0713	Nestle USA - Beverage Division, Inc.
NJ	Monmouth	34025	21146	U12	OS3	10200602	55.00	SCC Descriptio	30.2800	0.0552	0.0552	Nestle USA - Beverage Division, Inc.
NJ	Monmouth	34025	21146	U12	OS1	10200602	55.00	SCC Descriptio	4.3700	0.0000	0.0106	Nestle USA - Beverage Division, Inc.
NJ	Monmouth	34025	21146	U2	OS13	10300602	55.00	SCC Descriptio	0.3900	0.0020	0.0020	Nestle USA - Beverage Division, Inc.
NJ	Monmouth	34025	21146	U2	OS15	10300602	55.00	SCC Descriptio	0.3900	0.0010	0.0010	Nestle USA - Beverage Division, Inc.
NJ	Monmouth	34025	21146	U7	OS1	10200602	55.00	SCC Descriptio	1.7000	0.0040	0.0040	Nestle USA - Beverage Division, Inc.
NJ	Morris	34027	25019	U200	OS1	10200502	55.00	SCC Descriptio	1.5500	0.0139	0.0139	Adron-Boonton Plant
NJ	Morris	34027	25056	U100	OS122	10300602	55.00	SCC Descriptio	0.4200	0.0017	0.0017	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS119	10300602	55.00	SCC Descriptio	0.4200	0.0013	0.0013	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS116	10300602	55.00	SCC Descriptio	0.2400	0.0010	0.0010	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS118	10300602	55.00	SCC Descriptio	0.2500	0.0010	0.0010	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS100	10300602	55.00	SCC Descriptio	0.1800	0.0007	0.0007	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS102	10300602	55.00	SCC Descriptio	0.1800	0.0007	0.0007	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS108	10300602	55.00	SCC Descriptio	0.1800	0.0007	0.0007	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS123	10300602	55.00	SCC Descriptio	0.2500	0.0000	0.0007	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS104	10300602	55.00	SCC Descriptio	0.1500	0.0006	0.0006	MCWILLIAMS FORGE CO.

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NJ	Morris	34027	25056	U100	OS106	10300602	55.00	SCC Descriptio	0.1500	0.0006	0.0006	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS120	10300602	55.00	SCC Descriptio	0.1400	0.0005	0.0005	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS121	10300602	55.00	SCC Descriptio	0.0900	0.0005	0.0005	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS110	10300602	55.00	SCC Descriptio	0.1800	0.0002	0.0002	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS112	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS114	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25056	U100	OS124	10300402	55.00	SCC Descriptio	3.0000	0.0120	0.0120	MCWILLIAMS FORGE CO.
NJ	Morris	34027	25078	U32	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	KOP-COAT, INC. AN OHIO CORPORATION
NJ	Morris	34027	25125	U5000	O50011	10200602	55.00	SCC Descriptio	0.4800	0.0017	0.0017	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50012	10200502	55.00	SCC Descriptio	0.0100	0.0031	0.0031	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50021	10200602	55.00	SCC Descriptio	2.0500	0.0046	0.0046	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50022	10200502	55.00	SCC Descriptio	0.0200	0.0026	0.0026	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50031	10200502	55.00	SCC Descriptio	1.0300	0.0020	0.0020	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50032	10200502	55.00	SCC Descriptio	0.0100	0.0013	0.0013	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50041	10200602	55.00	SCC Descriptio	0.1000	0.0002	0.0002	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50051	10200602	55.00	SCC Descriptio	0.1000	0.0002	0.0002	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50061	10200602	55.00	SCC Descriptio	0.6300	0.0012	0.0012	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50071	10200602	55.00	SCC Descriptio	0.6300	0.0012	0.0012	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50081	10200602	55.00	SCC Descriptio	0.6300	0.0012	0.0012	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50091	10200602	55.00	SCC Descriptio	0.3200	0.0007	0.0007	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50101	10200602	55.00	SCC Descriptio	0.3200	0.0007	0.0007	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50111	10200602	55.00	SCC Descriptio	0.3200	0.0007	0.0007	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50121	10200602	55.00	SCC Descriptio	0.3200	0.0007	0.0007	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50151	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Warner-Lambert of Pfizer
NJ	Morris	34027	25125	U5000	O50191	10200602	55.00	SCC Descriptio	0.0700	0.0000	0.0000	Warner-Lambert of Pfizer
NJ	Morris	34027	25142	U10	OS1	10300602	55.00	SCC Descriptio	0.0700	0.0002	0.0002	ISP Chemicals Inc., Sutton Laboratories
NJ	Morris	34027	25142	U9	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0002	0.0002	ISP Chemicals Inc., Sutton Laboratories
NJ	Morris	34027	25165	U100	OS3502	10300602	55.00	SCC Descriptio	0.3000	0.0014	0.0014	Pfizer Inc
NJ	Morris	34027	25165	U100	OS3501	10300602	55.00	SCC Descriptio	0.3100	0.0012	0.0012	Pfizer Inc
NJ	Morris	34027	25165	U100	OS3503	10300502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Pfizer Inc
NJ	Morris	34027	25165	U100	OS2901	10300602	55.00	SCC Descriptio	0.2400	0.0010	0.0010	Pfizer Inc
NJ	Morris	34027	25165	U100	OS301	10300501	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Pfizer Inc
NJ	Morris	34027	25165	U100	OS2301	10300602	55.00	SCC Descriptio	0.1600	0.0003	0.0003	Pfizer Inc
NJ	Morris	34027	25165	U100	OS2401	10300602	55.00	SCC Descriptio	0.0500	0.0001	0.0001	Pfizer Inc
NJ	Morris	34027	25219	U3	OS4	10200402	55.00	SCC Descriptio	1.3600	0.0136	0.0136	GIVAUDAN FLAVORS CORPORATION
NJ	Morris	34027	25219	U3	OS3	10200602	55.00	SCC Descriptio	2.6300	0.0435	0.0435	GIVAUDAN FLAVORS CORPORATION
NJ	Morris	34027	25219	U3	OS1	10200602	55.00	SCC Descriptio	2.5500	0.0330	0.0330	GIVAUDAN FLAVORS CORPORATION
NJ	Morris	34027	25219	U3	OS2	10200402	55.00	SCC Descriptio	1.0800	0.0000	0.0026	GIVAUDAN FLAVORS CORPORATION
NJ	Morris	34027	25315	U88	OS1	10300602	55.00	SCC Descriptio	0.2700	0.0006	0.0006	ROYAL LUBRICANTS INC
NJ	Morris	34027	25315	U97	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0005	0.0005	ROYAL LUBRICANTS INC
NJ	Morris	34027	25441	U4	OS1	10300501	0.00		0.2100	0.0004	0.0004	NATIONAL MANUFACTURING CO INC
NJ	Morris	34027	25441	U5	OS1	10300602	55.00	SCC Descriptio	0.1400	0.0004	0.0004	NATIONAL MANUFACTURING CO INC
NJ	Morris	34027	25669	U1	OS1	10300602	55.00	SCC Descriptio	0.3200	0.0004	0.0004	NEWARK STAR LEDGER
NJ	Morris	34027	25669	U7	OS1	10300602	55.00	SCC Descriptio	0.5300	0.0007	0.0007	NEWARK STAR LEDGER
NJ	Morris	34027	25669	U8	OS1	10300602	55.00	SCC Descriptio	0.5300	0.0007	0.0007	NEWARK STAR LEDGER
NJ	Morris	34027	25683	U1	OS1	10300602	55.00	SCC Descriptio	0.3600	0.0004	0.0004	Deluxe Financial Services, Inc.
NJ	Morris	34027	26173	U11201	O11201	10200602	55.00	SCC Descriptio	0.2400	0.0007	0.0007	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U11201	O11202	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U121	O12101	10200602	55.00	SCC Descriptio	0.4100	0.0000	0.0000	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U121	O12102	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U3401	OS3402	10200602	55.00	SCC Descriptio	0.8300	0.0044	0.0044	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U9401	OS9401	10200602	55.00	SCC Descriptio	6.9200	0.0235	0.0235	Novartis Pharmaceuticals Corporation

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NJ	Morris	34027	26173	U9401	OS9402	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U9596	OS9601	10200602	55.00	SCC Descriptio	0.1600	0.0005	0.0005	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U9596	OS9501	10200602	55.00	SCC Descriptio	0.1100	0.0000	0.0003	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U9801	OS9801	10200602	55.00	SCC Descriptio	6.1300	0.0100	0.0100	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26173	U9801	OS9802	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Novartis Pharmaceuticals Corporation
NJ	Morris	34027	26198	U1	OS5	10200602	55.00	SCC Descriptio	0.2900	0.0012	0.0012	Roysons Corporation
NJ	Morris	34027	26198	U7	OS1	10300602	55.00	SCC Descriptio	0.1400	0.0006	0.0006	Roysons Corporation
NJ	Morris	34027	26198	U8	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0008	0.0008	Roysons Corporation
NJ	Morris	34027	26198	U9	OS1	10300602	55.00	SCC Descriptio	0.3000	0.0012	0.0012	Roysons Corporation
NJ	Morris	34027	26215	U9	OS1	10300602	55.00	SCC Descriptio	5.8900	0.0215	0.0215	Morristown Memorial Hospital
NJ	Morris	34027	26215	U9	OS3	10300602	55.00	SCC Descriptio	5.2600	0.0122	0.0122	Morristown Memorial Hospital
NJ	Morris	34027	26218	U17	OS1	10300402	55.00	SCC Descriptio	10.9800	0.1510	0.1510	GREYSTONE PARK PSYCHIATRIC HOSPITAL
NJ	Morris	34027	26218	U7	OS1	10300402	55.00	SCC Descriptio	10.9200	0.0000	0.0048	GREYSTONE PARK PSYCHIATRIC HOSPITAL
NJ	Morris	34027	26218	U7	OS2	10300402	55.00	SCC Descriptio	3.7700	0.0000	0.0120	GREYSTONE PARK PSYCHIATRIC HOSPITAL
NJ	Morris	34027	26233	U1	OS2	10300602	24.90	EU DESCRIPT	1.3200	0.0047	0.0047	Kraft Foods North America, Inc.
NJ	Morris	34027	26233	U1	OS1	10300501	24.90	EU DESCRIPT	0.0200	0.0006	0.0006	Kraft Foods North America, Inc.
NJ	Morris	34027	26233	U2	OS1	10300501	24.90	EU DESCRIPT	0.0200	0.0029	0.0029	Kraft Foods North America, Inc.
NJ	Morris	34027	26233	U2	OS2	10300602	24.90	EU DESCRIPT	1.4200	0.0046	0.0046	Kraft Foods North America, Inc.
NJ	Morris	34027	26234	U2	OS3	10200602	55.00	SCC Descriptio	0.6000	0.0000	0.0016	Sidmak Laboratories, Inc.
NJ	Morris	34027	26234	U2	OS5	10200602	55.00	SCC Descriptio	0.5000	0.0008	0.0008	Sidmak Laboratories, Inc.
NJ	Morris	34027	26234	U2	OS4	10200602	55.00	SCC Descriptio	0.1000	0.0003	0.0003	Sidmak Laboratories, Inc.
NJ	Morris	34027	26234	U2	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	Sidmak Laboratories, Inc.
NJ	Morris	34027	26234	U2	OS2	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Sidmak Laboratories, Inc.
NJ	Morris	34027	26236	U13	OS13	10200602	55.00	SCC Descriptio	0.8900	0.0004	0.0004	Butler Printing & Laminating, Inc.
NJ	Morris	34027	26236	U14	OS14	10200602	55.00	SCC Descriptio	0.1300	0.0000	0.0001	Butler Printing & Laminating, Inc.
NJ	Morris	34027	26237	U11	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Blue Ridge Paper Products - DairyPak
NJ	Morris	34027	26237	U3	OS1	10300602	55.00	SCC Descriptio	0.3600	0.0000	0.0000	Blue Ridge Paper Products - DairyPak
NJ	Morris	34027	26237	U4	OS1	10300602	55.00	SCC Descriptio	0.3600	0.0000	0.0000	Blue Ridge Paper Products - DairyPak
NJ	Morris	34027	26263	U6	OS1	10300501	0.00		0.3700	0.0000	0.0001	Elm Manufacturing
NJ	Morris	34027	26263	U7	OS1	10300903	0.00		0.1300	0.0000	0.0000	Elm Manufacturing
NJ	Ocean	34029	78022	U10	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0002	0.0002	DPT Lakewood, Inc.
NJ	Ocean	34029	78022	U18	OS1	10300602	55.00	SCC Descriptio	0.4900	0.0006	0.0006	DPT Lakewood, Inc.
NJ	Ocean	34029	78022	U19	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0002	0.0002	DPT Lakewood, Inc.
NJ	Ocean	34029	78244	U2	OS204	10300602	55.00	SCC Descriptio	3.6000	0.0104	0.0104	Kimball Medical Center
NJ	Ocean	34029	78244	U2	OS202	10300602	55.00	SCC Descriptio	3.3700	0.0082	0.0082	Kimball Medical Center
NJ	Ocean	34029	78244	U2	OS206	10300602	55.00	SCC Descriptio	2.7300	0.0072	0.0072	Kimball Medical Center
NJ	Ocean	34029	78268	U4	OS2	10200602	55.00	SCC Descriptio	0.0500	0.0021	0.0021	PERMACEL, A NITTO DENKO COMPANY
NJ	Ocean	34029	78268	U4	OS1	10200602	55.00	SCC Descriptio	0.2400	0.0016	0.0016	PERMACEL, A NITTO DENKO COMPANY
NJ	Ocean	34029	78896	U3	OS1	10200602	131.00	EU DESCRIPT	0.4200	0.0030	0.0030	Lakewood Cogeneration, L.P.
NJ	Ocean	34029	78897	U102	OS1	10300602	1.83	EU DESCRIPT	0.0600	0.0005	0.0005	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U104	OS1	10300602	3.17	EU DESCRIPT	0.0900	0.0008	0.0008	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U13	OS1	10300602	55.00	SCC Descriptio	0.1400	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U13	OS2	10300602	55.00	SCC Descriptio	0.1400	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U14	OS2	10300602	55.00	SCC Descriptio	0.0700	0.0007	0.0007	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U14	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0006	0.0006	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U15	OS1	10300501	0.00		0.5000	0.0000	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U16	OS1	10300402	55.00	SCC Descriptio	3.6400	0.0051	0.0051	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U17	OS1	10300402	55.00	SCC Descriptio	3.2500	0.0046	0.0046	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U2	OS1	10300602	16.33	EU DESCRIPT	1.1600	0.0003	0.0003	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U22	OS1	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U23	OS1	10300402	55.00	SCC Descriptio	2.6700	0.0558	0.0558	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U25	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0000	0.0000	NAVAL AIR ENGINEERING STATION

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NJ	Ocean	34029	78897	U3	OS1	10301002	0.00		0.0400	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U303	OS1	10300602	55.00	SCC Descriptio	0.0300	0.0003	0.0003	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U305	OS1	10300602	2.20	EU DESCRIPT	0.0600	0.0000	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U36	OS1	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U36	OS2	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U4	OS1	10301002	0.00		0.0600	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U45	OS2	10300602	55.00	SCC Descriptio	0.0300	0.0002	0.0002	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U46	OS2	10300602	55.00	SCC Descriptio	0.0300	0.0002	0.0002	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U6	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0006	0.0006	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U6	OS2	10300602	55.00	SCC Descriptio	0.0500	0.0005	0.0005	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U64	OS1	10300501	0.00		0.1300	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U7	OS3	10300602	55.00	SCC Descriptio	0.0500	0.0005	0.0005	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U80	OS1	10200401	57.50	EU DESCRIPT	0.9600	0.0055	0.0055	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U83	OS1	10300602	1.51	EU DESCRIPT	0.0200	0.0002	0.0002	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U84	OS1	10300602	1.51	EU DESCRIPT	0.1200	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U85	OS1	10300602	1.51	EU DESCRIPT	0.1600	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U86	OS1	10300602	1.51	EU DESCRIPT	0.3200	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U87	OS1	10300602	5.50	EU DESCRIPT	0.2100	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U88	OS1	10300602	2.10	EU DESCRIPT	0.0700	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U89	OS1	10300602	2.10	EU DESCRIPT	0.0800	0.0000	0.0000	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U9	OS1	10300602	55.00	SCC Descriptio	0.0900	0.0008	0.0008	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U90	OS1	10300602	55.00	SCC Descriptio	0.2700	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U90	OS2	10300602	55.00	SCC Descriptio	0.2700	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U92	OS1	10300602	55.00	SCC Descriptio	0.2700	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U92	OS2	10300602	55.00	SCC Descriptio	0.2700	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U94	OS1	10300602	55.00	SCC Descriptio	0.1800	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U94	OS2	10300602	55.00	SCC Descriptio	0.1800	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U96	OS1	10300602	55.00	SCC Descriptio	0.1800	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U96	OS2	10300602	55.00	SCC Descriptio	0.1800	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U98	OS1	10300602	2.70	EU DESCRIPT	0.1200	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78897	U99	OS1	10300602	1.50	EU DESCRIPT	0.0500	0.0001	0.0001	NAVAL AIR ENGINEERING STATION
NJ	Ocean	34029	78909	U1	OS16	10300501	0.00		1.5300	0.0060	0.0060	Ocean County Utilities Authority - CWPCF
NJ	Ocean	34029	78909	U1	OS17	10300501	0.00		0.6000	0.0060	0.0060	Ocean County Utilities Authority - CWPCF
NJ	Ocean	34029	78909	U1	OS14	10300799	0.00		0.0900	0.0015	0.0015	Ocean County Utilities Authority - CWPCF
NJ	Ocean	34029	78909	U1	OS15	10300799	0.00		0.0600	0.0015	0.0015	Ocean County Utilities Authority - CWPCF
NJ	Ocean	34029	78931	U3	OS1	10300502	55.00	SCC Descriptio	0.2000	0.0000	0.0005	Ocean County Landfill Corporation
NJ	Passaic	34031	30053	U3	OS1	10200602	55.00	SCC Descriptio	0.2200	0.0003	0.0003	CONGRESS INDUSTRIES, INC.
NJ	Passaic	34031	30345	U25	OS1	10200602	55.00	SCC Descriptio	0.2600	0.0000	0.0001	ALPHA PROCESSING CO, INC.
NJ	Passaic	34031	30355	U4	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U5	OS1	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U7	OS4	10300602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U7	OS5	10300602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U7	OS1	10300602	55.00	SCC Descriptio	0.2400	0.0000	0.0001	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U7	OS2	10300602	55.00	SCC Descriptio	0.2400	0.0000	0.0007	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	30355	U7	OS3	10300602	55.00	SCC Descriptio	0.1200	0.0000	0.0003	PASSAIC, COUNTY OF, BOARD EDUCATION
NJ	Passaic	34031	31074	U1	OS1	10300602	55.00	SCC Descriptio	0.3600	0.0084	0.0084	PASSAIC PIONEER PROPERTIES CO.
NJ	Passaic	34031	31074	U3	OS1	10300602	55.00	SCC Descriptio	0.6300	0.0093	0.0093	PASSAIC PIONEER PROPERTIES CO.
NJ	Passaic	34031	31074	U8	OS1	10300602	55.00	SCC Descriptio	1.4300	0.0132	0.0132	PASSAIC PIONEER PROPERTIES CO.
NJ	Passaic	34031	31439	U13	OS1	10300602	55.00	SCC Descriptio	0.2700	0.0013	0.0013	Crown Roll Leaf, Inc.
NJ	Passaic	34031	31439	U14	OS1	10300602	55.00	SCC Descriptio	0.2500	0.0012	0.0012	Crown Roll Leaf, Inc.
NJ	Passaic	34031	31439	U15	OS1	10300602	55.00	SCC Descriptio	0.2500	0.0012	0.0012	Crown Roll Leaf, Inc.
NJ	Passaic	34031	31440	U5	OS1	10300602	91.60	EU DESCRIPT	0.9600	0.0000	0.0000	Recycled Paperboard, Inc. of Clifton

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NJ	Passaic	34031	31440	U5	OS2	10300501	91.60	EU DESCRIPT	0.0400	0.0000	0.0000	Recycled Paperboard, Inc. of Clifton
NJ	Passaic	34031	31440	U6	OS2	10200602	55.00	SCC Descriptio	10.8900	0.0347	0.0347	Recycled Paperboard, Inc. of Clifton
NJ	Passaic	34031	31440	U6	OS3	10200602	55.00	SCC Descriptio	3.3800	0.0086	0.0086	Recycled Paperboard, Inc. of Clifton
NJ	Passaic	34031	31440	U6	OS4	10200502	55.00	SCC Descriptio	1.8800	0.0000	0.0000	Recycled Paperboard, Inc. of Clifton
NJ	Passaic	34031	31499	U1	OS1	10200602	55.00	SCC Descriptio	1.0000	0.0005	0.0005	Morton International
NJ	Passaic	34031	31499	U1	OS2	10200602	55.00	SCC Descriptio	1.0000	0.0005	0.0005	Morton International
NJ	Passaic	34031	31544	U101	OS1	10200502	26.40	EU DESCRIPT	10.1700	0.0148	0.0148	North Jersey Development Center
NJ	Passaic	34031	31544	U102	OS1	10200502	8.25	EU DESCRIPT	0.7700	0.0000	0.0021	North Jersey Development Center
NJ	Passaic	34031	31544	U2	OS1	10200401	0.00		0.6100	0.0000	0.0017	North Jersey Development Center
NJ	Passaic	34031	31564	U1	OS6	10300602	55.00	SCC Descriptio	0.4900	0.0015	0.0015	Chase Facile Inc.
NJ	Passaic	34031	31670	U2	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0005	0.0005	Poly Molding Corp.
NJ	Passaic	34031	31670	U3	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0005	0.0005	Poly Molding Corp.
NJ	Passaic	34031	31670	U4	OS1	10300602	55.00	SCC Descriptio	0.1500	0.0005	0.0005	Poly Molding Corp.
NJ	Salem	34033	65024	U18	OS1	10300602	55.00	SCC Descriptio	0.7700	0.0016	0.0016	Budd Chemical Company
NJ	Salem	34033	65047	U1	OS1	10200602	4.95	EU DESCRIPT	0.0600	0.0006	0.0006	Memorial Hospital of Salem County
NJ	Salem	34033	65047	U1	OS2	10200502	4.95	EU DESCRIPT	0.2300	0.0022	0.0022	Memorial Hospital of Salem County
NJ	Salem	34033	65047	U2	OS2	10200502	9.90	EU DESCRIPT	0.7400	0.0000	0.0004	Memorial Hospital of Salem County
NJ	Salem	34033	65047	U2	OS1	10200602	9.90	EU DESCRIPT	0.0700	0.0000	0.0001	Memorial Hospital of Salem County
NJ	Salem	34033	65047	U3	OS1	10200602	9.90	EU DESCRIPT	0.2900	0.0000	0.0004	Memorial Hospital of Salem County
NJ	Salem	34033	65047	U3	OS2	10200502	9.90	EU DESCRIPT	0.4800	0.0000	0.0003	Memorial Hospital of Salem County
NJ	Salem	34033	65482	U1	OS1	10300602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Praxair, Inc.
NJ	Salem	34033	65485	U12	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	Siegfried (USA), Inc.
NJ	Salem	34033	65485	U26	OS1	10200602	29.40	EU DESCRIPT	0.5600	0.0016	0.0016	Siegfried (USA), Inc.
NJ	Salem	34033	65485	U6	OS2	10200602	23.10	EU DESCRIPT	1.1700	0.0053	0.0053	Siegfried (USA), Inc.
NJ	Salem	34033	65493	U131	OS1	10200602	55.00	SCC Descriptio	0.3500	0.0000	0.0001	Mannington Mills, Inc
NJ	Salem	34033	65493	U131	OS2	10200602	55.00	SCC Descriptio	0.2500	0.0000	0.0001	Mannington Mills, Inc
NJ	Salem	34033	65493	U37	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Mannington Mills, Inc
NJ	Salem	34033	65493	U38	OS1	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0000	Mannington Mills, Inc
NJ	Salem	34033	65493	U39	OS1	10200602	55.00	SCC Descriptio	0.8100	0.0000	0.0019	Mannington Mills, Inc
NJ	Salem	34033	65493	U39	OS2	10200502	55.00	SCC Descriptio	0.9300	0.0000	0.0004	Mannington Mills, Inc
NJ	Salem	34033	65493	U40	OS1	10200602	55.00	SCC Descriptio	0.8600	0.0000	0.0020	Mannington Mills, Inc
NJ	Salem	34033	65493	U40	OS2	10200502	55.00	SCC Descriptio	3.2000	0.0000	0.0018	Mannington Mills, Inc
NJ	Salem	34033	65493	U46	OS1	10200602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Mannington Mills, Inc
NJ	Salem	34033	65493	U46	OS2	10200602	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Mannington Mills, Inc
NJ	Salem	34033	65495	U4	OS2	10200502	55.00	SCC Descriptio	0.1700	0.0000	0.0000	Deepwater Generating Station
NJ	Salem	34033	65496	U15	OS1	10200502	55.00	SCC Descriptio	3.9700	0.0000	0.0000	Hope Creek Generating Station
NJ	Salem	34033	65496	U16	OS1	10200502	55.00	SCC Descriptio	3.6800	0.0000	0.0000	Hope Creek Generating Station
NJ	Salem	34033	65496	U17	OS1	10200502	55.00	SCC Descriptio	5.7200	0.0000	0.0000	Hope Creek Generating Station
NJ	Salem	34033	65499	U8	OS1	10300602	1.60	EU DESCRIPT	0.3500	0.0000	0.0009	Anchor Glass Container Corporation
NJ	Salem	34033	65500	U11	OS1	10200502	55.00	SCC Descriptio	0.4400	0.0000	0.0000	Salem Generating Station
NJ	Salem	34033	65500	U2	OS1	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Salem Generating Station
NJ	Somerset	34035	35004	U501	OS1	10300602	55.00	SCC Descriptio	3.2200	0.0087	0.0087	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS3	10300602	55.00	SCC Descriptio	2.1200	0.0058	0.0058	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS20	10200602	55.00	SCC Descriptio	0.3300	0.0009	0.0009	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS5	10300602	55.00	SCC Descriptio	2.5900	0.0018	0.0018	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS10	10300602	55.00	SCC Descriptio	0.5600	0.0015	0.0015	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS9	10300602	55.00	SCC Descriptio	0.5600	0.0015	0.0015	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS6	10300501	55.00	SCC Descriptio	0.2800	0.0002	0.0002	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS7	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS8	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35004	U501	OS2	10300402	55.00	SCC Descriptio	0.2300	0.0000	0.0006	Ortho-McNeil Pharmaceutical
NJ	Somerset	34035	35011	U17	OS1	10200602	55.00	SCC Descriptio	2.4700	0.0171	0.0171	Veterans Affairs Medical Center, Lyons

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NJ	Somerset	34035	35011	U17	OS2	10200502	55.00	SCC Descriptio	0.0600	0.0064	0.0064	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U18	OS1	10200602	55.00	SCC Descriptio	1.8100	0.0014	0.0014	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U18	OS2	10200502	55.00	SCC Descriptio	0.1500	0.0060	0.0060	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U19	OS1	10200602	55.00	SCC Descriptio	0.7200	0.0003	0.0003	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U19	OS2	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U20	OS1	10200602	55.00	SCC Descriptio	2.3900	0.0002	0.0002	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U20	OS2	10200502	55.00	SCC Descriptio	0.0600	0.0006	0.0006	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U21	OS1	10200602	55.00	SCC Descriptio	1.8400	0.0086	0.0086	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35011	U21	OS2	10200502	55.00	SCC Descriptio	0.0900	0.0065	0.0065	Veterans Affairs Medical Center, Lyons
NJ	Somerset	34035	35040	U110	OS1	10300602	55.00	SCC Descriptio	1.3100	0.0019	0.0019	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS11	10300602	55.00	SCC Descriptio	0.0200	0.0001	0.0001	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS5	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS9	10300602	55.00	SCC Descriptio	0.0400	0.0001	0.0001	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS7	10300602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS10	10300501	55.00	SCC Descriptio	0.0400	0.0000	0.0001	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS12	10300501	55.00	SCC Descriptio	0.0300	0.0000	0.0000	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS2	10300402	55.00	SCC Descriptio	0.1400	0.0000	0.0002	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS6	10300501	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35040	U110	OS8	10300501	55.00	SCC Descriptio	0.0600	0.0000	0.0001	Johnson & Johnson Consumer Products, Inc.
NJ	Somerset	34035	35046	U68	OS1	10300602	55.00	SCC Descriptio	4.4200	0.0125	0.0125	ORTHO CLINICAL DIAGNOSTICS, INC.
NJ	Somerset	34035	35046	U68	OS3	10300504	55.00	SCC Descriptio	0.5700	0.0000	0.0000	ORTHO CLINICAL DIAGNOSTICS, INC.
NJ	Somerset	34035	35046	U68	OS2	10300501	55.00	SCC Descriptio	0.2000	0.0000	0.0001	ORTHO CLINICAL DIAGNOSTICS, INC.
NJ	Somerset	34035	35052	U47	OS501	10200602	55.00	SCC Descriptio	0.6500	0.0033	0.0033	Reckitt Benckiser
NJ	Somerset	34035	35052	U47	OS502	10200602	55.00	SCC Descriptio	0.6500	0.0033	0.0033	Reckitt Benckiser
NJ	Somerset	34035	35052	U47	OS503	10300602	55.00	SCC Descriptio	0.4700	0.0012	0.0012	Reckitt Benckiser
NJ	Somerset	34035	35052	U47	OS504	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0001	Reckitt Benckiser
NJ	Somerset	34035	35052	U47	OS505	10300602	55.00	SCC Descriptio	0.1200	0.0000	0.0001	Reckitt Benckiser
NJ	Somerset	34035	35052	U47	OS506	10300602	55.00	SCC Descriptio	0.1100	0.0000	0.0001	Reckitt Benckiser
NJ	Somerset	34035	35054	U9901	OS4	10200602	55.00	SCC Descriptio	3.1200	0.0139	0.0139	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35054	U9901	OS3	10200602	55.00	SCC Descriptio	0.7600	0.0119	0.0119	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35054	U9901	OS2	10200602	55.00	SCC Descriptio	0.4200	0.0109	0.0109	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35054	U9901	OS1	10200602	55.00	SCC Descriptio	0.4300	0.0096	0.0096	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35054	U9901	OS28	10300501	55.00	SCC Descriptio	0.0400	0.0000	0.0001	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35054	U9901	OS29	10300602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	NATIONAL STARCH & CHEMICAL CORP
NJ	Somerset	34035	35091	U1	OS1	10300602	55.00	SCC Descriptio	0.2100	0.0004	0.0004	Haarmann & Reimer
NJ	Somerset	34035	35091	U2	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0003	0.0003	Haarmann & Reimer
NJ	Somerset	34035	35091	U20	OS1	10300602	55.00	SCC Descriptio	0.7100	0.0013	0.0013	Haarmann & Reimer
NJ	Somerset	34035	35091	U6	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0003	0.0003	Haarmann & Reimer
NJ	Somerset	34035	35211	U1	OS1	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U2	OS2	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U3	OS3	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U300	OS9	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U301	OS10	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U303	OS11	10300602	55.00	SCC Descriptio	0.2200	0.0002	0.0002	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U304	OS12	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U306	OS13	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U307	OS14	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U308	OS15	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U4	OS4	10300602	55.00	SCC Descriptio	0.0700	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U5	OS5	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U6	OS6	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.
NJ	Somerset	34035	35211	U7	OS7	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Huntingdon Life Sceinces Inc.

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NJ	Somerset	34035	35328	U101	OS2	10200602	55.00	SCC Descriptio	2.6800	0.0068	0.0068	REBTEX, INC
NJ	Somerset	34035	35328	U101	OS1	10200402	55.00	SCC Descriptio	0.0600	0.0000	0.0002	REBTEX, INC
NJ	Somerset	34035	35328	U102	OS1	10300602	55.00	SCC Descriptio	2.4400	0.0123	0.0123	REBTEX, INC
NJ	Somerset	34035	35328	U102	OS2	10300402	55.00	SCC Descriptio	0.4600	0.0000	0.0010	REBTEX, INC
NJ	Somerset	34035	35742	U10	OS10	10200602	3.50	EU DESCRIPT	0.7900	0.0000	0.0002	Transco Compressor Station 505
NJ	Somerset	34035	35827	U2	OS1	10200602	55.00	SCC Descriptio	0.5200	0.0000	0.0014	Clariant Corporation
NJ	Somerset	34035	35827	U2	OS3	10200602	55.00	SCC Descriptio	0.7700	0.0008	0.0008	Clariant Corporation
NJ	Somerset	34035	35827	U2	OS4	10200602	55.00	SCC Descriptio	0.7700	0.0008	0.0008	Clariant Corporation
NJ	Somerset	34035	35827	U2	OS2	10200602	55.00	SCC Descriptio	0.0800	0.0000	0.0002	Clariant Corporation
NJ	Somerset	34035	35832	U1	OS1	10200602	55.00	SCC Descriptio	2.3800	0.0237	0.0237	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35832	U1	OS5	10200602	55.00	SCC Descriptio	2.6100	0.0168	0.0168	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35832	U1	OS3	10200602	55.00	SCC Descriptio	1.7200	0.0152	0.0152	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35832	U1	OS4	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35832	U18	OS1	10200602	55.00	SCC Descriptio	1.4200	0.0078	0.0078	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35832	U18	OS2	10200502	55.00	SCC Descriptio	0.1900	0.0208	0.0208	Aventis Pharmaceuticals, Inc.
NJ	Somerset	34035	35862	U201	OS1	10300402	2.70	EU DESCRIPT	0.0500	0.0000	0.0000	Elizabethtown Water Company
NJ	Somerset	34035	35862	U501	OS1	10300501	0.00		0.3200	0.0000	0.0001	Elizabethtown Water Company
NJ	Somerset	34035	35873	U10	OS1	10200602	55.00	SCC Descriptio	0.3200	0.0009	0.0009	Tekni-Plex, Inc. Somerville Facility
NJ	Somerset	34035	35873	U15	OS1	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0000	Tekni-Plex, Inc. Somerville Facility
NJ	Somerset	34035	35886	U10	OS1	10300602	8.25	EU DESCRIPT	0.1900	0.0003	0.0003	Agfa Corporation
NJ	Somerset	34035	35886	U11	OS1	10300602	6.60	EU DESCRIPT	0.1600	0.0003	0.0003	Agfa Corporation
NJ	Somerset	34035	35886	U13	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U14	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U15	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U16	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U17	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U18	OS1	10300602	1.25	EU DESCRIPT	0.5100	0.0006	0.0006	Agfa Corporation
NJ	Somerset	34035	35886	U8	OS1	10300602	4.95	EU DESCRIPT	0.1200	0.0002	0.0002	Agfa Corporation
NJ	Somerset	34035	35886	U9	OS1	10300602	6.60	EU DESCRIPT	0.1600	0.0003	0.0003	Agfa Corporation
NJ	Somerset	34035	35897	U9	OS1	10300602	55.00	SCC Descriptio	0.4500	0.0118	0.0118	Pharmacia & Upjohn - Peapack Campus
NJ	Somerset	34035	35897	U9	OS2	10300602	55.00	SCC Descriptio	0.5600	0.0118	0.0118	Pharmacia & Upjohn - Peapack Campus
NJ	Somerset	34035	35933	U10	OS10	10200602	55.00	SCC Descriptio	1.5700	0.0070	0.0070	Cardinal Health Pharm Tech Services Center
NJ	Somerset	34035	35933	U11	OS11	10200602	55.00	SCC Descriptio	1.9400	0.0024	0.0024	Cardinal Health Pharm Tech Services Center
NJ	Somerset	34035	35933	U20	OS20	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Cardinal Health Pharm Tech Services Center
NJ	Somerset	34035	35933	U21	OS21	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Cardinal Health Pharm Tech Services Center
NJ	Somerset	34035	35967	U8	OS1	10200602	55.00	SCC Descriptio	0.5100	0.0005	0.0005	Anadigics, Inc.
NJ	Somerset	34035	35967	U8	OS2	10200602	55.00	SCC Descriptio	0.5100	0.0005	0.0005	Anadigics, Inc.
NJ	Sussex	34037	83404	U12	OS12	10300602	55.00	SCC Descriptio	0.8700	0.0000	0.0016	NEWCO INC.
NJ	Sussex	34037	83404	U13	OS13	10300602	55.00	SCC Descriptio	0.8700	0.0040	0.0040	NEWCO INC.
NJ	Sussex	34037	83405	U3	OS1	10200602	55.00	SCC Descriptio	0.4100	0.0023	0.0023	Tennessee Gas Pipeline Company
NJ	Union	34039	40059	U25	OS1	10200602	55.00	SCC Descriptio	0.4700	0.0008	0.0008	DOCK RESINS CORP
NJ	Union	34039	40160	U5	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0004	0.0004	Mulberry Metal Products, Inc.
NJ	Union	34039	40160	U6	OS1	10300602	55.00	SCC Descriptio	0.1100	0.0004	0.0004	Mulberry Metal Products, Inc.
NJ	Union	34039	40177	U4	OS1	10200502	55.00	SCC Descriptio	0.7000	0.0013	0.0013	SYNRAY CORPORATION
NJ	Union	34039	40177	U5	OS1	10200502	55.00	SCC Descriptio	0.2700	0.0013	0.0013	SYNRAY CORPORATION
NJ	Union	34039	40177	U6	OS1	10200502	55.00	SCC Descriptio	0.1700	0.0003	0.0003	SYNRAY CORPORATION
NJ	Union	34039	40213	U4	OS1	10200602	55.00	SCC Descriptio	0.7300	0.0036	0.0036	Trinitas New Point Campus
NJ	Union	34039	40213	U5	OS1	10200602	55.00	SCC Descriptio	0.6200	0.0036	0.0036	Trinitas New Point Campus
NJ	Union	34039	40213	U6	OS1	10200602	55.00	SCC Descriptio	0.1600	0.0035	0.0035	Trinitas New Point Campus
NJ	Union	34039	40213	U7	OS1	10200602	55.00	SCC Descriptio	0.1900	0.0033	0.0033	Trinitas New Point Campus
NJ	Union	34039	40263	U11	OS2	10200602	55.00	SCC Descriptio	0.1300	0.0000	0.0004	DUREX INC.
NJ	Union	34039	40263	U21	OS1	10300501	0.00		0.4500	0.0034	0.0034	DUREX INC.

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NJ	Union	34039	40271	U2	OS1	10200602	11.55	EU DESCRIPT	0.5500	0.0030	0.0030	Trinitas Hospital Jersey Street
NJ	Union	34039	40271	U3	OS1	10200602	11.55	EU DESCRIPT	0.5500	0.0030	0.0030	Trinitas Hospital Jersey Street
NJ	Union	34039	40295	U23	OS1	10200602	55.00	SCC Descriptio	2.9800	0.0146	0.0146	PUREPAC PHARMACEUTICAL COMPANY
NJ	Union	34039	40295	U24	OS1	10200602	55.00	SCC Descriptio	1.7000	0.0000	0.0046	PUREPAC PHARMACEUTICAL COMPANY
NJ	Union	34039	40326	U1	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0070	0.0070	Duro Bag Manufacturing
NJ	Union	34039	40326	U2	OS1	10200602	55.00	SCC Descriptio	0.1400	0.0070	0.0070	Duro Bag Manufacturing
NJ	Union	34039	40326	U3	OS1	10200602	55.00	SCC Descriptio	0.0900	0.0000	0.0000	Duro Bag Manufacturing
NJ	Union	34039	40383	U1	OS1	10300602	13.20	EU DESCRIPT	2.2700	0.0059	0.0059	Trinitas Williamson Street
NJ	Union	34039	40383	U2	OS1	10300602	13.20	EU DESCRIPT	2.2700	0.0059	0.0059	Trinitas Williamson Street
NJ	Union	34039	40383	U3	OS1	10300602	6.60	EU DESCRIPT	0.9100	0.0029	0.0029	Trinitas Williamson Street
NJ	Union	34039	40543	U1	OS1	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0001	PLYMOUTH PRINTING CO, INC.
NJ	Union	34039	40543	U7	OS1	10200602	55.00	SCC Descriptio	0.0600	0.0000	0.0000	PLYMOUTH PRINTING CO, INC.
NJ	Union	34039	40668	U2	OS1	10300602	55.00	SCC Descriptio	1.6600	0.0116	0.0116	OVERLOOK HOSPITAL
NJ	Union	34039	40668	U2	OS3	10300602	55.00	SCC Descriptio	1.1100	0.0114	0.0114	OVERLOOK HOSPITAL
NJ	Union	34039	40668	U2	OS2	10300602	55.00	SCC Descriptio	2.1500	0.0000	0.0000	OVERLOOK HOSPITAL
NJ	Union	34039	40668	U2	OS202	10300501	55.00	SCC Descriptio	0.7300	0.0000	0.0048	OVERLOOK HOSPITAL
NJ	Union	34039	41682	U1	OS1	10200602	62.64	EU DESCRIPT	4.6300	0.0232	0.0232	Lucent Technologies Inc.
NJ	Union	34039	41682	U1	OS2	10200401	62.64	EU DESCRIPT	2.3500	0.0000	0.0000	Lucent Technologies Inc.
NJ	Union	34039	41682	U2	OS1	10200602	62.64	EU DESCRIPT	1.4400	0.0055	0.0055	Lucent Technologies Inc.
NJ	Union	34039	41682	U2	OS2	10200401	62.64	EU DESCRIPT	3.6100	0.0000	0.0000	Lucent Technologies Inc.
NJ	Union	34039	41682	U3	OS2	10200401	88.74	EU DESCRIPT	9.5100	0.0017	0.0017	Lucent Technologies Inc.
NJ	Union	34039	41682	U3	OS1	10200602	88.74	EU DESCRIPT	5.9800	0.0035	0.0035	Lucent Technologies Inc.
NJ	Union	34039	41682	U4	OS2	10200401	88.74	EU DESCRIPT	6.8900	0.0952	0.0952	Lucent Technologies Inc.
NJ	Union	34039	41682	U4	OS1	10200602	88.74	EU DESCRIPT	3.5500	0.0191	0.0191	Lucent Technologies Inc.
NJ	Union	34039	41702	U13001	O13001	10300602	55.00	SCC Descriptio	0.2400	0.0000	0.0001	Rahway Valley Sewerage Authority
NJ	Union	34039	41702	U60001	O60001	10200602	55.00	SCC Descriptio	0.3400	0.0012	0.0012	Rahway Valley Sewerage Authority
NJ	Union	34039	41702	U60002	O60003	10300602	55.00	SCC Descriptio	0.8200	0.0032	0.0032	Rahway Valley Sewerage Authority
NJ	Union	34039	41702	U80001	O80001	10200799	0.00		1.0300	0.0035	0.0035	Rahway Valley Sewerage Authority
NJ	Union	34039	41708	U2	OS1	10300602	76.70	EU DESCRIPT	0.1300	0.0003	0.0003	Schering Corporation-Union
NJ	Union	34039	41712	U116	OS11	10200602	55.00	SCC Descriptio	1.5600	0.0062	0.0062	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U116	OS1	10200602	55.00	SCC Descriptio	0.4700	0.0050	0.0050	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U116	OS12	10200502	55.00	SCC Descriptio	0.0900	0.0210	0.0210	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U116	OS2	10200502	55.00	SCC Descriptio	0.0700	0.0086	0.0086	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U116	OS21	10200602	55.00	SCC Descriptio	0.3900	0.0000	0.0000	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U116	OS22	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75004	OS1	10200602	81.20	EU DESCRIPT	10.5000	0.0823	0.0823	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75004	OS2	10200502	81.20	EU DESCRIPT	0.0500	0.0077	0.0077	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75006	OS1	10200602	108.60	EU DESCRIPT	14.0400	0.0848	0.0848	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75006	OS2	10200502	108.60	EU DESCRIPT	0.1800	0.0609	0.0609	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75007	OS1	10200602	133.70	EU DESCRIPT	30.2500	0.1062	0.1062	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75007	OS2	10200502	133.70	EU DESCRIPT	1.3300	0.0110	0.0110	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75008	OS1	10200602	155.60	EU DESCRIPT	42.4700	0.1745	0.1745	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75008	OS2	10200502	155.60	EU DESCRIPT	0.6900	0.1287	0.1287	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75010	OS11	10200602	55.00	SCC Descriptio	0.0800	0.0035	0.0035	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75010	OS7	10200502	55.00	SCC Descriptio	0.0400	0.0150	0.0150	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75010	OS6	10200602	55.00	SCC Descriptio	0.0300	0.0024	0.0024	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41712	U75010	OS12	10200502	55.00	SCC Descriptio	0.1900	0.0000	0.0007	Merck & Co., Inc. - Rahway, New Jersey
NJ	Union	34039	41716	U3	OS1	10200502	55.00	SCC Descriptio	0.0600	0.0000	0.0000	HOWARD PRESS INC. 1101/1107 DIVISION
NJ	Union	34039	41724	U1	OS13	10200602	55.00	SCC Descriptio	1.0300	0.0051	0.0051	COUNTY OF UNION
NJ	Union	34039	41724	U1	OS4	10200602	55.00	SCC Descriptio	1.3100	0.0035	0.0035	COUNTY OF UNION
NJ	Union	34039	41724	U1	OS3	10200602	55.00	SCC Descriptio	1.5600	0.0000	0.0046	COUNTY OF UNION
NJ	Union	34039	41724	U8	OS1	10300602	55.00	SCC Descriptio	0.1300	0.0023	0.0023	COUNTY OF UNION

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NJ	Union	34039	41724	U8	OS2	10300602	55.00	SCC Descriptio	0.1300	0.0023	0.0023	COUNTY OF UNION
NJ	Union	34039	41735	U1	OS2	10300501	55.00	SCC Descriptio	0.0100	0.0040	0.0040	Kean College of New Jersey
NJ	Union	34039	41735	U1	OS1	10300602	55.00	SCC Descriptio	0.8400	0.0127	0.0127	Kean College of New Jersey
NJ	Union	34039	41735	U2	OS1	10300602	55.00	SCC Descriptio	0.7500	0.0066	0.0066	Kean College of New Jersey
NJ	Union	34039	41735	U21	OS1	10300602	8.40	EU DESCRIPT	0.0500	0.0017	0.0017	Kean College of New Jersey
NJ	Union	34039	41735	U22	OS1	10300602	8.40	EU DESCRIPT	0.0400	0.0011	0.0011	Kean College of New Jersey
NJ	Union	34039	41735	U3	OS1	10300602	55.00	SCC Descriptio	0.8600	0.0134	0.0134	Kean College of New Jersey
NJ	Union	34039	41735	U8	OS1	10300501	0.00		0.1800	0.0000	0.0003	Kean College of New Jersey
NJ	Union	34039	41735	U9	OS1	10300501	0.00		0.1200	0.0000	0.0002	Kean College of New Jersey
NJ	Union	34039	41766	U11	OS2	10200602	12.55	EU DESCRIPT	0.5600	0.0010	0.0010	Tuscan/Lehigh Dairies
NJ	Union	34039	41766	U11	OS1	10200401	12.55	EU DESCRIPT	0.2700	0.0000	0.0006	Tuscan/Lehigh Dairies
NJ	Union	34039	41766	U12	OS1	10200401	12.55	EU DESCRIPT	0.7100	0.0000	0.0015	Tuscan/Lehigh Dairies
NJ	Union	34039	41766	U13	OS2	10200602	20.92	EU DESCRIPT	1.3700	0.0010	0.0010	Tuscan/Lehigh Dairies
NJ	Union	34039	41766	U13	OS1	10200401	20.92	EU DESCRIPT	1.0300	0.0000	0.0019	Tuscan/Lehigh Dairies
NJ	Union	34039	41785	U10	OS1	10300602	55.00	SCC Descriptio	2.6100	0.0043	0.0043	Muhlenberg Regional Medical Center
NJ	Union	34039	41785	U10	OS3	10300602	55.00	SCC Descriptio	2.6100	0.0043	0.0043	Muhlenberg Regional Medical Center
NJ	Union	34039	41795	U8	OS1	10300602	55.00	SCC Descriptio	0.1000	0.0001	0.0001	Inter City Tire
NJ	Union	34039	41798	U3	OS1	10200602	3.00	EU DESCRIPT	0.0200	0.0000	0.0000	Andre Originals Manufacturing Company
NJ	Union	34039	41798	U4	OS1	10300504	6.20	EU DESCRIPT	0.1800	0.0000	0.0001	Andre Originals Manufacturing Company
NJ	Union	34039	41800	U13	OS1	10200401	0.00		5.1400	0.0097	0.0097	ST Linden Terminal, LLC
NJ	Union	34039	41800	U14	OS1	10200401	0.00		6.1000	0.0080	0.0080	ST Linden Terminal, LLC
NJ	Union	34039	41802	U12	OS142	10200602	55.00	SCC Descriptio	3.5500	0.0044	0.0044	INTERBAKE FOODS, INC.
NJ	Union	34039	41802	U12	OS132	10200502	55.00	SCC Descriptio	4.4400	0.0123	0.0123	INTERBAKE FOODS, INC.
NJ	Union	34039	41802	U12	OS122	10200502	55.00	SCC Descriptio	0.0900	0.0000	0.0002	INTERBAKE FOODS, INC.
NJ	Union	34039	41804	U9	OS1	10300602	55.00	SCC Descriptio	0.1900	0.0000	0.0000	Sun Chemical Corporation
NJ	Union	34039	41805	U2	OS6	10200799	0.00		14.2200	0.0388	0.0388	Bayway Refinery
NJ	Union	34039	41805	U2	OS4	10200799	0.00		1.8100	0.0117	0.0117	Bayway Refinery
NJ	Union	34039	41805	U2	OS2	10200799	0.00		0.2200	0.0011	0.0011	Bayway Refinery
NJ	Union	34039	41805	U2	OS3	10200799	0.00		0.0500	0.0003	0.0003	Bayway Refinery
NJ	Union	34039	41805	U3	OS17	10200799	251.00	Title V Permit	572.6000	1.5720	1.5720	Bayway Refinery
NJ	Union	34039	41805	U3	OS16	10200799	251.00	Title V Permit	309.5900	0.8760	0.8760	Bayway Refinery
NJ	Union	34039	41805	U3	OS15	10200799	251.00	Title V Permit	90.3400	0.2540	0.2540	Bayway Refinery
NJ	Union	34039	41805	U3	OS9	10200799	251.00	Title V Permit	41.9600	0.1313	0.1313	Bayway Refinery
NJ	Union	34039	41805	U3	OS6	10200799	251.00	Title V Permit	11.8400	0.0378	0.0378	Bayway Refinery
NJ	Union	34039	41805	U3	OS2	10200799	251.00	Title V Permit	14.0900	0.0360	0.0360	Bayway Refinery
NJ	Union	34039	41805	U3	OS4	10200799	251.00	Title V Permit	10.6900	0.0346	0.0346	Bayway Refinery
NJ	Union	34039	41805	U3	OS3	10200799	251.00	Title V Permit	9.5100	0.0312	0.0312	Bayway Refinery
NJ	Union	34039	41805	U3	OS13	10200799	251.00	Title V Permit	11.2300	0.0306	0.0306	Bayway Refinery
NJ	Union	34039	41805	U3	OS1	10200799	251.00	Title V Permit	7.8300	0.0241	0.0241	Bayway Refinery
NJ	Union	34039	41805	U3	OS8	10200799	251.00	Title V Permit	8.1100	0.0240	0.0240	Bayway Refinery
NJ	Union	34039	41805	U3	OS5	10200799	251.00	Title V Permit	6.7700	0.0207	0.0207	Bayway Refinery
NJ	Union	34039	41805	U3	OS12	10200799	251.00	Title V Permit	6.3200	0.0194	0.0194	Bayway Refinery
NJ	Union	34039	41805	U3	OS7	10200799	251.00	Title V Permit	1.9300	0.0124	0.0124	Bayway Refinery
NJ	Union	34039	41805	U3	OS11	10200799	251.00	Title V Permit	4.2300	0.0113	0.0113	Bayway Refinery
NJ	Union	34039	41805	U3	OS10	10200799	251.00	Title V Permit	0.0600	0.0000	0.0002	Bayway Refinery
NJ	Union	34039	41806	U16	OS2	10200602	55.00	SCC Descriptio	1.4000	0.0056	0.0056	Schering Corporation
NJ	Union	34039	41806	U16	OS1	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Schering Corporation
NJ	Union	34039	41806	U17	OS2	10200602	55.00	SCC Descriptio	3.1400	0.0180	0.0180	Schering Corporation
NJ	Union	34039	41806	U17	OS1	10200502	55.00	SCC Descriptio	0.0100	0.0000	0.0000	Schering Corporation
NJ	Union	34039	41806	U18	OS2	10200602	55.00	SCC Descriptio	2.4400	0.0101	0.0101	Schering Corporation
NJ	Union	34039	41806	U18	OS1	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Schering Corporation
NJ	Union	34039	41807	U6	OS2	10200602	55.00	SCC Descriptio	2.1000	0.0049	0.0049	API Foils, Inc.

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NJ	Union	34039	41808	U1	OS1	10200602	55.00	SCC Descriptio	7.6600	0.0371	0.0371	Garwood Paperboard - Div. of Millen Ind. Inc.
NJ	Union	34039	41808	U1	OS3	10200602	55.00	SCC Descriptio	5.9500	0.0371	0.0371	Garwood Paperboard - Div. of Millen Ind. Inc.
NJ	Union	34039	41808	U1	OS2	10200401	55.00	SCC Descriptio	0.0600	0.0000	0.0002	Garwood Paperboard - Div. of Millen Ind. Inc.
NJ	Union	34039	41808	U1	OS4	10200401	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Garwood Paperboard - Div. of Millen Ind. Inc.
NJ	Union	34039	41811	U11	OS1	10200602	55.00	SCC Descriptio	2.9300	0.0164	0.0164	Safety-Kleen Systems, Inc.
NJ	Union	34039	41811	U11	OS3	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0006	Safety-Kleen Systems, Inc.
NJ	Union	34039	41813	U16	OS2	10300501	55.00	SCC Descriptio	0.7900	0.0000	0.0021	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U16	OS4	10300501	55.00	SCC Descriptio	0.3500	0.0000	0.0009	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U16	OS3	10300602	55.00	SCC Descriptio	0.1000	0.0000	0.0003	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U3	OS4	10300799	0.00		1.6700	0.0040	0.0040	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U3	OS2	10300799	0.00		1.1900	0.0037	0.0037	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U3	OS1	10300501	0.00		0.8300	0.0000	0.0022	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U3	OS3	10300501	0.00		0.1000	0.0000	0.0003	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41813	U37	OS1	10300799	0.00		0.0200	0.0001	0.0001	JOINT MEETING OF ESSEX AND UNION COUNTIES
NJ	Union	34039	41959	U1	O14503	10200602	55.00	SCC Descriptio	0.5800	0.0010	0.0010	Summit Property Company L.L.C.
NJ	Union	34039	41959	U2	OS1	10200602	55.00	SCC Descriptio	6.5000	0.0393	0.0393	Summit Property Company L.L.C.
NJ	Union	34039	41959	U3	OS1	10200602	55.00	SCC Descriptio	7.7100	0.0469	0.0469	Summit Property Company L.L.C.
NJ	Union	34039	41959	U4	OS1	10200602	55.00	SCC Descriptio	0.8100	0.0292	0.0292	Summit Property Company L.L.C.
NJ	Union	34039	41959	U4	OS2	10200502	55.00	SCC Descriptio	0.0200	0.0000	0.0000	Summit Property Company L.L.C.
NJ	Warren	34041	85003	U60102	O60102	10300602	55.00	SCC Descriptio	2.2900	0.0000	0.0010	BASF Corporation
NJ	Warren	34041	85003	U60102	O60103	10300502	55.00	SCC Descriptio	0.0900	0.0000	0.0000	BASF Corporation
NJ	Warren	34041	85005	U38	OS1	10200602	55.00	SCC Descriptio	0.8200	0.0000	0.0006	Pechiney Plastic Packaging, Inc.
NJ	Warren	34041	85005	U39	OS1	10200602	55.00	SCC Descriptio	0.1100	0.0000	0.0001	Pechiney Plastic Packaging, Inc.
NJ	Warren	34041	85442	U42	OS3	10200401	55.00	SCC Descriptio	18.3500	0.0000	0.0282	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85442	U42	OS1	10200602	55.00	SCC Descriptio	0.8700	0.0079	0.0079	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85442	U43	OS1	10200602	55.00	SCC Descriptio	3.0400	0.0172	0.0172	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85442	U43	OS3	10200401	55.00	SCC Descriptio	4.8800	0.0000	0.0027	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85442	U44	OS1	10200602	55.00	SCC Descriptio	0.3000	0.0031	0.0031	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85442	U44	OS3	10200401	55.00	SCC Descriptio	1.5500	0.0000	0.0000	Mallinckrodt Baker, Incorporated
NJ	Warren	34041	85443	U48	OS1	10300602	55.00	SCC Descriptio	0.9600	0.0020	0.0020	M & M / MARS
NJ	Warren	34041	85443	U48	OS3	10300602	55.00	SCC Descriptio	0.8600	0.0013	0.0013	M & M / MARS
NJ	Warren	34041	85443	U48	OS5	10300602	55.00	SCC Descriptio	0.0100	0.0001	0.0001	M & M / MARS
NJ	Warren	34041	85453	U7	OS3	10200602	55.00	SCC Descriptio	16.2000	0.0710	0.0710	Oxford Textile Facility
NJ	Warren	34041	85453	U7	OS5	10200602	55.00	SCC Descriptio	5.1500	0.0102	0.0102	Oxford Textile Facility
NJ	Warren	34041	85453	U7	OS6	10200502	55.00	SCC Descriptio	0.3300	0.0000	0.0004	Oxford Textile Facility
NY	Albany	36001	4010100112	EI0001	E06EI	10200501	0.00		0.0180	0.0000	0.0000	MOBIL OIL ALBANY TERMINAL #31-001
NY	Albany	36001	4010100122	00MAIN	GASFP	10200602	55.00	SCC Descriptio	69.7000	0.0000	0.1884	NYS OGS SHERIDAN STEAM PLT
NY	Albany	36001	4010100122	00MAIN	OILFP	10200502	55.00	SCC Descriptio	10.5300	0.0000	0.0289	NYS OGS SHERIDAN STEAM PLT
NY	Albany	36001	4010100153	EI0001	E02EI	10300603	5.00	SCC Descriptio	4.0282	0.0000	0.0106	SUNY AT ALBANY
NY	Albany	36001	4010100153	U10001	100FP	10300602	55.00	SCC Descriptio	14.4718	0.0000	0.0358	SUNY AT ALBANY
NY	Albany	36001	4010100153	U10001	201FP	10300502	55.00	SCC Descriptio	0.0136	0.0000	0.0000	SUNY AT ALBANY
NY	Albany	36001	4010100153	U10001	200FP	10300402	55.00	SCC Descriptio	4.6376	0.0000	0.0127	SUNY AT ALBANY
NY	Albany	36001	4012200007	APAREA	NTGFP	10200601	150.00	SCC Descriptio	51.0000	0.0000	0.1407	GENERAL ELECTRIC SELKIRK PLASTICS PLT
NY	Albany	36001	4012200007	APAREA	OFFFP	10200799	150.00	SCC Descriptio	14.8551	0.0000	0.0410	GENERAL ELECTRIC SELKIRK PLASTICS PLT
NY	Albany	36001	4012200007	EIC001	E01EI	10200602	55.00	SCC Descriptio	0.1620	0.0000	0.0004	GENERAL ELECTRIC SELKIRK PLASTICS PLT
NY	Albany	36001	4012200027	EI0001	E06EI	10200503	5.00	SCC Descriptio	0.0328	0.0000	0.0001	CITGO PETROLEUM GLENMONT TERMINAL
NY	Albany	36001	4012600160	BOILER	NG1FP	10200602	55.00	SCC Descriptio	6.6900	0.0000	0.0181	SAINT-GOBAIN ABRASIVES INC
NY	Allegany	36003	9026000009	UFAC01	X05EI	10200603	5.00	SCC Descriptio	2.1900	0.0000	0.0056	INDEPENDENCE STATION
NY	Allegany	36003	9026000009	UFAC01	X04EI	10200603	5.00	SCC Descriptio	1.7520	0.0000	0.0045	INDEPENDENCE STATION
NY	Allegany	36003	9026000009	UFAC01	X01EI	10200603	5.00	SCC Descriptio	0.7340	0.0000	0.0019	INDEPENDENCE STATION
NY	Allegany	36003	9026000009	UFAC01	X03EI	10200603	5.00	SCC Descriptio	0.1095	0.0000	0.0003	INDEPENDENCE STATION
NY	Allegany	36003	9026000009	UFAC01	X06EI	10200603	5.00	SCC Descriptio	0.0265	0.0000	0.0001	INDEPENDENCE STATION

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NY	Bronx	36005	2600100028	UC0001	001FP	10300401	0.00		21.9422	0.0000	0.0603	TRACEY TOWERS
NY	Bronx	36005	2600100031	A00001	NG1FP	10300602	55.00	SCC Descriptio	0.7700	0.0000	0.0019	AMALGAMATED HOUSING-130 GALE PLACE
NY	Bronx	36005	2600100031	A00001	RF6FP	10300402	55.00	SCC Descriptio	27.0050	0.0000	0.0742	AMALGAMATED HOUSING-130 GALE PLACE
NY	Bronx	36005	2600200055	U00001	BNGFP	10300602	55.00	SCC Descriptio	6.6200	0.0000	0.0182	NYC-HH - N CENTRAL BX HOSP-3424 KOSSUTH
NY	Bronx	36005	2600200055	U00001	B02FP	10300502	55.00	SCC Descriptio	0.0170	0.0000	0.0000	NYC-HH - N CENTRAL BX HOSP-3424 KOSSUTH
NY	Bronx	36005	2600200105	U00001	BNGFP	10300601	55.00	SCC Descriptio	33.0315	0.0000	0.0907	MONTEFIORE MEDICAL CTR-111 E 210TH ST
NY	Bronx	36005	2600200105	U00001	002EI	10300502	55.00	SCC Descriptio	2.6507	0.0000	0.0072	MONTEFIORE MEDICAL CTR-111 E 210TH ST
NY	Bronx	36005	2600200105	U00001	E07EI	10300501	55.00	SCC Descriptio	0.5770	0.0000	0.0015	MONTEFIORE MEDICAL CTR-111 E 210TH ST
NY	Bronx	36005	2600300038	U00001	002FP	10300601	377.00	Title V Permit	0.2431	0.0000	0.0007	RIVERBAY CORP-CO-OP CITY
NY	Bronx	36005	2600300038	U00001	001FP	10300401	377.00	Title V Permit	106.6118	0.0000	0.2882	RIVERBAY CORP-CO-OP CITY
NY	Bronx	36005	2600300038	U00002	004FP	10300601	377.00	Title V Permit	0.1607	0.0000	0.0004	RIVERBAY CORP-CO-OP CITY
NY	Bronx	36005	2600300038	U00002	003FP	10300401	377.00	Title V Permit	53.8204	0.0000	0.1455	RIVERBAY CORP-CO-OP CITY
NY	Bronx	36005	2600500011	U00001	BOIFP	10300401	30.00	Title V Permit	51.3354	0.0000	0.1410	NYC-HH - JACOBI MEDICAL CTR
NY	Bronx	36005	2600500115	EIC001	E01EI	10300503	5.00	SCC Descriptio	0.7183	0.0000	0.0019	BRONX PSYCHIATRIC CENTER
NY	Bronx	36005	2600500115	EIC001	001EI	10300603	5.00	SCC Descriptio	0.0689	0.0000	0.0002	BRONX PSYCHIATRIC CENTER
NY	Bronx	36005	2600500115	UEU001	PR1FP	10300402	55.00	SCC Descriptio	29.2468	0.0000	0.0803	BRONX PSYCHIATRIC CENTER
NY	Bronx	36005	2600500125	U01B01	001EI	10300501	5.00	SCC Descriptio	0.5820	0.0000	0.0016	BRONX ZOO
NY	Bronx	36005	2600500125	U01B01	002EI	10300603	5.00	SCC Descriptio	2.5918	0.0000	0.0068	BRONX ZOO
NY	Bronx	36005	2600500133	U00001	1AGFP	10300602	55.00	SCC Descriptio	14.9250	0.0000	0.0369	ALBERT EINSTEIN COLLEGE OF MEDICINE
NY	Bronx	36005	2600500133	U00001	1DRFP	10300401	55.00	SCC Descriptio	3.0023	0.0000	0.0082	ALBERT EINSTEIN COLLEGE OF MEDICINE
NY	Bronx	36005	2600500133	U00001	1CRFP	10300401	55.00	SCC Descriptio	3.0891	0.0000	0.0085	ALBERT EINSTEIN COLLEGE OF MEDICINE
NY	Bronx	36005	2600500133	U00001	1BRFP	10300401	55.00	SCC Descriptio	7.3951	0.0000	0.0203	ALBERT EINSTEIN COLLEGE OF MEDICINE
NY	Bronx	36005	2600500133	U00001	1ARFP	10300401	55.00	SCC Descriptio	19.2241	0.0000	0.0528	ALBERT EINSTEIN COLLEGE OF MEDICINE
NY	Bronx	36005	2600500139	U00001	001FP	10300602	55.00	SCC Descriptio	37.9390	0.0000	0.0938	PARKCHESTER SOUTH CONDOMINIUM
NY	Bronx	36005	2600500139	U00001	002FP	10300401	55.00	SCC Descriptio	22.9865	0.0000	0.0631	PARKCHESTER SOUTH CONDOMINIUM
NY	Bronx	36005	2600500148	UC0000	C01FP	10300401	0.00		4.8249	0.0000	0.0133	BRONX LEBANON HOSPITAL
NY	Bronx	36005	2600500148	UC0001	002EI	10300502	55.00	SCC Descriptio	1.0325	0.0000	0.0028	BRONX LEBANON HOSPITAL
NY	Bronx	36005	2600500179	UFR001	FR4EI	10300502	55.00	SCC Descriptio	0.1000	0.0000	0.0002	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFR001	FR1FP	10300602	55.00	SCC Descriptio	0.4667	0.0000	0.0013	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFR002	FR2FP	10300602	55.00	SCC Descriptio	0.4667	0.0000	0.0012	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFR003	FR3FP	10300602	55.00	SCC Descriptio	0.4667	0.0000	0.0012	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT6EI	10300602	55.00	SCC Descriptio	1.6150	0.0000	0.0044	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT1FP	10300502	55.00	SCC Descriptio	0.0750	0.0000	0.0002	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT2FP	10300502	55.00	SCC Descriptio	0.0750	0.0000	0.0002	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT3FP	10300603	55.00	SCC Descriptio	0.0433	0.0000	0.0001	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT4FP	10300603	55.00	SCC Descriptio	0.0433	0.0000	0.0001	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500179	UFT000	FT5FP	10300603	55.00	SCC Descriptio	0.0433	0.0000	0.0001	BRONX LEBANON HOSPITAL CTR
NY	Bronx	36005	2600500232	U00001	001FP	10200402	55.00	SCC Descriptio	14.4467	0.0000	0.0397	ST BARNABAS HOSPITAL
NY	Bronx	36005	2600500556	1THBLR	101FP	10200402	55.00	SCC Descriptio	16.1625	0.0000	0.0444	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	202FP	10200602	5.00	SCC Descriptio	0.8851	0.0000	0.0024	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E02EI	10300504	5.00	SCC Descriptio	0.3613	0.0000	0.0010	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E05EI	10300603	5.00	SCC Descriptio	0.9564	0.0000	0.0026	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E07EI	10300603	5.00	SCC Descriptio	0.4610	0.0000	0.0012	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E06EI	10300603	5.00	SCC Descriptio	0.4269	0.0000	0.0011	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E04EI	10300603	5.00	SCC Descriptio	0.2888	0.0000	0.0008	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E03EI	10300603	5.00	SCC Descriptio	0.2656	0.0000	0.0007	FORDHAM UNIVERSITY
NY	Bronx	36005	2600500556	2MCBLR	E01EI	10300603	5.00	SCC Descriptio	0.0843	0.0000	0.0002	FORDHAM UNIVERSITY
NY	Bronx	36005	2600700183	UC0001	001EI	10300401	0.00		13.8509	0.0000	0.0381	LAFAYETTE MORRISON HOUSING CORP
NY	Bronx	36005	2600700189	UC0001	E01EI	10300401	0.00		16.5748	0.0000	0.0455	LAFAYETTE BOYNTON HOUSES INC
NY	Bronx	36005	2600700190	EI0001	E02EI	10200603	5.00	SCC Descriptio	0.1467	0.0000	0.0004	HUNTS POINT AVENUE COMPRESSOR STATION
NY	Bronx	36005	2600700245	UC0001	001FP	10300401	0.00		7.7078	0.0000	0.0212	JAMIE TOWERS
NY	Bronx	36005	2600700259	U00001	001FP	10300602	55.00	SCC Descriptio	20.6579	0.0000	0.0511	NYC-DOC - RIKERS ISLAND

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	2002 NOx Emissions Summer Day from Inventory (tpd)	2002 NOx Emissions Summer Day Calculated (tpd)	Plant Name
NY	Bronx	36005	2600700259	U00001	002FP	10300502	55.00	SCC Descriptio	1.0883	0.0000	0.0030	NYC-DOC - RIKERS ISLAND
NY	Bronx	36005	2600700259	U00002	003FP	10300602	55.00	SCC Descriptio	14.9188	0.0000	0.0369	NYC-DOC - RIKERS ISLAND
NY	Bronx	36005	2600700259	U00002	004FP	10300502	55.00	SCC Descriptio	0.6069	0.0000	0.0017	NYC-DOC - RIKERS ISLAND
NY	Bronx	36005	2600700259	U00003	005FP	10300602	55.00	SCC Descriptio	10.5565	0.0000	0.0261	NYC-DOC - RIKERS ISLAND
NY	Bronx	36005	2600700259	U00003	006FP	10300502	55.00	SCC Descriptio	0.0003	0.0000	0.0000	NYC-DOC - RIKERS ISLAND
NY	Broome	36007	7034600032	B39000	GASFP	10200601	150.00	SCC Descriptio	73.5500	0.0000	0.2029	ENDICOTT INTERCONNECT TECHNOLOGIES INC
NY	Broome	36007	7034600032	B39000	OILFP	10200401	150.00	SCC Descriptio	0.1289	0.0000	0.0004	ENDICOTT INTERCONNECT TECHNOLOGIES INC
NY	Broome	36007	7034600032	EI0001	E14EI	10200602	55.00	SCC Descriptio	0.7347	0.0000	0.0020	ENDICOTT INTERCONNECT TECHNOLOGIES INC
NY	Broome	36007	7034600032	U10105	E05EI	10200603	5.00	SCC Descriptio	0.5100	0.0000	0.0013	ENDICOTT INTERCONNECT TECHNOLOGIES INC
NY	Broome	36007	7034600032	U10401	E06EI	10200603	5.00	SCC Descriptio	0.0690	0.0000	0.0002	ENDICOTT INTERCONNECT TECHNOLOGIES INC
NY	Broome	36007	7034800027	U0001A	E04EI	10200603	5.00	SCC Descriptio	5.1250	0.0000	0.0127	SUNY AT BINGHAMTON
NY	Broome	36007	7034800027	U0001A	003FP	10300602	5.00	SCC Descriptio	3.9060	0.0000	0.0100	SUNY AT BINGHAMTON
NY	Broome	36007	7034800027	U0003A	007FP	10300602	55.00	SCC Descriptio	1.4469	0.0000	0.0036	SUNY AT BINGHAMTON
NY	Broome	36007	7034800027	U0004A	009FP	10300602	55.00	SCC Descriptio	0.7392	0.0000	0.0018	SUNY AT BINGHAMTON
NY	Cayuga	36011	7055200004	UFAC01	999EI	10200602	55.00	SCC Descriptio	7.3500	0.0000	0.0199	OWENS-BROCKWAY AUBURN PLANT 35
NY	Chautauqua	36013	9060300001	EIC001	E09EI	10300603	5.00	SCC Descriptio	0.2430	0.0000	0.0006	DUNKIRK SPECIALTY STEEL LLC
NY	Chautauqua	36013	9060800023	6UTILT	P07FP	10300602	55.00	SCC Descriptio	1.1550	0.0000	0.0029	CHAUTAUQUA HARDWARE CORP
NY	Chautauqua	36013	9060800023	EI0001	X10EI	10200603	5.00	SCC Descriptio	0.4820	0.0000	0.0012	CHAUTAUQUA HARDWARE CORP
NY	Chautauqua	36013	9060800027	00000B	0F2FP	10300903	0.00		0.0412	0.0000	0.0001	CRAWFORD FURNITURE MFG CORP
NY	Chautauqua	36013	9060800027	00000B	0F1FP	10300903	0.00		2.5457	0.0000	0.0070	CRAWFORD FURNITURE MFG CORP
NY	Chautauqua	36013	9060800089	EI0001	X03EI	10300603	5.00	SCC Descriptio	1.0300	0.0000	0.0027	WOMEN'S CHRISTIAN ASSOC HOSPITAL
NY	Chautauqua	36013	9062200003	5HEATG	R01FP	10300602	55.00	SCC Descriptio	2.5500	0.0000	0.0063	CUMMINS ENGINE-JAMESTOWN PLANT
NY	Chautauqua	36013	9062800018	B00404	004FP	10300903	0.00		9.5477	0.0000	0.0262	ETHAN ALLEN, INC., MAYVILLE DIVISION
NY	Chautauqua	36013	9062800018	B00404	E99EI	10300901	0.00		17.4000	0.0000	0.0478	ETHAN ALLEN, INC., MAYVILLE DIVISION
NY	Chautauqua	36013	9062800018	B00505	005FP	10200602	55.00	SCC Descriptio	0.1496	0.0000	0.0004	ETHAN ALLEN, INC., MAYVILLE DIVISION
NY	Chemung	36015	8070400029	00MAIN	GASFP	10300602	55.00	SCC Descriptio	9.4965	0.0000	0.0235	NYS ELMIRA CORRECTIONAL FACILITY
NY	Chemung	36015	8070400029	00MAIN	OILFP	10300402	55.00	SCC Descriptio	0.5515	0.0000	0.0015	NYS ELMIRA CORRECTIONAL FACILITY
NY	Chemung	36015	8070400036	EI0001	999EI	10200602	55.00	SCC Descriptio	0.1499	0.0000	0.0004	ANCHOR GLASS CONTAINER CORP
NY	Chenango	36017	7083000037	U41202	00AEP	10200401	0.00		1.7108	0.0000	0.0047	RAYMOND CORPORATION
NY	Chenango	36017	7083000037	U41203	00BEP	10200401	0.00		1.5604	0.0000	0.0043	RAYMOND CORPORATION
NY	Chenango	36017	7083000037	U41204	E09EI	10200501	0.00		0.1848	0.0000	0.0005	RAYMOND CORPORATION
NY	Chenango	36017	7084200017	U00001	E03EI	10200602	55.00	SCC Descriptio	3.2350	0.0000	0.0087	QUEST INTERNATIONAL
NY	Chenango	36017	7084200017	U00002	00AEP	10200602	55.00	SCC Descriptio	3.0400	0.0000	0.0082	QUEST INTERNATIONAL
NY	Chenango	36017	7084200017	U00003	00BEP	10200602	55.00	SCC Descriptio	0.7500	0.0000	0.0020	QUEST INTERNATIONAL
NY	Clinton	36019	5092800017	000001	001FP	10200601	150.00	SCC Descriptio	55.4800	0.0000	0.1530	WYETH PHARMACEUTICALS
NY	Clinton	36019	5092800017	000001	01CFP	10200501	150.00	SCC Descriptio	1.5528	0.0000	0.0040	WYETH PHARMACEUTICALS
NY	Columbia	36021	4100600017	EI0001	E12EI	10200603	5.00	SCC Descriptio	0.0975	0.0000	0.0003	LB FURNITURE INDUSTRIES LLC
NY	Columbia	36021	4100600017	EI0001	E03EI	10300603	5.00	SCC Descriptio	0.3050	0.0000	0.0008	LB FURNITURE INDUSTRIES LLC
NY	Columbia	36021	4100600026	EI0001	E02EI	10200603	5.00	SCC Descriptio	0.6265	0.0000	0.0016	W B MCGUIRE CO INC
NY	Cortland	36023	7110200043	EI0001	E01EI	10200603	5.00	SCC Descriptio	0.1720	0.0000	0.0004	TUSCARORA INC
NY	Delaware	36025	4122800027	1BOILR	B02FP	10200504	0.00		11.2941	0.0000	0.0310	DMV INTERNATIONAL NUTRITIONALS
NY	Delaware	36025	4122800027	1BOILR	B01FP	10200504	0.00		6.1570	0.0000	0.0169	DMV INTERNATIONAL NUTRITIONALS
NY	Delaware	36025	4123000019	1BOILR	B01FP	10200905	55.00	SCC Descriptio	57.6870	0.0000	0.1559	NORBORD INDUSTRIES
NY	Delaware	36025	4123000019	1BOILR	B02FP	10200602	55.00	SCC Descriptio	1.7490	0.0000	0.0048	NORBORD INDUSTRIES
NY	Delaware	36025	4123000019	1BOILR	022EI	10200602	55.00	SCC Descriptio	1.1870	0.0000	0.0032	NORBORD INDUSTRIES
NY	Delaware	36025	4125000018	BOILRS	BLSFP	10300401	0.00		12.1072	0.0000	0.0333	AMPHENOL CORP - BENDIX CONNECTOR OPERS
NY	Dutchess	36027	3132800025	A00001	MBNFP	10200602	55.00	SCC Descriptio	24.5800	0.0000	0.0664	IBM EAST FISHKILL FACILITY
NY	Dutchess	36027	3132800025	A00001	SBNFP	10200602	55.00	SCC Descriptio	4.4500	0.0000	0.0122	IBM EAST FISHKILL FACILITY
NY	Dutchess	36027	3132800025	A00001	MB6FP	10200402	55.00	SCC Descriptio	0.7450	0.0000	0.0020	IBM EAST FISHKILL FACILITY
NY	Dutchess	36027	3132800025	A00001	E07EI	10200602	55.00	SCC Descriptio	2.7093	0.0000	0.0070	IBM EAST FISHKILL FACILITY
NY	Dutchess	36027	3132800025	A00001	SB2FP	10200501	55.00	SCC Descriptio	0.0650	0.0000	0.0002	IBM EAST FISHKILL FACILITY
NY	Dutchess	36027	3132800025	EI0001	E09EI	10200503	5.00	SCC Descriptio	1.3030	0.0000	0.0034	IBM EAST FISHKILL FACILITY

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NY	Dutchess	36027	3132800025	EI0001	E08EI	10200603	5.00	SCC Descriptio	0.0697	0.0000	0.0002	IBM EAST FISHKILL FACILITY
NY	Erie	36029	9140200021	1BOILR	NGSFP	10200602	55.00	SCC Descriptio	1.4953	0.0000	0.0040	OUTOKUMPU AMERICAN BRASS BUFFALO PLANT
NY	Erie	36029	9140200076	5BOILR	501FP	10200401	55.00	SCC Descriptio	67.5360	0.0000	0.1870	BUFFALO COLOR CORP - LEE ST PLANT
NY	Erie	36029	9140200076	5BOILR	502FP	10200602	55.00	SCC Descriptio	2.9660	0.0000	0.0080	BUFFALO COLOR CORP - LEE ST PLANT
NY	Erie	36029	9140200089	B00001	B01FP	10300602	55.00	SCC Descriptio	3.9400	0.0000	0.0097	BUFFALO GENERAL HOSPITAL
NY	Erie	36029	9140200089	B00001	B02FP	10300401	55.00	SCC Descriptio	8.7514	0.0000	0.0240	BUFFALO GENERAL HOSPITAL
NY	Erie	36029	9140200154	U00002	BOIFP	10300602	55.00	SCC Descriptio	4.6000	0.0000	0.0114	BIRD ISLAND STP
NY	Erie	36029	9140200421	EI0001	E01EI	10200603	5.00	SCC Descriptio	0.7000	0.0000	0.0018	SOVEREIGN PACKAGING GROUP INC
NY	Erie	36029	9140200421	EI0001	E02EI	10200603	5.00	SCC Descriptio	0.1000	0.0000	0.0003	SOVEREIGN PACKAGING GROUP INC
NY	Erie	36029	9140200435	U00090	017FP	10200602	55.00	SCC Descriptio	1.9700	0.0000	0.0053	PVS CHEMICALS
NY	Erie	36029	9140200465	3BOILR	B3CFP	10300203	55.00	SCC Descriptio	2.3491	0.0000	0.0065	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200465	3BOILR	B3EFP	10300602	55.00	SCC Descriptio	2.2988	0.0000	0.0057	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200465	3BOILR	B2EFP	10300602	55.00	SCC Descriptio	1.8265	0.0000	0.0050	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200465	3BOILR	B20FP	10300502	55.00	SCC Descriptio	0.0015	0.0000	0.0000	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200465	EI0001	E06EI	10300502	55.00	SCC Descriptio	0.0106	0.0000	0.0000	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200465	EI0001	E05EI	10300502	55.00	SCC Descriptio	0.0093	0.0000	0.0000	SISTERS OF CHARITY HOSPITAL
NY	Erie	36029	9140200573	EI0001	E01EI	10300603	5.00	SCC Descriptio	0.4500	0.0000	0.0012	BUFFALO STATE COLLEGE
NY	Erie	36029	9140200573	U00001	200FP	10300602	55.00	SCC Descriptio	4.7900	0.0000	0.0132	BUFFALO STATE COLLEGE
NY	Erie	36029	9140200573	U00001	20XEI	10300602	55.00	SCC Descriptio	0.6200	0.0000	0.0015	BUFFALO STATE COLLEGE
NY	Erie	36029	9140200573	U00001	100FP	10300402	55.00	SCC Descriptio	42.6050	0.0000	0.1053	BUFFALO STATE COLLEGE
NY	Erie	36029	9142200093	1BOILR	B20FP	10300602	55.00	SCC Descriptio	0.7750	0.0000	0.0019	INTERNATIONAL IMAGING
NY	Erie	36029	9142200093	1BOILR	B21FP	10300602	55.00	SCC Descriptio	0.7750	0.0000	0.0019	INTERNATIONAL IMAGING
NY	Erie	36029	9142200093	U78635	010EI	10300602	55.00	SCC Descriptio	1.3000	0.0000	0.0032	INTERNATIONAL IMAGING
NY	Erie	36029	9143000213	EG0003	03AFP	10200402	55.00	SCC Descriptio	18.8100	0.0000	0.0517	QUEBECOR WORLD BUFFALO INC
NY	Erie	36029	9143000213	EG0003	03BFP	10300602	55.00	SCC Descriptio	3.0000	0.0000	0.0074	QUEBECOR WORLD BUFFALO INC
NY	Erie	36029	9143000213	EIC001	E02EI	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	QUEBECOR WORLD BUFFALO INC
NY	Erie	36029	9144800178	00EU02	X01EI	10200601	150.00	SCC Descriptio	56.8189	0.0000	0.1567	LACKAWANNA PLANT- REPUBLIC ENG PROD INC
NY	Erie	36029	9145600017	EIC001	E01EI	10200603	5.00	SCC Descriptio	0.8350	0.0000	0.0021	WHITING ROLL-UP DOOR MFG CORP
NY	Erie	36029	9145600017	EIC001	E05EI	10200603	5.00	SCC Descriptio	0.0500	0.0000	0.0001	WHITING ROLL-UP DOOR MFG CORP
NY	Erie	36029	9146400030	00EU01	002FP	10200402	55.00	SCC Descriptio	69.1085	0.0000	0.1868	GOODYEAR DUNLOP TIRES NORTH AMERICA LTD
NY	Erie	36029	9146400030	00EU01	001FP	10200602	55.00	SCC Descriptio	15.4980	0.0000	0.0426	GOODYEAR DUNLOP TIRES NORTH AMERICA LTD
NY	Erie	36029	9146400048	EIC001	X09EI	10200602	55.00	SCC Descriptio	1.3700	0.0000	0.0037	GM POWERTRAIN - TONAWANDA ENGINE PLANT
NY	Erie	36029	9146400090	1CMBST	NO2FP	10300501	5.00	SCC Descriptio	0.2289	0.0000	0.0006	NOCO ENERGY CORP
NY	Erie	36029	9146400090	1CMBST	GASFP	10300603	5.00	SCC Descriptio	0.1778	0.0000	0.0005	NOCO ENERGY CORP
NY	Erie	36029	9146400113	U00001	A01FP	10200602	55.00	SCC Descriptio	5.6014	0.0000	0.0151	TONAWANDA COKE CORP
NY	Erie	36029	9146400113	U00001	A02FP	10200707	55.00	SCC Descriptio	54.7385	0.0000	0.1504	TONAWANDA COKE CORP
NY	Erie	36029	9146400164	UTHERM	255FP	10200402	55.00	SCC Descriptio	7.3036	0.0000	0.0197	3M TONAWANDA
NY	Erie	36029	9146400164	UTHERM	253FP	10200602	55.00	SCC Descriptio	10.2840	0.0000	0.0283	3M TONAWANDA
NY	Erie	36029	9149900067	UFAC03	022EI	10200602	55.00	SCC Descriptio	26.0250	0.0000	0.0704	ISG LACKAWANNA INC
NY	Essex	36031	5154800008	POWERH	106FP	10200401	251.00	SIP Call Assum	440.1410	0.0000	1.2189	INTERNATIONAL PAPER TICONDEROGA MILL
NY	Fulton	36035	5170800016	M00007	OILFP	10200401	0.00		12.7370	0.0000	0.0353	MILLIGAN & HIGGINS
NY	Genesee	36037	8183800007	UCOGEN	E09EI	10200602	55.00	SCC Descriptio	15.2570	0.0000	0.0412	U S GYPSUM CO OAKFIELD PLANT
NY	Genesee	36037	8183800007	UMKHTR	HTREI	10200602	55.00	SCC Descriptio	0.5710	0.0000	0.0015	U S GYPSUM CO OAKFIELD PLANT
NY	Herkimer	36043	6212600023	EI0001	E05EI	10200603	5.00	SCC Descriptio	1.2735	0.0000	0.0033	UNION TOOLS INC
NY	Herkimer	36043	6212600037	00000D	B01FP	10300603	5.00	SCC Descriptio	3.4635	0.0000	0.0091	CNG TRANSMISSION/UTICA
NY	Herkimer	36043	6212600037	EI0001	E07EI	10300603	5.00	SCC Descriptio	0.3050	0.0000	0.0008	CNG TRANSMISSION/UTICA
NY	Herkimer	36043	6212600037	EI0001	E08EI	10300603	5.00	SCC Descriptio	0.0145	0.0000	0.0000	CNG TRANSMISSION/UTICA
NY	Jefferson	36045	6221800017	1SVSAT	E02EI	10200501	0.00		2.2116	0.0000	0.0057	KNOWLTON SPECIALTY PAPERS
NY	Jefferson	36045	6221800017	E00001	E01EI	10200602	55.00	SCC Descriptio	5.6600	0.0000	0.0153	KNOWLTON SPECIALTY PAPERS
NY	Jefferson	36045	6225200007	EI0001	E08EI	10200501	0.00		0.0050	0.0000	0.0000	DANC RODMAN LANDFILL
NY	Jefferson	36045	6226000018	C11003	010EI	10200501	0.00		22.8600	0.0000	0.0588	NEWSTECH NY INC
NY	Kings	36047	2610100025	1BLERS	IUBFP	10300701	55.00	SCC Descriptio	7.6550	0.0000	0.0210	NYC-DEP NEWTOWN CREEK WPCP

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NY	Kings	36047	2610100152	UFAC01	P02FP	10300601	150.00	SCC Descriptio	24.1012	0.0000	0.0662	AMERICAN SUGAR REFINING INC
NY	Kings	36047	2610100152	UFAC01	P04FP	10300601	150.00	SCC Descriptio	23.5746	0.0000	0.0637	AMERICAN SUGAR REFINING INC
NY	Kings	36047	2610100152	UFAC01	P05FP	10300601	150.00	SCC Descriptio	0.7410	0.0000	0.0020	AMERICAN SUGAR REFINING INC
NY	Kings	36047	2610100152	UFAC01	P03FP	10300401	150.00	SCC Descriptio	4.0771	0.0000	0.0110	AMERICAN SUGAR REFINING INC
NY	Kings	36047	2610100152	UFAC01	P01FP	10300401	150.00	SCC Descriptio	6.6616	0.0000	0.0180	AMERICAN SUGAR REFINING INC
NY	Kings	36047	2610100163	U00103	010EI	10300501	0.00		0.0744	0.0000	0.0002	DITMAS TERMINAL - 364 MASPETH AVENUE
NY	Kings	36047	2610100381	000002	114FP	10200502	55.00	SCC Descriptio	0.0003	0.0000	0.0000	COGEN CORP-111 LIVINGSTON ST
NY	Kings	36047	2610200005	UIC001	1P1EI	10300701	5.00	SCC Descriptio	0.3933	0.0000	0.0011	NYC-DEP OWLS HEAD WPCP
NY	Kings	36047	2610200005	UIC001	E01EI	10300603	5.00	SCC Descriptio	1.0535	0.0000	0.0028	NYC-DEP OWLS HEAD WPCP
NY	Kings	36047	2610200103	U00001	BNGFP	10300602	55.00	SCC Descriptio	11.8275	0.0000	0.0292	MAIMONIDES MEDICAL CENTER
NY	Kings	36047	2610300077	UFAC01	00AEI	10300501	55.00	SCC Descriptio	0.0060	0.0000	0.0000	ULANO CORP-280 BERGEN ST
NY	Kings	36047	2610300077	UFAC01	00BEI	10300602	55.00	SCC Descriptio	0.0089	0.0000	0.0000	ULANO CORP-280 BERGEN ST
NY	Kings	36047	2610300158	U00001	BNGFP	10300602	55.00	SCC Descriptio	6.4795	0.0000	0.0160	NEW YORK METHODIST HOSPITAL
NY	Kings	36047	2610400015	U00001	010FP	10300401	0.00		0.0118	0.0000	0.0000	NYC-HH - WOODHULL HOSPITAL
NY	Kings	36047	2610400015	UIC001	002EI	10300601	150.00	SCC Descriptio	13.0112	0.0000	0.0352	NYC-HH - WOODHULL HOSPITAL
NY	Kings	36047	2610400132	0U0001	005EI	10300504	55.00	SCC Descriptio	0.8304	0.0000	0.0021	DOWNSTATE MEDICAL CENTER
NY	Kings	36047	2610400132	0U0001	001FP	10300602	55.00	SCC Descriptio	4.2907	0.0000	0.0118	DOWNSTATE MEDICAL CENTER
NY	Kings	36047	2610400132	0U0001	E02EI	10300603	55.00	SCC Descriptio	0.4450	0.0000	0.0012	DOWNSTATE MEDICAL CENTER
NY	Kings	36047	2610400132	0U0001	010FP	10300402	55.00	SCC Descriptio	25.5988	0.0000	0.0675	DOWNSTATE MEDICAL CENTER
NY	Kings	36047	2610400151	UFAC01	002EI	10300603	5.00	SCC Descriptio	0.1405	0.0000	0.0004	RELIABLE POLY PACKAGING-1250 METROPOLITA
NY	Kings	36047	2610400174	U00001	BNGFP	10300602	55.00	SCC Descriptio	4.3535	0.0000	0.0108	BROOKDALE MED HOSP CTR-1275 LINDEN BLVD
NY	Kings	36047	2610400174	U00001	BOIFP	10300401	55.00	SCC Descriptio	0.0383	0.0000	0.0001	BROOKDALE MED HOSP CTR-1275 LINDEN BLVD
NY	Kings	36047	2610400195	U00001	001EI	10300602	55.00	SCC Descriptio	5.4100	0.0000	0.0134	BROOKLYN COLLEGE
NY	Kings	36047	2610400249	U00001	001FP	10300602	55.00	SCC Descriptio	12.9701	0.0000	0.0321	NYC-HH - KINGS COUNTY HOSPITAL CENTER
NY	Kings	36047	2610400249	U00002	010FP	10300602	55.00	SCC Descriptio	12.9701	0.0000	0.0321	NYC-HH - KINGS COUNTY HOSPITAL CENTER
NY	Kings	36047	2610400255	UC0001	001FP	10300602	55.00	SCC Descriptio	1.9750	0.0000	0.0049	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400255	UC0001	E02EI	10300603	55.00	SCC Descriptio	0.2370	0.0000	0.0007	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400255	UC0001	002FP	10300502	55.00	SCC Descriptio	0.0058	0.0000	0.0000	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400255	UC0001	E01EI	10300503	55.00	SCC Descriptio	0.0007	0.0000	0.0000	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400255	UC0002	E04EI	10300603	5.00	SCC Descriptio	0.2370	0.0000	0.0007	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400255	UC0002	E03EI	10300503	5.00	SCC Descriptio	0.0007	0.0000	0.0000	SAINT MARY'S HOSPITAL
NY	Kings	36047	2610400279	UC0001	002EI	10300602	55.00	SCC Descriptio	6.9353	0.0000	0.0171	KINGSBROOK JEWISH MEDICAL CENTER
NY	Kings	36047	2610500149	EI0001	E02EI	10200603	5.00	SCC Descriptio	0.1400	0.0000	0.0004	ULTRA FLEX PKG CORP-975 ESSEX ST
NY	Kings	36047	2610500190	UFAC01	011EI	10300603	5.00	SCC Descriptio	0.0074	0.0000	0.0000	GLENMORE PLASTIC INDUSTRIES INC
NY	Kings	36047	2610500250	UC0001	NG1FP	10200603	5.00	SCC Descriptio	0.2110	0.0000	0.0005	ARROW LOCK MANUFACTURING CO
NY	Kings	36047	2610500250	UI0001	E01EI	10300603	5.00	SCC Descriptio	0.3940	0.0000	0.0010	ARROW LOCK MANUFACTURING CO
NY	Kings	36047	2610500262	B00001	B02FP	10300602	55.00	SCC Descriptio	5.5000	0.0000	0.0151	NYC-TA EAST NY BUS DEPOT & SHOPS
NY	Kings	36047	2610500262	B00001	B01FP	10300401	55.00	SCC Descriptio	5.2430	0.0000	0.0130	NYC-TA EAST NY BUS DEPOT & SHOPS
NY	Kings	36047	2610500301	0000CB	CBGFP	10200602	55.00	SCC Descriptio	1.7669	0.0000	0.0048	KINGS PLAZA TOTAL ENERGY PLANT
NY	Kings	36047	2610700004	2BLERS	EP5EI	10300701	55.00	SCC Descriptio	3.8274	0.0000	0.0095	NYC-DEP CONEY ISLAND WPCP
NY	Kings	36047	2610700004	2BLERS	BGGFP	10300602	55.00	SCC Descriptio	2.4927	0.0000	0.0068	NYC-DEP CONEY ISLAND WPCP
NY	Kings	36047	2610700012	UC0001	001FP	10300401	0.00		14.2748	0.0000	0.0392	NYC-HH - CONEY ISLAND HOSPITAL
NY	Kings	36047	2610700079	100BLR	OILFP	10200401	55.00	SCC Descriptio	4.8345	0.0000	0.0131	NYC-TA CONEY ISLAND YARD
NY	Kings	36047	2610700079	100BLR	GASFP	10200602	55.00	SCC Descriptio	2.5350	0.0000	0.0070	NYC-TA CONEY ISLAND YARD
NY	Kings	36047	2610700141	UFAC02	P07FP	10200405	0.00		0.3100	0.0000	0.0009	WARBASSE HOUSES & POWER PLANT
NY	Lewis	36049	6233600028	000001	011FP	10200401	0.00		1.2443	0.0000	0.0034	FIBERMARK INC
NY	Lewis	36049	6233800012	U00001	100FP	10200903	290.00	Title V Permit	120.9298	0.0000	0.3309	LYONSDALE BIOMASS LLC
NY	Lewis	36049	6233800012	U00001	200FP	10200501	290.00	Title V Permit	0.0576	0.0000	0.0001	LYONSDALE BIOMASS LLC
NY	Livingston	36051	8242600012	EIC001	004EI	10300603	5.00	SCC Descriptio	4.8750	0.0000	0.0129	STATE UNIVERSITY OF NEW YORK AT GENESEO
NY	Livingston	36051	8242600012	FHTGPT	02FFP	10200602	55.00	SCC Descriptio	1.9700	0.0000	0.0051	STATE UNIVERSITY OF NEW YORK AT GENESEO
NY	Livingston	36051	8242600012	FHTGPT	01FFP	10200501	55.00	SCC Descriptio	3.2616	0.0000	0.0088	STATE UNIVERSITY OF NEW YORK AT GENESEO
NY	Livingston	36051	8243800057	000001	004FP	10300206	55.00	SCC Descriptio	0.2020	0.0000	0.0004	COMBUSTION & ENVIRONMENTAL TEST FACILITY

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NY	Livingston	36051	8243800057	000001	001FP	10200802	55.00	SCC Descriptio	0.0540	0.0000	0.0001	COMBUSTION & ENVIRONMENTAL TEST FACILITY
NY	Livingston	36051	8243800057	000001	002FP	10300602	55.00	SCC Descriptio	0.0370	0.0000	0.0001	COMBUSTION & ENVIRONMENTAL TEST FACILITY
NY	Monroe	36055	8261400205	U00015	K14FP	10200501	251.00	SIP Call Assum	0.6380	0.0000	0.0018	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K12FP	10200401	251.00	SIP Call Assum	8.9065	0.0000	0.0245	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K07FP	10200401	251.00	SIP Call Assum	20.3455	0.0000	0.0563	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K10FP	10200401	251.00	SIP Call Assum	71.5750	0.0000	0.1966	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K09EI	10200206	251.00	SIP Call Assum	677.5085	0.0000	1.8762	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K15FP	10200202	251.00	SIP Call Assum	1017.9105	0.0000	2.7965	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K11FP	10200203	251.00	SIP Call Assum	1184.7930	0.0000	3.0466	KODAK PARK DIVISION
NY	Monroe	36055	8261400205	U00015	K13FP	10200203	251.00	SIP Call Assum	1937.5105	0.0000	5.3228	KODAK PARK DIVISION
NY	Monroe	36055	8261400208	UFAC01	999EI	10200603	5.00	SCC Descriptio	0.0545	0.0000	0.0001	ECONO PRODUCTS
NY	Monroe	36055	8261400709	1BOILR	BL1FP	10300601	150.00	SCC Descriptio	32.7275	0.0000	0.0885	ROCHESTER DISTRICT HEATING COOPERATIVE
NY	Monroe	36055	8261400709	1BOILR	BL2FP	10200602	150.00	SCC Descriptio	5.4550	0.0000	0.0147	ROCHESTER DISTRICT HEATING COOPERATIVE
NY	Monroe	36055	8261400709	1BOILR	BL3FP	10300601	150.00	SCC Descriptio	9.2150	0.0000	0.0249	ROCHESTER DISTRICT HEATING COOPERATIVE
NY	Monroe	36055	8261400795	A00001	011FP	10300209	55.00	SCC Descriptio	43.3470	0.0000	0.1191	IOLA POWERHOUSE & COGEN FACILITY
NY	Monroe	36055	8261400795	A00001	013FP	10300602	55.00	SCC Descriptio	11.5314	0.0000	0.0308	IOLA POWERHOUSE & COGEN FACILITY
NY	Monroe	36055	8261400795	A00001	012FP	10300501	55.00	SCC Descriptio	1.3250	0.0000	0.0033	IOLA POWERHOUSE & COGEN FACILITY
NY	Monroe	36055	8262600038	EI0001	E01EI	10200603	5.00	SCC Descriptio	0.1150	0.0000	0.0003	CRYOVAC INC
NY	Monroe	36055	8262600109	U00001	BLRFP	10200602	55.00	SCC Descriptio	13.3800	0.0000	0.0362	ROCHESTER TECHNOLOGY PARK
NY	Monroe	36055	8265400064	B00001	G01FP	10200602	55.00	SCC Descriptio	20.5000	0.0000	0.0554	XEROX JOSEPH C WILSON CTR FOR TECHNOLOGY
NY	Monroe	36055	8265400064	B00002	G03FP	10200602	55.00	SCC Descriptio	13.0200	0.0000	0.0352	XEROX JOSEPH C WILSON CTR FOR TECHNOLOGY
NY	Monroe	36055	8269900059	BOILR3	302FP	10300502	55.00	SCC Descriptio	2.8285	0.0000	0.0078	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	BOILR5	501FP	10300601	150.00	SCC Descriptio	18.5635	0.0000	0.0502	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	BOILR5	502FP	10300501	150.00	SCC Descriptio	0.0002	0.0000	0.0000	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	BOILR6	601FP	10300601	150.00	SCC Descriptio	28.4740	0.0000	0.0770	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	BOILR7	701FP	10300601	150.00	SCC Descriptio	13.6750	0.0000	0.0370	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	BOILR7	702FP	10300501	150.00	SCC Descriptio	0.0005	0.0000	0.0000	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	EI0001	E04EI	10300603	5.00	SCC Descriptio	3.5507	0.0000	0.0094	UNIVERSITY OF ROCHESTER
NY	Monroe	36055	8269900059	EI0001	E06EI	10301002	5.00	SCC Descriptio	0.0444	0.0000	0.0001	UNIVERSITY OF ROCHESTER
NY	Montgomery	36057	4273200014	U00005	E02FP	10200602	55.00	SCC Descriptio	2.9900	0.0000	0.0081	KEYMARK CORP PLANT
NY	Montgomery	36057	4273200014	U00006	E03FP	10200602	55.00	SCC Descriptio	2.9900	0.0000	0.0081	KEYMARK CORP PLANT
NY	Montgomery	36057	4273200014	U00027	F04FP	10300603	5.00	SCC Descriptio	0.8850	0.0000	0.0023	KEYMARK CORP PLANT
NY	Montgomery	36057	4273200014	U00028	F05FP	10300603	5.00	SCC Descriptio	0.0110	0.0000	0.0000	KEYMARK CORP PLANT
NY	Montgomery	36057	4273200014	U00034	212FP	10300603	5.00	SCC Descriptio	0.7650	0.0000	0.0020	KEYMARK CORP PLANT
NY	Montgomery	36057	4273200014	U00035	E01FP	10200602	55.00	SCC Descriptio	1.1650	0.0000	0.0031	KEYMARK CORP PLANT
NY	Nassau	36059	1280500030	U00002	E21EI	10200602	55.00	SCC Descriptio	1.7000	0.0000	0.0046	KONICA FILM PAPER & PHOTOCHEM MFG PLANT
NY	Nassau	36059	1280500030	U00003	E22EI	10200602	55.00	SCC Descriptio	1.7000	0.0000	0.0046	KONICA FILM PAPER & PHOTOCHEM MFG PLANT
NY	Nassau	36059	1282000357	100005	106EI	10300603	5.00	SCC Descriptio	0.3345	0.0000	0.0009	FREEPORT POWER PLANT #1
NY	Nassau	36059	1282000357	100005	105EI	10300503	5.00	SCC Descriptio	0.0146	0.0000	0.0000	FREEPORT POWER PLANT #1
NY	Nassau	36059	1282000457	EI0001	E02EI	10300501	5.00	SCC Descriptio	0.4855	0.0000	0.0013	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	EI0001	E01EI	10300603	5.00	SCC Descriptio	2.4677	0.0000	0.0066	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00001	1NGFP	10300602	55.00	SCC Descriptio	3.1241	0.0000	0.0083	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00001	1FOFP	10300501	55.00	SCC Descriptio	0.0050	0.0000	0.0000	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00017	6NGFP	10300602	55.00	SCC Descriptio	0.9395	0.0000	0.0025	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00017	6FOFP	10300501	55.00	SCC Descriptio	0.0140	0.0000	0.0000	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00101	4NGFP	10300602	55.00	SCC Descriptio	2.5533	0.0000	0.0063	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00101	3NGFP	10300602	55.00	SCC Descriptio	0.7961	0.0000	0.0021	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000457	U00101	4FOFP	10300501	55.00	SCC Descriptio	0.0087	0.0000	0.0000	HOFSTRA UNIVERSITY
NY	Nassau	36059	1282000652	UBOILR	B02FP	10200602	55.00	SCC Descriptio	0.3113	0.0000	0.0008	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B08FP	10200602	55.00	SCC Descriptio	0.3033	0.0000	0.0008	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B05FP	10200602	55.00	SCC Descriptio	0.2486	0.0000	0.0007	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B11FP	10200602	55.00	SCC Descriptio	0.2379	0.0000	0.0007	NASSAU COUNTY SD #2 BAY PARK STP

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NY	Nassau	36059	1282000652	UBOILR	B12FP	10200502	55.00	SCC Descriptio	0.3723	0.0000	0.0010	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B06FP	10200502	55.00	SCC Descriptio	0.1462	0.0000	0.0004	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B03FP	10200502	55.00	SCC Descriptio	0.0953	0.0000	0.0003	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B07FP	10300701	55.00	SCC Descriptio	0.0004	0.0000	0.0000	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000652	UBOILR	B09FP	10200502	55.00	SCC Descriptio	0.0005	0.0000	0.0000	NASSAU COUNTY SD #2 BAY PARK STP
NY	Nassau	36059	1282000653	UBOILR	B05FP	10200602	55.00	SCC Descriptio	0.0055	0.0000	0.0000	NCDPW - CEDAR CREEK WPCP (STP)
NY	Nassau	36059	1282000653	UBOILR	B03FP	10200602	55.00	SCC Descriptio	0.0045	0.0000	0.0000	NCDPW - CEDAR CREEK WPCP (STP)
NY	Nassau	36059	1282000653	UBOILR	B07FP	10200602	55.00	SCC Descriptio	0.0045	0.0000	0.0000	NCDPW - CEDAR CREEK WPCP (STP)
NY	Nassau	36059	1282000653	UBOILR	B01FP	10200602	55.00	SCC Descriptio	0.0010	0.0000	0.0000	NCDPW - CEDAR CREEK WPCP (STP)
NY	Nassau	36059	1282000947	EIC001	E01EI	10300501	0.00		0.1050	0.0000	0.0003	EXXONMOBIL INWOOD TERMINAL
NY	Nassau	36059	1282001104	4COMBU	CMBFP	10200501	0.00		0.0580	0.0000	0.0001	SPRAGUE - OCEANSIDE MARINE TERMINAL
NY	Nassau	36059	1282001549	EIC001	E01EI	10300501	0.00		0.2227	0.0000	0.0006	MOTIVA ENTERPRISES LLC PROPERTY
NY	Nassau	36059	1282400112	100CSP	GASFP	10200602	55.00	SCC Descriptio	0.0174	0.0000	0.0000	GRUMMAN AEROSPACE MFG PLANT
NY	Nassau	36059	1282400112	1BLR25	FO6FP	10200402	55.00	SCC Descriptio	1.5620	0.0000	0.0043	GRUMMAN AEROSPACE MFG PLANT
NY	Nassau	36059	1282400112	EI0001	E16EI	10200503	5.00	SCC Descriptio	0.6200	0.0000	0.0016	GRUMMAN AEROSPACE MFG PLANT
NY	Nassau	36059	1282400112	EI0001	E12EI	10200603	5.00	SCC Descriptio	0.0070	0.0000	0.0000	GRUMMAN AEROSPACE MFG PLANT
NY	Nassau	36059	1282400112	U14B01	070EI	10200401	0.00		4.2629	0.0000	0.0118	GRUMMAN AEROSPACE MFG PLANT
NY	Nassau	36059	1282400388	EIC001	E01EI	10300501	0.00		0.0240	0.0000	0.0001	EXXONMOBIL GLENWOOD LANDING TERMINAL
NY	Nassau	36059	1282400455	1BOILR	FO1FP	10200501	0.00		0.2681	0.0000	0.0007	COMMANDER OIL TERMINAL
NY	New York	36061	2620100004	100BLR	OILFP	10300401	0.00		17.3744	0.0000	0.0477	NYC-TA 207 STREET SHOP
NY	New York	36061	2620100004	EI0001	E07EI	10200503	5.00	SCC Descriptio	0.0100	0.0000	0.0000	NYC-TA 207 STREET SHOP
NY	New York	36061	2620100005	U00001	001FP	10300601	150.00	SCC Descriptio	68.3161	0.0000	0.1847	NEW YORK PRESBYTERIAN HOSPITAL
NY	New York	36061	2620100005	U00001	E02EI	10300602	150.00	SCC Descriptio	3.7000	0.0000	0.0102	NEW YORK PRESBYTERIAN HOSPITAL
NY	New York	36061	2620100005	U00001	002FP	10300401	150.00	SCC Descriptio	1.2233	0.0000	0.0030	NEW YORK PRESBYTERIAN HOSPITAL
NY	New York	36061	2620100045	U00001	P01FP	10300401	0.00		20.6588	0.0000	0.0568	RACHEL BRIDGE CORP
NY	New York	36061	2620200007	3BLERS	BGGFP	10300701	55.00	SCC Descriptio	13.2800	0.0000	0.0355	NYC-DEP NORTH RIVER WPCP
NY	New York	36061	2620200007	3BLERS	BDFFP	10300501	55.00	SCC Descriptio	2.8128	0.0000	0.0077	NYC-DEP NORTH RIVER WPCP
NY	New York	36061	2620200044	U00001	002FP	10300602	55.00	SCC Descriptio	6.1785	0.0000	0.0170	CITY COLLEGE OF NEW YORK
NY	New York	36061	2620200044	U00001	001FP	10300502	55.00	SCC Descriptio	0.0222	0.0000	0.0001	CITY COLLEGE OF NEW YORK
NY	New York	36061	2620200044	U00002	003FP	10200602	55.00	SCC Descriptio	1.9950	0.0000	0.0054	CITY COLLEGE OF NEW YORK
NY	New York	36061	2620200044	UFAC01	E05EI	10300603	5.00	SCC Descriptio	0.0350	0.0000	0.0001	CITY COLLEGE OF NEW YORK
NY	New York	36061	2620200100	UC0001	001FP	10300401	0.00		19.0475	0.0000	0.0523	ONE LINCOLN PLAZA CONDOMINIUM
NY	New York	36061	2620200106	UC0001	001FP	10300401	0.00		19.0960	0.0000	0.0525	RIVERSIDE MGMT CORP
NY	New York	36061	2620200167	U00101	002FP	10200602	55.00	SCC Descriptio	26.8145	0.0000	0.0737	COLUMBIA UNIVERSITY-410 W 118TH ST
NY	New York	36061	2620200167	U00101	001FP	10300401	55.00	SCC Descriptio	17.1775	0.0000	0.0464	COLUMBIA UNIVERSITY-410 W 118TH ST
NY	New York	36061	2620200181	UBOILR	BLRFP	10300401	0.00		9.4900	0.0000	0.0261	LE PARKER MERIDIEN-109 WEST 56TH ST
NY	New York	36061	2620200193	EI0001	E01EI	10300603	5.00	SCC Descriptio	0.0650	0.0000	0.0002	ASTRID OFFSET CORP
NY	New York	36061	2620200674	U-0001	002EI	10300602	55.00	SCC Descriptio	8.6300	0.0000	0.0237	ST LUKE'S ROOSEVELT HOSPITAL
NY	New York	36061	2620200674	U-0001	001EI	10300401	55.00	SCC Descriptio	11.8393	0.0000	0.0293	ST LUKE'S ROOSEVELT HOSPITAL
NY	New York	36061	2620300001	000001	E02EI	10300602	55.00	SCC Descriptio	16.8945	0.0000	0.0418	NYC-HH - HARLEM HOSPITAL
NY	New York	36061	2620300001	U00001	001EP	10300401	0.00		0.1645	0.0000	0.0005	NYC-HH - HARLEM HOSPITAL
NY	New York	36061	2620300005	1BLERS	BDFFP	10300501	0.00		4.0378	0.0000	0.0108	NYC-DEP WARDS ISLAND WPCP
NY	New York	36061	2620300017	U00001	002FP	10300701	55.00	SCC Descriptio	15.9772	0.0000	0.0439	MANHATTAN PSYCH CTR
NY	New York	36061	2620300017	U00001	001FP	10300402	55.00	SCC Descriptio	58.8155	0.0000	0.1616	MANHATTAN PSYCH CTR
NY	New York	36061	2620300047	UC0001	002FP	10200602	55.00	SCC Descriptio	7.0744	0.0000	0.0191	TAINO TOWERS-2253 THIRD AVENUE
NY	New York	36061	2620400058	UC0001	OILFP	10300402	55.00	SCC Descriptio	28.5575	0.0000	0.0785	NYC-HH - METROPOLITAN HOSPITAL
NY	New York	36061	2620400059	UC0001	001FP	10200602	55.00	SCC Descriptio	21.6320	0.0000	0.0585	MOUNT SINAI HOSPITAL
NY	New York	36061	2620400059	UC0001	004FP	10300402	55.00	SCC Descriptio	78.9620	0.0000	0.2169	MOUNT SINAI HOSPITAL
NY	New York	36061	2620400064	U00001	001FP	10300601	145.00	Title V Permit	102.7634	0.0000	0.2778	NY - PRESBYTERIAN HOSPITAL-525 E 68TH ST
NY	New York	36061	2620400064	U00001	E01EI	10300401	145.00	Title V Permit	0.2134	0.0000	0.0006	NY - PRESBYTERIAN HOSPITAL-525 E 68TH ST
NY	New York	36061	2620400118	043010	02AFP	10300602	55.00	SCC Descriptio	13.2085	0.0000	0.0363	ROCKEFELLER UNIVERSITY
NY	New York	36061	2620400118	043010	01AFP	10300401	55.00	SCC Descriptio	27.4541	0.0000	0.0679	ROCKEFELLER UNIVERSITY

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NY	New York	36061	2620400127	000001	010FP	10300401	7.60	Title V Permit	25.5545	0.0000	0.0702	COLER-GOLDWATER MEMORIAL HOSPITAL
NY	New York	36061	2620400127	000002	020FP	10300401	7.20	Title V Permit	25.5545	0.0000	0.0702	COLER-GOLDWATER MEMORIAL HOSPITAL
NY	New York	36061	2620400139	UC0001	001FP	10300401	0.00		30.9308	0.0000	0.0850	FRANKLIN PLAZA APARTMENTS
NY	New York	36061	2620500084	U00001	002EI	10300501	55.00	SCC Descriptio	0.1254	0.0000	0.0003	ENTERPRISE EXPRESS
NY	New York	36061	2620500084	U00001	001EI	10200602	55.00	SCC Descriptio	0.0525	0.0000	0.0001	ENTERPRISE EXPRESS
NY	New York	36061	2620500088	U00001	004EI	10200503	5.00	SCC Descriptio	0.0283	0.0000	0.0001	TANAGRAPHICS INC-263 NINTH AVE
NY	New York	36061	2620500182	U00001	001FP	10300602	55.00	SCC Descriptio	7.8200	0.0000	0.0193	MUTUAL REDEVELOPMENT HOUSES
NY	New York	36061	2620500246	100000	E02EI	10300601	150.00	SCC Descriptio	22.8260	0.0000	0.0627	CENTRAL PLANT - 251 MERCER ST
NY	New York	36061	2620500246	100000	002FP	10300401	150.00	SCC Descriptio	16.6935	0.0000	0.0459	CENTRAL PLANT - 251 MERCER ST
NY	New York	36061	2620500246	100000	E01EI	10300401	150.00	SCC Descriptio	19.2830	0.0000	0.0521	CENTRAL PLANT - 251 MERCER ST
NY	New York	36061	2620600063	U00001	1CRFP	10300401	0.00		4.7494	0.0000	0.0130	KNICKERBOCKER VILLAGE-10 MONROE ST
NY	New York	36061	2620600063	U00001	1BRFP	10300401	0.00		5.2687	0.0000	0.0145	KNICKERBOCKER VILLAGE-10 MONROE ST
NY	New York	36061	2620600063	U00001	1ARFP	10300401	0.00		7.9030	0.0000	0.0217	KNICKERBOCKER VILLAGE-10 MONROE ST
NY	New York	36061	2620600095	UC0001	003FP	10200504	0.00		17.6179	0.0000	0.0484	VILLAGE VIEW HOUSING
NY	New York	36061	2620600096	000001	MIDFP	10200402	55.00	SCC Descriptio	54.1750	0.0000	0.1488	EAST RIVER HOUSING CORP
NY	New York	36061	2620600096	000001	OILFP	10200401	55.00	SCC Descriptio	28.7875	0.0000	0.0797	EAST RIVER HOUSING CORP
NY	Niagara	36063	9290900018	BOILR1	BL1FP	10200602	55.00	SCC Descriptio	0.0774	0.0000	0.0002	DELPHI AUTOMOTIVE SYSTEMS - LOCKPORT
NY	Niagara	36063	9290900107	EIC001	E02EI	10200501	0.00		0.0236	0.0000	0.0001	ISOCHEM INC
NY	Niagara	36063	9291100030	U08001	100EI	10200799	0.00		9.8405	0.0000	0.0271	DUPONT COMPANY
NY	Niagara	36063	9291100030	UNIT03	GASFP	10200601	150.00	SCC Descriptio	39.7810	0.0000	0.1097	DUPONT COMPANY
NY	Niagara	36063	9291100030	UNIT05	PKGFP	10200601	150.00	SCC Descriptio	9.1405	0.0000	0.0252	DUPONT COMPANY
NY	Niagara	36063	9292800001	EI0001	E03EI	10200603	5.00	SCC Descriptio	0.0106	0.0000	0.0000	AKZO CHEMICALS BURT PLANT
NY	Oneida	36065	6301300103	00MAIN	GASFP	10300602	55.00	SCC Descriptio	11.8275	0.0000	0.0292	ONEIDA CORRECTIONAL FACILITY
NY	Oneida	36065	6301300103	00MAIN	OILFP	10300401	55.00	SCC Descriptio	6.8194	0.0000	0.0187	ONEIDA CORRECTIONAL FACILITY
NY	Oneida	36065	6301600057	EI0001	E04EI	10200603	5.00	SCC Descriptio	0.3548	0.0000	0.0009	UTICA ALLOYS
NY	Oneida	36065	6302000024	0POWER	BW3FP	10300902	0.00		3.4411	0.0000	0.0095	HARDEN FURNITURE INC
NY	Oneida	36065	6302000024	0POWER	BW1FP	10300902	0.00		5.6891	0.0000	0.0156	HARDEN FURNITURE INC
NY	Oneida	36065	6302000024	0POWER	BW2FP	10300902	0.00		14.8709	0.0000	0.0409	HARDEN FURNITURE INC
NY	Oneida	36065	6302600012	U00007	006EP	10200903	0.00		2.6327	0.0000	0.0072	ETHAN ALLEN INC
NY	Onondaga	36067	7312600016	1CMBUS	C33FP	10200602	55.00	SCC Descriptio	31.2480	0.0000	0.0845	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C35FP	10200602	55.00	SCC Descriptio	26.9325	0.0000	0.0746	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C31FP	10200602	55.00	SCC Descriptio	8.4000	0.0000	0.0227	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C32FP	10200401	55.00	SCC Descriptio	1.6365	0.0000	0.0042	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C38FP	10200602	55.00	SCC Descriptio	1.2663	0.0000	0.0034	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C40FP	10300701	55.00	SCC Descriptio	0.3242	0.0000	0.0008	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C37FP	10200602	55.00	SCC Descriptio	0.1827	0.0000	0.0005	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C34FP	10200501	55.00	SCC Descriptio	0.1200	0.0000	0.0003	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600016	1CMBUS	C36FP	10200501	55.00	SCC Descriptio	0.0970	0.0000	0.0003	BRISTOL-MYERS SQUIBB COMPANY
NY	Onondaga	36067	7312600093	000001	012EI	10200603	5.00	SCC Descriptio	2.0580	0.0000	0.0053	MARSELLUS CASKET CO
NY	Onondaga	36067	7313600002	0001UT	105FP	10200401	55.00	SCC Descriptio	1.3630	0.0000	0.0038	ANHEUSER BUSCH BALDWINSVILLE BREWERY
NY	Onondaga	36067	7313600002	0001UT	106FP	10200602	55.00	SCC Descriptio	0.0295	0.0000	0.0001	ANHEUSER BUSCH BALDWINSVILLE BREWERY
NY	Onondaga	36067	7313600002	EIC001	E02EI	10200799	0.00		0.1485	0.0000	0.0004	ANHEUSER BUSCH BALDWINSVILLE BREWERY
NY	Onondaga	36067	7313600002	U00001	002EP	10200601	150.00	SCC Descriptio	286.2750	0.0000	0.7896	ANHEUSER BUSCH BALDWINSVILLE BREWERY
NY	Onondaga	36067	7313600002	U00121	049EP	10200799	0.00		72.2285	0.0000	0.1992	ANHEUSER BUSCH BALDWINSVILLE BREWERY
NY	Onondaga	36067	7313800015	000002	BLRFP	10200903	0.00		1.9958	0.0000	0.0055	L & J G STICKLEY INC
NY	Ontario	36069	8320500041	UCOMBU	E02EI	10200603	5.00	SCC Descriptio	5.5825	0.0000	0.0153	GUARDIAN GENEVA FLOAT GLASS FACILITY
NY	Ontario	36069	8320500041	UCOMBU	E01EI	10201002	5.00	SCC Descriptio	0.1288	0.0000	0.0003	GUARDIAN GENEVA FLOAT GLASS FACILITY
NY	Orange	36071	3334600267	000001	001FP	10200602	55.00	SCC Descriptio	1.5900	0.0000	0.0043	NEW ENGLAND LAMINATES
NY	Orange	36071	3334800082	EI0001	E01EI	10300503	5.00	SCC Descriptio	0.0160	0.0000	0.0000	WAREX CARGO TERMINAL
NY	Orange	36071	3334800082	U0EVC1	01AEI	10201002	0.00		0.0371	0.0000	0.0001	WAREX CARGO TERMINAL
NY	Orange	36071	3334800084	UFAC01	E01EI	10200603	5.00	SCC Descriptio	12.6120	0.0000	0.0324	METAL CONTAINER CORP
NY	Orange	36071	3334800087	EI0001	E02EI	10201002	0.00		0.0618	0.0000	0.0002	WAREX TERMINALS CORP - NORTH TERMINAL

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NY	Orange	36071	3334800100	100BLR	E01EI	10200603	5.00	SCC Descriptio	0.0758	0.0000	0.0002	LAFAYETTE PAPER LP
NY	Orange	36071	3334800197	EIC001	E02EI	10300501	0.00		0.0105	0.0000	0.0000	WAREX TERMINALS CORP - SOUTH TERMINAL
NY	Orange	36071	3335200111	UFAC01	E01EI	10200602	55.00	SCC Descriptio	0.0900	0.0000	0.0002	TESA TAPE - MIDDLETOWN
NY	Orange	36071	3335200145	4BOILR	BLRFP	10200602	55.00	SCC Descriptio	4.3345	0.0000	0.0117	REVERE SMELTING & REFINING CORP
NY	Orange	36071	3335200145	UFAC01	E04EI	10201002	0.00		0.0143	0.0000	0.0000	REVERE SMELTING & REFINING CORP
NY	Orange	36071	3335400138	UFAC01	E01EI	10201002	0.00		0.0040	0.0000	0.0000	GEORGIA PACIFIC - WARWICK FACILITY
NY	Orange	36071	3335800045	1BYLER	103FP	10200602	55.00	SCC Descriptio	0.3522	0.0000	0.0009	NEPERA INC
NY	Orange	36071	3335800045	1BYLER	101FP	10300602	55.00	SCC Descriptio	1.5114	0.0000	0.0039	NEPERA INC
NY	Orange	36071	3335800045	1BYLER	102FP	10200501	55.00	SCC Descriptio	0.8766	0.0000	0.0024	NEPERA INC
NY	Orange	36071	3335800045	3PYRIN	E02EI	10300602	55.00	SCC Descriptio	11.6353	0.0000	0.0288	NEPERA INC
NY	Orange	36071	3335800045	U09002	007EI	10200401	0.00		14.4708	0.0000	0.0401	NEPERA INC
NY	Orange	36071	3335800045	U09003	101EI	10200602	55.00	SCC Descriptio	11.7936	0.0000	0.0319	NEPERA INC
NY	Orleans	36073	8342000010	B00001	G01FP	10200602	55.00	SCC Descriptio	5.0200	0.0000	0.0136	SAINT-GOBAIN TECHNICAL FABRICS GROUP
NY	Orleans	36073	8342000010	B00001	R01FP	10200402	55.00	SCC Descriptio	0.3094	0.0000	0.0009	SAINT-GOBAIN TECHNICAL FABRICS GROUP
NY	Oswego	36075	7350400012	EI0001	E04EI	10201002	0.00		0.0095	0.0000	0.0000	SONOCO FLEXIBLE PACKAGING INC
NY	Oswego	36075	7354200024	U00001	P11FP	10300501	0.00		0.4900	0.0000	0.0013	SOUTH OSWEGO TERMINAL
NY	Oswego	36075	7355000021	100BR1	029EP	10200602	55.00	SCC Descriptio	12.5000	0.0000	0.0338	FELIX SCHOELLER TECHNICAL PAPERS
NY	Oswego	36075	7355800001	1BOILR	003FP	10200401	150.00	SCC Descriptio	8.1512	0.0000	0.0225	INTERFACE SOLUTIONS INC
NY	Oswego	36075	7355800001	1BOILR	002FP	10200601	150.00	SCC Descriptio	3.9025	0.0000	0.0108	INTERFACE SOLUTIONS INC
NY	Oswego	36075	7355800001	EI0001	E03EI	10300501	0.00		0.1480	0.0000	0.0004	INTERFACE SOLUTIONS INC
NY	Oswego	36075	7355800013	U00001	E05EI	10200603	5.00	SCC Descriptio	0.0575	0.0000	0.0001	OSWEGO CO ENERGY RECOVERY FAC
NY	Queens	36081	2630100005	00BOIL	BCGFP	10200602	55.00	SCC Descriptio	1.8750	0.0000	0.0052	STEINWAY & SONS - QUEENS FACILITY
NY	Queens	36081	2630100005	00BOIL	BAGFP	10300602	55.00	SCC Descriptio	1.8750	0.0000	0.0046	STEINWAY & SONS - QUEENS FACILITY
NY	Queens	36081	2630100005	00BOIL	BAFFP	10300502	55.00	SCC Descriptio	0.0175	0.0000	0.0000	STEINWAY & SONS - QUEENS FACILITY
NY	Queens	36081	2630100005	00BOIL	BCFFP	10200502	55.00	SCC Descriptio	0.0175	0.0000	0.0000	STEINWAY & SONS - QUEENS FACILITY
NY	Queens	36081	2630100006	EI0001	E08EI	10300603	5.00	SCC Descriptio	1.3214	0.0000	0.0035	ASTORIA TUNNEL HEADHOUSE / PCB STORAGE
NY	Queens	36081	2630100065	0U0001	002FP	10300602	55.00	SCC Descriptio	5.7595	0.0000	0.0142	ELMHURST HOSP-79-01 BROADWAY
NY	Queens	36081	2630100065	0U0001	004EI	10300401	55.00	SCC Descriptio	11.2568	0.0000	0.0309	ELMHURST HOSP-79-01 BROADWAY
NY	Queens	36081	2630100093	EI0001	E01EI	10300603	5.00	SCC Descriptio	0.1330	0.0000	0.0004	STD FOLDING CARTON INC-85 ST & 24 AVE
NY	Queens	36081	2630200012	3BLERS	DIFFP	10300501	0.00		1.3629	0.0000	0.0037	NYC-DEP TALLMAN ISLAND WPCP
NY	Queens	36081	2630200012	3BLERS	011EI	10300701	0.00		0.2210	0.0000	0.0006	NYC-DEP TALLMAN ISLAND WPCP
NY	Queens	36081	2630200138	B00001	P03FP	10300503	5.00	SCC Descriptio	0.0320	0.0000	0.0001	GRACE ASPHALT DIV OF GRACE INDUSTRIES
NY	Queens	36081	2630400404	1STACK	PBGFP	10300602	55.00	SCC Descriptio	2.9000	0.0000	0.0072	BIG SIX TOWERS INC
NY	Queens	36081	2630400404	1STACK	PBOFP	10300502	55.00	SCC Descriptio	0.0265	0.0000	0.0001	BIG SIX TOWERS INC
NY	Queens	36081	2630500005	UFAC01	014EI	10300501	0.00		0.1584	0.0000	0.0004	BARKER BROS - RIDGEWOOD
NY	Queens	36081	2630600067	U00001	DI1FP	10300502	55.00	SCC Descriptio	0.7940	0.0000	0.0022	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	U00001	NG1FP	10300602	55.00	SCC Descriptio	3.5650	0.0000	0.0088	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	U00002	DI2FP	10300502	55.00	SCC Descriptio	2.6560	0.0000	0.0073	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	U00002	NG2FP	10300602	55.00	SCC Descriptio	5.3500	0.0000	0.0132	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	U00003	DI3FP	10300502	55.00	SCC Descriptio	0.2280	0.0000	0.0006	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	U00003	NG3FP	10300602	55.00	SCC Descriptio	0.7700	0.0000	0.0019	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	UFAC01	EX2EI	10300503	5.00	SCC Descriptio	0.4140	0.0000	0.0011	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600067	UFAC01	EX1EI	10300603	5.00	SCC Descriptio	1.2050	0.0000	0.0033	ST JOHNS UNIVERSITY
NY	Queens	36081	2630600071	U00002	P03EI	10200602	55.00	SCC Descriptio	17.0780	0.0000	0.0439	QUEENS FRESH MEADOWS FACILITY
NY	Queens	36081	2630600071	U00002	P02EI	10200501	55.00	SCC Descriptio	1.5307	0.0000	0.0041	QUEENS FRESH MEADOWS FACILITY
NY	Queens	36081	2630600111	0COMB1	F06FP	10300402	55.00	SCC Descriptio	17.1472	0.0000	0.0471	PARKER TOWERS
NY	Queens	36081	2630700242	U00001	002FP	10200602	55.00	SCC Descriptio	1.9483	0.0000	0.0054	CREEDMOOR PSYCHIATRIC CTR
NY	Queens	36081	2630700242	U00001	001FP	10300402	55.00	SCC Descriptio	34.8954	0.0000	0.0943	CREEDMOOR PSYCHIATRIC CTR
NY	Queens	36081	2630700242	UFAC01	E02EI	10300503	5.00	SCC Descriptio	0.2065	0.0000	0.0005	CREEDMOOR PSYCHIATRIC CTR
NY	Queens	36081	2630700242	UFAC01	E01EI	10300603	5.00	SCC Descriptio	0.0689	0.0000	0.0002	CREEDMOOR PSYCHIATRIC CTR
NY	Queens	36081	2630700273	UC0001	001FP	10300601	125.00	Title V Permit	126.3244	0.0000	0.3415	ROCHDALE VILLAGE
NY	Queens	36081	2630700273	UC0001	002FP	10300501	125.00	Title V Permit	1.7111	0.0000	0.0046	ROCHDALE VILLAGE

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NY	Queens	36081	2630700276	EI0001	E01EI	10300603	5.00	SCC Descriptio	3.7800	0.0000	0.0100	INTERSTATE BRANDS CORPORATION
NY	Queens	36081	2630700290	U000LB	LB3FP	10300504	0.00		0.4658	0.0000	0.0013	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000LB	LB1FP	10300504	0.00		0.4656	0.0000	0.0013	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000LB	LB2FP	10300504	0.00		0.4656	0.0000	0.0013	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000UB	4NGFP	10300602	55.00	SCC Descriptio	6.8560	0.0000	0.0188	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000UB	5NGFP	10300602	55.00	SCC Descriptio	6.8560	0.0000	0.0188	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000UB	3FOFP	10300402	55.00	SCC Descriptio	5.5941	0.0000	0.0154	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000UB	1FOFP	10300402	55.00	SCC Descriptio	5.8338	0.0000	0.0144	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	U000UB	4FOFP	10300402	55.00	SCC Descriptio	6.5806	0.0000	0.0163	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	UFAC01	EX1EI	10300504	5.00	SCC Descriptio	0.6243	0.0000	0.0017	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	UFAC01	EX3EI	10300501	5.00	SCC Descriptio	0.4026	0.0000	0.0011	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700290	UFAC01	EX2EI	10300603	5.00	SCC Descriptio	0.1475	0.0000	0.0004	LONG ISLAND JEWISH MEDICAL CENTER-QUEENS
NY	Queens	36081	2630700339	UFAC02	007FP	10300501	55.00	SCC Descriptio	1.3211	0.0000	0.0035	N SHORE TOWERS APT TOTAL ENERGY PLANT
NY	Queens	36081	2630700339	UFAC02	008FP	10300602	55.00	SCC Descriptio	5.6725	0.0000	0.0140	N SHORE TOWERS APT TOTAL ENERGY PLANT
NY	Queens	36081	2630700391	EI0001	E03EI	10300603	5.00	SCC Descriptio	1.1225	0.0000	0.0030	MARY IMMACULATE HOSPITAL
NY	Queens	36081	2630700391	UC0001	GASFP	10300602	55.00	SCC Descriptio	1.1505	0.0000	0.0028	MARY IMMACULATE HOSPITAL
NY	Queens	36081	2630800233	UC0001	GB1FP	10300402	55.00	SCC Descriptio	11.2475	0.0000	0.0309	DAYTON BEACH PARK # 1 CORPORATION
NY	Queens	36081	2630800233	UC0002	GB2FP	10300402	55.00	SCC Descriptio	9.1575	0.0000	0.0252	DAYTON BEACH PARK # 1 CORPORATION
NY	Rensselaer	36083	4381400016	U00007	702FP	10200602	55.00	SCC Descriptio	3.3185	0.0000	0.0090	ORGANICHEM CORP
NY	Rensselaer	36083	4381400016	U00007	701FP	10200602	55.00	SCC Descriptio	3.0635	0.0000	0.0083	ORGANICHEM CORP
NY	Rensselaer	36083	4382400019	U00002	002EP	10200401	0.00		3.1936	0.0000	0.0088	AMERADA HESS RENSSELAER TERMINAL
NY	Rensselaer	36083	4382400019	U00005	105FP	10200402	55.00	SCC Descriptio	7.5454	0.0000	0.0207	AMERADA HESS RENSSELAER TERMINAL
NY	Rensselaer	36083	4382800006	U00001	001FP	10200401	56.30	Title V Permit	47.9700	0.0000	0.1328	BENNINGTON PAPERBOARD CO
NY	Rensselaer	36083	4382800031	U11000	11AEI	10201002	0.00		0.4028	0.0000	0.0011	SAINT GOBAIN PERFORMANCE PLASTICS
NY	Richmond	36085	2640300031	UFAC01	00AEI	10300501	0.00		0.2162	0.0000	0.0006	VANBRO CORPORATION
NY	Richmond	36085	2640300107	U00001	001FP	10300601	150.00	SCC Descriptio	6.5149	0.0000	0.0176	VISY PAPER STATEN ISLAND PLANT
NY	Richmond	36085	2640500073	1-BOIL	DISFP	10200502	55.00	SCC Descriptio	5.3110	0.0000	0.0146	EXXONMOBIL - PORT MOBIL TERMINAL
NY	Richmond	36085	2649900029	U00001	A61EI	10300502	55.00	SCC Descriptio	1.6780	0.0000	0.0046	STATEN ISLAND LANDFILL
NY	Richmond	36085	2649900029	U00001	E03EI	10300503	55.00	SCC Descriptio	1.2964	0.0000	0.0034	STATEN ISLAND LANDFILL
NY	Richmond	36085	2649900029	U00001	E01EI	10300603	55.00	SCC Descriptio	1.3975	0.0000	0.0038	STATEN ISLAND LANDFILL
NY	Rockland	36087	3392200026	EIC001	E01EI	10200602	5.00	SCC Descriptio	1.8230	0.0000	0.0049	LOUIS HORNICK CO INC
NY	Rockland	36087	3392200026	EIC001	E03EI	10200603	5.00	SCC Descriptio	0.5040	0.0000	0.0013	LOUIS HORNICK CO INC
NY	Rockland	36087	3392400025	F00001	B01FP	10200601	150.00	SCC Descriptio	117.2350	0.0000	0.3234	WYETH PHARMACEUTICALS
NY	Rockland	36087	3392400025	F00001	B02FP	10200501	150.00	SCC Descriptio	0.0209	0.0000	0.0001	WYETH PHARMACEUTICALS
NY	Rockland	36087	3392400035	0U0001	001FP	10300602	55.00	SCC Descriptio	3.6111	0.0000	0.0089	NYACK HOSPITAL
NY	Rockland	36087	3392400173	EI0001	C01EI	10300603	5.00	SCC Descriptio	13.7895	0.0000	0.0364	PAXAR CORP SYSTEMS GROUP
NY	Rockland	36087	3392400178	0EU001	PR2FP	10300602	55.00	SCC Descriptio	3.2539	0.0000	0.0089	ROCKLAND PSYCHIATRIC CENTER
NY	Rockland	36087	3392400178	0EU001	PR1FP	10300402	55.00	SCC Descriptio	25.1572	0.0000	0.0622	ROCKLAND PSYCHIATRIC CENTER
NY	Rockland	36087	3392600041	U00001	BNGFP	10300602	55.00	SCC Descriptio	4.1210	0.0000	0.0102	GOOD SAMARITAN HOSPITAL
NY	Rockland	36087	3392600041	U00001	BOIFP	10300504	55.00	SCC Descriptio	0.0601	0.0000	0.0002	GOOD SAMARITAN HOSPITAL
NY	Rockland	36087	3392800001	UFAC01	E01EI	10200603	5.00	SCC Descriptio	0.2361	0.0000	0.0006	ALGONQUIN GAS: STONY POINT COMPRESSOR
NY	St. Lawrence	36089	6403000002	EI0001	E10EI	10200603	5.00	SCC Descriptio	2.5838	0.0000	0.0066	CORNING INC CANTON PLANT
NY	St. Lawrence	36089	6405800003	A00001	E02EI	10301002	0.00		0.1091	0.0000	0.0003	ALCOA MASSENA OPERATIONS (WEST PLANT)
NY	St. Lawrence	36089	6405800003	B00001	GASFP	10200601	150.00	SCC Descriptio	22.3290	0.0000	0.0616	ALCOA MASSENA OPERATIONS (WEST PLANT)
NY	St. Lawrence	36089	6405800003	B00001	OILFP	10200401	150.00	SCC Descriptio	0.0165	0.0000	0.0000	ALCOA MASSENA OPERATIONS (WEST PLANT)
NY	St. Lawrence	36089	6405800004	1GMFAC	PWRFP	10200602	55.00	SCC Descriptio	14.8920	0.0000	0.0403	GM POWERTRAIN - MASSENA PLANT
NY	St. Lawrence	36089	6405800024	BOIL01	I01FP	10200602	55.00	SCC Descriptio	12.2786	0.0000	0.0332	REYNOLDS METALS ST LAWRENCE REDUCTION PL
NY	St. Lawrence	36089	6405800024	BOIL01	I03FP	10200401	55.00	SCC Descriptio	0.1261	0.0000	0.0003	REYNOLDS METALS ST LAWRENCE REDUCTION PL
NY	Saratoga	36091	5412600007	UBOILR	B01FP	10200601	150.00	SCC Descriptio	78.0320	0.0000	0.2152	INTERNATIONAL PAPER HUDSON RIVER MILL
NY	Saratoga	36091	5412600007	UBOILR	B02FP	10200401	150.00	SCC Descriptio	4.9325	0.0000	0.0137	INTERNATIONAL PAPER HUDSON RIVER MILL
NY	Schenectady	36093	4421500054	1STDL0	NGCFP	10200602	55.00	SCC Descriptio	0.0715	0.0000	0.0002	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	BOILRS	67GFP	10200602	55.00	SCC Descriptio	18.3060	0.0000	0.0495	GENERAL ELECTRIC TURBINE PLT

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NY	Schenectady	36093	4421500054	BOILRS	67OFP	10200401	55.00	SCC Descriptio	1.0368	0.0000	0.0029	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	BOILRS	B5GFP	10200602	55.00	SCC Descriptio	3.4455	0.0000	0.0093	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	EI0001	E34EI	10200503	5.00	SCC Descriptio	1.0230	0.0000	0.0028	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	EXMBLR	NGSFP	10200603	5.00	SCC Descriptio	1.1200	0.0000	0.0031	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	EXMBLR	2FOFP	10200503	5.00	SCC Descriptio	0.0024	0.0000	0.0000	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4421500054	U00018	007EP	10200504	0.00		0.8460	0.0000	0.0023	GENERAL ELECTRIC TURBINE PLT
NY	Schenectady	36093	4422400001	A10000	A01FP	10300603	5.00	SCC Descriptio	0.0900	0.0000	0.0002	GE GLOBAL RESEARCH CENTER
NY	Schenectady	36093	4422400001	B18201	B02FP	10300602	55.00	SCC Descriptio	13.9850	0.0000	0.0384	GE GLOBAL RESEARCH CENTER
NY	Schenectady	36093	4422400001	B18201	B01FP	10300402	55.00	SCC Descriptio	14.4797	0.0000	0.0358	GE GLOBAL RESEARCH CENTER
NY	Schenectady	36093	4422400001	EI0001	E08EI	10300603	5.00	SCC Descriptio	0.1350	0.0000	0.0004	GE GLOBAL RESEARCH CENTER
NY	Schenectady	36093	4422400001	H17659	H01FP	10300602	55.00	SCC Descriptio	0.0450	0.0000	0.0001	GE GLOBAL RESEARCH CENTER
NY	Schenectady	36093	4422800056	000001	001FP	10200602	55.00	SCC Descriptio	19.6599	0.0000	0.0531	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000001	005FP	10200602	55.00	SCC Descriptio	1.5845	0.0000	0.0044	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000001	003FP	10200602	55.00	SCC Descriptio	0.2428	0.0000	0.0007	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000001	002FP	10200502	55.00	SCC Descriptio	0.1322	0.0000	0.0004	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000001	006FP	10200502	55.00	SCC Descriptio	0.1164	0.0000	0.0003	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000001	004FP	10200502	55.00	SCC Descriptio	0.0135	0.0000	0.0000	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800056	000002	011FP	10200602	55.00	SCC Descriptio	3.0132	0.0000	0.0081	SCHENECTADY INTERNATIONAL/ROTT JCT FAC
NY	Schenectady	36093	4422800076	EI0001	E16EI	10200603	5.00	SCC Descriptio	2.4950	0.0000	0.0064	VON ROLL ISOLA USA INC
NY	Schuyler	36097	8442400001	EI0001	E03EI	10200602	5.00	SCC Descriptio	0.1930	0.0000	0.0005	CARGILL SALT CO- WATKINS GLEN PLANT
NY	Schuyler	36097	8442400001	EI0001	E01EI	10200603	5.00	SCC Descriptio	0.1250	0.0000	0.0003	CARGILL SALT CO- WATKINS GLEN PLANT
NY	Schuyler	36097	8442400001	U00001	001FP	10300209	92.20	Title V Permit	127.7640	0.0000	0.3510	CARGILL SALT CO- WATKINS GLEN PLANT
NY	Schuyler	36097	8442400001	UBLR02	NG2FP	10200602	55.00	SCC Descriptio	0.8580	0.0000	0.0023	CARGILL SALT CO- WATKINS GLEN PLANT
NY	Schuyler	36097	8443200001	1BOILS	U1GFP	10200601	150.00	SCC Descriptio	72.3140	0.0000	0.1995	U S SALT - WATKINS GLEN REFINERY
NY	Schuyler	36097	8443200001	1BOILS	U7GFP	10200602	150.00	SCC Descriptio	15.8800	0.0000	0.0429	U S SALT - WATKINS GLEN REFINERY
NY	Seneca	36099	8453800003	1BOILR	GASFP	10200601	150.00	SCC Descriptio	14.6110	0.0000	0.0403	HAMPSHIRE CHEMICAL CORP/EVANS CHEMETICS
NY	Steuben	36101	8460300008	EI0001	E01EI	10200603	5.00	SCC Descriptio	1.0000	0.0000	0.0026	CORNING INC - FALLBROOK PLANT
NY	Steuben	36101	8460600024	EI0001	E01EI	10200603	5.00	SCC Descriptio	1.5750	0.0000	0.0041	ALSTOM - HORNELL CAR SHOP
NY	Steuben	36101	8467400004	400000	400FP	10200906	55.00	SCC Descriptio	1.7000	0.0000	0.0047	GUNLOCKE CO
NY	Steuben	36101	8467400004	400000	500FP	10200602	55.00	SCC Descriptio	4.2532	0.0000	0.0115	GUNLOCKE CO
NY	Steuben	36101	8468200006	00000C	B01FP	10200602	55.00	SCC Descriptio	16.4934	0.0000	0.0446	WOODHULL STATION
NY	Steuben	36101	8468200006	EI0001	X02EI	10300603	5.00	SCC Descriptio	0.0250	0.0000	0.0001	WOODHULL STATION
NY	Suffolk	36103	1472000343	U00001	BNGFP	10300602	55.00	SCC Descriptio	1.8666	0.0000	0.0046	SOUTH OAKS HOSPITAL
NY	Suffolk	36103	1472000343	U00001	BOIFP	10300501	55.00	SCC Descriptio	0.0035	0.0000	0.0000	SOUTH OAKS HOSPITAL
NY	Suffolk	36103	1472000355	U00002	P01FP	10200602	55.00	SCC Descriptio	2.4850	0.0000	0.0067	BERGEN POINT STP & BERGEN AVE DOCK
NY	Suffolk	36103	1472000355	U00002	P02FP	10200501	55.00	SCC Descriptio	1.0224	0.0000	0.0026	BERGEN POINT STP & BERGEN AVE DOCK
NY	Suffolk	36103	1472200032	U61005	SF2FP	10300601	150.00	SCC Descriptio	0.0724	0.0000	0.0002	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61005	SF3FP	10300501	150.00	SCC Descriptio	0.0005	0.0000	0.0000	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61005	SF1FP	10300401	150.00	SCC Descriptio	17.1775	0.0000	0.0459	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61006	SF5FP	10300601	150.00	SCC Descriptio	7.2420	0.0000	0.0199	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61006	SF6FP	10300501	150.00	SCC Descriptio	0.0010	0.0000	0.0000	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61006	SF4FP	10300401	150.00	SCC Descriptio	0.4145	0.0000	0.0011	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61007	SF8FP	10300601	150.00	SCC Descriptio	2.2910	0.0000	0.0063	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61007	SF9FP	10300501	150.00	SCC Descriptio	0.0015	0.0000	0.0000	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200032	U61007	SF7FP	10300401	150.00	SCC Descriptio	35.1585	0.0000	0.0939	BROOKHAVEN NATIONAL LABORATORY
NY	Suffolk	36103	1472200557	UFAC01	005FP	10300602	55.00	SCC Descriptio	2.6363	0.0000	0.0065	ST CHARLES HOSPITAL
NY	Suffolk	36103	1472200557	UFAC01	006FP	10300502	55.00	SCC Descriptio	0.0350	0.0000	0.0001	ST CHARLES HOSPITAL
NY	Suffolk	36103	1472801480	EI0001	E07EI	10300603	5.00	SCC Descriptio	1.8505	0.0000	0.0049	ENTENMANN'S BAKERY
NY	Suffolk	36103	1472801480	EI0001	E01EI	10300501	5.00	SCC Descriptio	0.0678	0.0000	0.0002	ENTENMANN'S BAKERY
NY	Suffolk	36103	1472801480	EI0001	E15EI	10300603	5.00	SCC Descriptio	0.1620	0.0000	0.0004	ENTENMANN'S BAKERY
NY	Suffolk	36103	1472801480	EI0001	E08EI	10300501	5.00	SCC Descriptio	0.0006	0.0000	0.0000	ENTENMANN'S BAKERY
NY	Suffolk	36103	1473000023	U00002	NO6FP	10200401	0.00		31.0435	0.0000	0.0860	RIVERHEAD TERMINAL-CONOCOPHILLIPS

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NY	Suffolk	36103	1473400016	U00004	001EI	10200603	5.00	SCC Descriptio	0.7710	0.0000	0.0020	ARKAY PACKAGING CORP
NY	Suffolk	36103	1473400016	U00005	E02EI	10200501	0.00		0.0027	0.0000	0.0000	ARKAY PACKAGING CORP
NY	Suffolk	36103	1473600387	U00001	X01EI	10300602	55.00	SCC Descriptio	1.5450	0.0000	0.0042	SOUTHAMPTON HOSPITAL PROPERTY
NY	Suffolk	36103	1473600387	U00001	001FP	10300401	55.00	SCC Descriptio	0.2092	0.0000	0.0005	SOUTHAMPTON HOSPITAL PROPERTY
NY	Sullivan	36105	3484600079	EIC001	E03EI	10301002	0.00		0.0577	0.0000	0.0002	SULLIVAN COUNTY LANDFILL
NY	Tompkins	36109	7500700030	1CHP01	B8CFP	10200205	248.00	TITLE V PERM	205.9035	0.0000	0.5679	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	1CHP01	67GFP	10200601	248.00	TITLE V PERM	3.7620	0.0000	0.0104	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	1CHP01	67OFP	10200401	248.00	TITLE V PERM	0.7185	0.0000	0.0020	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	1CHP02	B1CFP	10200204	117.00	TITLE V PERM	135.2185	0.0000	0.3715	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	1CHP02	B20FP	10200401	117.00	TITLE V PERM	0.0047	0.0000	0.0000	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	1CHP03	B5GFP	10200601	145.00	TITLE V PERM	0.0260	0.0000	0.0001	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	EI0001	E03EI	10300603	5.00	SCC Descriptio	3.9600	0.0000	0.0104	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	EI0001	E04EI	10300603	5.00	SCC Descriptio	3.9600	0.0000	0.0104	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7500700030	EI0001	E16EI	10200503	5.00	SCC Descriptio	0.0246	0.0000	0.0001	CORNELL UNIVERSITY MAIN CAMPUS
NY	Tompkins	36109	7502400007	EI0001	E02EI	10300603	5.00	SCC Descriptio	0.5813	0.0000	0.0015	CONSOLIDATED GAS BORGER STATION
NY	Tompkins	36109	7503200017	EI0001	E04EI	10200603	5.00	SCC Descriptio	12.0923	0.0000	0.0311	BORG WARNER AUTO-TRANSMISSION COMPONENTS
NY	Ulster	36111	3513800024	00MAIN	NO2EI	10300501	55.00	SCC Descriptio	1.8800	0.0000	0.0046	SUNY AT NEW PALTZ
NY	Ulster	36111	3513800024	00MAIN	GASFP	10300602	55.00	SCC Descriptio	0.2375	0.0000	0.0006	SUNY AT NEW PALTZ
NY	Ulster	36111	3513800024	00MAIN	OILFP	10300401	55.00	SCC Descriptio	18.2618	0.0000	0.0502	SUNY AT NEW PALTZ
NY	Ulster	36111	3515200100	00MAIN	OILFP	10200401	0.00		16.1069	0.0000	0.0442	WALLKILL/SHAWANGUNK CORRECTIONAL
NY	Ulster	36111	3515200100	00MAIN	E04EI	10301002	0.00		0.0037	0.0000	0.0000	WALLKILL/SHAWANGUNK CORRECTIONAL
NY	Ulster	36111	3515400153	A00001	OILFP	10200402	55.00	SCC Descriptio	11.6600	0.0000	0.0315	TECH CITY
NY	Ulster	36111	3515400153	A00001	GASFP	10200602	55.00	SCC Descriptio	1.4700	0.0000	0.0040	TECH CITY
NY	Ulster	36111	3515600095	U00043	001FP	10200504	0.00		34.3126	0.0000	0.0943	HYDRO ALUMINUM NORTH AMERICA
NY	Ulster	36111	3515600095	U00045	012FP	10200504	0.00		5.7188	0.0000	0.0157	HYDRO ALUMINUM NORTH AMERICA
NY	Ulster	36111	3515600095	U00046	013FP	10200504	0.00		5.7188	0.0000	0.0157	HYDRO ALUMINUM NORTH AMERICA
NY	Warren	36113	5520500005	300000	302FP	10200402	55.00	SCC Descriptio	78.2045	0.0000	0.2114	FINCH PRUYN & CO
NY	Warren	36113	5520500005	300000	301FP	10200602	55.00	SCC Descriptio	213.7915	0.0000	0.5873	FINCH PRUYN & CO
NY	Warren	36113	5520500005	310000	303FP	10200602	55.00	SCC Descriptio	68.8415	0.0000	0.1861	FINCH PRUYN & CO
NY	Warren	36113	5520500005	310000	305FP	10200901	55.00	SCC Descriptio	22.0385	0.0000	0.0605	FINCH PRUYN & CO
NY	Warren	36113	5520500005	310000	304FP	10200402	55.00	SCC Descriptio	2.2990	0.0000	0.0063	FINCH PRUYN & CO
NY	Warren	36113	5520500005	320000	306FP	10200602	55.00	SCC Descriptio	51.1845	0.0000	0.1384	FINCH PRUYN & CO
NY	Warren	36113	5520500013	EIC001	E01EI	10200501	0.00		0.0251	0.0000	0.0001	GLENS FALLS LEHIGH CEMENT COMPANY
NY	Warren	36113	5520500020	100BLR	60FFP	10200402	55.00	SCC Descriptio	7.3975	0.0000	0.0203	NATIVE TEXTILES
NY	Warren	36113	5520500020	100BLR	NGFFP	10200602	55.00	SCC Descriptio	3.6500	0.0000	0.0099	NATIVE TEXTILES
NY	Washington	36115	5532600004	UBOILR	001FP	10200402	55.00	SCC Descriptio	24.0350	0.0000	0.0660	HOLLINGSWORTH & VOSE-EASTON MILL
NY	Washington	36115	5532600004	UBOILR	002FP	10200602	55.00	SCC Descriptio	7.4500	0.0000	0.0201	HOLLINGSWORTH & VOSE-EASTON MILL
NY	Washington	36115	5532800010	00MAIN	OILFP	10300401	30.75	Title V Permit	35.6573	0.0000	0.0980	NYS GREAT MEADOW CORRECTIONAL FACILITY
NY	Washington	36115	5533000015	B00001	001FP	10200601	150.00	SCC Descriptio	57.9880	0.0000	0.1599	IRVING TISSUE INC FT EDWARD OPERATIONS
NY	Washington	36115	5533000015	B00001	003FP	10200501	150.00	SCC Descriptio	0.4032	0.0000	0.0010	IRVING TISSUE INC FT EDWARD OPERATIONS
NY	Washington	36115	5533000016	EI0001	E01EI	10200603	5.00	SCC Descriptio	1.8385	0.0000	0.0047	PLIANT SOLUTIONS CORPORATION
NY	Washington	36115	5533200025	U00002	002EP	10200501	0.00		0.2058	0.0000	0.0005	MANCHESTER WOOD INC
NY	Washington	36115	5533400006	U00008	001EP	10200401	0.00		3.5250	0.0000	0.0098	HOLLINGSWORTH & VOSE GREENWICH MILL
NY	Washington	36115	5533400006	U00009	002EP	10200401	0.00		4.8645	0.0000	0.0135	HOLLINGSWORTH & VOSE GREENWICH MILL
NY	Washington	36115	5533400006	UBOILR	001FP	10200401	0.00		3.2900	0.0000	0.0091	HOLLINGSWORTH & VOSE GREENWICH MILL
NY	Wayne	36117	8543000073	EI0001	998EI	10200602	55.00	SCC Descriptio	0.5800	0.0000	0.0016	TYCO PLASTICS/ADHESIVES
NY	Wayne	36117	8543600007	1BOILR	GASFP	10200602	55.00	SCC Descriptio	48.1245	0.0000	0.1301	GARLOCK SEALING TECHNOLOGIES
NY	Westchester	36119	3550800088	E00001	E01EI	10200501	5.00	SCC Descriptio	0.1783	0.0000	0.0005	SPRAYLAT CORP
NY	Westchester	36119	3550800088	E00001	E03EI	10200603	5.00	SCC Descriptio	0.0140	0.0000	0.0000	SPRAYLAT CORP
NY	Westchester	36119	3551200041	EIC001	X01EI	10200704	0.00		0.4545	0.0000	0.0012	ENGELHARD CORPORATION - PIGMENT PLANT
NY	Westchester	36119	3551200041	EU001A	P1AFP	10200602	55.00	SCC Descriptio	7.0730	0.0000	0.0191	ENGELHARD CORPORATION - PIGMENT PLANT
NY	Westchester	36119	3551800222	U00001	BOIFP	10300401	0.00		11.3435	0.0000	0.0312	SAINT JOHN'S RIVERSIDE HOSPITAL

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
NY	Westchester	36119	3551800242	UFAC01	E03EI	10200504	0.00		1.1304	0.0000	0.0031	STEWART EFI NEW YORK LLC
NY	Westchester	36119	3551800342	1SDBLR	OILFP	10200502	55.00	SCC Descriptio	1.4602	0.0000	0.0040	YONKERS JOINT WWTP
NY	Westchester	36119	3551800342	EIC001	E09EI	10300603	5.00	SCC Descriptio	0.3800	0.0000	0.0010	YONKERS JOINT WWTP
NY	Westchester	36119	3552000007	00MAIN	NG2FP	10200602	55.00	SCC Descriptio	3.8606	0.0000	0.0104	BEDFORD HILLS CORRECTIONAL FACILITY
NY	Westchester	36119	3553400075	U00001	001FP	10300601	150.00	SCC Descriptio	14.5000	0.0000	0.0392	LANDMARK @ EASTVIEW
NY	Westchester	36119	3553400075	U00002	003FP	10300602	55.00	SCC Descriptio	3.4032	0.0000	0.0084	LANDMARK @ EASTVIEW
NY	Westchester	36119	3553400075	U00003	005FP	10300602	55.00	SCC Descriptio	3.0000	0.0000	0.0074	LANDMARK @ EASTVIEW
NY	Westchester	36119	3553400157	0U0001	002EI	10300601	150.00	SCC Descriptio	2.6406	0.0000	0.0071	WESTCHESTER COUNTY HEALTH CARE CORP
NY	Westchester	36119	3553400189	000101	CH1FP	10300602	55.00	SCC Descriptio	9.7250	0.0000	0.0240	VALHALLA CAMPUS (GRASSLANDS)
NY	Westchester	36119	3553400189	000101	CH2FP	10300501	55.00	SCC Descriptio	0.4350	0.0000	0.0012	VALHALLA CAMPUS (GRASSLANDS)
NY	Westchester	36119	3555400036	A00001	COMFP	10200402	55.00	SCC Descriptio	42.7785	0.0000	0.1175	TJ WATSON RESEARCH CENTER
NY	Westchester	36119	3555400036	EI0001	E03EI	10200502	55.00	SCC Descriptio	0.7794	0.0000	0.0021	TJ WATSON RESEARCH CENTER
NY	Westchester	36119	3555400036	EI0001	E01EI	10201002	55.00	SCC Descriptio	0.0826	0.0000	0.0002	TJ WATSON RESEARCH CENTER
NY	Wyoming	36121	9563200007	MBC001	001FP	10200202	251.00	Title V Permit	167.5740	0.0000	0.4604	MORTON SALT DIV
NY	Wyoming	36121	9563200007	MBC001	002FP	10200601	251.00	Title V Permit	0.4519	0.0000	0.0012	MORTON SALT DIV
PA	Adams	42001	420010009	101	1	10200603	7.50	MANEVU2002	1.4500	0.0000	0.0038	SCHINDLER ELEVATOR CORP/GETTYSBURG
PA	Adams	42001	420010019	031	1	10300603	6.10	MANEVU2002	0.2420	0.0000	0.0001	MCCLARIN PLASTICS INC/BLETTNER AVE
PA	Adams	42001	420010050	104	3	10200504	55.00	MANEVU2002	2.3788	0.0000	0.0133	CARMEUSE LIME INC/HANOVER LIME PLT
PA	Adams	42001	420010050	105	1	10200504	0.00	MANEVU2002	4.2896	0.0000	0.0170	CARMEUSE LIME INC/HANOVER LIME PLT
PA	Adams	42001	420010050	106	1	10200504	55.00	MANEVU2002	7.3420	0.0000	0.0218	CARMEUSE LIME INC/HANOVER LIME PLT
PA	Adams	42001	420010557	103	3	10300503	5.00	John Hulsberg	0.0560	0.0000	0.0002	RAVEN ROCK MTN COMPLEX/SITE R
PA	Adams	42001	420010557	103	4	10300503	5.00	John Hulsberg	0.0560	0.0000	0.0002	RAVEN ROCK MTN COMPLEX/SITE R
PA	Allegheny	42003	4200300002	003	1	10200104	0.00		21.9621	0.0011	0.0011	THE LANE CONSTRUCTION BRIDGEVILLE
PA	Allegheny	42003	4200300003	018	1	10200603	5.00	SCC Descriptio	1.1819	0.0000	0.0032	UNIVERSAL STAINLESS & ALLOY PRODUCTS
PA	Allegheny	42003	4200300005	B01	1	10300602	55.00	SCC Descriptio	4.0075	0.0000	0.0026	UNIVERSITY OF PITTSBURGH (MAIN CAMPUS)
PA	Allegheny	42003	4200300005	H01	1	10300602	55.00	SCC Descriptio	0.0794	0.0000	0.0001	UNIVERSITY OF PITTSBURGH (MAIN CAMPUS)
PA	Allegheny	42003	4200300005	HW1	1	10300602	55.00	SCC Descriptio	0.4781	0.0000	0.0013	UNIVERSITY OF PITTSBURGH (MAIN CAMPUS)
PA	Allegheny	42003	4200300008	032	1	10200602	55.00	SCC Descriptio	0.0200	0.0000	0.0000	NEVILLE CHEMICAL COMPANY
PA	Allegheny	42003	4200300008	033	1	10200501	0.00		0.5500	0.0000	0.0000	NEVILLE CHEMICAL COMPANY
PA	Allegheny	42003	4200300008	034	1	10200602	55.00	SCC Descriptio	0.0230	0.0000	0.0000	NEVILLE CHEMICAL COMPANY
PA	Allegheny	42003	4200300008	035	1	10200501	0.00		14.6900	0.0007	0.0007	NEVILLE CHEMICAL COMPANY
PA	Allegheny	42003	4200300008	037	1	10200501	0.00		29.5900	0.1036	0.1036	NEVILLE CHEMICAL COMPANY
PA	Allegheny	42003	4200300009	001	1	10200205	61.50	Gary Fischman	12.8138	0.0572	0.0572	PITTSBURGH BREWING CO. PITTSBURGH
PA	Allegheny	42003	4200300009	003	1	10200205	61.50	Gary Fischman	12.3900	0.0572	0.0572	PITTSBURGH BREWING CO. PITTSBURGH
PA	Allegheny	42003	4200300009	005	1	10200602	61.50	Gary Fischman	2.8290	0.0000	0.0040	PITTSBURGH BREWING CO. PITTSBURGH
PA	Allegheny	42003	4200300016	001	3	10200602	9.00	MANEVU2002	9.5580	0.0263	0.0263	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	003	2	10200603	5.00	SCC Descriptio	0.1373	0.0004	0.0004	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	006	1	10200603	5.00	SCC Descriptio	1.0087	0.0000	0.0028	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	007	1	10200603	5.00	SCC Descriptio	1.0087	0.0028	0.0028	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	008	1	10200602	55.00	SCC Descriptio	4.7078	0.0001	0.0001	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	009	1	10200603	5.00	SCC Descriptio	0.0267	0.0000	0.0001	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	011	1	10200603	5.00	SCC Descriptio	0.4626	0.0077	0.0077	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	012	1	10200603	5.00	SCC Descriptio	0.4626	0.0077	0.0077	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	013	1	10200603	9.00	MANEVU2002	0.4626	0.0077	0.0077	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	014	1	10200603	5.00	SCC Descriptio	0.4626	0.0077	0.0077	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	017	2	10200603	5.00	SCC Descriptio	0.0155	0.0001	0.0001	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	022	1	10200603	9.00	MANEVU2002	0.3048	0.0025	0.0025	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	023	1	10200603	9.00	MANEVU2002	0.3048	0.0025	0.0025	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300016	028	1	10200603	9.00	MANEVU2002	1.7509	0.0048	0.0048	HUSSEY COPPER LTD.
PA	Allegheny	42003	4200300022	005	1	10200601	400.00	Gary Fischman	8.4200	0.0229	0.0229	SHENANGO INC.
PA	Allegheny	42003	4200300022	006	1	10200707	400.00	Gary Fischman	66.2300	0.0018	0.0018	SHENANGO INC.
PA	Allegheny	42003	4200300022	007	1	10200501	400.00	Gary Fischman	0.4700	0.0000	0.0013	SHENANGO INC.

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PA	Allegheny	42003	4200300022	008	1	10200601	532.00	Gary Fischman	4.6170	0.0125	0.0125	SHENANGO INC.
PA	Allegheny	42003	4200300022	009	1	10200707	532.00	Gary Fischman	62.3500	0.0017	0.0017	SHENANGO INC.
PA	Allegheny	42003	4200300022	010	1	10200501	532.00	Gary Fischman	0.1400	0.0000	0.0004	SHENANGO INC.
PA	Allegheny	42003	4200300022	036	1	10200602	55.00	SCC Descriptio	0.1685	0.0005	0.0005	SHENANGO INC.
PA	Allegheny	42003	4200300024	001	1	10200205	91.00	Gary Fischman	65.3111	0.0016	0.0016	DLM FOODS
PA	Allegheny	42003	4200300024	002	1	10200602	91.00	Gary Fischman	1.9750	0.0000	0.0046	DLM FOODS
PA	Allegheny	42003	4200300024	003	1	10200205	91.00	Gary Fischman	62.8526	0.0016	0.0016	DLM FOODS
PA	Allegheny	42003	4200300024	005	1	10200205	61.00	Gary Fischman	46.1447	0.0011	0.0011	DLM FOODS
PA	Allegheny	42003	4200300024	006	1	10200602	61.00	Gary Fischman	0.7300	0.0000	0.0017	DLM FOODS
PA	Allegheny	42003	4200300024	007	1	10200205	61.00	Gary Fischman	36.8403	0.0009	0.0009	DLM FOODS
PA	Allegheny	42003	4200300024	008	1	10200602	61.00	Gary Fischman	0.5850	0.0000	0.0014	DLM FOODS
PA	Allegheny	42003	4200300024	013	1	10200601	150.00	SCC Descriptio	0.0369	0.0000	0.0000	DLM FOODS
PA	Allegheny	42003	4200300027	004	1	10200603	5.00	SCC Descriptio	1.9761	0.0001	0.0001	KOPPERS INDUSTRIES INC. CLAIRTON PLANT
PA	Allegheny	42003	4200300027	005	1	10200603	5.00	SCC Descriptio	3.5591	0.0001	0.0001	KOPPERS INDUSTRIES INC. CLAIRTON PLANT
PA	Allegheny	42003	4200300027	007	1	10200603	5.00	SCC Descriptio	1.0055	0.0000	0.0028	KOPPERS INDUSTRIES INC. CLAIRTON PLANT
PA	Allegheny	42003	4200300028	001	1	10300602	55.00	SCC Descriptio	2.0835	0.0000	0.0037	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300028	002	1	10300501	0.00		0.0500	0.0000	0.0000	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300028	003	1	10300602	55.00	SCC Descriptio	2.0835	0.0000	0.0037	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300028	004	1	10300501	0.00		0.0500	0.0000	0.0000	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300028	005	1	10300602	55.00	SCC Descriptio	2.0835	0.0000	0.0037	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300028	006	1	10300501	0.00		0.0500	0.0000	0.0000	UPMC MAGEE HOSPITAL
PA	Allegheny	42003	4200300032	047	1	10200707	0.00		8.8200	0.0000	0.0010	USS - CLAIRTON WORKS
PA	Allegheny	42003	4200300032	049	1	10200707	0.00		5.5200	0.0000	0.0000	USS - CLAIRTON WORKS
PA	Allegheny	42003	4200300032	051	1	10200707	0.00		5.3500	0.0000	0.0000	USS - CLAIRTON WORKS
PA	Allegheny	42003	4200300032	053	1	10200707	0.00		5.3500	0.0000	0.0000	USS - CLAIRTON WORKS
PA	Allegheny	42003	4200300051	003	1	10300603	5.00	SCC Descriptio	0.1018	0.0000	0.0001	PRUETT-SCHAFFER CHEMICAL CO., INC.
PA	Allegheny	42003	4200300065	002	1	10200602	55.00	SCC Descriptio	2.0463	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	006	1	10300603	5.00	SCC Descriptio	0.3168	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	007	1	10200603	5.00	SCC Descriptio	0.1056	0.0000	0.0003	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	008	1	10200603	5.00	SCC Descriptio	0.0117	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	009	1	10300603	5.00	SCC Descriptio	0.0235	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	010	1	10300603	5.00	SCC Descriptio	0.0528	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	011	1	10300603	5.00	SCC Descriptio	0.0704	0.0000	0.0002	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300065	013	1	10300603	5.00	SCC Descriptio	0.0029	0.0000	0.0000	GENERAL MOTORS PITTSBURGH PLANT
PA	Allegheny	42003	4200300073	001	1	10300601	150.00	Gary Fischman	13.7011	0.0000	0.0000	PITTSBURGH ALLEGHENY COUNTY THERMAL, LTD
PA	Allegheny	42003	4200300073	003	1	10300601	150.00	Gary Fischman	29.0604	0.0000	0.0000	PITTSBURGH ALLEGHENY COUNTY THERMAL, LTD
PA	Allegheny	42003	4200300073	005	1	10300601	150.00	Gary Fischman	34.0863	0.1408	0.1408	PITTSBURGH ALLEGHENY COUNTY THERMAL, LTD
PA	Allegheny	42003	4200300073	007	1	10300601	150.00	Gary Fischman	14.1882	0.0000	0.0000	PITTSBURGH ALLEGHENY COUNTY THERMAL, LTD
PA	Allegheny	42003	4200300075	009	1	10200603	5.00	SCC Descriptio	0.2790	0.0008	0.0008	LIBERTY POLYGLAS PULTRUSIONS
PA	Allegheny	42003	4200300092	004	1	10300603	5.00	SCC Descriptio	0.0188	0.0002	0.0002	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300092	005	1	10300602	55.00	SCC Descriptio	0.0229	0.0002	0.0002	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300092	006	1	10300603	5.00	SCC Descriptio	0.0111	0.0001	0.0001	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300092	007	1	10300603	5.00	SCC Descriptio	0.0050	0.0000	0.0000	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300092	008	1	10300603	5.00	SCC Descriptio	0.0007	0.0000	0.0000	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300092	009	1	10300603	5.00	SCC Descriptio	0.0540	0.0004	0.0004	NATIONAL ENERGY TECHNOLOGY LAB - PGH
PA	Allegheny	42003	4200300093	002	1	10200602	55.00	SCC Descriptio	0.8500	0.0054	0.0054	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	004	1	10200602	55.00	SCC Descriptio	0.8500	0.0054	0.0054	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	008	1	10200603	5.00	SCC Descriptio	0.7000	0.0000	0.0012	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	009	1	10200602	55.00	SCC Descriptio	5.1000	0.0002	0.0002	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	010	1	10200603	5.00	SCC Descriptio	2.4500	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	011	1	10200603	5.00	SCC Descriptio	1.7000	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	019	1	10200602	55.00	SCC Descriptio	4.4000	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE

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PA	Allegheny	42003	4200300093	020	1	10200602	55.00	SCC Descriptio	3.3500	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	021	1	10200603	5.00	SCC Descriptio	2.6500	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	022	1	10200602	55.00	SCC Descriptio	5.9000	0.0002	0.0002	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	023	1	10200603	5.00	SCC Descriptio	0.9500	0.0000	0.0023	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	024	1	10200603	5.00	SCC Descriptio	0.6500	0.0000	0.0015	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	025	1	10200603	5.00	SCC Descriptio	2.5500	0.0001	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	026	3	10200603	5.00	SCC Descriptio	0.1500	0.0000	0.0004	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	027	1	10200603	5.00	SCC Descriptio	0.5500	0.0000	0.0013	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	028	1	10200602	55.00	SCC Descriptio	5.8500	0.0006	0.0006	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	028	2	10200602	55.00	SCC Descriptio	5.8500	0.0006	0.0006	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	028	3	10200602	55.00	SCC Descriptio	5.8500	0.0006	0.0006	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	028	4	10200602	55.00	SCC Descriptio	4.3500	0.0005	0.0005	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	028	5	10200602	55.00	SCC Descriptio	1.8000	0.0002	0.0002	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	029	1	10200602	55.00	SCC Descriptio	1.8000	0.0005	0.0005	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	029	2	10200602	55.00	SCC Descriptio	1.8000	0.0005	0.0005	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	037	1	10200603	5.00	SCC Descriptio	0.5000	0.0000	0.0012	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	040	1	10200603	5.00	SCC Descriptio	1.3000	0.0000	0.0030	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	041	1	10200603	5.00	SCC Descriptio	0.7500	0.0000	0.0017	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	043	1	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0007	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	044	1	10200603	5.00	SCC Descriptio	0.0500	0.0000	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	046	1	10200602	55.00	SCC Descriptio	6.8000	0.0003	0.0003	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	049	1	10200603	5.00	SCC Descriptio	0.1500	0.0000	0.0003	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	054	1	10200602	55.00	SCC Descriptio	9.9000	0.0002	0.0002	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	055	1	10200603	5.00	SCC Descriptio	4.0500	0.0035	0.0035	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300093	066	1	10200603	5.00	SCC Descriptio	0.1000	0.0000	0.0001	ALLEGHENY LUDLUM CORP - BRACKENRIDGE
PA	Allegheny	42003	4200300102	018	1	10200501	0.00		0.1621	0.0000	0.0000	KINDER MORGAN INDIANOLA PLANT
PA	Allegheny	42003	4200300102	103	1	10300602	55.00	SCC Descriptio	0.1505	0.0000	0.0000	KINDER MORGAN INDIANOLA PLANT
PA	Allegheny	42003	4200300102	104	1	10200602	55.00	SCC Descriptio	5.3319	0.0110	0.0110	KINDER MORGAN INDIANOLA PLANT
PA	Allegheny	42003	4200300114	013	1	10300501	0.00		0.0300	0.0000	0.0000	MOTIVA ENTERPRISES LLC
PA	Allegheny	42003	4200300121	002	4	10200602	58.40	Gary Fischman	14.5840	0.0396	0.0396	ASHLAND SPECIALTY CHEMICAL CO - NEVILLE
PA	Allegheny	42003	4200300121	003	1	10200601	113.00	Gary Fischman	29.1123	0.0222	0.0222	ASHLAND SPECIALTY CHEMICAL CO - NEVILLE
PA	Allegheny	42003	4200300121	004	1	10200602	55.00	SCC Descriptio	0.8673	0.0017	0.0017	ASHLAND SPECIALTY CHEMICAL CO - NEVILLE
PA	Allegheny	42003	4200300121	005	1	10200602	55.00	SCC Descriptio	1.7449	0.0047	0.0047	ASHLAND SPECIALTY CHEMICAL CO - NEVILLE
PA	Allegheny	42003	4200300122	001	1	10200602	43.40	MANEVU2002	8.9900	0.0002	0.0002	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	003	1	10200602	5.10	MANEVU2002	0.0550	0.0000	0.0002	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	004	1	10200602	70.00	MANEVU2002	0.0001	0.0000	0.0000	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	009	1	10200602	12.00	MANEVU2002	1.7250	0.0000	0.0047	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	010	2	10200602	5.00	MANEVU2002	0.4050	0.0011	0.0011	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	012	2	10300501	55.00	SCC Descriptio	0.0001	0.0000	0.0000	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	012	1	10300602	55.00	SCC Descriptio	0.0005	0.0000	0.0000	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	013	1	10300603	5.30	MANEVU2002	0.0900	0.0000	0.0002	REICHHOLD, INC.
PA	Allegheny	42003	4200300122	014	2	10300603	5.00	SCC Descriptio	0.5600	0.0000	0.0015	REICHHOLD, INC.
PA	Allegheny	42003	4200300134	001	1	10200602	66.50	Gary Fischman	25.0100	0.0680	0.0680	GALVTECH
PA	Allegheny	42003	4200300134	001	2	10200602	66.50	Gary Fischman	8.2500	0.0224	0.0224	GALVTECH
PA	Allegheny	42003	4200300134	001	3	10200602	66.50	Gary Fischman	1.0000	0.0027	0.0027	GALVTECH
PA	Allegheny	42003	4200300140	019	1	10200602	55.00	SCC Descriptio	0.9820	0.0000	0.0000	ALLEGHENY COUNTY SANITARY AUTHORITY
PA	Allegheny	42003	4200300144	001	1	10300207	124.00	Gary Fischman	34.7917	0.1160	0.1160	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	002	1	10300602	74.00	Gary Fischman	13.0620	0.0005	0.0005	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	003	1	10300208	163.00	Gary Fischman	6.2277	0.0778	0.0778	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	004	1	10300207	115.00	Gary Fischman	57.8164	0.1527	0.1527	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	005	1	10300602	115.00	Gary Fischman	12.1984	0.0368	0.0368	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	008	1	10300207	134.00	Gary Fischman	33.7787	0.0008	0.0008	BELLEFIELD BOILER PLANT

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PA	Allegheny	42003	4200300144	009	1	10300602	74.00	Gary Fischman	10.5791	0.0005	0.0005	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	010	1	10300601	179.00	Gary Fischman	25.8870	0.0863	0.0863	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300144	012	1	10300601	179.00	Gary Fischman	2.8529	0.1854	0.1854	BELLEFIELD BOILER PLANT
PA	Allegheny	42003	4200300145	B02	1	10300602	30.00	MANEVU2002	0.2850	0.0000	0.0000	PPG INDUSTRIES - CHEMICALS TECHNICAL CTR
PA	Allegheny	42003	4200300145	B03	1	10300602	35.00	MANEVU2002	0.9550	0.0000	0.0038	PPG INDUSTRIES - CHEMICALS TECHNICAL CTR
PA	Allegheny	42003	4200300145	B04	1	10300602	35.00	MANEVU2002	0.5650	0.0000	0.0031	PPG INDUSTRIES - CHEMICALS TECHNICAL CTR
PA	Allegheny	42003	4200300145	B05	1	10300602	35.00	MANEVU2002	0.5400	0.0000	0.0030	PPG INDUSTRIES - CHEMICALS TECHNICAL CTR
PA	Allegheny	42003	4200300154	009	1	10300603	5.00	SCC Descriptio	0.0520	0.0000	0.0001	GENERAL ELECTRIC APPARATUS SERVICE
PA	Allegheny	42003	4200300154	010	1	10300603	5.00	SCC Descriptio	0.0105	0.0000	0.0000	GENERAL ELECTRIC APPARATUS SERVICE
PA	Allegheny	42003	4200300164	019	1	10200603	5.00	SCC Descriptio	0.1925	0.0000	0.0000	GE CONSUMER PRODUCTS, LIGHTING
PA	Allegheny	42003	4200300164	020	1	10200603	5.00	SCC Descriptio	0.1285	0.0000	0.0000	GE CONSUMER PRODUCTS, LIGHTING
PA	Allegheny	42003	4200300165	B01	1	10300603	5.00	SCC Descriptio	4.0235	0.0000	0.0000	GLENSHAW GLASS COMPANY, INC.
PA	Allegheny	42003	4200300171	P04	1	10200602	55.00	SCC Descriptio	0.4150	0.0026	0.0026	CP INDUSTRIES
PA	Allegheny	42003	4200300171	P05	1	10200602	55.00	SCC Descriptio	0.6250	0.0039	0.0039	CP INDUSTRIES
PA	Allegheny	42003	4200300171	P06	1	10200603	5.00	SCC Descriptio	0.4378	0.0037	0.0037	CP INDUSTRIES
PA	Allegheny	42003	4200300175	011	1	10200603	5.00	SCC Descriptio	0.0357	0.0000	0.0001	ROYSTON LABORATORIES DIVISION
PA	Allegheny	42003	4200300176	001	1	10200602	35.00	MANEVU2002	1.9743	0.0002	0.0002	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	001	2	10200502	35.00	MANEVU2002	0.0025	0.0000	0.0000	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	002	1	10200602	31.00	MANEVU2002	0.4254	0.0001	0.0001	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	007	1	10200602	35.00	MANEVU2002	3.2035	0.0192	0.0192	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	007	2	10200502	35.00	MANEVU2002	0.0025	0.0000	0.0000	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	008	1	10200602	35.00	MANEVU2002	1.4242	0.0175	0.0175	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300176	008	2	10200502	35.00	MANEVU2002	0.0033	0.0000	0.0000	MERCY HOSPITAL OF PITTSBURGH
PA	Allegheny	42003	4200300183	002	1	10300207	40.00	MANEVU2002	6.1771	0.0000	0.0000	STATE CORRECTIONAL INSTITUTION -- PGH.
PA	Allegheny	42003	4200300183	004	1	10300602	40.00	MANEVU2002	2.1057	0.0001	0.0001	STATE CORRECTIONAL INSTITUTION -- PGH.
PA	Allegheny	42003	4200300191	05A	1	10200602	55.00	SCC Descriptio	2.7885	0.0042	0.0042	PPG INDUSTRIES, INC. SPRINGDALE
PA	Allegheny	42003	4200300191	06A	1	10200602	55.00	SCC Descriptio	2.9509	0.0038	0.0038	PPG INDUSTRIES, INC. SPRINGDALE
PA	Allegheny	42003	4200300196	001	1	10200603	5.00	SCC Descriptio	1.1601	0.0082	0.0082	THE LANE MCKEES ROCK ASPHALT PLANT
PA	Allegheny	42003	4200300196	002	1	10200104	0.00		26.4070	0.0019	0.0019	THE LANE MCKEES ROCK ASPHALT PLANT
PA	Allegheny	42003	4200300202	027	1	10200707	41.30	Gary Fischman	24.2000	0.0006	0.0006	USS CORPORATION - EDGAR THOMSON WORKS
PA	Allegheny	42003	4200300202	028	1	10200603	42.36	Gary Fischman	12.7000	0.0002	0.0002	USS CORPORATION - EDGAR THOMSON WORKS
PA	Allegheny	42003	4200300202	048	1	10200707	0.00		1.0744	0.0029	0.0029	USS CORPORATION - EDGAR THOMSON WORKS
PA	Allegheny	42003	4200300202	049	1	10200707	0.00		0.9184	0.0025	0.0025	USS CORPORATION - EDGAR THOMSON WORKS
PA	Allegheny	42003	4200300202	055	1	10200603	5.00	SCC Descriptio	7.4500	0.0089	0.0089	USS CORPORATION - EDGAR THOMSON WORKS
PA	Allegheny	42003	4200300203	001	1	10200707	79.80	Gary Fischman	23.9632	0.0625	0.0625	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	002	1	10200602	79.80	Gary Fischman	3.9745	0.0099	0.0099	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	003	1	10200707	84.60	Gary Fischman	21.0956	0.0390	0.0390	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	004	1	10200602	84.60	Gary Fischman	3.5930	0.0001	0.0001	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	005	1	10200707	0.00		5.7768	0.0188	0.0188	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	006	1	10200602	55.00	SCC Descriptio	0.9515	0.0030	0.0030	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	007	1	10200707	0.00		5.7152	0.0002	0.0002	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	008	1	10200602	55.00	SCC Descriptio	0.9465	0.0000	0.0030	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300203	034	1	10200603	5.00	SCC Descriptio	15.2135	0.0001	0.0001	US STEEL CORPORATION - IRVIN PLANT
PA	Allegheny	42003	4200300208	001	2	10200402	55.00	SCC Descriptio	4.9884	0.0000	0.0225	KINDER-MORGAN LIQUIDS TERMINAL LLC
PA	Allegheny	42003	4200300208	001	1	10200602	55.00	SCC Descriptio	0.9527	0.0000	0.0043	KINDER-MORGAN LIQUIDS TERMINAL LLC
PA	Allegheny	42003	4200300208	002	1	10200602	55.00	SCC Descriptio	0.1019	0.0000	0.0002	KINDER-MORGAN LIQUIDS TERMINAL LLC
PA	Allegheny	42003	4200300208	003	1	10200602	55.00	SCC Descriptio	0.1185	0.0000	0.0000	KINDER-MORGAN LIQUIDS TERMINAL LLC
PA	Allegheny	42003	4200300208	008	1	10200602	55.00	SCC Descriptio	0.1793	0.0007	0.0007	KINDER-MORGAN LIQUIDS TERMINAL LLC
PA	Allegheny	42003	4200300221	001	1	10200602	55.00	SCC Descriptio	0.6100	0.0090	0.0090	VA MEDICAL CENTER - HIGHLAND DRIVE FAC
PA	Allegheny	42003	4200300221	001	2	10200502	55.00	SCC Descriptio	0.0007	0.0000	0.0000	VA MEDICAL CENTER - HIGHLAND DRIVE FAC
PA	Allegheny	42003	4200300221	002	1	10200602	55.00	SCC Descriptio	0.7210	0.0031	0.0031	VA MEDICAL CENTER - HIGHLAND DRIVE FAC
PA	Allegheny	42003	4200300221	002	2	10200502	55.00	SCC Descriptio	0.0027	0.0000	0.0000	VA MEDICAL CENTER - HIGHLAND DRIVE FAC

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Allegheny	42003	4200300221	003	1	10200602	55.00	SCC Descriptio	1.2553	0.0142	0.0142	VA MEDICAL CENTER - HIGHLAND DRIVE FAC
PA	Allegheny	42003	4200300221	003	2	10200502	55.00	SCC Descriptio	0.0015	0.0000	0.0000	VA MEDICAL CENTER - HIGHLAND DRIVE FAC
PA	Allegheny	42003	4200300227	011	1	10300603	5.00	SCC Descriptio	0.0709	0.0014	0.0014	KOPP GLASS, INCORPORATED
PA	Allegheny	42003	4200300227	012	1	10300603	5.00	SCC Descriptio	0.2637	0.0053	0.0053	KOPP GLASS, INCORPORATED
PA	Allegheny	42003	4200300228	003	1	10200603	5.00	SCC Descriptio	0.3430	0.0011	0.0011	PRECOAT METALS, A DIV. OF SEQUA COATINGS
PA	Allegheny	42003	4200300228	004	1	10200603	5.00	SCC Descriptio	0.2572	0.0008	0.0008	PRECOAT METALS, A DIV. OF SEQUA COATINGS
PA	Allegheny	42003	4200300228	005	1	10200603	5.00	SCC Descriptio	1.0456	0.0034	0.0034	PRECOAT METALS, A DIV. OF SEQUA COATINGS
PA	Allegheny	42003	4200300228	006	1	10200603	5.00	SCC Descriptio	0.4380	0.0000	0.0000	PRECOAT METALS, A DIV. OF SEQUA COATINGS
PA	Allegheny	42003	4200300228	007	1	10200603	5.00	SCC Descriptio	0.2519	0.0000	0.0000	PRECOAT METALS, A DIV. OF SEQUA COATINGS
PA	Allegheny	42003	4200300240	003	3	10200501	55.00	SCC Descriptio	9.1600	0.0382	0.0382	VALLEY PROTEINS (PA), INC.
PA	Allegheny	42003	4200300240	003	1	10200602	55.00	SCC Descriptio	0.0013	0.0000	0.0000	VALLEY PROTEINS (PA), INC.
PA	Allegheny	42003	4200300240	003	2	10200501	55.00	SCC Descriptio	0.0025	0.0000	0.0000	VALLEY PROTEINS (PA), INC.
PA	Allegheny	42003	4200300241	B1G	1	10200602	55.00	SCC Descriptio	1.4322	0.0081	0.0081	BAKE- LINE GROUP LLC
PA	Allegheny	42003	4200300241	B2G	1	10200602	55.00	SCC Descriptio	1.4324	0.0000	0.0000	BAKE- LINE GROUP LLC
PA	Allegheny	42003	4200300255	B01	1	10200603	5.00	SCC Descriptio	0.2054	0.0007	0.0007	BAKERSTOWN CONTAINER CORPORATION
PA	Allegheny	42003	4200300258	001	3	10300602	58.70	MANEVU2002	4.9102	0.0107	0.0107	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	4	10300602	58.70	MANEVU2002	2.4040	0.0052	0.0052	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	1	10300602	58.70	MANEVU2002	1.0719	0.0023	0.0023	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	2	10300602	58.70	MANEVU2002	1.0113	0.0022	0.0022	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	5	10300602	58.70	MANEVU2002	0.6155	0.0013	0.0013	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	7	10300602	58.70	MANEVU2002	0.3342	0.0007	0.0007	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	001	6	10300602	58.70	MANEVU2002	0.1621	0.0004	0.0004	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	003	1	10300603	5.40	MANEVU2002	0.1567	0.0000	0.0000	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	004	1	10300603	7.00	MANEVU2002	0.2908	0.0756	0.0756	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	004	2	10300603	7.00	MANEVU2002	0.2908	0.0756	0.0756	UPMC SHADYSIDE
PA	Allegheny	42003	4200300258	008	1	10300502	58.70	MANEVU2002	0.0050	0.0000	0.0000	UPMC SHADYSIDE
PA	Allegheny	42003	4200300259	B1G	1	10300602	20.90	MANEVU2002	0.4257	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	B2G	1	10300602	20.90	MANEVU2002	0.4634	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	B3F	1	10300501	21.00	MANEVU2002	0.0002	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	B3G	1	10300602	21.00	MANEVU2002	0.5063	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	B4F	1	10300501	21.00	MANEVU2002	0.0005	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	B4G	1	10300602	21.00	MANEVU2002	0.4821	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	SCG	1	10300603	5.00	SCC Descriptio	2.6920	0.0000	0.0000	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300259	VHG	1	10300602	88.50	MANEVU2002	0.5029	0.0000	0.0006	BETTIS ATOMIC POWER LABORATORY
PA	Allegheny	42003	4200300265	001	11	10200603	5.00	SCC Descriptio	0.3748	0.0000	0.0010	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	006	1	10200602	55.00	SCC Descriptio	0.1826	0.0000	0.0004	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	007	1	10200602	55.00	SCC Descriptio	0.1084	0.0000	0.0003	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	008	1	10200602	55.00	SCC Descriptio	1.7055	0.0000	0.0022	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	010	1	10200602	38.00	Gary Fischman	1.0698	0.0002	0.0002	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	015	1	10200602	55.00	SCC Descriptio	2.9337	0.0001	0.0001	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	019	3	10200603	5.00	SCC Descriptio	0.8678	0.0000	0.0024	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	019	1	10200603	5.00	SCC Descriptio	1.8054	0.0001	0.0001	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300265	020	1	10200603	5.00	SCC Descriptio	0.1542	0.0000	0.0004	EASTMAN CHEMICAL RESINS, INC.
PA	Allegheny	42003	4200300280	002	1	10300602	55.00	SCC Descriptio	0.0240	0.0001	0.0001	DURA - BOND INDUSTRIES INC.
PA	Allegheny	42003	4200300280	004	1	10300603	5.00	SCC Descriptio	0.1550	0.0005	0.0005	DURA - BOND INDUSTRIES INC.
PA	Allegheny	42003	4200300280	005	1	10300603	5.00	SCC Descriptio	0.1550	0.0005	0.0005	DURA - BOND INDUSTRIES INC.
PA	Allegheny	42003	4200300280	006	1	10300603	5.00	SCC Descriptio	0.1550	0.0005	0.0005	DURA - BOND INDUSTRIES INC.
PA	Allegheny	42003	4200300280	009	1	10300603	5.00	SCC Descriptio	0.3050	0.0011	0.0011	DURA - BOND INDUSTRIES INC.
PA	Allegheny	42003	4200300281	001	1	10200602	55.00	SCC Descriptio	0.0475	0.0000	0.0000	VA MEDICAL CENTER - ASPINWAL FACILITY
PA	Allegheny	42003	4200300281	002	1	10200602	55.00	SCC Descriptio	0.7594	0.0000	0.0000	VA MEDICAL CENTER - ASPINWAL FACILITY
PA	Allegheny	42003	4200300281	003	1	10200602	55.00	SCC Descriptio	0.6215	0.0030	0.0030	VA MEDICAL CENTER - ASPINWAL FACILITY
PA	Allegheny	42003	4200300281	004	1	10200602	55.00	SCC Descriptio	0.6499	0.0000	0.0000	VA MEDICAL CENTER - ASPINWAL FACILITY

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Allegheny	42003	4200300303	001	1	10200603	5.00	SCC Descriptio	1.3033	0.0000	0.0014	RANBAR TECHNOLOGY INC.
PA	Allegheny	42003	4200300310	006	1	10200603	5.00	SCC Descriptio	0.3072	0.0000	0.0008	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	007	1	10200603	5.00	SCC Descriptio	0.3072	0.0000	0.0008	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	008	1	10200603	5.00	SCC Descriptio	0.4096	0.0011	0.0011	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	009	1	10200603	5.00	SCC Descriptio	0.4096	0.0000	0.0011	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	011	1	10200603	5.00	SCC Descriptio	0.0661	0.0000	0.0002	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	012	1	10200603	5.00	SCC Descriptio	0.2080	0.0006	0.0006	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	013	1	10200603	5.00	SCC Descriptio	0.2080	0.0006	0.0006	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300310	014	1	10200603	5.00	SCC Descriptio	0.1689	0.0006	0.0006	THE VALSPAR CORPORATION
PA	Allegheny	42003	4200300311	001	1	10300207	0.00		19.5113	0.0000	0.0000	CDC, NIOSH, PITTSBURGH RESEARCH LAB.
PA	Allegheny	42003	4200300311	003	1	10300602	55.00	SCC Descriptio	0.2575	0.0000	0.0000	CDC, NIOSH, PITTSBURGH RESEARCH LAB.
PA	Allegheny	42003	4200300311	004	1	10300602	55.00	SCC Descriptio	0.1300	0.0000	0.0000	CDC, NIOSH, PITTSBURGH RESEARCH LAB.
PA	Allegheny	42003	4200300312	004	5	10300603	5.00	SCC Descriptio	0.0854	0.0002	0.0002	MCCONWAY & TORLEY CORPORATION
PA	Allegheny	42003	4200300312	004	6	10300603	5.00	SCC Descriptio	0.0854	0.0002	0.0002	MCCONWAY & TORLEY CORPORATION
PA	Allegheny	42003	4200300312	005	1	10300603	5.00	SCC Descriptio	3.8023	0.0111	0.0111	MCCONWAY & TORLEY CORPORATION
PA	Allegheny	42003	4200300312	006	1	10300603	5.00	SCC Descriptio	0.1282	0.0004	0.0004	MCCONWAY & TORLEY CORPORATION
PA	Allegheny	42003	4200300316	001	3	10200602	55.00	SCC Descriptio	1.1047	0.0000	0.0030	BARBER SPRING
PA	Allegheny	42003	4200300316	001	4	10200602	55.00	SCC Descriptio	0.5524	0.0000	0.0015	BARBER SPRING
PA	Allegheny	42003	4200300316	001	1	10200602	55.00	SCC Descriptio	0.1990	0.0000	0.0005	BARBER SPRING
PA	Allegheny	42003	4200300316	001	2	10200602	55.00	SCC Descriptio	0.1990	0.0000	0.0005	BARBER SPRING
PA	Allegheny	42003	4200300316	002	3	10200602	55.00	SCC Descriptio	0.5524	0.0000	0.0015	BARBER SPRING
PA	Allegheny	42003	4200300316	002	4	10200602	55.00	SCC Descriptio	0.3006	0.0000	0.0008	BARBER SPRING
PA	Allegheny	42003	4200300316	002	1	10200602	55.00	SCC Descriptio	0.1016	0.0000	0.0003	BARBER SPRING
PA	Allegheny	42003	4200300316	002	2	10200602	55.00	SCC Descriptio	0.1016	0.0000	0.0003	BARBER SPRING
PA	Allegheny	42003	4200300316	003	2	10200602	55.00	SCC Descriptio	0.6498	0.0000	0.0018	BARBER SPRING
PA	Allegheny	42003	4200300316	003	1	10200602	55.00	SCC Descriptio	0.1990	0.0000	0.0005	BARBER SPRING
PA	Allegheny	42003	4200300316	003	3	10200602	55.00	SCC Descriptio	0.1016	0.0000	0.0003	BARBER SPRING
PA	Allegheny	42003	4200300330	002	1	10300602	55.00	SCC Descriptio	0.5000	0.0020	0.0020	LOZIER CORPORATION
PA	Allegheny	42003	4200300332	I02	1	10200602	55.00	SCC Descriptio	0.0847	0.0000	0.0000	PENNSYLVANIA ELECTRIC COIL LTD
PA	Allegheny	42003	4200300335	B01	1	10200602	55.00	SCC Descriptio	2.1600	0.0000	0.0000	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300335	B02	1	10200602	55.00	SCC Descriptio	1.4700	0.0000	0.0000	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300335	B03	1	10200602	55.00	SCC Descriptio	2.7250	0.0000	0.0144	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300335	B04	1	10200602	55.00	SCC Descriptio	2.0650	0.0000	0.0000	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300335	B05	1	10300603	5.00	SCC Descriptio	0.0650	0.0000	0.0000	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300335	B06	1	10300603	5.00	SCC Descriptio	0.0600	0.0000	0.0000	UNIV OF PITT APPLIED RESEARCH CTR- UPARC
PA	Allegheny	42003	4200300342	001	2	10200603	5.00	SCC Descriptio	0.0150	0.0000	0.0000	GUARDIAN INDUSTRIES CORP. FLOREFFE
PA	Allegheny	42003	4200300342	003	2	10200603	5.00	SCC Descriptio	0.1050	0.0003	0.0003	GUARDIAN INDUSTRIES CORP. FLOREFFE
PA	Allegheny	42003	4200300342	004	1	10200603	5.00	SCC Descriptio	0.6500	0.0018	0.0018	GUARDIAN INDUSTRIES CORP. FLOREFFE
PA	Allegheny	42003	4200300346	B01	1	10200602	55.00	SCC Descriptio	0.0432	0.0000	0.0001	PITT PENN OIL COMPANY
PA	Allegheny	42003	4200300346	B02	1	10300603	5.00	SCC Descriptio	0.0969	0.0000	0.0000	PITT PENN OIL COMPANY
PA	Allegheny	42003	4200300351	0B1	1	10300603	5.00	SCC Descriptio	0.1040	0.0000	0.0000	DICE COMPRESSOR STATION
PA	Allegheny	42003	4200300358	B01	1	10200602	55.00	SCC Descriptio	1.2523	0.0047	0.0047	UNION ELECTRIC STEEL CORPORATION
PA	Allegheny	42003	4200300358	B01	2	10200604	55.00	SCC Descriptio	0.4019	0.0015	0.0015	UNION ELECTRIC STEEL CORPORATION
PA	Allegheny	42003	4200300360	009	1	10200603	5.00	SCC Descriptio	0.1045	0.0003	0.0003	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	017	1	10200603	5.00	SCC Descriptio	0.1479	0.0004	0.0004	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	019	1	10200603	5.00	SCC Descriptio	0.1479	0.0004	0.0004	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	023	1	10200603	5.00	SCC Descriptio	0.1479	0.0004	0.0004	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	029	1	10200602	55.00	SCC Descriptio	0.4903	0.0013	0.0013	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	030	1	10200602	55.00	SCC Descriptio	0.4903	0.0013	0.0013	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	031	1	10200603	5.00	SCC Descriptio	0.1204	0.0003	0.0003	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	047	1	10200603	5.00	SCC Descriptio	0.2452	0.0007	0.0007	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	048	1	10200603	5.00	SCC Descriptio	0.2452	0.0007	0.0007	US AIRWAYS MAINTENANCE BASE

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PA	Allegheny	42003	4200300360	054	1	10200603	5.00	SCC Descriptio	0.1450	0.0004	0.0004	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	092	1	10200603	5.00	SCC Descriptio	0.2547	0.0007	0.0007	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	095	1	10200603	5.00	SCC Descriptio	0.2547	0.0007	0.0007	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300360	101	1	10200603	5.00	SCC Descriptio	0.2735	0.0007	0.0007	US AIRWAYS MAINTENANCE BASE
PA	Allegheny	42003	4200300379	003	1	10300603	5.00	SCC Descriptio	0.7215	0.0019	0.0019	BEST FEEDS & FARM SUPPLIES, INC.
PA	Allegheny	42003	4200300379	003	2	10300603	5.00	SCC Descriptio	0.7215	0.0019	0.0019	BEST FEEDS & FARM SUPPLIES, INC.
PA	Allegheny	42003	4200300389	001	1	10300602	55.00	SCC Descriptio	4.0865	0.0005	0.0005	NRG ENERGY CENTER PITTSBURGH
PA	Allegheny	42003	4200300389	003	1	10300602	92.00	Gary Fischman	11.3950	0.0007	0.0007	NRG ENERGY CENTER PITTSBURGH
PA	Allegheny	42003	4200300389	005	1	10300601	131.10	Gary Fischman	28.1216	0.0009	0.0009	NRG ENERGY CENTER PITTSBURGH
PA	Allegheny	42003	4200300389	008	1	10300602	55.00	SCC Descriptio	0.3250	0.0000	0.0000	NRG ENERGY CENTER PITTSBURGH
PA	Allegheny	42003	4200300498	001	1	10300602	55.00	SCC Descriptio	1.2321	0.0246	0.0246	FOX CHAPEL SENIOR HIGH SCHOOL
PA	Allegheny	42003	4200300498	001	2	10300602	55.00	SCC Descriptio	0.0649	0.0013	0.0013	FOX CHAPEL SENIOR HIGH SCHOOL
PA	Allegheny	42003	4200300564	001	1	10300602	16.90	MANEVU2002	0.3019	0.0000	0.0000	ALLDERDICE SCHOOL
PA	Allegheny	42003	4200300564	002	2	10300602	16.90	MANEVU2002	0.3019	0.0000	0.0000	ALLDERDICE SCHOOL
PA	Allegheny	42003	4200300564	003	3	10300602	13.90	MANEVU2002	0.3019	0.0000	0.0000	ALLDERDICE SCHOOL
PA	Allegheny	42003	4200300564	004	3	10300602	13.90	MANEVU2002	0.0425	0.0005	0.0005	ALLDERDICE SCHOOL
PA	Allegheny	42003	4200300573	001	1	10300602	55.00	MANEVU2002	0.1808	0.0000	0.0000	ARSENAL SCHOOL
PA	Allegheny	42003	4200300573	002	2	10300602	55.00	MANEVU2002	0.1808	0.0000	0.0000	ARSENAL SCHOOL
PA	Allegheny	42003	4200300573	003	3	10300602	55.00	MANEVU2002	0.1808	0.0000	0.0000	ARSENAL SCHOOL
PA	Allegheny	42003	4200300577	002	2	10300602	12.00	MANEVU2002	0.3100	0.0000	0.0000	CARRICK SCHOOL
PA	Allegheny	42003	4200300577	003	3	10300602	12.00	MANEVU2002	0.3100	0.0000	0.0000	CARRICK SCHOOL
PA	Allegheny	42003	4200300577	004	1	10300603	12.00	MANEVU2002	0.0002	0.0000	0.0000	CARRICK SCHOOL
PA	Allegheny	42003	4200300577	005	1	10300603	12.00	MANEVU2002	0.0003	0.0000	0.0000	CARRICK SCHOOL
PA	Allegheny	42003	4200300581	001	1	10300602	21.00	MANEVU2002	0.4158	0.0000	0.0000	CONNELLEY SCHOOL
PA	Allegheny	42003	4200300581	002	2	10300602	21.00	MANEVU2002	0.4158	0.0000	0.0000	CONNELLEY SCHOOL
PA	Allegheny	42003	4200300581	003	3	10300602	21.00	MANEVU2002	0.4158	0.0000	0.0000	CONNELLEY SCHOOL
PA	Allegheny	42003	4200300581	005	1	10300602	21.00	MANEVU2002	0.0001	0.0000	0.0000	CONNELLEY SCHOOL
PA	Allegheny	42003	4200300611	001	1	10300602	12.60	MANEVU2002	0.3238	0.0001	0.0001	SCHENLEY SCHOOL
PA	Allegheny	42003	4200300611	002	2	10300602	12.60	MANEVU2002	0.3238	0.0001	0.0001	SCHENLEY SCHOOL
PA	Allegheny	42003	4200300611	003	3	10300602	12.60	MANEVU2002	0.3238	0.0001	0.0001	SCHENLEY SCHOOL
PA	Allegheny	42003	4200300611	004	4	10300603	4.30	MANEVU2002	0.1795	0.0005	0.0005	SCHENLEY SCHOOL
PA	Allegheny	42003	4200300617	001	1	10300602	14.40	MANEVU2002	0.2751	0.0000	0.0000	SOUTH HIGH SCHOOL
PA	Allegheny	42003	4200300617	002	2	10300602	14.40	MANEVU2002	0.2751	0.0000	0.0000	SOUTH HIGH SCHOOL
PA	Allegheny	42003	4200300617	003	3	10300602	14.40	MANEVU2002	0.2751	0.0000	0.0000	SOUTH HIGH SCHOOL
PA	Allegheny	42003	4200300623	005	1	10300602	55.00	SCC Descriptio	0.2453	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300623	006	1	10300602	55.00	SCC Descriptio	0.2453	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300623	007	1	10300603	0.80	MANEVU2002	0.0148	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300623	008	1	10300602	55.00	SCC Descriptio	0.2453	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300623	009	1	10300603	0.80	MANEVU2002	0.0148	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300623	010	1	10300603	0.80	MANEVU2002	0.0148	0.0000	0.0000	WESTINGHOUSE SCHOOL
PA	Allegheny	42003	4200300634	001	1	10300602	11.70	MANEVU2002	0.4283	0.0001	0.0001	CENTRAL FOOD KITCHEN
PA	Allegheny	42003	4200300634	002	2	10300602	11.70	MANEVU2002	0.4283	0.0001	0.0001	CENTRAL FOOD KITCHEN
PA	Allegheny	42003	4200300634	003	3	10300602	11.70	MANEVU2002	0.4283	0.0001	0.0001	CENTRAL FOOD KITCHEN
PA	Allegheny	42003	4200300634	004	1	10300603	11.70	MANEVU2002	0.0012	0.0000	0.0000	CENTRAL FOOD KITCHEN
PA	Allegheny	42003	4200300705	B01	1	10200602	55.00	SCC Descriptio	0.8500	0.0106	0.0106	DUQUESNE UNIVERSITY
PA	Allegheny	42003	4200300705	B02	1	10200602	55.00	SCC Descriptio	0.6500	0.0046	0.0046	DUQUESNE UNIVERSITY
PA	Allegheny	42003	4200300705	B03	1	10200602	55.00	SCC Descriptio	0.7500	0.0105	0.0105	DUQUESNE UNIVERSITY
PA	Allegheny	42003	4200300705	B04	1	10200602	55.00	SCC Descriptio	0.4000	0.0005	0.0005	DUQUESNE UNIVERSITY
PA	Allegheny	42003	4200300746	007	1	10200502	55.00	SCC Descriptio	1.7900	0.0000	0.0000	ALLEGHENY VALLEY HOSPITAL
PA	Allegheny	42003	4200300755	001	2	10300501	33.50	MANEVU2002	0.0184	0.0000	0.0001	UPMC MCKEESPORT
PA	Allegheny	42003	4200300755	001	1	10300602	33.50	MANEVU2002	0.9741	0.0001	0.0001	UPMC MCKEESPORT
PA	Allegheny	42003	4200300755	002	2	10300501	33.50	MANEVU2002	0.0184	0.0000	0.0001	UPMC MCKEESPORT

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PA	Allegheny	42003	4200300755	002	1	10300602	33.50	MANEVU2002	0.9741	0.0001	0.0001	UPMC MCKEESPORT
PA	Allegheny	42003	4200300760	001	1	10200602	55.00	SCC Descriptio	7.9500	0.0216	0.0216	METALTECH
PA	Allegheny	42003	4200300760	001	2	10200602	55.00	SCC Descriptio	7.9500	0.0216	0.0216	METALTECH
PA	Allegheny	42003	4200300760	001	4	10200602	55.00	SCC Descriptio	0.9250	0.0025	0.0025	METALTECH
PA	Allegheny	42003	4200300760	001	3	10200602	55.00	SCC Descriptio	0.0230	0.0001	0.0001	METALTECH
PA	Allegheny	42003	4200300766	001	1	10300602	55.00	SCC Descriptio	1.0084	0.0032	0.0032	UPMC SOUTHSIDE
PA	Allegheny	42003	4200300766	001	2	10300602	55.00	SCC Descriptio	1.0084	0.0032	0.0032	UPMC SOUTHSIDE
PA	Allegheny	42003	4200300766	001	3	10300501	55.00	SCC Descriptio	0.0048	0.0000	0.0000	UPMC SOUTHSIDE
PA	Allegheny	42003	4200300766	001	4	10300501	55.00	SCC Descriptio	0.0048	0.0000	0.0000	UPMC SOUTHSIDE
PA	Allegheny	42003	4200300767	002	3	10200603	5.00	SCC Descriptio	0.3290	0.0011	0.0011	TRINITY INDUSTRIES, INC. PLT # 441
PA	Allegheny	42003	4200300809	020	1	10300501	0.00		0.1272	0.0000	0.0000	GULF OIL LIMITED PARTNERSHIP NEVILLE IS
PA	Allegheny	42003	4200300812	011	1	10300602	55.00	SCC Descriptio	2.6500	0.0001	0.0001	ARROW CONCRETE COMPANY
PA	Allegheny	42003	4200300839	006	1	10300603	5.00	SCC Descriptio	0.0103	0.0003	0.0003	PITTSBURGH ELECTRICAL INSULATION
PA	Allegheny	42003	4200300839	007	1	10300603	5.00	SCC Descriptio	0.0069	0.0003	0.0003	PITTSBURGH ELECTRICAL INSULATION
PA	Allegheny	42003	4200300839	009	1	10200602	55.00	SCC Descriptio	0.0344	0.0000	0.0000	PITTSBURGH ELECTRICAL INSULATION
PA	Allegheny	42003	4200300839	010	1	10300602	55.00	SCC Descriptio	0.0172	0.0007	0.0007	PITTSBURGH ELECTRICAL INSULATION
PA	Allegheny	42003	4200300881	4	3	10200602	44.40	MANEVU2002	1.6440	0.0048	0.0048	BOX USA
PA	Allegheny	42003	4200300885	012	1	10200603	5.00	SCC Descriptio	3.1000	0.0031	0.0031	WINTHROP MANAGEMENT - US STEEL TOWER
PA	Allegheny	42003	4200300885	012	3	10200603	5.00	SCC Descriptio	2.3500	0.0023	0.0023	WINTHROP MANAGEMENT - US STEEL TOWER
PA	Allegheny	42003	4200300885	012	2	10200603	5.00	SCC Descriptio	1.5500	0.0015	0.0015	WINTHROP MANAGEMENT - US STEEL TOWER
PA	Allegheny	42003	4200300889	001	1	10200602	55.00	SCC Descriptio	9.3800	0.0255	0.0255	NEXTECH
PA	Allegheny	42003	4200300889	001	2	10200602	55.00	SCC Descriptio	2.0630	0.0056	0.0056	NEXTECH
PA	Allegheny	42003	4200300889	001	4	10200602	55.00	SCC Descriptio	0.0520	0.0001	0.0001	NEXTECH
PA	Allegheny	42003	4200300895	001	9	10300602	5.00	SCC Descriptio	0.1473	0.0011	0.0011	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	1	10300603	5.00	SCC Descriptio	0.3715	0.0000	0.0010	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	2	10300602	5.00	SCC Descriptio	0.3284	0.0000	0.0009	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	6	10300602	5.00	SCC Descriptio	0.0688	0.0000	0.0002	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	7	10300603	5.00	SCC Descriptio	1.6009	0.0001	0.0001	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	4	10300603	5.00	SCC Descriptio	0.0101	0.0000	0.0000	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300895	001	5	10300603	5.00	SCC Descriptio	0.0101	0.0000	0.0000	WHEMCO - WEST HOMESTEAD FACILITY
PA	Allegheny	42003	4200300899	005	1	10200603	5.00	SCC Descriptio	0.4000	0.0002	0.0002	ACEOMATIC RECON, LLC
PA	Allegheny	42003	4200300907	001	2	10300602	123.00	MANEVU2002	2.3700	0.0046	0.0046	UPMC - OAKLAND CAMPUS
PA	Allegheny	42003	4200300907	001	3	10300602	123.00	MANEVU2002	2.1049	0.0041	0.0041	UPMC - OAKLAND CAMPUS
PA	Allegheny	42003	4200300907	001	1	10300602	123.00	MANEVU2002	1.6125	0.0032	0.0032	UPMC - OAKLAND CAMPUS
PA	Allegheny	42003	4200300912	002	1	10200602	55.00	SCC Descriptio	1.7167	0.0000	0.0000	VA MEDICAL CENTER - OAKLAND FACILITY
PA	Allegheny	42003	4200300912	003	1	10200602	55.00	SCC Descriptio	1.1265	0.0000	0.0000	VA MEDICAL CENTER - OAKLAND FACILITY
PA	Allegheny	42003	4200300912	004	1	10200602	55.00	SCC Descriptio	1.0013	0.0000	0.0052	VA MEDICAL CENTER - OAKLAND FACILITY
PA	Allegheny	42003	4200300913	001	2	10200707	0.00		0.5624	0.0000	0.0015	BRADDOCK RECOVERY, INC.
PA	Allegheny	42003	4200300913	002	2	10200707	0.00		3.0056	0.0001	0.0001	BRADDOCK RECOVERY, INC.
PA	Allegheny	42003	4200300950	001	1	10300602	55.00	SCC Descriptio	0.7042	0.0005	0.0005	MT. LEBANON HIGH SCHOOL
PA	Allegheny	42003	4200300950	001	2	10300602	55.00	SCC Descriptio	0.7042	0.0005	0.0005	MT. LEBANON HIGH SCHOOL
PA	Allegheny	42003	4200300950	001	3	10300602	55.00	SCC Descriptio	0.7042	0.0005	0.0005	MT. LEBANON HIGH SCHOOL
PA	Allegheny	42003	4200300951	B02	1	10200602	55.00	SCC Descriptio	0.4561	0.0000	0.0013	NASH_ELMO INDUSTRIES, L.L.C.
PA	Allegheny	42003	4200300982	001	1	10300603	5.00	SCC Descriptio	0.4774	0.0000	0.0013	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	8	10300603	5.00	SCC Descriptio	0.4613	0.0000	0.0013	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	4	10300603	5.00	SCC Descriptio	0.4384	0.0000	0.0012	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	2	10300602	5.00	SCC Descriptio	0.4119	0.0000	0.0011	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	5	10300603	5.00	SCC Descriptio	0.3830	0.0000	0.0011	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	3	10300602	5.00	SCC Descriptio	0.2437	0.0000	0.0007	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	6	10300603	5.00	SCC Descriptio	0.1785	0.0000	0.0005	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200300982	001	7	10300602	5.00	SCC Descriptio	0.1148	0.0000	0.0003	WHEMCO - HAYS PLANT
PA	Allegheny	42003	4200301012	005	1	10200603	5.00	SCC Descriptio	0.0410	0.0001	0.0001	LIBERTY-PITTSBURGH SYSTEMS, INC.

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PA	Allegheny	42003	4200301019	001	1	10300602	21.00	MANEVU2002	1.8465	0.0032	0.0032	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	001	2	10300602	21.00	MANEVU2002	1.3580	0.0024	0.0024	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	001	3	10300602	21.00	MANEVU2002	0.3615	0.0006	0.0006	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	002	1	10300501	21.00	MANEVU2002	0.0232	0.0005	0.0005	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	002	2	10300501	21.00	MANEVU2002	0.0170	0.0004	0.0004	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	002	3	10300501	21.00	MANEVU2002	0.0046	0.0001	0.0001	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	005	1	10300602	55.00	SCC Descriptio	0.0360	0.0000	0.0000	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	005	2	10300602	55.00	SCC Descriptio	0.0360	0.0000	0.0000	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	006	1	10300602	55.00	SCC Descriptio	0.0340	0.0000	0.0000	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301019	006	2	10300602	55.00	SCC Descriptio	0.0340	0.0000	0.0000	JEFFERSON REGIONAL MEDICAL CENTER
PA	Allegheny	42003	4200301021	H01	1	10200602	55.00	SCC Descriptio	0.0204	0.0001	0.0001	PANNIER CORPORATION, GRAPHICS DIVISION
PA	Allegheny	42003	4200301021	P01	3	10200602	55.00	SCC Descriptio	0.0402	0.0002	0.0002	PANNIER CORPORATION, GRAPHICS DIVISION
PA	Allegheny	42003	4200301032	C01	1	10200603	5.00	SCC Descriptio	0.3650	0.0058	0.0058	AMERICAN BRIDGE MANUFACTURING
PA	Allegheny	42003	4200301033	001	8	10200603	5.00	SCC Descriptio	0.0575	0.0001	0.0001	HOECHSTETTER PRINTING
PA	Allegheny	42003	4200301033	001	3	10300602	5.00	SCC Descriptio	0.1900	0.0002	0.0002	HOECHSTETTER PRINTING
PA	Allegheny	42003	4200301033	001	6	10300602	5.00	SCC Descriptio	0.0245	0.0000	0.0000	HOECHSTETTER PRINTING
PA	Armstrong	42005	420050008	100	1	10200602	55.00	MANEVU2002	0.9746	0.0000	0.0000	FREEPORT BRICK CO/FREEPORT BORO
PA	Armstrong	42005	420050008	101	1	10200602	55.00	MANEVU2002	1.1450	0.0000	0.0035	FREEPORT BRICK CO/FREEPORT BORO
PA	Armstrong	42005	420050013	032	1	10200603	1.00	MANEVU2002	0.9000	0.0000	0.0024	DOMINION PEOPLES/VALLEY STA
PA	Armstrong	42005	420050015	032	1	10200603	5.50	MANEVU2002	0.2000	0.0000	0.0000	DOMINION TRANS INC/SOUTH BEND STA
PA	Armstrong	42005	420050100	P05	1	10200603	1.00	MANEVU2002	0.0730	0.0000	0.0000	NATURES BLEND WOOD PROD/FORD CITY
PA	Armstrong	42005	420050371	031	1	10300603	5.00	MANEVU2002	0.2680	0.0000	0.0004	KITTANNING BRICK CO/REESEDALE
PA	Armstrong	42005	420050371	100	1	10200602	55.00	SCC Descriptio	0.4880	0.0000	0.0012	KITTANNING BRICK CO/REESEDALE
PA	Armstrong	42005	420050371	101	1	10200602	55.00	SCC Descriptio	0.3460	0.0000	0.0000	KITTANNING BRICK CO/REESEDALE
PA	Armstrong	42005	420050371	102	1	10200602	55.00	SCC Descriptio	0.0310	0.0000	0.0000	KITTANNING BRICK CO/REESEDALE
PA	Armstrong	42005	420050371	103	1	10200603	5.00	SCC Descriptio	0.1276	0.0000	0.0004	KITTANNING BRICK CO/REESEDALE
PA	Armstrong	42005	420050371	105	1	10200603	5.00	SCC Descriptio	0.1492	0.0000	0.0004	KITTANNING BRICK CO/REESEDALE
PA	Beaver	42007	420070003	032	1	10300602	48.80	MANEVU2002	3.6800	0.0000	0.0000	CUTLER HAMMER/BEAVER
PA	Beaver	42007	420070003	033	1	10300602	25.00	MANEVU2002	1.7700	0.0000	0.0000	CUTLER HAMMER/BEAVER
PA	Beaver	42007	420070022	033	1	10200602	20.90	MANEVU2002	2.3000	0.0000	0.0058	ARMSTRONG WORLD IND /BEAVER FALLS
PA	Beaver	42007	420070027	033	1	10200603	5.00	SCC Descriptio	1.5400	0.0000	0.0019	KOPPEL STEEL CORP/KOPPEL
PA	Beaver	42007	420070043	040	1	10200602	49.90	MANEVU2002	9.1300	0.0000	0.0191	JEWEL ACQUISITION/MIDLAND FAC
PA	Beaver	42007	420070043	041	1	10200603	9.30	MANEVU2002	14.0000	0.0000	0.0092	JEWEL ACQUISITION/MIDLAND FAC
PA	Beaver	42007	420070043	041	2	10200603	9.30	MANEVU2002	14.0000	0.0000	0.0092	JEWEL ACQUISITION/MIDLAND FAC
PA	Beaver	42007	420070043	050	1	10200603	5.00	MANEVU2002	0.0090	0.0000	0.0000	JEWEL ACQUISITION/MIDLAND FAC
PA	Beaver	42007	420070043	209	1	10200602	55.00	SCC Descriptio	2.8700	0.0000	0.0079	JEWEL ACQUISITION/MIDLAND FAC
PA	Beaver	42007	420070044	134	1	10200603	191.60	MANEVU2002	7.4600	0.0000	0.0221	WHEMCO FOUNDRY/MIDLAND
PA	Beaver	42007	420070044	135	1	10200603	8.00	MANEVU2002	0.3300	0.0000	0.0009	WHEMCO FOUNDRY/MIDLAND
PA	Beaver	42007	420070055	032	1	10200602	12.90	MANEVU2002	0.9100	0.0000	0.0024	SCA PKG NORTH AMERICA /NEW BRIGHTON FAC
PA	Beaver	42007	420070119	036	1	10300602	8.50	MANEVU2002	6.5000	0.0000	0.0200	DOMINION TRANS INC/BEAVER
PA	Beaver	42007	420070165	EU-7	1	10300603	5.00	MANEVU2002	1.2700	0.0000	0.0000	US GYPSUM CO/ALIQUIPPA
PA	Beaver	42007	420071036	031	1	10200602	16.70	MANEVU2002	1.3445	0.0000	0.0000	NORFOLK SOUTHERN RAILWAY/CONWAY
PA	Beaver	42007	420071036	032	1	10200602	16.70	MANEVU2002	1.3000	0.0000	0.0000	NORFOLK SOUTHERN RAILWAY/CONWAY
PA	Beaver	42007	420071036	033	1	10200602	16.70	MANEVU2002	1.3000	0.0000	0.0000	NORFOLK SOUTHERN RAILWAY/CONWAY
PA	Bedford	42009	420090004	031	1	10200603	5.00	SCC Descriptio	1.7000	0.0000	0.0013	BEDFORD MATERIALS/BEDFORD
PA	Bedford	42009	420090004	C01	1	10200601	150.00	SCC Descriptio	18.6000	0.0000	0.0513	BEDFORD MATERIALS/BEDFORD
PA	Bedford	42009	420090004	C02	1	10200601	150.00	SCC Descriptio	9.8000	0.0000	0.0270	BEDFORD MATERIALS/BEDFORD
PA	Bedford	42009	420090008	032	1	10200603	5.00	SCC Descriptio	0.4800	0.0000	0.0011	HEDSTROM CORP/BEDFORD PLT
PA	Bedford	42009	420090009	HTR2	1	10200602	11.00	MANEVU2002	2.7000	0.0000	0.0047	COLUMBIA GAS TRANS CORP/ARTEMAS COMP STA
PA	Bedford	42009	420090009	HTR3	1	10200603	5.60	MANEVU2002	1.0000	0.0000	0.0018	COLUMBIA GAS TRANS CORP/ARTEMAS COMP STA
PA	Bedford	42009	420090009	HTR4	1	10200603	5.00	MANEVU2002	0.8000	0.0000	0.0010	COLUMBIA GAS TRANS CORP/ARTEMAS COMP STA
PA	Bedford	42009	420090013	031	1	10200603	20.30	MANEVU2002	1.0778	0.0000	0.0019	CANNONDALE BICYCLE CORP/BEDFORD PLT

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PA	Bedford	42009	420090359	031	1	10300501	21.00	MANEVU2002	1.2940	0.0000	0.0028	SETON/SAXTON PLT
PA	Berks	42011	420110002	034	1	10200401	28.80	MANEVU2002	2.2600	0.0000	0.0002	COUNTY OF BERKS/BERKS COUNTY COMPLEX
PA	Berks	42011	420110002	035	1	10200401	28.80	MANEVU2002	5.1700	0.0000	0.0114	COUNTY OF BERKS/BERKS COUNTY COMPLEX
PA	Berks	42011	420110002	036	1	10200401	28.80	MANEVU2002	3.4900	0.0000	0.0081	COUNTY OF BERKS/BERKS COUNTY COMPLEX
PA	Berks	42011	420110002	037	1	10300501	2.70	MANEVU2002	0.2500	0.0000	0.0010	COUNTY OF BERKS/BERKS COUNTY COMPLEX
PA	Berks	42011	420110002	038	1	10300501	2.70	MANEVU2002	0.2500	0.0000	0.0010	COUNTY OF BERKS/BERKS COUNTY COMPLEX
PA	Berks	42011	420110008	031	1	10300102	25.80	MANEVU2002	2.6616	0.0000	0.0000	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110008	032	1	10300102	25.80	MANEVU2002	6.8528	0.0000	0.0000	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110008	033	1	10300102	38.60	MANEVU2002	12.9722	0.0000	0.0000	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110008	034	3	10300602	16.80	MANEVU2002	0.5000	0.0000	0.0000	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110008	035	2	10300102	43.60	MANEVU2002	21.3750	0.0000	0.0000	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110008	043	1	10200602	0.80	MANEVU2002	0.2375	0.0000	0.0007	PA STATE SYS OF HIGHER ED/KUTZTOWN UNIV OF PA
PA	Berks	42011	420110014	107	2	10300603	5.00	SCC Descriptio	1.1500	0.0000	0.0030	EAST PENN MFG CO INC/SMELTER PLT
PA	Berks	42011	420110014	110	1	10200602	55.00	SCC Descriptio	1.1000	0.0000	0.0028	EAST PENN MFG CO INC/SMELTER PLT
PA	Berks	42011	420110016	033	1	10200602	39.40	MANEVU2002	0.0230	0.0000	0.0000	INTERSTATE CONTAINER/READING PLT
PA	Berks	42011	420110016	035	1	10200602	60.00	MANEVU2002	2.7124	0.0000	0.0057	INTERSTATE CONTAINER/READING PLT
PA	Berks	42011	420110016	035	2	10200501	60.00	MANEVU2002	0.0009	0.0000	0.0000	INTERSTATE CONTAINER/READING PLT
PA	Berks	42011	420110028	031	2	10300501	7.50	MANEVU2002	0.1596	0.0000	0.0000	BOYERTOWN FOUNDRY CO/FKA EAFCO
PA	Berks	42011	420110028	032	1	10300501	6.70	MANEVU2002	0.4787	0.0000	0.0004	BOYERTOWN FOUNDRY CO/FKA EAFCO
PA	Berks	42011	420110028	033	1	10300603	5.00	MANEVU2002	0.3366	0.0000	0.0000	BOYERTOWN FOUNDRY CO/FKA EAFCO
PA	Berks	42011	420110028	034	1	10300603	5.00	SCC Descriptio	0.8050	0.0000	0.0000	BOYERTOWN FOUNDRY CO/FKA EAFCO
PA	Berks	42011	420110031	041	1	10300603	8.40	MANEVU2002	0.0212	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	045	1	10300603	4.20	MANEVU2002	0.5194	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	046	1	10300603	4.20	MANEVU2002	0.5194	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	047	2	10200602	20.90	MANEVU2002	3.7400	0.0000	0.0160	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	048	2	10200602	29.40	MANEVU2002	4.0800	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	049	2	10200602	29.40	MANEVU2002	5.3700	0.0000	0.0153	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	050	1	10200603	4.20	MANEVU2002	0.0885	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	051	1	10300603	4.20	MANEVU2002	0.0722	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	052	1	10300603	4.20	MANEVU2002	0.0722	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	053	1	10300603	12.50	MANEVU2002	0.5759	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	054	2	10200602	12.50	MANEVU2002	0.5759	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	056	1	10300603	8.40	MANEVU2002	0.4907	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	059	1	10200603	61.30	MANEVU2002	0.4256	0.0000	0.0012	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	060	2	10200602	8.40	MANEVU2002	0.4907	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	062	1	10300603	1.70	MANEVU2002	0.1474	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	063	2	10200603	1.50	MANEVU2002	0.0633	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	065	1	10200603	25.00	MANEVU2002	1.5500	0.0000	0.0043	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	067	1	10200603	1.50	MANEVU2002	0.0258	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	145	1	10300603	5.00	SCC Descriptio	0.2961	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	146	1	10200603	5.00	SCC Descriptio	0.3555	0.0000	0.0009	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	147	1	10300603	5.00	SCC Descriptio	0.4880	0.0000	0.0012	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	148	1	10300603	5.00	SCC Descriptio	0.1089	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	149	1	10300603	5.00	MANEVU2002	0.1192	0.0000	0.0003	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	150	1	10300603	5.00	MANEVU2002	0.0008	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	151	1	10300603	5.00	SCC Descriptio	0.2635	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	152	1	10300603	5.00	MANEVU2002	0.3621	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	153	1	10300603	5.00	SCC Descriptio	0.3621	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	154	1	10300603	5.00	SCC Descriptio	0.2260	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	155	2	10200603	5.00	SCC Descriptio	0.4852	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	156	1	10300603	5.00	SCC Descriptio	0.2054	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	157	1	10300603	5.00	SCC Descriptio	0.0992	0.0000	0.0003	CARPENTER TECH CORP/READING PLT

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PA	Berks	42011	420110031	158	1	10300603	5.00	SCC Descriptio	0.1072	0.0000	0.0003	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	159	1	10300603	5.00	SCC Descriptio	0.0135	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	160	1	10300603	5.00	SCC Descriptio	1.3404	0.0000	0.0034	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	161	1	10300603	5.00	SCC Descriptio	0.6530	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	163	1	10300603	5.00	MANEVU2002	0.4341	0.0000	0.0012	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	164	1	10200603	5.00	MANEVU2002	0.2389	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	165	1	10200603	5.00	MANEVU2002	0.5725	0.0000	0.0016	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	166	1	10300603	5.00	MANEVU2002	0.5720	0.0000	0.0016	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	167	1	10300603	5.00	SCC Descriptio	0.2771	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	168	1	10300603	5.00	SCC Descriptio	0.2418	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	169	1	10300603	5.00	MANEVU2002	0.0997	0.0000	0.0003	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	170	1	10300603	5.00	SCC Descriptio	0.3247	0.0000	0.0009	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	173	1	10300603	5.00	MANEVU2002	0.3669	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	174	1	10300603	5.00	SCC Descriptio	0.4866	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	182	1	10300603	5.00	SCC Descriptio	0.0805	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	183	1	10300603	5.00	SCC Descriptio	0.1676	0.0000	0.0005	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	184	1	10300603	5.00	MANEVU2002	4.8500	0.0000	0.0123	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	185	1	10200602	55.00	MANEVU2002	6.6300	0.0000	0.0204	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	186	1	10200602	55.00	MANEVU2002	8.3300	0.0000	0.0220	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	187	1	10200602	55.00	SCC Descriptio	25.2000	0.0000	0.0637	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	200	1	10300603	5.00	SCC Descriptio	0.2419	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	201	1	10300603	5.00	SCC Descriptio	0.1650	0.0000	0.0005	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	202	1	10200603	5.00	SCC Descriptio	0.3092	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	203	1	10200603	5.00	SCC Descriptio	0.7740	0.0000	0.0021	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	204	1	10300603	5.00	SCC Descriptio	0.1919	0.0000	0.0005	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	205	2	10200603	5.00	SCC Descriptio	0.0864	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	208	1	10300603	5.00	SCC Descriptio	0.0378	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	211	1	10300603	5.00	SCC Descriptio	0.2155	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	212	1	10300603	5.00	SCC Descriptio	0.3475	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	213	1	10300603	5.00	SCC Descriptio	0.3618	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	214	1	10300603	5.00	SCC Descriptio	0.0775	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	215	1	10300603	5.00	SCC Descriptio	0.9090	0.0000	0.0021	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	216	1	10300603	5.00	SCC Descriptio	0.9786	0.0000	0.0027	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	217	1	10300603	5.00	SCC Descriptio	0.8525	0.0000	0.0023	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	221	1	10300603	5.00	SCC Descriptio	0.0895	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	222	1	10300603	5.00	SCC Descriptio	0.4945	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	223	1	10300603	5.00	SCC Descriptio	0.2675	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	224	2	10200603	5.00	SCC Descriptio	0.3069	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	225	1	10300603	5.00	SCC Descriptio	0.3657	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	226	1	10300603	5.00	SCC Descriptio	0.5625	0.0000	0.0015	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	227	1	10300603	5.00	SCC Descriptio	0.3678	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	232	1	10200603	5.00	SCC Descriptio	0.0008	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	234	1	10300603	5.00	SCC Descriptio	0.7905	0.0000	0.0022	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	235	1	10300603	5.00	SCC Descriptio	1.3294	0.0000	0.0037	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	242	1	10300603	5.00	SCC Descriptio	0.2075	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	243	2	10200603	5.00	SCC Descriptio	0.3265	0.0000	0.0009	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	244	1	10300603	5.00	SCC Descriptio	0.1310	0.0000	0.0004	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	245	1	10300603	5.00	SCC Descriptio	0.4741	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	246	1	10300603	5.00	SCC Descriptio	0.3170	0.0000	0.0009	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	247	1	10300603	5.00	SCC Descriptio	0.1371	0.0000	0.0004	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	248	1	10300603	5.00	SCC Descriptio	0.7330	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	251	1	10300603	5.00	SCC Descriptio	0.1532	0.0000	0.0004	CARPENTER TECH CORP/READING PLT

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PA	Berks	42011	420110031	254	1	10300603	5.00	SCC Descriptio	0.2494	0.0000	0.0007	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	255	1	10300603	5.00	SCC Descriptio	0.4119	0.0000	0.0011	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	260	1	10300603	5.00	SCC Descriptio	0.1220	0.0000	0.0003	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	267	1	10300603	5.00	SCC Descriptio	0.0242	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	283	1	10300603	5.00	SCC Descriptio	0.2998	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	284	1	10300603	5.00	SCC Descriptio	0.1684	0.0000	0.0005	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	286	1	10300603	5.00	SCC Descriptio	0.3204	0.0000	0.0009	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	287	1	10200602	55.00	SCC Descriptio	0.3044	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	289	1	10300603	5.00	SCC Descriptio	0.1333	0.0000	0.0004	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	290	1	10300603	5.00	SCC Descriptio	0.5780	0.0000	0.0016	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	291	1	10300603	5.00	SCC Descriptio	0.4624	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	293	1	10300603	5.00	SCC Descriptio	0.5020	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	295	1	10300603	5.00	SCC Descriptio	0.3500	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	296	2	10200602	55.00	SCC Descriptio	0.4776	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	297	2	10200602	55.00	SCC Descriptio	0.4678	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	300	2	10200602	55.00	SCC Descriptio	1.7490	0.0000	0.0048	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	302	1	10300603	5.00	SCC Descriptio	0.0597	0.0000	0.0002	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	305	1	10300603	5.00	SCC Descriptio	0.2058	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	306	1	10300603	5.00	SCC Descriptio	0.8710	0.0000	0.0024	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	307	1	10300603	5.00	SCC Descriptio	0.7415	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	308	1	10300603	5.00	SCC Descriptio	0.5835	0.0000	0.0016	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	309	1	10300603	5.00	SCC Descriptio	0.6090	0.0000	0.0017	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	310	1	10300603	5.00	SCC Descriptio	0.6495	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	312	2	10200602	55.00	SCC Descriptio	1.1670	0.0000	0.0032	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	313	2	10200602	55.00	SCC Descriptio	1.6020	0.0000	0.0044	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	314	1	10300603	5.00	SCC Descriptio	0.4749	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	315	1	10300603	5.00	SCC Descriptio	0.7910	0.0000	0.0022	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	316	1	10300603	5.00	SCC Descriptio	0.6700	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	317	1	10300603	5.00	SCC Descriptio	0.7250	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	318	1	10300603	5.00	SCC Descriptio	0.4383	0.0000	0.0012	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	320	2	10200602	55.00	SCC Descriptio	1.3675	0.0000	0.0038	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	321	1	10300603	5.00	SCC Descriptio	0.7365	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	322	1	10300603	5.00	SCC Descriptio	0.6270	0.0000	0.0017	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	323	1	10300603	5.00	SCC Descriptio	0.6735	0.0000	0.0019	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	324	1	10300603	5.00	SCC Descriptio	0.3654	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	325	1	10300603	5.00	SCC Descriptio	0.3624	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	326	1	10300603	5.00	SCC Descriptio	0.9255	0.0000	0.0025	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	327	1	10300603	5.00	SCC Descriptio	0.5003	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	328	2	10200602	55.00	SCC Descriptio	0.3931	0.0000	0.0011	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	330	2	10200602	55.00	SCC Descriptio	0.9335	0.0000	0.0026	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	331	2	10200602	55.00	SCC Descriptio	1.1210	0.0000	0.0031	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	332	2	10200602	55.00	SCC Descriptio	1.0045	0.0000	0.0028	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	333	2	10200602	55.00	SCC Descriptio	1.0165	0.0000	0.0028	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	334	2	10200602	55.00	SCC Descriptio	1.1015	0.0000	0.0030	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	335	1	10300603	5.00	SCC Descriptio	0.0201	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	336	2	10200602	55.00	SCC Descriptio	0.9495	0.0000	0.0026	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	337	2	10200602	55.00	SCC Descriptio	0.9685	0.0000	0.0027	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	338	2	10200602	55.00	SCC Descriptio	1.0285	0.0000	0.0028	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	344	1	10200602	55.00	SCC Descriptio	0.3580	0.0000	0.0010	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	345	2	10200602	55.00	SCC Descriptio	0.4663	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	354	1	10300603	5.00	SCC Descriptio	0.0289	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	356	2	10200602	55.00	SCC Descriptio	0.7755	0.0000	0.0021	CARPENTER TECH CORP/READING PLT

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Berks	42011	420110031	357	2	10200602	55.00	SCC Descriptio	0.9005	0.0000	0.0025	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	358	2	10200602	55.00	SCC Descriptio	1.1715	0.0000	0.0032	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	380	1	10300603	5.00	SCC Descriptio	0.0373	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	381	1	10200602	55.00	SCC Descriptio	1.6950	0.0000	0.0047	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	382	1	10200603	5.00	SCC Descriptio	0.7320	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	383	1	10300603	5.00	SCC Descriptio	0.2820	0.0000	0.0008	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	385	1	10300603	5.00	SCC Descriptio	8.6100	0.0000	0.0237	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	386	1	10300603	5.00	SCC Descriptio	0.8385	0.0000	0.0023	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	387	1	10300603	5.00	SCC Descriptio	0.9495	0.0000	0.0026	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	389	2	10200602	55.00	SCC Descriptio	1.1800	0.0000	0.0032	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	390	2	10200602	55.00	SCC Descriptio	0.7530	0.0000	0.0021	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	391	2	10200602	55.00	SCC Descriptio	0.6500	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	392	1	10300603	5.00	SCC Descriptio	0.4724	0.0000	0.0013	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	393	1	10300603	5.00	SCC Descriptio	0.4113	0.0000	0.0011	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	394	1	10300603	5.00	SCC Descriptio	0.5020	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	395	2	10200602	55.00	SCC Descriptio	2.0230	0.0000	0.0056	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	396	2	10200602	55.00	SCC Descriptio	3.5565	0.0000	0.0098	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	397	1	10300603	5.00	SCC Descriptio	0.7280	0.0000	0.0020	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	398	1	10300603	5.00	SCC Descriptio	0.6405	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	443	1	10200603	5.00	SCC Descriptio	0.0178	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	600	1	10300603	5.00	SCC Descriptio	1.2015	0.0000	0.0033	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	601	1	10300603	5.00	SCC Descriptio	0.1293	0.0000	0.0004	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	602	1	10300603	5.00	SCC Descriptio	0.6610	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	701	2	10200602	55.00	SCC Descriptio	0.5245	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	702	2	10200602	55.00	SCC Descriptio	0.4177	0.0000	0.0011	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	703	2	10200602	55.00	SCC Descriptio	0.8390	0.0000	0.0023	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	704	2	10200602	55.00	SCC Descriptio	1.0005	0.0000	0.0027	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	705	2	10200602	55.00	SCC Descriptio	1.0200	0.0000	0.0028	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	706	2	10200602	55.00	SCC Descriptio	0.7915	0.0000	0.0022	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	707	2	10200602	55.00	SCC Descriptio	0.7065	0.0000	0.0019	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	709	1	10300603	1.50	MANEVU2002	0.0479	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	710	1	10300603	1.40	MANEVU2002	0.0447	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	711	1	10300603	1.40	MANEVU2002	0.0120	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	712	1	10300603	0.10	MANEVU2002	0.0035	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	713	1	10200603	5.00	SCC Descriptio	0.0201	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	714	1	10200603	5.00	SCC Descriptio	0.0201	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	715	1	10300603	5.00	SCC Descriptio	0.0064	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	716	1	10300603	5.00	SCC Descriptio	0.0241	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	717	1	10300603	5.00	SCC Descriptio	0.2206	0.0000	0.0006	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	719	1	10300603	5.00	SCC Descriptio	0.0281	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	720	1	10300602	55.00	SCC Descriptio	0.7545	0.0000	0.0021	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	722	1	10200602	55.00	SCC Descriptio	0.6725	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	724	1	10200603	5.00	SCC Descriptio	0.0063	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	725	1	10200603	5.00	SCC Descriptio	0.0063	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	728	1	10200602	15.00	MANEVU2002	0.6950	0.0000	0.0019	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	729	1	10200602	55.00	SCC Descriptio	0.8295	0.0000	0.0023	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	730	1	10200602	55.00	SCC Descriptio	0.8105	0.0000	0.0022	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	731	1	10200602	55.00	SCC Descriptio	0.9135	0.0000	0.0025	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	732	1	10200602	55.00	SCC Descriptio	0.8650	0.0000	0.0024	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	733	1	10200602	55.00	SCC Descriptio	0.6630	0.0000	0.0018	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	734	1	10200602	55.00	SCC Descriptio	0.4102	0.0000	0.0011	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	736	1	10200602	21.00	MANEVU2002	0.7715	0.0000	0.0021	CARPENTER TECH CORP/READING PLT

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Berks	42011	420110031	768	1	10300603	5.00	SCC Descriptio	0.0320	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	771	1	10300603	5.00	SCC Descriptio	0.0479	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	773	1	10300603	2.00	MANEVU2002	0.0047	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	774	1	10300603	2.00	MANEVU2002	0.0015	0.0000	0.0000	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	775	1	10300603	5.00	SCC Descriptio	0.1676	0.0000	0.0005	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	777	1	10200602	55.00	SCC Descriptio	1.0006	0.0000	0.0027	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	778	1	10200602	55.00	SCC Descriptio	1.0060	0.0000	0.0028	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	779	1	10300603	5.00	SCC Descriptio	0.4963	0.0000	0.0014	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110031	790	1	10200603	1.40	MANEVU2002	0.0218	0.0000	0.0001	CARPENTER TECH CORP/READING PLT
PA	Berks	42011	420110034	122	1	10200603	5.00	SCC Descriptio	14.0115	0.0000	0.0360	EXIDE TECH/READING SMELTER
PA	Berks	42011	420110039	109	2	10200602	55.00	MANEVU2002	0.1000	0.0000	0.0002	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	110	2	10200602	55.00	MANEVU2002	0.1000	0.0000	0.0002	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	112	2	10200602	55.00	MANEVU2002	0.2000	0.0000	0.0004	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	121	2	10200603	5.00	MANEVU2002	0.3510	0.0000	0.0008	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	121	1	10200501	5.00	MANEVU2002	0.0233	0.0000	0.0001	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	122	2	10200603	5.00	MANEVU2002	0.5962	0.0000	0.0056	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	122	1	10200501	5.00	MANEVU2002	0.0056	0.0000	0.0000	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110039	440	1	10300501	2.70	MANEVU2002	0.4016	0.0000	0.0001	LEHIGH CEMENT CO /EVANSVILLE CEMENT PLT
PA	Berks	42011	420110040	033	2	10200602	16.70	John Hulsberg	0.6200	0.0000	0.0017	GLIDDEN DBA ICI PAINTS/READING
PA	Berks	42011	420110040	034	2	10300602	24.90	MANEVU2002	4.4200	0.0000	0.0000	GLIDDEN DBA ICI PAINTS/READING
PA	Berks	42011	420110042	032	1	10200602	25.20	MANEVU2002	1.9700	0.0000	0.0030	GST AUTOLEATHER/FLEETWOOD PLT
PA	Berks	42011	420110045	036	1	10300501	0.00		0.0269	0.0000	0.0000	RELIANT ENERGY MID A/TITUS ELECTRIC GEN STA
PA	Berks	42011	420110045	037	1	10301002	0.00		0.0174	0.0000	0.0000	RELIANT ENERGY MID A/TITUS ELECTRIC GEN STA
PA	Berks	42011	420110054	031	1	10200401	7.00	MANEVU2002	6.4353	0.0000	0.0120	ATLAS MINERALS & CHEM/MERTZTOWN
PA	Berks	42011	420110054	101	1	10200401	0.00	MANEVU2002	4.7083	0.0000	0.0124	ATLAS MINERALS & CHEM/MERTZTOWN
PA	Berks	42011	420110054	101	2	10200501	0.00	MANEVU2002	0.5123	0.0000	0.0016	ATLAS MINERALS & CHEM/MERTZTOWN
PA	Berks	42011	420110066	035	1	10200401	22.20	MANEVU2002	1.4970	0.0000	0.0012	READING HOUSING AUTH/OAKBROOK
PA	Berks	42011	420110066	036	1	10200401	22.20	MANEVU2002	1.9811	0.0000	0.0015	READING HOUSING AUTH/OAKBROOK
PA	Berks	42011	420110066	037	1	10200401	22.20	MANEVU2002	1.8446	0.0000	0.0022	READING HOUSING AUTH/OAKBROOK
PA	Berks	42011	420110075	031	1	10200603	5.00	SCC Descriptio	0.1237	0.0000	0.0000	CAMBRIDGE LEE IND IN/READING TUBE DIV
PA	Berks	42011	420110075	105	1	10200602	55.00	MANEVU2002	2.7931	0.0000	0.0089	CAMBRIDGE LEE IND IN/READING TUBE DIV
PA	Berks	42011	420110075	106	1	10200603	5.00	MANEVU2002	0.9190	0.0000	0.0029	CAMBRIDGE LEE IND IN/READING TUBE DIV
PA	Berks	42011	420110075	107	1	10200603	5.00	SCC Descriptio	1.8621	0.0000	0.0059	CAMBRIDGE LEE IND IN/READING TUBE DIV
PA	Berks	42011	420110075	C01	1	10200603	5.00	SCC Descriptio	0.9095	0.0000	0.0024	CAMBRIDGE LEE IND IN/READING TUBE DIV
PA	Berks	42011	420110078	031	2	10200602	71.00	MANEVU2002	8.9000	0.0000	0.0284	AGERE SYSTEMS INC/READING FACILITY
PA	Berks	42011	420110078	032	2	10200602	49.00	MANEVU2002	0.7420	0.0000	0.0000	AGERE SYSTEMS INC/READING FACILITY
PA	Berks	42011	420110078	033	2	10200602	71.00	MANEVU2002	6.9000	0.0000	0.0114	AGERE SYSTEMS INC/READING FACILITY
PA	Berks	42011	420110078	034	2	10200602	49.00	MANEVU2002	0.5620	0.0000	0.0000	AGERE SYSTEMS INC/READING FACILITY
PA	Berks	42011	420110080	031	2	10200602	12.50	MANEVU2002	0.5575	0.0000	0.0015	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	033	2	10200602	12.50	MANEVU2002	0.5725	0.0000	0.0016	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	034	2	10200602	50.20	MANEVU2002	5.1519	0.0000	0.0142	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	035	2	10200602	50.00	MANEVU2002	1.6500	0.0000	0.0045	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	115	1	10200603	5.00	MANEVU2002	0.0400	0.0000	0.0002	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	117	1	10300603	5.00	MANEVU2002	0.0140	0.0000	0.0001	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110080	122	1	10300603	5.00	MANEVU2002	0.2600	0.0000	0.0005	SENSIENT COLORS INC/GIBRALTAR
PA	Berks	42011	420110082	031	2	10200602	24.40	MANEVU2002	6.5709	0.0000	0.0173	CARAUSTAR MILL GROUP INC/SINKING SPRING
PA	Berks	42011	420110082	031	3	10200401	24.40	MANEVU2002	0.2115	0.0000	0.0000	CARAUSTAR MILL GROUP INC/SINKING SPRING
PA	Berks	42011	420110082	102	1	10200603	5.00	SCC Descriptio	0.0540	0.0000	0.0001	CARAUSTAR MILL GROUP INC/SINKING SPRING
PA	Berks	42011	420110084	031	1	10200602	12.60	MANEVU2002	0.6827	0.0000	0.0000	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	105	1	10200602	55.00	MANEVU2002	0.1155	0.0000	0.0005	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	106	1	10200602	55.00	MANEVU2002	0.1153	0.0000	0.0003	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	107	1	10200602	55.00	MANEVU2002	0.0137	0.0000	0.0000	PACKAGING GROUP/BOYERTOWN PRINTING PLT

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PA	Berks	42011	420110084	109	1	10200602	55.00	MANEVU2002	0.1245	0.0000	0.0005	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	114	1	10200602	55.00	MANEVU2002	0.1552	0.0000	0.0006	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	115	1	10200602	55.00	SCC Descriptio	0.0124	0.0000	0.0001	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	116	1	10200602	55.00	SCC Descriptio	0.1491	0.0000	0.0004	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	123S	1	10200602	55.00	SCC Descriptio	0.0008	0.0000	0.0000	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	C02	1	10200602	55.00	MANEVU2002	0.0500	0.0000	0.0002	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110084	C03	1	10200603	5.00	MANEVU2002	0.0334	0.0000	0.0001	PACKAGING GROUP/BOYERTOWN PRINTING PLT
PA	Berks	42011	420110089	106	1	10200602	55.00	SCC Descriptio	0.0327	0.0000	0.0001	READING BODY WORKS I/READING
PA	Berks	42011	420110089	111	1	10200603	5.00	MANEVU2002	0.1013	0.0000	0.0002	READING BODY WORKS I/READING
PA	Berks	42011	420110089	111	3	10200603	5.00	MANEVU2002	0.1013	0.0000	0.0002	READING BODY WORKS I/READING
PA	Berks	42011	420110089	112	1	10200603	5.00	MANEVU2002	0.9000	0.0000	0.0018	READING BODY WORKS I/READING
PA	Berks	42011	420110089	118	1	10200603	5.00	SCC Descriptio	0.9000	0.0000	0.0019	READING BODY WORKS I/READING
PA	Berks	42011	420110090	110	1	10200602	55.00	SCC Descriptio	4.1000	0.0000	0.0063	YUASA BATTERY INC/LAURELDALE
PA	Berks	42011	420110091	127	1	10200501	5.00	SCC Descriptio	0.8978	0.0000	0.0002	MORGAN CORP/CAERNARVON TWP
PA	Berks	42011	420110091	127	2	10200603	5.00	SCC Descriptio	0.2022	0.0000	0.0000	MORGAN CORP/CAERNARVON TWP
PA	Berks	42011	420110095	031	1	10200401	12.60	MANEVU2002	7.7974	0.0000	0.0206	BALDWIN HDWR CORP/READING PLT
PA	Berks	42011	420110095	031	2	10200602	12.60	MANEVU2002	3.5626	0.0000	0.0059	BALDWIN HDWR CORP/READING PLT
PA	Berks	42011	420110095	125	1	10200603	10.00	MANEVU2002	3.0800	0.0000	0.0034	BALDWIN HDWR CORP/READING PLT
PA	Berks	42011	420110097	031	1	10200603	4.20	MANEVU2002	0.3547	0.0000	0.0006	STROEHMANN BAKERIES LC/MAIERS PLANT-READING
PA	Berks	42011	420110097	032	1	10200603	4.20	MANEVU2002	0.3500	0.0000	0.0003	STROEHMANN BAKERIES LC/MAIERS PLANT-READING
PA	Berks	42011	420110097	033	1	10300602	10.00	MANEVU2002	0.0800	0.0000	0.0000	STROEHMANN BAKERIES LC/MAIERS PLANT-READING
PA	Berks	42011	420110097	C01	1	10200603	5.00	SCC Descriptio	0.2777	0.0000	0.0008	STROEHMANN BAKERIES LC/MAIERS PLANT-READING
PA	Berks	42011	420110098	031	1	10200501	2.50	MANEVU2002	0.0308	0.0000	0.0000	NAFCO/READING
PA	Berks	42011	420110099	031	1	10200602	19.00	MANEVU2002	0.3000	0.0000	0.0007	CHIYODA AMER INC/CAERNARVON
PA	Berks	42011	420110099	111	1	10200603	5.00	SCC Descriptio	4.5000	0.0000	0.0109	CHIYODA AMER INC/CAERNARVON
PA	Berks	42011	420110099	C01	1	10200602	55.00	MANEVU2002	6.1000	0.0000	0.0147	CHIYODA AMER INC/CAERNARVON
PA	Berks	42011	420110099	C02	1	10200602	55.00	SCC Descriptio	4.5000	0.0000	0.0109	CHIYODA AMER INC/CAERNARVON
PA	Berks	42011	420110101	105	2	10200603	5.00	MANEVU2002	0.4632	0.0000	0.0013	CAN CORP OF AMER/BLANDON PLT
PA	Berks	42011	420110101	C02	1	10200603	5.00	MANEVU2002	0.1644	0.0000	0.0005	CAN CORP OF AMER/BLANDON PLT
PA	Berks	42011	420110101	C03	1	10200603	5.00	MANEVU2002	0.1075	0.0000	0.0002	CAN CORP OF AMER/BLANDON PLT
PA	Berks	42011	420110101	C04	1	10200603	5.00	MANEVU2002	1.2046	0.0000	0.0033	CAN CORP OF AMER/BLANDON PLT
PA	Berks	42011	420110101	C05	1	10200603	5.00	SCC Descriptio	1.3223	0.0000	0.0052	CAN CORP OF AMER/BLANDON PLT
PA	Berks	42011	420110111	032	1	10200603	12.00	MANEVU2002	0.6890	0.0000	0.0013	SFS INTEC/WYOMISSING
PA	Berks	42011	420110111	101	1	10200603	5.00	MANEVU2002	0.0213	0.0000	0.0000	SFS INTEC/WYOMISSING
PA	Berks	42011	420110111	102	1	10200603	5.00	MANEVU2002	0.0213	0.0000	0.0000	SFS INTEC/WYOMISSING
PA	Berks	42011	420110111	103	1	10200603	5.00	MANEVU2002	0.0213	0.0000	0.0000	SFS INTEC/WYOMISSING
PA	Berks	42011	420110111	106	1	10200603	5.00	MANEVU2002	0.0960	0.0000	0.0002	SFS INTEC/WYOMISSING
PA	Berks	42011	420110127	031	2	10200501	6.70	MANEVU2002	0.1911	0.0000	0.0000	HH BROWN SHOE CO INC/DOUBLE H BOOT WOMELSDORF
PA	Berks	42011	420110170	036	1	10300501	0.00		0.6000	0.0000	0.0016	SUN PIPE LINE/MONTELLO PUMP STATION
PA	Berks	42011	420110175	125	1	10200603	10.00	John Hulsberg	0.6848	0.0000	0.0018	EMPIRE STEEL CASTING/MUHLENBERG PLT
PA	Berks	42011	420110274	164A	1	10200603	10.00	MANEVU2002	3.6662	0.0000	0.0068	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	164A	2	10201002	10.00	MANEVU2002	0.2238	0.0000	0.0003	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	165A	1	10200603	10.00	MANEVU2002	4.9900	0.0000	0.0093	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	166	1	10200603	10.00	MANEVU2002	7.3228	0.0000	0.0137	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	166	2	10201002	10.00	MANEVU2002	0.4472	0.0000	0.0007	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	167	4	10200602	25.00	MANEVU2002	4.9600	0.0000	0.0076	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	167	2	10201002	25.00	MANEVU2002	0.3200	0.0000	0.0004	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	180	1	10200603	20.00	MANEVU2002	5.4944	0.0000	0.0103	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110274	180	2	10201002	20.00	MANEVU2002	0.3356	0.0000	0.0005	EAST PENN MFG CO INC/BATTERY ASSEMBLY
PA	Berks	42011	420110354	101	2	10200603	5.00	SCC Descriptio	1.2496	0.0000	0.0037	BERKS CAN CO INC/BERKS CAN PLANT
PA	Berks	42011	420110365	031	1	10201002	1.20	MANEVU2002	0.0310	0.0000	0.0000	DELAWARE CNTY SWA/ROLLING HILLS MUNI WASTE LDFL
PA	Berks	42011	420110370	101	1	10201002	0.00		0.2603	0.0000	0.0007	STERICYCLE INC/MORGANTOWN FACILITY

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PA	Berks	42011	420110370	102	1	10201002	0.00		0.3905	0.0000	0.0011	STERICYCLE INC/MORGANTOWN FACILITY
PA	Berks	42011	420110370	103	1	10201002	0.00		1.5797	0.0000	0.0049	STERICYCLE INC/MORGANTOWN FACILITY
PA	Berks	42011	420110431	031	1	10300501	25.00	MANEVU2002	1.2635	0.0000	0.0064	PA DPW/HAMBURG CTR
PA	Berks	42011	420110431	032	1	10300102	30.00	MANEVU2002	10.2673	0.0000	0.0000	PA DPW/HAMBURG CTR
PA	Berks	42011	420110431	033	1	10300102	30.00	MANEVU2002	0.0045	0.0000	0.0000	PA DPW/HAMBURG CTR
PA	Berks	42011	420110471	031	1	10300102	44.00	MANEVU2002	5.7897	0.0000	0.0000	PA DPW/WERNERSVILLE STATE HOSP
PA	Berks	42011	420110471	032	1	10300102	44.00	MANEVU2002	6.6635	0.0000	0.0388	PA DPW/WERNERSVILLE STATE HOSP
PA	Berks	42011	420110471	033	1	10300102	44.00	MANEVU2002	7.7140	0.0000	0.0000	PA DPW/WERNERSVILLE STATE HOSP
PA	Berks	42011	420110473	031	1	10200602	99.00	MANEVU2002	34.5238	0.0000	0.0835	UNITED CORRSTACK LLC/READING
PA	Berks	42011	420110476	102	1	10300603	5.00	SCC Descriptio	0.1250	0.0000	0.0003	MCCONWAY & TORLEY CO/KUTZTOWN FOUNDRY
PA	Berks	42011	420110478	102	1	10200603	5.00	SCC Descriptio	0.9200	0.0000	0.0020	EAST PENN MFG CO INC/KUTZTOWN
PA	Berks	42011	420110554	109	1	10200601	150.00	SCC Descriptio	0.1000	0.0000	0.0003	GLEN GERY CORP/MID-ATLANTIC PLANT
PA	Berks	42011	420110637	031	1	10200401	41.00	MANEVU2002	8.1634	0.0000	0.0341	SEALED AIR CORP/READING PLT
PA	Berks	42011	420110637	031	2	10200602	41.00	MANEVU2002	2.8685	0.0000	0.0079	SEALED AIR CORP/READING PLT
PA	Berks	42011	420110637	033	1	10200401	29.90	MANEVU2002	2.8510	0.0000	0.0053	SEALED AIR CORP/READING PLT
PA	Berks	42011	420110637	033	2	10200602	29.90	MANEVU2002	0.0001	0.0000	0.0000	SEALED AIR CORP/READING PLT
PA	Berks	42011	420110669	031	1	10200602	1.50	MANEVU2002	0.0912	0.0000	0.0000	BIRCHCRAFT KITCHENS/READING FACILITY
PA	Berks	42011	420110669	032	1	10200503	1.20	MANEVU2002	0.0273	0.0000	0.0000	BIRCHCRAFT KITCHENS/READING FACILITY
PA	Berks	42011	420110867	031	2	10200602	29.30	MANEVU2002	0.6875	0.0000	0.0017	HERSHEY FOODS CORP/READING PLT
PA	Berks	42011	420110867	032	2	10200602	29.30	MANEVU2002	0.6880	0.0000	0.0017	HERSHEY FOODS CORP/READING PLT
PA	Berks	42011	420111012	031	1	10300602	29.90	MANEVU2002	9.9000	0.0000	0.0272	DIETRICHS MILK PROD /READING PLANT
PA	Berks	42011	420111012	032	1	10300602	14.60	MANEVU2002	2.0160	0.0000	0.0055	DIETRICHS MILK PROD /READING PLANT
PA	Berks	42011	420111018	031	1	10300602	12.90	MANEVU2002	0.6496	0.0000	0.0015	ROEBERG ENTERPRISES/YORGEYS CLNRS
PA	Blair	42013	420130005	031	1	10200204	80.00	MANEVU2002	29.5400	0.0000	0.0519	NORFOLK SOUTHERN RAILWAY CO/JUNIATA LOCOMOTIVE SHOPS
PA	Blair	42013	420130005	032	1	10200204	80.00	MANEVU2002	25.9600	0.0000	0.0000	NORFOLK SOUTHERN RAILWAY CO/JUNIATA LOCOMOTIVE SHOPS
PA	Blair	42013	420130005	033	1	10200204	80.00	MANEVU2002	55.5000	0.0000	0.0915	NORFOLK SOUTHERN RAILWAY CO/JUNIATA LOCOMOTIVE SHOPS
PA	Blair	42013	420130005	034	1	10200603	44.00	MANEVU2002	1.4240	0.0000	0.0011	NORFOLK SOUTHERN RAILWAY CO/JUNIATA LOCOMOTIVE SHOPS
PA	Blair	42013	420130005	040	1	10200603	5.00	SCC Descriptio	0.6370	0.0000	0.0017	NORFOLK SOUTHERN RAILWAY CO/JUNIATA LOCOMOTIVE SHOPS
PA	Blair	42013	420130010	033	1	10200401	205.30	MANEVU2002	1.0198	0.0000	0.0025	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	033	2	10200602	205.30	MANEVU2002	0.8202	0.0000	0.0000	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	036	1	10200204	180.00	MANEVU2002	146.4561	0.0000	0.3702	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	036	2	10200901	180.00	MANEVU2002	26.7598	0.0000	0.0735	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	038	1	10200401	217.00	MANEVU2002	2.7423	0.0000	0.0084	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	038	3	10200401	217.00	MANEVU2002	2.7423	0.0000	0.0084	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	038	5	10200603	217.00	MANEVU2002	0.0798	0.0000	0.0003	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130010	038	6	10200603	217.00	MANEVU2002	0.0798	0.0000	0.0003	APPLETON PAPERS/SPRING MILL
PA	Blair	42013	420130020	040	1	10300602	20.00	MANEVU2002	0.7500	0.0000	0.0010	NORFOLK SOUTHERN RAILWAY CO/HOLLIDAYSBURG CAR SHOP
PA	Blair	42013	420130020	041	1	10300602	20.00	MANEVU2002	0.7870	0.0000	0.0006	NORFOLK SOUTHERN RAILWAY CO/HOLLIDAYSBURG CAR SHOP
PA	Blair	42013	420130020	051	1	10200501	0.00		0.2050	0.0000	0.0000	NORFOLK SOUTHERN RAILWAY CO/HOLLIDAYSBURG CAR SHOP
PA	Blair	42013	420130021	037	1	10200603	8.00	MANEVU2002	0.0330	0.0000	0.0001	UNION TANK CAR/ALTOONA SHOP
PA	Blair	42013	420130021	037	2	10200603	8.00	MANEVU2002	0.0330	0.0000	0.0001	UNION TANK CAR/ALTOONA SHOP
PA	Blair	42013	420130021	038	1	10200603	40.30	MANEVU2002	1.8004	0.0000	0.0032	UNION TANK CAR/ALTOONA SHOP
PA	Blair	42013	420130021	039	1	10200603	8.40	MANEVU2002	0.8000	0.0000	0.0014	UNION TANK CAR/ALTOONA SHOP
PA	Blair	42013	420130021	040	1	10200603	8.40	MANEVU2002	0.8000	0.0000	0.0014	UNION TANK CAR/ALTOONA SHOP
PA	Blair	42013	420130022	040	2	10200602	55.00	SCC Descriptio	2.0200	0.0000	0.0009	MILLENNIUM RAIL/HOLLIDAYSBURG
PA	Blair	42013	420130022	104	1	10201002	0.00		0.0700	0.0000	0.0002	MILLENNIUM RAIL/HOLLIDAYSBURG
PA	Blair	42013	420130035	031	1	10200603	11.00	MANEVU2002	0.7600	0.0000	0.0013	LUMAX IND/ALTOONA PLT
PA	Blair	42013	420130037	036	1	10300603	3.40	MANEVU2002	0.7850	0.0000	0.0016	SMALL TUBE PROD/ALTOONA PLT
PA	Blair	42013	420130037	102	1	10200603	5.00	SCC Descriptio	0.0720	0.0000	0.0002	SMALL TUBE PROD/ALTOONA PLT
PA	Blair	42013	420130037	103	1	10200603	5.00	SCC Descriptio	0.4600	0.0000	0.0014	SMALL TUBE PROD/ALTOONA PLT
PA	Blair	42013	420130037	104	1	10200603	5.00	SCC Descriptio	0.7660	0.0000	0.0023	SMALL TUBE PROD/ALTOONA PLT
PA	Blair	42013	420130037	105	1	10200603	5.00	SCC Descriptio	0.2110	0.0000	0.0006	SMALL TUBE PROD/ALTOONA PLT

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PA	Blair	42013	420130077	031	1	10200603	8.40	MANEVU2002	0.9000	0.0000	0.0000	ALBEMARLE/TYRONE QUALITY CHEM
PA	Blair	42013	420130077	032	1	10200602	14.70	MANEVU2002	0.8531	0.0000	0.0038	ALBEMARLE/TYRONE QUALITY CHEM
PA	Blair	42013	420130077	032	2	10300501	14.70	MANEVU2002	0.9369	0.0000	0.0000	ALBEMARLE/TYRONE QUALITY CHEM
PA	Blair	42013	420130077	033	1	10200602	16.30	MANEVU2002	0.7400	0.0000	0.0015	ALBEMARLE/TYRONE QUALITY CHEM
PA	Blair	42013	420130077	035	1	10200602	3.00	MANEVU2002	0.2800	0.0000	0.0005	ALBEMARLE/TYRONE QUALITY CHEM
PA	Blair	42013	420130374	099	1	10200603	5.00	SCC Descriptio	0.3600	0.0000	0.0010	FRY METALS/ALTOONA PLT
PA	Blair	42013	420130374	101	1	10200603	5.00	SCC Descriptio	2.0300	0.0000	0.0056	FRY METALS/ALTOONA PLT
PA	Blair	42013	420130374	102	1	10200603	5.00	SCC Descriptio	3.1500	0.0000	0.0087	FRY METALS/ALTOONA PLT
PA	Blair	42013	420130480	031	1	10300603	6.50	John Hulsberg	0.1399	0.0000	0.0000	HH BROWN SHOE CO/COVE SHOE MARTINSBURG
PA	Blair	42013	420130480	031	2	10301002	6.50	John Hulsberg	0.0701	0.0000	0.0000	HH BROWN SHOE CO/COVE SHOE MARTINSBURG
PA	Blair	42013	420130633	035	1	10200603	6.20	MANEVU2002	0.3560	0.0000	0.0005	CHICAGO RIVET & MACH/TYRONE PLT
PA	Bradford	42015	420150002	031	1	10200601	82.40	John Hulsberg	0.0200	0.0000	0.0001	CRAFTMASTER MFG/TOWANDA MILL
PA	Bradford	42015	420150002	032	1	10200602	161.00	John Hulsberg	0.3569	0.0000	0.0010	CRAFTMASTER MFG/TOWANDA MILL
PA	Bradford	42015	420150002	032	2	10300903	161.00	John Hulsberg	0.6431	0.0000	0.0018	CRAFTMASTER MFG/TOWANDA MILL
PA	Bradford	42015	420150002	033	1	10200602	242.40	MANEVU2002	15.4044	0.0000	0.0406	CRAFTMASTER MFG/TOWANDA MILL
PA	Bradford	42015	420150002	033	2	10300903	242.40	MANEVU2002	101.1556	0.0000	0.2668	CRAFTMASTER MFG/TOWANDA MILL
PA	Bradford	42015	420150006	031	1	10200602	30.50	John Hulsberg	2.5000	0.0000	0.0068	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150006	032	2	10200602	30.50	John Hulsberg	3.4000	0.0000	0.0092	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150006	033	1	10200602	30.50	John Hulsberg	2.3000	0.0000	0.0062	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150006	034	1	10200401	33.50	John Hulsberg	2.6420	0.0000	0.0073	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150006	034	2	10200602	33.50	John Hulsberg	1.3580	0.0000	0.0037	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150006	P155	1	10200602	55.00	SCC Descriptio	0.2000	0.0000	0.0005	DUPONT & CO INC/TOWANDA
PA	Bradford	42015	420150011	031	1	10200602	13.00	John Hulsberg	0.5500	0.0000	0.0015	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	032	1	10200602	13.00	John Hulsberg	0.5760	0.0000	0.0016	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	034	1	10200602	21.60	John Hulsberg	1.8800	0.0000	0.0051	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	035	1	10200602	21.60	John Hulsberg	2.4400	0.0000	0.0066	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	036	1	10200602	26.00	John Hulsberg	1.7900	0.0000	0.0048	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	037	1	10200602	29.20	John Hulsberg	3.2100	0.0000	0.0087	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	038	1	10200603	2.60	John Hulsberg	0.3600	0.0000	0.0009	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	039	1	10200603	2.60	John Hulsberg	0.3400	0.0000	0.0009	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	040	1	10200602	32.50	John Hulsberg	4.8100	0.0000	0.0130	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	041	1	10200602	32.50	John Hulsberg	4.8100	0.0000	0.0130	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150011	042	1	10200602	30.50	MANEVU2002	3.4600	0.0000	0.0099	OSRAM SYLVANIA PROD /HAWES STREET
PA	Bradford	42015	420150012	057	1	10200603	3.40	MANEVU2002	0.1800	0.0000	0.0003	STROEHMANN BAKERIES/SAYRE PLT
PA	Bradford	42015	420150055	031	2	10300602	55.00	SCC Descriptio	8.8094	0.0000	0.0000	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150055	031	1	10300501	55.00	SCC Descriptio	0.0906	0.0000	0.0002	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150055	CU01	2	10300602	40.40	MANEVU2002	0.4000	0.0000	0.0011	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150055	CU01	3	10300501	40.40	MANEVU2002	0.0101	0.0000	0.0000	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150055	CU04	2	10300602	24.50	MANEVU2002	1.1000	0.0000	0.0057	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150055	CU04	1	10300501	24.50	MANEVU2002	0.0532	0.0000	0.0001	TAYLOR PACKING CO INC/MEAT PACKING PLT
PA	Bradford	42015	420150068	031	1	10200906	28.70	MANEVU2002	5.3033	0.0000	0.0128	MILLS PRIDE PA/ATHENS TWP PLT
PA	Bradford	42015	420150068	031	2	10300602	28.70	MANEVU2002	0.9167	0.0000	0.0000	MILLS PRIDE PA/ATHENS TWP PLT
PA	Bradford	42015	420150068	032	1	10200906	28.70	MANEVU2002	5.3956	0.0000	0.0130	MILLS PRIDE PA/ATHENS TWP PLT
PA	Bradford	42015	420150068	032	2	10300602	28.70	MANEVU2002	0.7744	0.0000	0.0000	MILLS PRIDE PA/ATHENS TWP PLT
PA	Bradford	42015	420150735	CU031	2	10200602	20.00	MANEVU2002	3.0900	0.0000	0.0061	LEPRINO FOODS CO/WAVERLY PLT
PA	Bradford	42015	420150735	CU032	2	10200602	16.70	MANEVU2002	2.9100	0.0000	0.0045	LEPRINO FOODS CO/WAVERLY PLT
PA	Bradford	42015	420150735	CU033	2	10200602	20.00	MANEVU2002	2.5700	0.0000	0.0068	LEPRINO FOODS CO/WAVERLY PLT
PA	Bradford	42015	420150735	CU034	2	10200602	20.90	MANEVU2002	3.0400	0.0000	0.0090	LEPRINO FOODS CO/WAVERLY PLT
PA	Bradford	42015	420150776	031	2	10200602	37.00	MANEVU2002	1.9300	0.0000	0.0000	GUTHRIE ROBERT PACKER/SAYRE
PA	Bradford	42015	420150776	032	2	10200602	37.00	MANEVU2002	1.9252	0.0000	0.0000	GUTHRIE ROBERT PACKER/SAYRE
PA	Bradford	42015	420150776	032	1	10200501	37.00	MANEVU2002	0.0048	0.0000	0.0000	GUTHRIE ROBERT PACKER/SAYRE
PA	Bradford	42015	420150776	033	2	10200602	37.00	MANEVU2002	1.5483	0.0000	0.0000	GUTHRIE ROBERT PACKER/SAYRE

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PA	Bradford	42015	420150776	033	1	10200501	37.00	MANEVU2002	0.0017	0.0000	0.0000	GUTHRIE ROBERT PACKER/SAYRE
PA	Bucks	42017	420170009	032	2	10200603	137.00	MANEVU2002	3.7900	0.0000	0.0000	ROHM & HAAS CO/BRISTOL
PA	Bucks	42017	420170009	032	1	10200401	137.00	MANEVU2002	29.8351	0.0000	0.1213	ROHM & HAAS CO/BRISTOL
PA	Bucks	42017	420170009	033	1	10200401	137.00	MANEVU2002	29.0737	0.0000	0.0415	ROHM & HAAS CO/BRISTOL
PA	Bucks	42017	420170009	033	2	10200602	137.00	MANEVU2002	0.5730	0.0000	0.0057	ROHM & HAAS CO/BRISTOL
PA	Bucks	42017	420170040	032	1	10200602	12.60	MANEVU2002	0.2700	0.0000	0.0011	AVERY DENNISON CORP/QUAKERTOWN
PA	Bucks	42017	420170040	033	1	10200602	12.60	MANEVU2002	0.1400	0.0000	0.0000	AVERY DENNISON CORP/QUAKERTOWN
PA	Bucks	42017	420170053	031	1	10200602	14.70	MANEVU2002	1.9600	0.0000	0.0019	FRES CO SYS USA INC/TELFORD PLT
PA	Bucks	42017	420170053	032	1	10300603	8.40	MANEVU2002	0.6600	0.0000	0.0054	FRES CO SYS USA INC/TELFORD PLT
PA	Bucks	42017	420170053	T01	1	10200602	55.00	MANEVU2002	1.1500	0.0000	0.0024	FRES CO SYS USA INC/TELFORD PLT
PA	Bucks	42017	420170053	T02	1	10200602	55.00	SCC Descriptio	2.1500	0.0000	0.0045	FRES CO SYS USA INC/TELFORD PLT
PA	Bucks	42017	420170055	C504	1	10200602	55.00	SCC Descriptio	12.8100	0.0000	0.0197	US STEEL CORP/FAIRLESS HILLS
PA	Bucks	42017	420170056	032	2	10200602	49.90	John Hulsberg	1.2000	0.0000	0.0032	3M CO/BRISTOL
PA	Bucks	42017	420170056	032	4	10200602	49.90	John Hulsberg	1.2000	0.0000	0.0032	3M CO/BRISTOL
PA	Bucks	42017	420170080	031	1	10200501	14.70	MANEVU2002	0.0996	0.0000	0.0000	WEBCRAFT LLC/CHALFONT
PA	Bucks	42017	420170080	031	2	10200602	14.70	MANEVU2002	0.0004	0.0000	0.0000	WEBCRAFT LLC/CHALFONT
PA	Bucks	42017	420170080	032	1	10200603	11.20	MANEVU2002	1.0700	0.0000	0.0000	WEBCRAFT LLC/CHALFONT
PA	Bucks	42017	420170120	031	1	10300603	3.30	MANEVU2002	0.7000	0.0000	0.0004	GILES & RANSOME INC/BENSALEM
PA	Bucks	42017	420170221	034	1	10300401	15.10	MANEVU2002	0.1000	0.0000	0.0003	LOWER BUCKS CNTY HOSP/BRISTOL
PA	Bucks	42017	420170221	035	1	10300602	14.60	MANEVU2002	5.6610	0.0000	0.0149	LOWER BUCKS CNTY HOSP/BRISTOL
PA	Bucks	42017	420170221	037	1	10300401	14.40	MANEVU2002	7.0960	0.0000	0.0000	LOWER BUCKS CNTY HOSP/BRISTOL
PA	Bucks	42017	420170306	043	2	10200604	468.50	MANEVU2002	2.4000	0.0000	0.0264	EXELON GENERATION CO/FAIRLESS HILLS GEN STA
PA	Bucks	42017	420170306	044	1	10200405	468.50	MANEVU2002	40.4348	0.0000	0.3510	EXELON GENERATION CO/FAIRLESS HILLS GEN STA
PA	Bucks	42017	420170306	044	2	10200604	468.50	MANEVU2002	23.0652	0.0000	0.1470	EXELON GENERATION CO/FAIRLESS HILLS GEN STA
PA	Bucks	42017	420170306	045	1	10200405	468.50	MANEVU2002	11.3349	0.0000	0.1208	EXELON GENERATION CO/FAIRLESS HILLS GEN STA
PA	Bucks	42017	420170306	045	2	10200604	468.50	MANEVU2002	6.2651	0.0000	0.0468	EXELON GENERATION CO/FAIRLESS HILLS GEN STA
PA	Bucks	42017	420170307	001	1	10300602	15.00	MANEVU2002	0.1500	0.0000	0.0004	LOCKHEED MARTIN CORP/COMM & POWER CTR
PA	Bucks	42017	420170307	002	1	10300602	15.00	MANEVU2002	0.1600	0.0000	0.0005	LOCKHEED MARTIN CORP/COMM & POWER CTR
PA	Bucks	42017	420170307	003	1	10300603	7.00	MANEVU2002	0.5300	0.0000	0.0002	LOCKHEED MARTIN CORP/COMM & POWER CTR
PA	Bucks	42017	420170307	004	1	10200602	10.50	MANEVU2002	0.0110	0.0000	0.0000	LOCKHEED MARTIN CORP/COMM & POWER CTR
PA	Bucks	42017	420170307	005	1	10200603	1.80	MANEVU2002	0.0002	0.0000	0.0000	LOCKHEED MARTIN CORP/COMM & POWER CTR
PA	Bucks	42017	420170313	031	1	10200602	3.00	MANEVU2002	0.1100	0.0000	0.0000	PCR AQUISITIONS DBA CAMPANIA INTL INC/QUAKERTOWN
PA	Bucks	42017	420170334	030	1	10200502	19.40	MANEVU2002	0.3300	0.0000	0.0000	NESHAMINY SCH DIST/NESHAMINY HIGH SCH
PA	Bucks	42017	420170334	030	2	10200502	19.40	MANEVU2002	0.3300	0.0000	0.0000	NESHAMINY SCH DIST/NESHAMINY HIGH SCH
PA	Bucks	42017	420170334	031	1	10200502	12.40	MANEVU2002	0.4200	0.0000	0.0000	NESHAMINY SCH DIST/NESHAMINY HIGH SCH
PA	Bucks	42017	420170334	032	1	10200502	16.20	MANEVU2002	0.5200	0.0000	0.0000	NESHAMINY SCH DIST/NESHAMINY HIGH SCH
PA	Bucks	42017	420170334	033	1	10200502	2.40	MANEVU2002	0.0800	0.0000	0.0000	NESHAMINY SCH DIST/NESHAMINY HIGH SCH
PA	Bucks	42017	420170408	C03	1	10200799	0.00		0.0400	0.0000	0.0000	WASTE MGMT DSPL SVC /GROWS LDFL
PA	Bucks	42017	420170570	031	1	10300602	25.00	MANEVU2002	4.5000	0.0000	0.0030	HINES HORTICULTURE INC/PIPERSVILLE
PA	Bucks	42017	420170570	033	2	10300602	8.40	MANEVU2002	0.5816	0.0000	0.0000	HINES HORTICULTURE INC/PIPERSVILLE
PA	Bucks	42017	420170570	037	1	10300602	13.40	MANEVU2002	2.8368	0.0000	0.0000	HINES HORTICULTURE INC/PIPERSVILLE
PA	Bucks	42017	420170571	031	1	10300501	8.90	MANEVU2002	0.9400	0.0000	0.0009	GE BETZ INC/TREVOSE
PA	Bucks	42017	420170571	032	1	10300501	31.50	MANEVU2002	3.3600	0.0000	0.0078	GE BETZ INC/TREVOSE
PA	Bucks	42017	420170572	031	2	10200502	16.70	MANEVU2002	0.0180	0.0000	0.0000	AMETEK INC/SELLERSVILLE
PA	Bucks	42017	420170572	032	1	10200602	16.70	MANEVU2002	0.4650	0.0000	0.0006	AMETEK INC/SELLERSVILLE
PA	Bucks	42017	420170572	033	2	10200401	25.10	MANEVU2002	1.8200	0.0000	0.0014	AMETEK INC/SELLERSVILLE
PA	Bucks	42017	420170572	034	3	10200401	16.70	MANEVU2002	3.0066	0.0000	0.0093	AMETEK INC/SELLERSVILLE
PA	Bucks	42017	420170572	034	4	10200602	16.70	MANEVU2002	0.1834	0.0000	0.0000	AMETEK INC/SELLERSVILLE
PA	Bucks	42017	420170574	024	1	10200601	7.50	MANEVU2002	0.9610	0.0000	0.0023	GAF MATERIALS CORP/QUAKERTOWN
PA	Bucks	42017	420170574	025	1	10200601	150.00	SCC Descriptio	0.5460	0.0000	0.0013	GAF MATERIALS CORP/QUAKERTOWN
PA	Bucks	42017	420170574	027	1	10200601	5.20	MANEVU2002	0.6700	0.0000	0.0016	GAF MATERIALS CORP/QUAKERTOWN
PA	Bucks	42017	420170574	028	1	10200601	5.20	MANEVU2002	0.6700	0.0000	0.0016	GAF MATERIALS CORP/QUAKERTOWN

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PA	Bucks	42017	420170574	O23	1	10200602	10.00	MANEVU2002	1.7930	0.0000	0.0043	GAF MATERIALS CORP/QUAKERTOWN
PA	Bucks	42017	420170583	C101	1	10200799	0.00		0.0410	0.0000	0.0005	WASTE MGMT PA/TULLYTOWN RES REC FAC
PA	Bucks	42017	420170611	031	1	10300501	12.60	MANEVU2002	0.2000	0.0000	0.0002	ALFA LAVAL SEPARATION/WARMINSTER
PA	Bucks	42017	420170865	031	1	10300603	1.70	MANEVU2002	0.0130	0.0000	0.0000	ST MARY MED CTR/LANGHORNE
PA	Bucks	42017	420170865	032	1	10300602	33.10	MANEVU2002	3.1900	0.0000	0.0193	ST MARY MED CTR/LANGHORNE
PA	Bucks	42017	420170865	033	1	10300602	33.10	MANEVU2002	1.9500	0.0000	0.0000	ST MARY MED CTR/LANGHORNE
PA	Bucks	42017	420170865	034	1	10300603	0.90	MANEVU2002	0.0104	0.0000	0.0000	ST MARY MED CTR/LANGHORNE
PA	Bucks	42017	420171041	031	1	10300603	6.70	MANEVU2002	1.8930	0.0000	0.0000	ROGERS FOAM CORP/MORRISVILLE
PA	Bucks	42017	420172005	011	1	10200602	55.00	SCC Descriptio	0.5500	0.0000	0.0000	CLEARVIEW STRUCTURAL STEEL/HILLTOWN
PA	Butler	42019	420190003	031	1	10300207	35.00	MANEVU2002	5.0134	0.0000	0.0242	PA STATE SYS OF HIGHER ED/SLIPPERY ROCK UNIV PA
PA	Butler	42019	420190003	031	2	10300602	35.00	MANEVU2002	0.5913	0.0000	0.0027	PA STATE SYS OF HIGHER ED/SLIPPERY ROCK UNIV PA
PA	Butler	42019	420190003	032	1	10300207	35.00	MANEVU2002	9.5689	0.0000	0.0021	PA STATE SYS OF HIGHER ED/SLIPPERY ROCK UNIV PA
PA	Butler	42019	420190003	032	2	10300602	35.00	MANEVU2002	27.7376	0.0000	0.0061	PA STATE SYS OF HIGHER ED/SLIPPERY ROCK UNIV PA
PA	Butler	42019	420190003	034	1	10300209	39.00	MANEVU2002	24.0026	0.0000	0.0264	PA STATE SYS OF HIGHER ED/SLIPPERY ROCK UNIV PA
PA	Butler	42019	420190007	031	1	10200602	69.00	MANEVU2002	5.1600	0.0000	0.0130	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	032	1	10200602	21.00	MANEVU2002	3.6200	0.0000	0.0107	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	033	1	10200602	65.00	MANEVU2002	6.0100	0.0000	0.0178	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	034	1	10200602	65.00	MANEVU2002	6.5900	0.0000	0.0275	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	035	1	10200602	65.00	MANEVU2002	11.5600	0.0000	0.0191	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	038	1	10200602	14.30	MANEVU2002	1.4100	0.0000	0.0039	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	111	1	10200601	150.00	SCC Descriptio	11.0667	0.0000	0.0304	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	112	1	10200601	150.00	SCC Descriptio	9.5707	0.0000	0.0263	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	113	1	10200601	150.00	SCC Descriptio	10.6416	0.0000	0.0292	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	130	1	10200602	55.00	SCC Descriptio	1.5400	0.0000	0.0039	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	133	1	10200602	55.00	SCC Descriptio	2.1300	0.0000	0.0054	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	134	1	10200603	5.00	SCC Descriptio	0.9600	0.0000	0.0023	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	135	1	10200602	55.00	SCC Descriptio	1.3700	0.0000	0.0032	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	137	1	10200601	150.00	SCC Descriptio	13.3825	0.0000	0.0382	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	140	1	10200603	5.00	SCC Descriptio	0.0986	0.0000	0.0002	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	141	1	10200603	5.00	SCC Descriptio	0.1724	0.0000	0.0003	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	156	1	10200602	55.00	SCC Descriptio	9.0800	0.0000	0.0269	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	157	1	10200602	55.00	SCC Descriptio	10.4800	0.0000	0.0276	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	158	1	10200601	150.00	SCC Descriptio	16.0800	0.0000	0.0424	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	159	1	10200602	55.00	SCC Descriptio	9.2500	0.0000	0.0315	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	160A	1	10200602	55.00	SCC Descriptio	4.2300	0.0000	0.0107	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	247	1	10200602	55.00	SCC Descriptio	1.2800	0.0000	0.0035	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	248	1	10200602	55.00	SCC Descriptio	1.7800	0.0000	0.0047	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	249	1	10200602	55.00	SCC Descriptio	1.3500	0.0000	0.0040	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	250	1	10200602	55.00	SCC Descriptio	1.8300	0.0000	0.0054	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	251	1	10200602	55.00	SCC Descriptio	1.5800	0.0000	0.0047	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	252	1	10200602	55.00	SCC Descriptio	1.5700	0.0000	0.0043	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190007	253	1	10200602	55.00	SCC Descriptio	22.6700	0.0000	0.0149	AK STEEL CORP/BUTLER WORKS
PA	Butler	42019	420190015	031	2	10200602	66.00	MANEVU2002	1.5674	0.0000	0.0041	PENRECO/KARNS CITY
PA	Butler	42019	420190015	031	1	10200501	66.00	MANEVU2002	2.0326	0.0000	0.0154	PENRECO/KARNS CITY
PA	Butler	42019	420190015	032	1	10200204	66.00	MANEVU2002	98.9000	0.0000	0.1848	PENRECO/KARNS CITY
PA	Butler	42019	420190015	033	1	10200204	66.00	MANEVU2002	104.6000	0.0000	0.1724	PENRECO/KARNS CITY
PA	Butler	42019	420190021	111	4	10300602	55.00	MANEVU2002	0.6914	0.0000	0.0019	MERCER LIME & STONE /BRANCHTON
PA	Butler	42019	420190022	032	1	10200401	55.00	SCC Descriptio	14.9718	0.0000	0.0543	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190022	032	2	10200602	55.00	SCC Descriptio	9.2582	0.0000	0.0092	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190022	033	1	10200602	55.00	SCC Descriptio	14.0500	0.0000	0.0232	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190022	034	1	10200401	55.00	SCC Descriptio	33.8996	0.0000	0.1416	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190022	034	2	10200602	55.00	SCC Descriptio	3.7004	0.0000	0.0041	CROMPTON CORP/PETROLIA

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PA	Butler	42019	420190022	035	1	10200401	55.00	SCC Descriptio	19.7355	0.0000	0.0759	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190022	035	2	10200602	55.00	SCC Descriptio	0.9245	0.0000	0.0010	CROMPTON CORP/PETROLIA
PA	Butler	42019	420190026	035	1	10200602	12.80	MANEVU2002	6.9400	0.0000	0.0145	INDSPEC CHEM CORP/PETROLIA
PA	Butler	42019	420190026	036	1	10200602	12.80	MANEVU2002	7.0800	0.0000	0.0148	INDSPEC CHEM CORP/PETROLIA
PA	Butler	42019	420190026	038	1	10200601	141.00	MANEVU2002	9.5000	0.0000	0.0282	INDSPEC CHEM CORP/PETROLIA
PA	Butler	42019	420190026	039	1	10200601	202.00	MANEVU2002	20.2000	0.0000	0.0533	INDSPEC CHEM CORP/PETROLIA
PA	Butler	42019	420190026	040	1	10200601	200.00	MANEVU2002	12.1300	0.0000	0.0160	INDSPEC CHEM CORP/PETROLIA
PA	Butler	42019	420190029	031	1	10200602	10.50	MANEVU2002	1.6800	0.0000	0.0000	CASTLE RUBBER LLC/EAST BUTLER BORO
PA	Butler	42019	420190029	032	1	10200602	10.50	MANEVU2002	1.6800	0.0000	0.0000	CASTLE RUBBER LLC/EAST BUTLER BORO
PA	Butler	42019	420190029	033	1	10200602	10.50	MANEVU2002	0.4880	0.0000	0.0041	CASTLE RUBBER LLC/EAST BUTLER BORO
PA	Butler	42019	420190030	032	1	10200602	7.50	MANEVU2002	1.1312	0.0000	0.0034	NAPCO INC/VALENCIA
PA	Butler	42019	420190030	033	1	10200602	9.00	MANEVU2002	1.3550	0.0000	0.0040	NAPCO INC/VALENCIA
PA	Butler	42019	420190030	C01	1	10200602	55.00	MANEVU2002	4.4088	0.0000	0.0131	NAPCO INC/VALENCIA
PA	Butler	42019	420190035	102	1	10200603	5.00	MANEVU2002	0.3900	0.0000	0.0012	THREE RIVERS ALUM CO/TRACO
PA	Butler	42019	420190078	101	1	10300603	5.00	SCC Descriptio	0.2052	0.0000	0.0005	MINTEQ INTL/ZEDMARK DIV SLIPPERY ROCK
PA	Butler	42019	420190078	102	1	10300603	5.00	SCC Descriptio	1.2258	0.0000	0.0039	MINTEQ INTL/ZEDMARK DIV SLIPPERY ROCK
PA	Butler	42019	420190516	102	1	10200603	5.00	SCC Descriptio	0.0614	0.0000	0.0001	RESOLITE STABILIT AMER/ZELIENOPLE
PA	Butler	42019	420190615	721	1	10200602	14.60	MANEVU2002	1.5000	0.0000	0.0033	BASF EVANS CITY OPS
PA	Butler	42019	420190991	031	1	10200603	0.50	MANEVU2002	0.3863	0.0000	0.0011	FB LEOPOLD CO/ZELIENOPLE
PA	Cambria	42021	420210003	031	1	10300208	26.80	MANEVU2002	2.8215	0.0000	0.0000	PA DEPT OF LABOR & IND/HIRAM ANDREWS REHAB CTR
PA	Cambria	42021	420210003	032	1	10300208	26.80	MANEVU2002	1.9190	0.0000	0.0000	PA DEPT OF LABOR & IND/HIRAM ANDREWS REHAB CTR
PA	Cambria	42021	420210020	036	1	10200602	55.00	SCC Descriptio	16.5900	0.0000	0.0310	JOHNSTOWN CORP/JOHNSTOWN
PA	Cambria	42021	420210027	031	2	10300208	14.90	MANEVU2002	11.8205	0.0000	0.0403	CONEMAUGH VALLEY MEM/JOHNSTOWN
PA	Cambria	42021	420210027	032	2	10300208	14.90	MANEVU2002	8.1327	0.0000	0.0000	CONEMAUGH VALLEY MEM/JOHNSTOWN
PA	Cambria	42021	420210029	031	1	10300603	5.00	SCC Descriptio	0.1460	0.0000	0.0001	UNITED METAL FABRICA/JOHNSTOWN
PA	Cambria	42021	420210030	031	1	10200602	44.40	MANEVU2002	0.9506	0.0000	0.0002	JOHNSTOWN AMER CORP/NO 5 CAR SHOP
PA	Cambria	42021	420210031	031	1	10200602	187.00	MANEVU2002	4.5721	0.0000	0.0040	JOHNSTOWN AMER CORP/FRANKLIN
PA	Cambria	42021	420210033	032	1	10300602	61.20	MANEVU2002	0.9735	0.0000	0.0026	EBENSBURG POWER CO/EBENSBURG COGENERATION PLT
PA	Cambria	42021	420210034	032	1	10301002	28.00	MANEVU2002	0.3486	0.0000	0.0004	INTER POWER AHLCON L/COLVER POWER PROJ
PA	Cambria	42021	420210657	031	1	10300602	182.00	MANEVU2002	4.6000	0.0000	0.0131	GAUTIER STEEL LTD/JOHNSTOWN PLT
PA	Cambria	42021	420210657	032	1	10300602	34.40	MANEVU2002	0.5260	0.0000	0.0016	GAUTIER STEEL LTD/JOHNSTOWN PLT
PA	Cambria	42021	420210657	033	1	10300602	47.30	MANEVU2002	0.2330	0.0000	0.0006	GAUTIER STEEL LTD/JOHNSTOWN PLT
PA	Cameron	42023	420230550	035	1	10200603	5.00	SCC Descriptio	0.1000	0.0000	0.0003	COLUMBIA GAS TRANS CORP/EMPORIUM STATION
PA	Cameron	42023	420230550	036	1	10200603	5.00	SCC Descriptio	0.0100	0.0000	0.0000	COLUMBIA GAS TRANS CORP/EMPORIUM STATION
PA	Carbon	42025	420250001	031	1	10200401	21.00	MANEVU2002	5.9300	0.0000	0.0078	ALTADIS USA INC/MCADOO PLT
PA	Carbon	42025	420250001	032	1	10200401	99.00	MANEVU2002	4.9000	0.0000	0.0005	ALTADIS USA INC/MCADOO PLT
PA	Carbon	42025	420250001	034	1	10200401	57.60	MANEVU2002	36.3900	0.0000	0.1080	ALTADIS USA INC/MCADOO PLT
PA	Carbon	42025	420250009	035	1	10200602	12.90	MANEVU2002	1.4700	0.0000	0.0058	HORSEHEAD CORP/EAST PLT
PA	Carbon	42025	420250011	031	1	10200503	6.30	MANEVU2002	0.4000	0.0000	0.0000	KOVATCH MOBILE EQUIP/NESQUEHONING PLT
PA	Carbon	42025	420250011	033	1	10200503	8.40	MANEVU2002	0.6000	0.0000	0.0000	KOVATCH MOBILE EQUIP/NESQUEHONING PLT
PA	Carbon	42025	420250013	031	1	10200602	12.00	John Hulsberg	3.7100	0.0000	0.0100	HORSEHEAD RESOURCE DEV/PALMERTON FAC
PA	Carbon	42025	420250013	032	2	10200602	19.00	John Hulsberg	2.1200	0.0000	0.0057	HORSEHEAD RESOURCE DEV/PALMERTON FAC
PA	Carbon	42025	420250100	031	1	10300501	5.00	MANEVU2002	1.3000	0.0000	0.0000	SILBERLINE MFG CO/LANSFORD PLT
PA	Carbon	42025	420250100	032	1	10300501	2.60	MANEVU2002	0.2000	0.0000	0.0012	SILBERLINE MFG CO/LANSFORD PLT
PA	Centre	42027	420270002	031	1	10300208	25.00	MANEVU2002	3.9700	0.0000	0.0009	PA DEPT OF CORR/ROCKVIEW SCI
PA	Centre	42027	420270002	032	1	10300208	47.00	MANEVU2002	28.6900	0.0000	0.0126	PA DEPT OF CORR/ROCKVIEW SCI
PA	Centre	42027	420270002	033	1	10300208	25.00	MANEVU2002	6.1800	0.0000	0.0027	PA DEPT OF CORR/ROCKVIEW SCI
PA	Centre	42027	420270017	031	1	10300208	143.00	MANEVU2002	80.7059	0.0000	0.1951	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	031	2	10300601	143.00	MANEVU2002	2.7741	0.0000	0.0296	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	032	1	10300208	143.00	MANEVU2002	77.2098	0.0000	0.1103	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	032	2	10300601	143.00	MANEVU2002	2.4842	0.0000	0.0218	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	033	1	10300602	67.50	MANEVU2002	1.4390	0.0000	0.0046	PA STATE UNIV/UNIV PARK CAMPUS

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PA	Centre	42027	420270017	034	1	10300207	155.00	MANEVU2002	53.1952	0.0000	0.1111	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	034	2	10300602	155.00	MANEVU2002	0.5248	0.0000	0.0029	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	035	1	10300207	143.00	MANEVU2002	70.1796	0.0000	0.0077	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	035	2	10300602	143.00	MANEVU2002	0.0963	0.0000	0.0000	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	036	1	10300602	130.00	MANEVU2002	1.3581	0.0000	0.0036	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	036	2	10300501	130.00	MANEVU2002	0.0316	0.0000	0.0000	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	037	1	10300602	130.00	MANEVU2002	2.3718	0.0000	0.0060	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	037	2	10300501	130.00	MANEVU2002	0.2442	0.0000	0.0000	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	CU038	1	10300501	55.00	SCC Descriptio	3.5880	0.0000	0.0099	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	CU038	2	10300602	55.00	SCC Descriptio	11.1410	0.0000	0.0306	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	CU038	4	10301002	55.00	SCC Descriptio	0.6263	0.0000	0.0017	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270017	CU038	3	10300209	55.00	SCC Descriptio	0.3847	0.0000	0.0011	PA STATE UNIV/UNIV PARK CAMPUS
PA	Centre	42027	420270020	031	1	10200602	14.60	John Hulsberg	1.4000	0.0000	0.0038	RUETGERS ORGANICS CO/STATE COLLEGE
PA	Centre	42027	420270020	032	1	10200602	14.60	John Hulsberg	1.4000	0.0000	0.0038	RUETGERS ORGANICS CO/STATE COLLEGE
PA	Centre	42027	420270021	P106	1	10300602	55.00	SCC Descriptio	17.1000	0.0000	0.0470	CORNING ASAHI VIDEO PROD CO/STATE COLLEGE
PA	Centre	42027	420270719	032	1	10200602	55.00	MANEVU2002	5.5220	0.0000	0.0000	CERRO METAL PROD CO/PLT 1 & 4
PA	Centre	42027	420270719	033	1	10200602	14.70	MANEVU2002	1.2363	0.0000	0.0000	CERRO METAL PROD CO/PLT 1 & 4
PA	Centre	42027	420270719	033	2	10200501	14.70	MANEVU2002	0.0437	0.0000	0.0000	CERRO METAL PROD CO/PLT 1 & 4
PA	Centre	42027	420270719	034	1	10200603	8.40	MANEVU2002	1.0140	0.0000	0.0006	CERRO METAL PROD CO/PLT 1 & 4
PA	Chester	42029	420290003	031	1	10300102	40.20	MANEVU2002	14.1790	0.0000	0.0000	PA STATE SYS OF HIGHER ED/WEST CHESTER UNIV OF PA
PA	Chester	42029	420290003	032	1	10200501	34.40	MANEVU2002	0.9480	0.0000	0.0000	PA STATE SYS OF HIGHER ED/WEST CHESTER UNIV OF PA
PA	Chester	42029	420290003	033	1	10300102	26.00	MANEVU2002	3.5600	0.0000	0.0000	PA STATE SYS OF HIGHER ED/WEST CHESTER UNIV OF PA
PA	Chester	42029	420290003	034	1	10300102	40.20	MANEVU2002	5.4670	0.0000	0.0000	PA STATE SYS OF HIGHER ED/WEST CHESTER UNIV OF PA
PA	Chester	42029	420290003	036	1	10300501	24.50	MANEVU2002	2.0640	0.0000	0.0000	PA STATE SYS OF HIGHER ED/WEST CHESTER UNIV OF PA
PA	Chester	42029	420290005	034	2	10200602	29.30	MANEVU2002	9.4280	0.0000	0.0197	NVF CO/KENNETT PLT
PA	Chester	42029	420290005	C02	2	10200602	55.00	MANEVU2002	3.4000	0.0000	0.0097	NVF CO/KENNETT PLT
PA	Chester	42029	420290009	031	2	10200602	25.20	MANEVU2002	4.6900	0.0000	0.0124	QUEBECOR WORLD INC/ATGLEN
PA	Chester	42029	420290009	032A	1	10200602	11.70	MANEVU2002	0.8000	0.0000	0.0020	QUEBECOR WORLD INC/ATGLEN
PA	Chester	42029	420290009	033	2	10200602	29.40	MANEVU2002	0.2500	0.0000	0.0000	QUEBECOR WORLD INC/ATGLEN
PA	Chester	42029	420290009	034	2	10200602	29.40	MANEVU2002	2.1700	0.0000	0.0060	QUEBECOR WORLD INC/ATGLEN
PA	Chester	42029	420290009	035	1	10300602	32.60	MANEVU2002	1.3700	0.0000	0.0036	QUEBECOR WORLD INC/ATGLEN
PA	Chester	42029	420290011	034	1	10300501	17.70	MANEVU2002	4.3900	0.0000	0.0048	PA DPW/EMBREEVILLE CTR
PA	Chester	42029	420290011	036	1	10300501	25.10	MANEVU2002	1.0100	0.0000	0.0000	PA DPW/EMBREEVILLE CTR
PA	Chester	42029	420290011	037	1	10200501	22.00	MANEVU2002	2.6900	0.0000	0.0086	PA DPW/EMBREEVILLE CTR
PA	Chester	42029	420290012	036	1	10300603	2.40	MANEVU2002	0.4120	0.0000	0.0003	PA DEPT OF MILITARY /SOUTHEASTERN VETERANS CTR
PA	Chester	42029	420290012	037	1	10300603	1.70	MANEVU2002	0.1790	0.0000	0.0012	PA DEPT OF MILITARY /SOUTHEASTERN VETERANS CTR
PA	Chester	42029	420290012	039	1	10300602	12.00	MANEVU2002	0.5330	0.0000	0.0008	PA DEPT OF MILITARY /SOUTHEASTERN VETERANS CTR
PA	Chester	42029	420290012	040	1	10300602	12.00	MANEVU2002	0.6000	0.0000	0.0014	PA DEPT OF MILITARY /SOUTHEASTERN VETERANS CTR
PA	Chester	42029	420290015	031	1	10200401	105.00	MANEVU2002	0.2900	0.0000	0.0000	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290015	031	2	10200501	105.00	MANEVU2002	0.2320	0.0000	0.0000	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290015	032A	1	10200202	196.90	MANEVU2002	201.0150	0.0000	0.5964	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290015	032A	2	10200602	196.90	MANEVU2002	2.3750	0.0000	0.0089	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290015	033	1	10200401	105.00	MANEVU2002	0.2380	0.0000	0.0000	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290015	033	2	10200501	105.00	MANEVU2002	0.2353	0.0000	0.0000	SONOCO PROD CO/DOWNINGTOWN
PA	Chester	42029	420290023	035	1	10300603	5.80	MANEVU2002	0.0100	0.0000	0.0000	EXELON GENERATION CO/CROMBY GENERATION STATION
PA	Chester	42029	420290024	033	1	10200602	27.30	MANEVU2002	3.5800	0.0000	0.0071	ISG PLATE LLC/COATESVILLE
PA	Chester	42029	420290024	034	1	10200602	27.30	MANEVU2002	1.3700	0.0000	0.0000	ISG PLATE LLC/COATESVILLE
PA	Chester	42029	420290024	055	1	10200602	62.30	MANEVU2002	9.1900	0.0000	0.0273	ISG PLATE LLC/COATESVILLE
PA	Chester	42029	420290024	056	1	10200602	10.00	MANEVU2002	0.2100	0.0000	0.0006	ISG PLATE LLC/COATESVILLE
PA	Chester	42029	420290024	058	1	10200602	9.90	MANEVU2002	0.4600	0.0000	0.0012	ISG PLATE LLC/COATESVILLE
PA	Chester	42029	420290029	035	1	10200602	33.50	MANEVU2002	1.0600	0.0000	0.0030	WYETH PHARMACEUTICALS/WEST CHESTER
PA	Chester	42029	420290029	036	1	10200602	33.50	MANEVU2002	0.8500	0.0000	0.0008	WYETH PHARMACEUTICALS/WEST CHESTER

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PA	Chester	42029	420290030	106	2	10200602	22.00	MANEVU2002	0.5455	0.0000	0.0000	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290030	106	3	10200504	22.00	MANEVU2002	0.2345	0.0000	0.0000	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290030	106A	2	10200602	22.00	MANEVU2002	0.0400	0.0000	0.0000	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290030	107	2	10300799	1.50	MANEVU2002	0.0050	0.0000	0.0000	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290030	111	1	10300603	13.50	MANEVU2002	1.2295	0.0000	0.0041	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290030	111	2	10300503	13.50	MANEVU2002	0.0005	0.0000	0.0000	WYETH PHARMACEUTICALS/FRAZER
PA	Chester	42029	420290039	031	1	10200401	26.90	MANEVU2002	12.1900	0.0000	0.0000	LINCOLN UNIV/LOWER OXFORD
PA	Chester	42029	420290039	032	1	10200404	15.60	MANEVU2002	0.6161	0.0000	0.0000	LINCOLN UNIV/LOWER OXFORD
PA	Chester	42029	420290039	032	2	10200401	15.60	MANEVU2002	2.2539	0.0000	0.0000	LINCOLN UNIV/LOWER OXFORD
PA	Chester	42029	420290039	035	1	10301002	6.00	MANEVU2002	0.0700	0.0000	0.0000	LINCOLN UNIV/LOWER OXFORD
PA	Chester	42029	420290040	032	1	10300603	2.90	MANEVU2002	1.3300	0.0000	0.0031	HENRY CO/KIMBERTON PLANT
PA	Chester	42029	420290043	031	1	10200603	14.60	MANEVU2002	0.5600	0.0000	0.0010	HUHTAMAKI FLEXIBLES /MALVERN
PA	Chester	42029	420290043	032	1	10200603	14.60	MANEVU2002	0.1800	0.0000	0.0000	HUHTAMAKI FLEXIBLES /MALVERN
PA	Chester	42029	420290046	031	2	10200601	6.70	MANEVU2002	3.7600	0.0000	0.0103	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	032	1	10300602	55.00	SCC Descriptio	0.2600	0.0000	0.0007	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	107	1	10300602	55.00	MANEVU2002	0.0900	0.0000	0.0002	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	111	4	10300602	55.00	MANEVU2002	0.2185	0.0000	0.0006	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	111	1	10300602	55.00	MANEVU2002	0.0115	0.0000	0.0000	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	C03	1	10300602	55.00	MANEVU2002	0.0600	0.0000	0.0002	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	C04	1	10300602	55.00	MANEVU2002	0.0040	0.0000	0.0000	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290046	C06	1	10300602	55.00	SCC Descriptio	0.1130	0.0000	0.0003	REYNOLDS METALS CO/DOWNINGTOWN
PA	Chester	42029	420290047	045	1	10300603	5.00	SCC Descriptio	0.9400	0.0000	0.0000	TRANSCONTINENTAL GAS/FRAZER STA 200
PA	Chester	42029	420290054	031	1	10200602	14.60	MANEVU2002	1.0500	0.0000	0.0018	DOPACO INC/DOWNINGTOWN
PA	Chester	42029	420290054	111A	1	10200603	5.00	SCC Descriptio	0.2300	0.0000	0.0004	DOPACO INC/DOWNINGTOWN
PA	Chester	42029	420290056	031	2	10200602	14.60	MANEVU2002	3.7674	0.0000	0.0046	SARTOMER CO INC/WEST CHESTER
PA	Chester	42029	420290056	031	1	10200501	14.60	MANEVU2002	0.0326	0.0000	0.0001	SARTOMER CO INC/WEST CHESTER
PA	Chester	42029	420290056	032	2	10200602	14.70	MANEVU2002	3.7764	0.0000	0.0033	SARTOMER CO INC/WEST CHESTER
PA	Chester	42029	420290056	032	1	10200501	14.70	MANEVU2002	0.0236	0.0000	0.0001	SARTOMER CO INC/WEST CHESTER
PA	Chester	42029	420290056	033	1	10200602	14.60	MANEVU2002	0.4000	0.0000	0.0001	SARTOMER CO INC/WEST CHESTER
PA	Chester	42029	420290059	031	1	10300603	4.20	MANEVU2002	0.2600	0.0000	0.0007	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290059	032	1	10300603	6.30	MANEVU2002	0.3900	0.0000	0.0011	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290059	033	1	10300603	5.20	MANEVU2002	0.3300	0.0000	0.0009	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290059	106	1	10300603	5.00	SCC Descriptio	0.5000	0.0000	0.0014	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290059	108	1	10300603	4.60	MANEVU2002	0.2900	0.0000	0.0008	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290059	109	1	10300603	4.60	MANEVU2002	0.2900	0.0000	0.0008	PEPPERIDGE FARM INC/DOWNINGTOWN
PA	Chester	42029	420290066	101	1	10301002	10.10	MANEVU2002	0.3200	0.0000	0.0006	GRACO CHILDRENS PROD/ELVERSON
PA	Chester	42029	420290066	101	2	10301002	10.10	MANEVU2002	0.3200	0.0000	0.0006	GRACO CHILDRENS PROD/ELVERSON
PA	Chester	42029	420290066	101	3	10301002	10.10	MANEVU2002	0.3200	0.0000	0.0006	GRACO CHILDRENS PROD/ELVERSON
PA	Chester	42029	420290066	101	4	10301002	10.10	MANEVU2002	0.3200	0.0000	0.0006	GRACO CHILDRENS PROD/ELVERSON
PA	Chester	42029	420290066	101	5	10301002	10.10	MANEVU2002	0.3200	0.0000	0.0006	GRACO CHILDRENS PROD/ELVERSON
PA	Chester	42029	420290108	031	3	10200602	25.10	MANEVU2002	0.2816	0.0000	0.0007	CHESTER CNTY HOSP/WEST CHESTER
PA	Chester	42029	420290108	031	2	10300401	25.10	MANEVU2002	4.9184	0.0000	0.0000	CHESTER CNTY HOSP/WEST CHESTER
PA	Chester	42029	420290108	032	3	10200602	25.10	MANEVU2002	0.2816	0.0000	0.0007	CHESTER CNTY HOSP/WEST CHESTER
PA	Chester	42029	420290108	032	2	10300401	25.10	MANEVU2002	4.9184	0.0000	0.0000	CHESTER CNTY HOSP/WEST CHESTER
PA	Chester	42029	420290119	031	1	10300602	16.80	MANEVU2002	1.3700	0.0000	0.0029	CENTOCOR INC/MALVERN
PA	Chester	42029	420290119	032	1	10300603	4.30	MANEVU2002	0.2100	0.0000	0.0002	CENTOCOR INC/MALVERN
PA	Chester	42029	420290119	033	1	10300603	1.00	MANEVU2002	0.2500	0.0000	0.0005	CENTOCOR INC/MALVERN
PA	Chester	42029	420290119	035	1	10300602	16.70	MANEVU2002	0.8100	0.0000	0.0019	CENTOCOR INC/MALVERN
PA	Chester	42029	420290119	036	1	10300602	20.90	MANEVU2002	0.8100	0.0000	0.0019	CENTOCOR INC/MALVERN
PA	Chester	42029	420290119	037	2	10300501	18.90	MANEVU2002	1.0200	0.0000	0.0028	CENTOCOR INC/MALVERN
PA	Chester	42029	420290127	031	1	10300602	10.50	MANEVU2002	0.1800	0.0000	0.0000	WORTHINGTON STEEL CO/MALVERN PLT
PA	Chester	42029	420290127	032	1	10300602	12.60	MANEVU2002	0.1100	0.0000	0.0000	WORTHINGTON STEEL CO/MALVERN PLT

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PA	Chester	42029	420290127	032	2	10300602	12.60	MANEVU2002	0.1100	0.0000	0.0000	WORTHINGTON STEEL CO/MALVERN PLT
PA	Chester	42029	420290127	034	1	10200602	40.50	MANEVU2002	1.4700	0.0000	0.0003	WORTHINGTON STEEL CO/MALVERN PLT
PA	Chester	42029	420290129	113	1	10200602	4.50	MANEVU2002	0.0900	0.0000	0.0000	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	115	1	10200602	2.00	MANEVU2002	0.2600	0.0000	0.0007	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	116	1	10200602	2.00	MANEVU2002	0.2600	0.0000	0.0008	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	117	1	10200602	55.00	SCC Descriptio	1.0472	0.0000	0.0066	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	117	3	10200602	55.00	SCC Descriptio	1.0164	0.0000	0.0064	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	117	5	10200602	55.00	SCC Descriptio	1.0164	0.0000	0.0064	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	118	1	10200602	55.00	SCC Descriptio	0.5250	0.0000	0.0010	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	118	3	10200602	55.00	SCC Descriptio	0.5250	0.0000	0.0010	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	119	1	10200602	55.00	SCC Descriptio	0.1190	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	119	3	10200602	55.00	SCC Descriptio	0.1155	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	119	5	10200602	55.00	SCC Descriptio	0.1155	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	120	1	10200602	55.00	SCC Descriptio	0.3162	0.0000	0.0009	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	120	3	10200602	55.00	SCC Descriptio	0.3069	0.0000	0.0008	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	120	5	10200602	55.00	SCC Descriptio	0.3069	0.0000	0.0008	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	121	1	10200602	55.00	SCC Descriptio	0.1500	0.0000	0.0004	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	122	1	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	123	1	10200602	55.00	SCC Descriptio	0.0700	0.0000	0.0002	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	124	1	10200602	55.00	SCC Descriptio	0.7800	0.0000	0.0022	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	124	3	10200602	55.00	SCC Descriptio	0.2652	0.0000	0.0008	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	124	5	10200602	55.00	SCC Descriptio	0.2652	0.0000	0.0008	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	124	7	10200602	55.00	SCC Descriptio	0.2496	0.0000	0.0007	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	1	10200602	55.00	SCC Descriptio	0.6200	0.0000	0.0017	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	11	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	3	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	5	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	7	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	125	9	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	1	10200602	55.00	SCC Descriptio	0.6350	0.0000	0.0017	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	11	10200602	55.00	SCC Descriptio	0.1270	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	3	10200602	55.00	SCC Descriptio	0.1270	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	5	10200602	55.00	SCC Descriptio	0.1270	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	7	10200602	55.00	SCC Descriptio	0.1270	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	126	9	10200602	55.00	SCC Descriptio	0.1270	0.0000	0.0003	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	127	1	10200602	55.00	SCC Descriptio	0.4600	0.0000	0.0015	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	127	3	10200602	55.00	SCC Descriptio	0.1564	0.0000	0.0005	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	127	5	10200602	55.00	SCC Descriptio	0.1564	0.0000	0.0005	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	127	7	10200602	55.00	SCC Descriptio	0.1472	0.0000	0.0005	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	130	1	10200602	55.00	SCC Descriptio	0.4850	0.0000	0.0017	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290129	130	3	10200602	55.00	SCC Descriptio	0.4850	0.0000	0.0017	HERR FOODS INC/NOTTINGHAM
PA	Chester	42029	420290269	110	1	10200603	1.00	MANEVU2002	0.1300	0.0000	0.0004	MCAVOY VITRIFIED BRICK CO/PHOENIXVILLE
PA	Chester	42029	420290313	031	1	10200603	6.30	MANEVU2002	0.3000	0.0000	0.0007	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	032	1	10200603	1.50	MANEVU2002	0.0800	0.0000	0.0002	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	033	1	10200603	1.50	MANEVU2002	0.0800	0.0000	0.0002	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	034	1	10200603	1.00	MANEVU2002	0.0500	0.0000	0.0001	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	035	1	10200603	0.40	MANEVU2002	0.0200	0.0000	0.0000	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	039	1	10200603	5.60	MANEVU2002	0.1000	0.0000	0.0000	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	040	1	10200603	0.70	MANEVU2002	0.0200	0.0000	0.0000	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	041	1	10200603	1.90	MANEVU2002	0.0500	0.0000	0.0002	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	101	1	10200603	5.00	SCC Descriptio	0.2500	0.0000	0.0007	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	102	5	10200603	5.00	SCC Descriptio	0.0782	0.0000	0.0002	TASTY BAKING/OXFORD PLT

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PA	Chester	42029	420290313	102	1	10200603	5.00	SCC Descriptio	0.0759	0.0000	0.0002	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	102	3	10200603	5.00	SCC Descriptio	0.0759	0.0000	0.0002	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290313	G01	1	10200603	3.40	MANEVU2002	0.0600	0.0000	0.0000	TASTY BAKING/OXFORD PLT
PA	Chester	42029	420290398	001	1	10200602	55.00	SCC Descriptio	0.0002	0.0000	0.0000	LNP/THORNDALE
PA	Chester	42029	420290624	031	1	10200603	0.30	MANEVU2002	0.1000	0.0000	0.0002	OBERTHUR CARD SYSTEMS INC/EXTON
PA	Chester	42029	420290791	031	1	10200401	46.00	MANEVU2002	1.3897	0.0000	0.0029	SEALED AIR CORP/MODENA
PA	Chester	42029	420290791	031	2	10200602	46.00	MANEVU2002	0.0863	0.0000	0.0004	SEALED AIR CORP/MODENA
PA	Chester	42029	420290900	731	2	10200602	40.00	MANEVU2002	1.9389	0.0000	0.0000	SANOFI SYNTHELABO INC/GREAT VALLEY
PA	Chester	42029	420290900	731	4	10200602	40.00	MANEVU2002	1.9389	0.0000	0.0034	SANOFI SYNTHELABO INC/GREAT VALLEY
PA	Chester	42029	420290900	731	1	10200501	40.00	MANEVU2002	0.0001	0.0000	0.0000	SANOFI SYNTHELABO INC/GREAT VALLEY
PA	Chester	42029	420290900	731	3	10200501	40.00	MANEVU2002	0.0001	0.0000	0.0000	SANOFI SYNTHELABO INC/GREAT VALLEY
PA	Chester	42029	420291019	031	2	10200602	12.30	MANEVU2002	1.5314	0.0000	0.0035	PHOENIXVILLE HOSP INC/PHOENIXVILLE
PA	Chester	42029	420291019	032	1	10200602	16.80	MANEVU2002	0.2014	0.0000	0.0008	PHOENIXVILLE HOSP INC/PHOENIXVILLE
PA	Chester	42029	420291019	033	3	10200602	5.20	MANEVU2002	0.0044	0.0000	0.0000	PHOENIXVILLE HOSP INC/PHOENIXVILLE
PA	Chester	42029	420292028	031	2	10300602	28.40	MANEVU2002	2.0123	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	031	1	10300501	28.40	MANEVU2002	0.0137	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	032	3	10300601	28.40	MANEVU2002	2.0729	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	032	1	10300501	28.40	MANEVU2002	0.0011	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	033	1	10300501	56.00	MANEVU2002	0.0009	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	033	2	10300601	56.00	MANEVU2002	0.6731	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	034	1	10300501	56.00	MANEVU2002	0.0008	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Chester	42029	420292028	034	2	10300601	56.00	MANEVU2002	1.4592	0.0000	0.0000	US VETERANS ADMIN/COATESVILLE VA MED CTR
PA	Clarion	42031	420310004	031	1	10200906	6.30	MANEVU2002	0.0262	0.0000	0.0000	OEM ENTERPRISES INC/REDBANK PLT
PA	Clarion	42031	420310556	031	1	10300903	25.00	MANEVU2002	3.2200	0.0000	0.0039	GEORGIA PACIFIC CORP/MARBLE
PA	Clinton	42035	420350008	033	1	10200204	291.90	MANEVU2002	112.6569	0.0000	0.0000	INTL PAPER CO/LOCK HAVEN MILL
PA	Clinton	42035	420350008	034	1	10200204	291.90	MANEVU2002	83.9460	0.0000	0.0000	INTL PAPER CO/LOCK HAVEN MILL
PA	Clinton	42035	420350010	038	1	10200603	3.30	MANEVU2002	0.0067	0.0000	0.0000	DOMINION TRANS INC/FINNEFROCK STATION
PA	Clinton	42035	420350010	039	1	10200603	2.80	MANEVU2002	1.4000	0.0000	0.0029	DOMINION TRANS INC/FINNEFROCK STATION
PA	Clinton	42035	420350010	040	1	10200603	1.20	MANEVU2002	0.0061	0.0000	0.0000	DOMINION TRANS INC/FINNEFROCK STATION
PA	Clinton	42035	420350011	047	1	10200603	40.00	MANEVU2002	10.8000	0.0000	0.0047	DOMINION TRANS INC/LEIDY STATION
PA	Clinton	42035	420350011	048	1	10200603	40.00	MANEVU2002	9.4000	0.0000	0.0062	DOMINION TRANS INC/LEIDY STATION
PA	Clinton	42035	420350011	049	1	10200603	40.00	MANEVU2002	10.5000	0.0000	0.0046	DOMINION TRANS INC/LEIDY STATION
PA	Clinton	42035	420350012	031	1	10200501	62.50	MANEVU2002	0.2100	0.0000	0.0003	WOOLRICH INC/WOOLRICH PLT
PA	Clinton	42035	420350012	032	3	10200601	41.60	MANEVU2002	2.7700	0.0000	0.0046	WOOLRICH INC/WOOLRICH PLT
PA	Clinton	42035	420350014	CU031	1	10200603	8.40	MANEVU2002	0.8000	0.0000	0.0024	ARMSTRONG WORLD IND /BEECH CREEK PLT
PA	Clinton	42035	420350014	CU032	1	10200603	8.40	MANEVU2002	0.2000	0.0000	0.0002	ARMSTRONG WORLD IND /BEECH CREEK PLT
PA	Clinton	42035	420350016	037	1	10200603	5.00	SCC Descriptio	0.3000	0.0000	0.0000	COLUMBIA GAS TRANS CORP/RENOVO STATION
PA	Clinton	42035	420350016	039	1	10200603	5.00	SCC Descriptio	0.0200	0.0000	0.0001	COLUMBIA GAS TRANS CORP/RENOVO STATION
PA	Clinton	42035	420350016	040	1	10200603	5.00	SCC Descriptio	0.1000	0.0000	0.0002	COLUMBIA GAS TRANS CORP/RENOVO STATION
PA	Clinton	42035	420350812	001	1	10200602	14.60	MANEVU2002	1.0477	0.0000	0.0036	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	001	2	10200502	14.60	MANEVU2002	0.0323	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	002	1	10200602	4.20	MANEVU2002	0.3232	0.0000	0.0007	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	002	2	10200502	4.20	MANEVU2002	0.0068	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	003	1	10200602	14.60	MANEVU2002	1.5573	0.0000	0.0036	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	003	2	10200502	14.60	MANEVU2002	0.0327	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	004	1	10200602	55.00	SCC Descriptio	0.3133	0.0000	0.0007	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	004	2	10200502	55.00	SCC Descriptio	0.0067	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	005	1	10200602	55.00	SCC Descriptio	0.1679	0.0000	0.0004	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	005	2	10200502	55.00	SCC Descriptio	0.0021	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	006	1	10200602	1.60	MANEVU2002	0.1200	0.0000	0.0003	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	007	1	10200602	14.60	MANEVU2002	0.0100	0.0000	0.0000	CRODA INC/DRAKETOWN ROAD
PA	Clinton	42035	420350812	P115	1	10200502	55.00	SCC Descriptio	0.1300	0.0000	0.0005	CRODA INC/DRAKETOWN ROAD

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PA	Columbia	42037	420370002	031	1	10300102	26.40	MANEVU2002	1.4000	0.0000	0.0000	PA STATE SYS OF HIGHED ED/BLOOMSBURG UNIV PA
PA	Columbia	42037	420370002	032	1	10300102	26.40	MANEVU2002	11.6900	0.0000	0.0257	PA STATE SYS OF HIGHED ED/BLOOMSBURG UNIV PA
PA	Columbia	42037	420370002	033	1	10300102	26.40	MANEVU2002	13.4000	0.0000	0.0059	PA STATE SYS OF HIGHED ED/BLOOMSBURG UNIV PA
PA	Columbia	42037	420370002	035	1	10300102	26.40	MANEVU2002	1.5300	0.0000	0.0000	PA STATE SYS OF HIGHED ED/BLOOMSBURG UNIV PA
PA	Columbia	42037	420370002	036	1	10300602	21.30	MANEVU2002	0.0012	0.0000	0.0000	PA STATE SYS OF HIGHED ED/BLOOMSBURG UNIV PA
PA	Columbia	42037	420370007	032	1	10200504	77.00	MANEVU2002	0.5630	0.0000	0.0002	MAGEE RIETER AUTO SYS/BLOOMSBURG PLT
PA	Columbia	42037	420370007	033	1	10200504	77.00	MANEVU2002	0.0385	0.0000	0.0001	MAGEE RIETER AUTO SYS/BLOOMSBURG PLT
PA	Columbia	42037	420370007	034	1	10200104	60.00	MANEVU2002	26.7100	0.0000	0.0264	MAGEE RIETER AUTO SYS/BLOOMSBURG PLT
PA	Columbia	42037	420370007	035	1	10200104	86.60	MANEVU2002	37.5100	0.0000	0.0701	MAGEE RIETER AUTO SYS/BLOOMSBURG PLT
PA	Columbia	42037	420370010	031	2	10200602	26.60	MANEVU2002	5.1365	0.0000	0.0000	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	031	1	10200401	26.60	MANEVU2002	0.0235	0.0000	0.0000	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	032	2	10200602	26.60	MANEVU2002	3.9110	0.0000	0.0000	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	032	1	10200401	26.60	MANEVU2002	0.0290	0.0000	0.0001	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	034	1	10200602	50.30	MANEVU2002	9.5876	0.0000	0.0179	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	034	2	10200501	50.30	MANEVU2002	0.0324	0.0000	0.0000	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	035	1	10200602	50.30	MANEVU2002	12.1721	0.0000	0.0281	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370010	035	2	10200501	50.30	MANEVU2002	0.0179	0.0000	0.0000	DLM FOODS LLC/BLOOMSBURG PLT
PA	Columbia	42037	420370036	032	1	10200602	14.30	MANEVU2002	2.0100	0.0000	0.0053	FOAM FABRICATORS INC/BLOOMSBURG PLT
PA	Columbia	42037	420370037	CU031	1	10200602	55.00	SCC Descriptio	0.1800	0.0000	0.0003	HADDON CRAFTSMEN/BLOOMSBURG PLT
PA	Columbia	42037	420370037	CU032	1	10200601	150.00	SCC Descriptio	0.1800	0.0000	0.0003	HADDON CRAFTSMEN/BLOOMSBURG PLT
PA	Columbia	42037	420370037	CU033	1	10200601	150.00	SCC Descriptio	0.3500	0.0000	0.0011	HADDON CRAFTSMEN/BLOOMSBURG PLT
PA	Crawford	42039	420390006	001	1	10200603	5.00	SCC Descriptio	0.7821	0.0000	0.0001	US BRONZE FOUNDRY & /US BRONZE
PA	Crawford	42039	420390013	001	1	10200603	6.70	MANEVU2002	0.1485	0.0000	0.0009	LORD CORP/SAEGERTOWN
PA	Crawford	42039	420390013	004	1	10200603	6.70	MANEVU2002	0.5237	0.0000	0.0009	LORD CORP/SAEGERTOWN
PA	Crawford	42039	420390014	031	1	10200603	8.40	MANEVU2002	0.2830	0.0000	0.0004	LORD CORP/MECH PROD DIV
PA	Crawford	42039	420390014	035	1	10200603	12.60	MANEVU2002	0.2360	0.0000	0.0010	LORD CORP/MECH PROD DIV
PA	Crawford	42039	420390502	B 1	1	10200603	4.20	MANEVU2002	0.5000	0.0000	0.0017	MOLDED FIBERGLASS CO/LINESVILLE
PA	Crawford	42039	420390502	B 2	1	10200603	4.20	MANEVU2002	0.3540	0.0000	0.0005	MOLDED FIBERGLASS CO/LINESVILLE
PA	Cumberland	42041	420410003	032	1	10300102	47.00	MANEVU2002	20.8000	0.0000	0.0251	PA DEPT OF CORR/CAMP HILL SCI
PA	Cumberland	42041	420410003	033	1	10300102	47.00	MANEVU2002	25.6100	0.0000	0.0450	PA DEPT OF CORR/CAMP HILL SCI
PA	Cumberland	42041	420410003	038	1	10300501	63.90	MANEVU2002	1.6100	0.0000	0.0108	PA DEPT OF CORR/CAMP HILL SCI
PA	Cumberland	42041	420410005	033	1	10200602	24.50	MANEVU2002	0.0900	0.0000	0.0003	AHLSTROM TECH SPECIALTIES/MT HOLLY SPRINGS PLT
PA	Cumberland	42041	420410005	034	2	10200601	24.50	MANEVU2002	3.2593	0.0000	0.0093	AHLSTROM TECH SPECIALTIES/MT HOLLY SPRINGS PLT
PA	Cumberland	42041	420410005	034	1	10200401	24.50	MANEVU2002	0.6407	0.0000	0.0014	AHLSTROM TECH SPECIALTIES/MT HOLLY SPRINGS PLT
PA	Cumberland	42041	420410008	031	2	10300602	12.50	MANEVU2002	0.0029	0.0000	0.0000	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410008	031	1	10200401	12.50	MANEVU2002	1.6971	0.0000	0.0041	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410008	032	2	10300602	12.50	MANEVU2002	0.0018	0.0000	0.0000	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410008	032	1	10200401	12.50	MANEVU2002	3.0982	0.0000	0.0071	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410008	034	1	10300603	8.40	MANEVU2002	0.2000	0.0000	0.0000	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410008	034	2	10300603	8.40	MANEVU2002	0.2000	0.0000	0.0000	CARLISLE SYNTEC INC/CARLISLE
PA	Cumberland	42041	420410009	033	2	10200602	50.20	MANEVU2002	8.4516	0.0000	0.0000	CARLISLE TIRE & WHEEL/COLLEGE STREET
PA	Cumberland	42041	420410009	033	1	10200401	50.20	MANEVU2002	5.0484	0.0000	0.0139	CARLISLE TIRE & WHEEL/COLLEGE STREET
PA	Cumberland	42041	420410010	032	2	10200602	57.40	MANEVU2002	2.1087	0.0000	0.0000	LEAR OPR CORP/CARLISLE
PA	Cumberland	42041	420410010	032	1	10200501	57.40	MANEVU2002	0.1213	0.0000	0.0002	LEAR OPR CORP/CARLISLE
PA	Cumberland	42041	420410010	033A	2	10200602	38.50	MANEVU2002	1.5018	0.0000	0.0000	LEAR OPR CORP/CARLISLE
PA	Cumberland	42041	420410010	033A	1	10200501	38.50	MANEVU2002	0.0082	0.0000	0.0000	LEAR OPR CORP/CARLISLE
PA	Cumberland	42041	420410013	031	1	10200602	25.10	John Hulsberg	1.6100	0.0000	0.0044	PPG IND INC/WORKS NO 6
PA	Cumberland	42041	420410013	032	1	10200602	25.10	John Hulsberg	2.0100	0.0000	0.0054	PPG IND INC/WORKS NO 6
PA	Cumberland	42041	420410013	033	1	10200602	25.10	John Hulsberg	2.0700	0.0000	0.0056	PPG IND INC/WORKS NO 6
PA	Cumberland	42041	420410026	031	1	10200602	13.00	MANEVU2002	0.1700	0.0000	0.0004	MH TECHNOLOGIES LLC/MT HOLLY SPRINGS
PA	Cumberland	42041	420410026	032	2	10200602	29.30	MANEVU2002	1.1729	0.0000	0.0000	MH TECHNOLOGIES LLC/MT HOLLY SPRINGS
PA	Cumberland	42041	420410026	032	1	10200401	29.30	MANEVU2002	0.1571	0.0000	0.0004	MH TECHNOLOGIES LLC/MT HOLLY SPRINGS

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PA	Cumberland	42041	420410026	034	2	10200602	29.30	MANEVU2002	3.1350	0.0000	0.0000	MH TECHNOLOGIES LLC/MT HOLLY SPRINGS
PA	Cumberland	42041	420410026	034	1	10200401	29.30	MANEVU2002	0.1050	0.0000	0.0002	MH TECHNOLOGIES LLC/MT HOLLY SPRINGS
PA	Cumberland	42041	420410028	031	1	10300102	32.40	MANEVU2002	9.7000	0.0000	0.0000	PA STATE SYS OF HIGHER ED/SHIPPENSBURG UNIV OF PA
PA	Cumberland	42041	420410028	032	1	10300102	32.40	MANEVU2002	6.3000	0.0000	0.0000	PA STATE SYS OF HIGHER ED/SHIPPENSBURG UNIV OF PA
PA	Cumberland	42041	420410028	033	1	10300102	38.80	MANEVU2002	10.1000	0.0000	0.0000	PA STATE SYS OF HIGHER ED/SHIPPENSBURG UNIV OF PA
PA	Cumberland	42041	420410028	034	1	10300102	32.40	MANEVU2002	7.3000	0.0000	0.0000	PA STATE SYS OF HIGHER ED/SHIPPENSBURG UNIV OF PA
PA	Cumberland	42041	420410029	031	1	10200602	14.60	MANEVU2002	1.7800	0.0000	0.0047	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	032	1	10200602	14.60	MANEVU2002	1.4500	0.0000	0.0038	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	033	1	10200602	14.60	MANEVU2002	1.6400	0.0000	0.0043	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	035	1	10200602	31.50	MANEVU2002	1.6800	0.0000	0.0041	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	036	1	10200602	31.50	MANEVU2002	1.5300	0.0000	0.0042	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	037	1	10200602	31.50	MANEVU2002	1.4400	0.0000	0.0043	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	102	1	10200602	55.00	MANEVU2002	0.0504	0.0000	0.0000	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	103	1	10200602	55.00	SCC Descriptio	0.5740	0.0000	0.0017	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	104	1	10200602	55.00	SCC Descriptio	1.0100	0.0000	0.0020	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410029	105	1	10200602	55.00	SCC Descriptio	1.0400	0.0000	0.0031	LAND O LAKES INC/HOLLY MILK DIV
PA	Cumberland	42041	420410030	127	1	10200602	55.00	MANEVU2002	0.3000	0.0000	0.0008	FROG SWITCH & MFG CO/CARLISLE
PA	Cumberland	42041	420410322	031	2	10300602	15.50	MANEVU2002	0.8100	0.0000	0.0000	US ARMY/CARLISLE BARRACKS
PA	Cumberland	42041	420410322	032	2	10300602	25.50	MANEVU2002	2.1900	0.0000	0.0000	US ARMY/CARLISLE BARRACKS
PA	Cumberland	42041	420410322	033	2	10300602	12.60	MANEVU2002	0.0300	0.0000	0.0000	US ARMY/CARLISLE BARRACKS
PA	Cumberland	42041	420410322	034	1	10300501	5.90	MANEVU2002	0.0400	0.0000	0.0000	US ARMY/CARLISLE BARRACKS
PA	Cumberland	42041	420410322	035	1	10300603	51.00	MANEVU2002	1.9500	0.0000	0.0024	US ARMY/CARLISLE BARRACKS
PA	Cumberland	42041	420410329	031	1	10300501	14.70	MANEVU2002	1.3500	0.0000	0.0000	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Cumberland	42041	420410329	032	1	10300501	14.70	MANEVU2002	0.1500	0.0000	0.0000	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Cumberland	42041	420410329	034	2	10200501	96.80	John Hulsberg	18.7700	0.0000	0.0516	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Cumberland	42041	420410329	035	2	10200501	1.30	MANEVU2002	0.4200	0.0000	0.0000	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Cumberland	42041	420410329	036	2	10200501	1.30	MANEVU2002	0.0700	0.0000	0.0000	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Cumberland	42041	420410329	037	1	10300603	16.80	John Hulsberg	0.9830	0.0000	0.0005	NAVAL SUPPORT ACTIVI/MECHANICSBURG
PA	Dauphin	42043	420430018	032	2	10200601	200.00	John Hulsberg	22.2100	0.0000	0.0613	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	034	1	10200602	55.00	SCC Descriptio	4.7900	0.0000	0.0129	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	232C	1	10200601	150.00	SCC Descriptio	6.4065	0.0000	0.0177	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	301	1	10200602	55.00	SCC Descriptio	1.0272	0.0000	0.0028	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	301	3	10200602	55.00	SCC Descriptio	1.0272	0.0000	0.0028	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	301	5	10200602	55.00	SCC Descriptio	1.0272	0.0000	0.0028	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	301	7	10200602	55.00	SCC Descriptio	1.0272	0.0000	0.0028	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	10	10200602	55.00	SCC Descriptio	7.3848	0.0000	0.0200	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	2	10200602	55.00	SCC Descriptio	7.3848	0.0000	0.0200	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	4	10200602	55.00	SCC Descriptio	7.3848	0.0000	0.0200	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	6	10200602	55.00	SCC Descriptio	7.3848	0.0000	0.0200	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	8	10200602	55.00	SCC Descriptio	7.3848	0.0000	0.0200	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430018	401	12	10200602	55.00	SCC Descriptio	6.5160	0.0000	0.0176	ISG STEELTON LLC/STEELTON STEEL PLT
PA	Dauphin	42043	420430022	031	2	10201002	11.00	MANEVU2002	5.7700	0.0000	0.0146	MI METALS INC/MILLERSBURG
PA	Dauphin	42043	420430023	031	1	10200603	6.30	MANEVU2002	0.7800	0.0000	0.0021	STROEHMANN BAKERIES /CAPITOL BAKERY
PA	Dauphin	42043	420430023	032	1	10200603	0.50	MANEVU2002	0.0800	0.0000	0.0001	STROEHMANN BAKERIES /CAPITOL BAKERY
PA	Dauphin	42043	420430023	C01	1	10200603	5.00	SCC Descriptio	0.3800	0.0000	0.0011	STROEHMANN BAKERIES /CAPITOL BAKERY
PA	Dauphin	42043	420430024	031	1	10200401	0.00		7.1600	0.0000	0.0181	HARSCO CORP/TAYLOR WHARTON GAS EQUIPMENT D
PA	Dauphin	42043	420430026	033	1	10200602	21.90	MANEVU2002	0.1710	0.0000	0.0000	AMES TRUE TEMPER INC/HARRISBURG
PA	Dauphin	42043	420430026	101	1	10200603	5.00	MANEVU2002	0.3830	0.0000	0.0006	AMES TRUE TEMPER INC/HARRISBURG
PA	Dauphin	42043	420430026	103	1	10200603	5.00	MANEVU2002	0.0290	0.0000	0.0000	AMES TRUE TEMPER INC/HARRISBURG
PA	Dauphin	42043	420430026	203	1	10200603	5.00	SCC Descriptio	0.1620	0.0000	0.0002	AMES TRUE TEMPER INC/HARRISBURG
PA	Dauphin	42043	420430049	103	1	10200603	5.00	SCC Descriptio	6.1200	0.0000	0.0161	DAYTON PARTS LLC/HARRISBURG
PA	Dauphin	42043	420430049	104	1	10200603	5.00	SCC Descriptio	0.4700	0.0000	0.0012	DAYTON PARTS LLC/HARRISBURG

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PA	Dauphin	42043	420430049	105	1	10200603	5.00	SCC Descriptio	0.4400	0.0000	0.0012	DAYTON PARTS LLC/HARRISBURG
PA	Dauphin	42043	420430071	035	1	10200601	155.00	John Hulsberg	2.5000	0.0000	0.0069	HERSHEY FOODS CORP/EAST PLT
PA	Dauphin	42043	420430071	036	3	10200601	99.00	John Hulsberg	4.1000	0.0000	0.0113	HERSHEY FOODS CORP/EAST PLT
PA	Dauphin	42043	420430071	037	3	10200601	99.00	John Hulsberg	4.8000	0.0000	0.0132	HERSHEY FOODS CORP/EAST PLT
PA	Dauphin	42043	420430071	190	1	10200603	5.00	SCC Descriptio	0.3000	0.0000	0.0008	HERSHEY FOODS CORP/EAST PLT
PA	Dauphin	42043	420430071	199	2	10200603	5.00	SCC Descriptio	3.2000	0.0000	0.0082	HERSHEY FOODS CORP/EAST PLT
PA	Dauphin	42043	420430698	031	2	10300602	24.50	MANEVU2002	1.1520	0.0000	0.0053	PA DPW/HARRISBURG STATE HOSP
PA	Dauphin	42043	420430698	032	1	10300602	48.80	MANEVU2002	1.6190	0.0000	0.0000	PA DPW/HARRISBURG STATE HOSP
PA	Dauphin	42043	420430698	033	2	10300602	48.80	MANEVU2002	1.0210	0.0000	0.0000	PA DPW/HARRISBURG STATE HOSP
PA	Delaware	42045	420450002	031	2	10200602	76.50	John Hulsberg	2.6000	0.0000	0.0070	STONEY CREEK TECH/TRAINER
PA	Delaware	42045	420450002	033	2	10200602	94.00	John Hulsberg	7.2000	0.0000	0.0195	STONEY CREEK TECH/TRAINER
PA	Delaware	42045	420450012	031	1	10300602	25.10	MANEVU2002	11.8000	0.0000	0.0000	CROZER CHESTER MED CTR/UPLAND
PA	Delaware	42045	420450012	033	1	10300602	22.00	MANEVU2002	7.3000	0.0000	0.0545	CROZER CHESTER MED CTR/UPLAND
PA	Delaware	42045	420450014	042	1	10300603	8.80	MANEVU2002	0.0480	0.0000	0.0001	EXELON GENERATION CO/EDDYSTONE
PA	Delaware	42045	420450016	033	1	10200601	198.00	John Hulsberg	14.4000	0.0000	0.0397	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450016	034	2	10200601	249.00	John Hulsberg	15.5000	0.0000	0.0428	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450016	103	1	10200602	55.00	SCC Descriptio	3.8860	0.0000	0.0105	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450016	103	3	10200602	55.00	SCC Descriptio	1.9140	0.0000	0.0052	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450016	104	1	10200602	55.00	SCC Descriptio	4.4530	0.0000	0.0120	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450016	104	3	10200602	55.00	SCC Descriptio	2.8470	0.0000	0.0077	KIMBERLY CLARK PA LLC/CHESTER OPERATIONS
PA	Delaware	42045	420450017	035	1	10200602	10.00	MANEVU2002	0.9000	0.0000	0.0030	PQ CORP/CHESTER
PA	Delaware	42045	420450017	103	1	10200603	5.00	MANEVU2002	1.2000	0.0000	0.0030	PQ CORP/CHESTER
PA	Delaware	42045	420450017	105	1	10200602	16.60	MANEVU2002	0.4000	0.0000	0.0017	PQ CORP/CHESTER
PA	Delaware	42045	420450021	031	1	10200401	29.50	MANEVU2002	1.8288	0.0000	0.0058	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	031	2	10200602	29.50	MANEVU2002	3.8312	0.0000	0.0114	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	032	2	10200602	29.50	MANEVU2002	3.1721	0.0000	0.0010	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	032	1	10200401	29.50	MANEVU2002	1.1879	0.0000	0.0046	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	033	2	10200602	25.00	MANEVU2002	0.0005	0.0000	0.0000	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	033	1	10200401	25.00	MANEVU2002	4.0895	0.0000	0.0229	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	034	1	10200401	50.00	MANEVU2002	14.9819	0.0000	0.0362	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450021	034	2	10200602	50.00	MANEVU2002	3.5781	0.0000	0.0004	VILLANOVA UNIV/MAIN CAMPUS
PA	Delaware	42045	420450023	031	1	10200501	20.90	MANEVU2002	1.3300	0.0000	0.0013	SUNOCO PARTNERS MKT & TERM LP/FT MIFFLIN
PA	Delaware	42045	420450023	032	1	10200501	20.90	MANEVU2002	1.3300	0.0000	0.0013	SUNOCO PARTNERS MKT & TERM LP/FT MIFFLIN
PA	Delaware	42045	420450025	087	1	10200401	170.00	MANEVU2002	5.1118	0.0000	0.0000	SUNOCO INC (R&M)/MARCUS HOOK REFINERY
PA	Delaware	42045	420450025	087	2	10200701	170.00	MANEVU2002	24.7882	0.0000	0.0599	SUNOCO INC (R&M)/MARCUS HOOK REFINERY
PA	Delaware	42045	420450025	088	2	10200701	246.00	MANEVU2002	99.2000	0.0000	0.2834	SUNOCO INC (R&M)/MARCUS HOOK REFINERY
PA	Delaware	42045	420450025	089	1	10200701	245.00	MANEVU2002	103.6000	0.0000	0.1708	SUNOCO INC (R&M)/MARCUS HOOK REFINERY
PA	Delaware	42045	420450025	092	1	10200701	237.00	MANEVU2002	5.8000	0.0000	0.0064	SUNOCO INC (R&M)/MARCUS HOOK REFINERY
PA	Delaware	42045	420450029	031	1	10200401	26.50	MANEVU2002	2.8000	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	032	1	10200401	26.50	MANEVU2002	2.8000	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	033	2	10200602	42.00	MANEVU2002	2.1114	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	033	1	10200401	42.00	MANEVU2002	6.8886	0.0000	0.0522	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	035	1	10200401	86.00	MANEVU2002	28.5000	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	036	1	10200401	86.00	MANEVU2002	14.0000	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	037	1	10200401	35.70	MANEVU2002	12.4693	0.0000	0.0397	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	037	2	10200602	35.70	MANEVU2002	0.6307	0.0000	0.0011	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	039	2	10200602	42.00	MANEVU2002	0.6399	0.0000	0.0000	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450029	039	1	10200401	42.00	MANEVU2002	14.2601	0.0000	0.0658	BOEING ROTOCRAFT MANAGEMENT CENTER/RIDLEY
PA	Delaware	42045	420450030	031	1	10200401	180.00	MANEVU2002	67.2730	0.0000	0.0665	CONOCOPHILLIPS CO/TRAINER REF
PA	Delaware	42045	420450030	032	1	10200401	335.00	MANEVU2002	201.4200	0.0000	0.2877	CONOCOPHILLIPS CO/TRAINER REF
PA	Delaware	42045	420450030	033	1	10200701	335.00	MANEVU2002	57.4061	0.0000	0.2019	CONOCOPHILLIPS CO/TRAINER REF
PA	Delaware	42045	420450040	031	1	10200603	10.50	MANEVU2002	1.2700	0.0000	0.0001	FOAMEX LP/EDDYSTONE PLT

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PA	Delaware	42045	420450040	032	1	10200603	10.50	MANEVU2002	1.1450	0.0000	0.0008	FOAMEX LP/EDDYSTONE PLT
PA	Delaware	42045	420450040	033	1	10200504	18.80	MANEVU2002	0.0040	0.0000	0.0000	FOAMEX LP/EDDYSTONE PLT
PA	Delaware	42045	420450041	031	1	10300602	14.70	MANEVU2002	0.1964	0.0000	0.0004	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	031	2	10301002	14.70	MANEVU2002	0.0036	0.0000	0.0000	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	032	1	10300603	10.00	MANEVU2002	0.9915	0.0000	0.0028	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	032	2	10301002	10.00	MANEVU2002	0.0085	0.0000	0.0000	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	109	7	10300602	55.00	SCC Descriptio	1.8739	0.0000	0.0070	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	109	8	10301002	55.00	SCC Descriptio	0.0261	0.0000	0.0000	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	112	1	10300602	55.00	SCC Descriptio	5.1511	0.0000	0.0187	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450041	112	2	10301002	55.00	SCC Descriptio	0.0489	0.0000	0.0000	DEGUSSA CORP/CHESTER
PA	Delaware	42045	420450049	033	1	10200603	6.30	John Hulsberg	0.4000	0.0000	0.0010	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	051	1	10200602	25.10	MANEVU2002	1.4000	0.0000	0.0000	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	052	1	10200602	25.00	MANEVU2002	2.3000	0.0000	0.0000	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	102	3	10200603	5.00	SCC Descriptio	0.0089	0.0000	0.0000	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	109	1	10200603	5.00	SCC Descriptio	1.2000	0.0000	0.0033	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	110	1	10200602	55.00	SCC Descriptio	1.6000	0.0000	0.0044	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	111	1	10200602	55.00	SCC Descriptio	2.2000	0.0000	0.0056	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	112	1	10200602	55.00	SCC Descriptio	5.6000	0.0000	0.0142	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	C02	2	10300602	55.00	SCC Descriptio	0.0045	0.0000	0.0000	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450049	C05	1	10200601	150.00	SCC Descriptio	6.3000	0.0000	0.0145	CONGOLEUM CORP/TRAINER PLT
PA	Delaware	42045	420450170	031	2	10300603	25.10	MANEVU2002	0.3400	0.0000	0.0000	TAYLOR HOSP/RIDLEY PARK
PA	Delaware	42045	420450170	031	1	10300501	25.10	MANEVU2002	0.6460	0.0000	0.0008	TAYLOR HOSP/RIDLEY PARK
PA	Delaware	42045	420450215	031	2	10200602	55.00	SCC Descriptio	1.4300	0.0000	0.0000	PA DEPT OF CORR/CHESTER SCI
PA	Delaware	42045	420450215	031	1	10200501	55.00	SCC Descriptio	0.0060	0.0000	0.0000	PA DEPT OF CORR/CHESTER SCI
PA	Delaware	42045	420450215	032	2	10300602	55.00	SCC Descriptio	1.2150	0.0000	0.0000	PA DEPT OF CORR/CHESTER SCI
PA	Delaware	42045	420450215	032	1	10300501	55.00	SCC Descriptio	0.0023	0.0000	0.0000	PA DEPT OF CORR/CHESTER SCI
PA	Delaware	42045	420450623	031	1	10300603	9.00	MANEVU2002	3.5460	0.0000	0.0004	UNITED PARCEL SVC INC/PHILA AIR HUB
PA	Delaware	42045	420450661	104	1	10300603	6.30	MANEVU2002	0.9000	0.0000	0.0026	EPSILON PROD CO/PLANT 1 & 2
PA	Delaware	42045	420450838	017	2	10300603	10.00	MANEVU2002	0.7210	0.0000	0.0003	SWARTHMORE COLL/SWARTHMORE
PA	Delaware	42045	420450875	106	1	10200603	3.70	MANEVU2002	0.2100	0.0000	0.0000	FRANKLIN MINT/FRANKLIN CENTER
PA	Delaware	42045	420450903	031	1	10200603	4.20	MANEVU2002	0.6000	0.0000	0.0035	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	032	2	10200602	14.70	MANEVU2002	0.4000	0.0000	0.0001	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	033	2	10200602	14.70	MANEVU2002	0.8000	0.0000	0.0000	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	034	2	10200602	14.70	MANEVU2002	0.9000	0.0000	0.0000	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	035	1	10200501	1.60	MANEVU2002	0.1000	0.0000	0.0000	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	036	1	10200602	21.90	MANEVU2002	0.4000	0.0000	0.0001	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450903	038	1	10300602	7.80	MANEVU2002	0.1000	0.0000	0.0005	HAVERFORD COLL/HAVERFORD COLLEGE
PA	Delaware	42045	420450948	031	1	10200602	18.20	MANEVU2002	3.1400	0.0000	0.0069	RIDDLE MEM HOSP/BALT PIKE
PA	Delaware	42045	420450954	030	2	10200602	20.90	MANEVU2002	3.8843	0.0000	0.0102	JEFFERSON SMURFIT CO/ASTON CONTAINER DIV
PA	Delaware	42045	420450954	030	3	10200502	20.90	MANEVU2002	0.1098	0.0000	0.0000	JEFFERSON SMURFIT CO/ASTON CONTAINER DIV
PA	Delaware	42045	420450966	031	2	10300602	12.80	MANEVU2002	1.0500	0.0000	0.0000	DELAWARE CNTY MEM HOSP/DREXEL HILL
PA	Delaware	42045	420450966	032	1	10300603	7.30	MANEVU2002	0.5100	0.0000	0.0040	DELAWARE CNTY MEM HOSP/DREXEL HILL
PA	Delaware	42045	420450966	033	2	10300602	12.50	MANEVU2002	0.7900	0.0000	0.0004	DELAWARE CNTY MEM HOSP/DREXEL HILL
PA	Delaware	42045	420450985	01	1	10200602	55.00	SCC Descriptio	0.0136	0.0000	0.0000	LYONDELL CHEMICAL CO/NEWTOWN SQUARE
PA	Delaware	42045	420450985	01	2	10300501	55.00	SCC Descriptio	0.2264	0.0000	0.0000	LYONDELL CHEMICAL CO/NEWTOWN SQUARE
PA	Delaware	42045	420450985	031	2	10200602	34.00	MANEVU2002	2.9900	0.0000	0.0039	LYONDELL CHEMICAL CO/NEWTOWN SQUARE
PA	Delaware	42045	420450985	032	2	10200602	34.00	MANEVU2002	4.5000	0.0000	0.0054	LYONDELL CHEMICAL CO/NEWTOWN SQUARE
PA	Delaware	42045	420450985	033	1	10200501	34.00	MANEVU2002	0.0700	0.0000	0.0000	LYONDELL CHEMICAL CO/NEWTOWN SQUARE
PA	Delaware	42045	420451010	034	1	10200501	17.80	MANEVU2002	3.3000	0.0000	0.0029	PPL INTERSTATE ENERGY/MARCUS HOOK PUMP STATION
PA	Delaware	42045	420451042	031	2	10300602	50.40	MANEVU2002	3.0457	0.0000	0.0023	RUBENSTEIN CO LP/RADNOR
PA	Delaware	42045	420451042	032	2	10300602	33.40	MANEVU2002	2.4325	0.0000	0.0094	RUBENSTEIN CO LP/RADNOR
PA	Elk	42047	420470001	500	1	10200601	150.00	SCC Descriptio	5.5000	0.0000	0.0066	CARBONE AMER/BENZINGER TWP PLT

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PA	Elk	42047	420470004	002	1	10200602	31.00	John Hulsberg	6.2150	0.0000	0.0168	CG ELECTRODES LLC/ST MARYS
PA	Elk	42047	420470005	037A	1	10200601	530.00	MANEVU2002	26.4134	0.0000	0.0348	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	039	1	10200602	180.00	MANEVU2002	15.9700	0.0000	0.0246	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	040	3	10200601	249.90	MANEVU2002	16.6771	0.0000	0.0458	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	040	2	10200501	249.90	MANEVU2002	1.0987	0.0000	0.0034	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	040	1	10200202	249.90	MANEVU2002	435.2242	0.0000	1.1000	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	041	3	10200601	249.90	MANEVU2002	17.1138	0.0000	0.0470	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	041	2	10200501	249.90	MANEVU2002	2.3987	0.0000	0.0050	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470005	041	1	10200202	249.90	MANEVU2002	424.4875	0.0000	1.2128	WEYERHAEUSER/JOHNSONBURG MILL
PA	Elk	42047	420470173	C101	1	10200601	150.00	SCC Descriptio	7.5300	0.0000	0.0182	ONYX GREENTREE LANDFILL
PA	Elk	42047	420470546	C101	1	10300603	5.40	MANEVU2002	4.8000	0.0000	0.0000	METAL POWDER PROD/ST MARYS
PA	Elk	42047	420470546	P103	1	10300603	5.00	SCC Descriptio	1.5000	0.0000	0.0040	METAL POWDER PROD/ST MARYS
PA	Erie	42049	420490004	035	1	10200202	214.00	MANEVU2002	91.6993	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	035	2	10200601	214.00	MANEVU2002	10.0907	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	036	1	10200202	214.00	MANEVU2002	121.2079	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	036	2	10200601	214.00	MANEVU2002	10.5121	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	037	1	10200204	326.00	MANEVU2002	47.6521	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	037	2	10200901	326.00	MANEVU2002	7.7679	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490004	039	1	10200601	244.00	MANEVU2002	1.7100	0.0000	0.0000	INTL PAPER CO/ERIE MILL
PA	Erie	42049	420490007	203	1	10200802	0.00	MANEVU2002	1.1019	0.0000	0.0035	URICK FOUNDRY CO/ERIE
PA	Erie	42049	420490007	C203A	1	10200601	150.00	MANEVU2002	0.3500	0.0000	0.0009	URICK FOUNDRY CO/ERIE
PA	Erie	42049	420490009	031	1	10200204	217.00	MANEVU2002	256.1020	0.0000	0.7036	GE CO/ERIE PLT
PA	Erie	42049	420490009	033	1	10200204	145.20	MANEVU2002	162.6460	0.0000	0.2502	GE CO/ERIE PLT
PA	Erie	42049	420490009	035	1	10200204	241.00	MANEVU2002	271.1115	0.0000	0.4171	GE CO/ERIE PLT
PA	Erie	42049	420490010	031	1	10200903	20.70	MANEVU2002	4.0659	0.0000	0.0076	ETHAN ALLEN INC CHER/UNION CITY PLT
PA	Erie	42049	420490026	001	1	10200602	55.00	MANEVU2002	2.6761	0.0000	0.0112	ERIE WWTP
PA	Erie	42049	420490026	002	1	10200602	55.00	MANEVU2002	2.1300	0.0000	0.0000	ERIE WWTP
PA	Erie	42049	420490027	CU001	1	10200603	8.40	John Hulsberg	1.7000	0.0000	0.0044	ENGELHARD CORP/CALSICAT DIV ERIE
PA	Erie	42049	420490027	CU002	1	10200603	8.40	John Hulsberg	1.5700	0.0000	0.0040	ENGELHARD CORP/CALSICAT DIV ERIE
PA	Erie	42049	420490027	CU003	1	10200603	3.50	John Hulsberg	0.4000	0.0000	0.0010	ENGELHARD CORP/CALSICAT DIV ERIE
PA	Erie	42049	420490027	CU004	1	10200603	10.50	John Hulsberg	2.3200	0.0000	0.0060	ENGELHARD CORP/CALSICAT DIV ERIE
PA	Erie	42049	420490029	033	1	10200602	20.90	MANEVU2002	1.9500	0.0000	0.0054	LORD CORP/ERIE
PA	Erie	42049	420490029	034	1	10200602	20.90	MANEVU2002	2.1500	0.0000	0.0059	LORD CORP/ERIE
PA	Erie	42049	420490031	031	2	10200802	60.00	MANEVU2002	18.8653	0.0000	0.0394	ERIE COKE CORP/ERIE PLT
PA	Erie	42049	420490031	031	1	10200707	60.00	MANEVU2002	7.8947	0.0000	0.0078	ERIE COKE CORP/ERIE PLT
PA	Erie	42049	420490031	032	2	10200802	77.20	MANEVU2002	18.2604	0.0000	0.0582	ERIE COKE CORP/ERIE PLT
PA	Erie	42049	420490031	032	1	10200707	77.20	MANEVU2002	10.5896	0.0000	0.0384	ERIE COKE CORP/ERIE PLT
PA	Erie	42049	420490036	001	1	10200603	5.00	SCC Descriptio	1.6200	0.0000	0.0007	ERIE FORGE & STEEL/ERIE PLT
PA	Erie	42049	420490036	103	1	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0030	ERIE FORGE & STEEL/ERIE PLT
PA	Erie	42049	420490038	034	1	10200401	66.00	MANEVU2002	3.9700	0.0000	0.0000	QUIN T CORP/16TH ST PLT
PA	Erie	42049	420490040	031	1	10200603	0.10	MANEVU2002	0.1700	0.0000	0.0001	CORRY CONTRACT INC/CORRY
PA	Erie	42049	420490040	032	1	10200603	5.00	MANEVU2002	0.4700	0.0000	0.0000	CORRY CONTRACT INC/CORRY
PA	Erie	42049	420490040	104	1	10200603	5.00	SCC Descriptio	0.1900	0.0000	0.0004	CORRY CONTRACT INC/CORRY
PA	Erie	42049	420490040	109	1	10200603	5.00	SCC Descriptio	0.1100	0.0000	0.0001	CORRY CONTRACT INC/CORRY
PA	Erie	42049	420490045	107	1	10200602	55.00	SCC Descriptio	4.9416	0.0000	0.0136	CORRY FORGE CO/CORRY
PA	Erie	42049	420490045	108	1	10200602	55.00	SCC Descriptio	0.0073	0.0000	0.0000	CORRY FORGE CO/CORRY
PA	Erie	42049	420490045	706	1	10200602	55.00	SCC Descriptio	0.0018	0.0000	0.0000	CORRY FORGE CO/CORRY
PA	Erie	42049	420490090	BLR01	1	10200603	5.00	MANEVU2002	0.2100	0.0000	0.0006	INSUL BOARD/ERIE
PA	Erie	42049	420490153	031	1	10300602	33.40	MANEVU2002	0.0033	0.0000	0.0000	PA DEPT OF CORR/ALBION SCI
PA	Erie	42049	420490153	035	1	10300603	8.20	MANEVU2002	0.0008	0.0000	0.0000	PA DEPT OF CORR/ALBION SCI
PA	Erie	42049	420490154	001	1	10200603	2.50	MANEVU2002	0.1600	0.0000	0.0004	APW ERIE/ERIE
PA	Erie	42049	420490503	B01	1	10200603	15.60	MANEVU2002	1.0900	0.0000	0.0019	MOLDED FIBERGLASS CO/UNION CITY

									2002 NOx Emissions			
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PA	Erie	42049	420490503	BO2	1	10200603	1.80	MANEVU2002	0.6600	0.0000	0.0009	MOLDED FIBERGLASS CO/UNION CITY
PA	Erie	42049	420490508	031	1	10200603	4.20	MANEVU2002	0.3000	0.0000	0.0005	HAYSITE REINFORCED PLASTICS/ERIE
PA	Erie	42049	420490508	032	1	10200603	4.40	MANEVU2002	0.3000	0.0000	0.0005	HAYSITE REINFORCED PLASTICS/ERIE
PA	Erie	42049	420490509	001	1	10200603	37.00	MANEVU2002	2.5200	0.0000	0.0006	FOAMEX LP/CORRY
PA	Erie	42049	420490514	AIRMU	1	10200603	5.00	SCC Descriptio	0.5200	0.0000	0.0000	ASSOC SPRING BARNES /CORRY DIV
PA	Erie	42049	420490514	BLR01	1	10200603	5.00	SCC Descriptio	0.2500	0.0000	0.0000	ASSOC SPRING BARNES /CORRY DIV
PA	Erie	42049	420490514	BLR02	1	10200603	8.00	MANEVU2002	0.2500	0.0000	0.0000	ASSOC SPRING BARNES /CORRY DIV
PA	Erie	42049	420490514	BLR03	1	10200603	5.00	SCC Descriptio	0.4800	0.0000	0.0013	ASSOC SPRING BARNES /CORRY DIV
PA	Erie	42049	420490514	OVENS	1	10200603	5.00	SCC Descriptio	0.7800	0.0000	0.0021	ASSOC SPRING BARNES /CORRY DIV
PA	Erie	42049	420490664	BLRA6	1	10200603	8.40	MANEVU2002	1.0900	0.0000	0.0024	FOAM FABRICATORS INC/ERIE
PA	Erie	42049	420490877	031	1	10200602	20.90	MANEVU2002	3.7760	0.0000	0.0062	HAMOT MED CTR/HAMOT MEDICAL CENTER
PA	Erie	42049	420490995	031	1	10200906	3.40	MANEVU2002	0.0776	0.0000	0.0001	LOGER IND INC/LAKE CITY PLT
PA	Fayette	42051	420510020	108	1	10200602	16.00	MANEVU2002	0.9600	0.0000	0.0027	ANCHOR GLASS CONTAINER/PLT 5
PA	Fayette	42051	420510020	109	1	10200603	5.00	SCC Descriptio	1.2500	0.0000	0.0041	ANCHOR GLASS CONTAINER/PLT 5
PA	Fayette	42051	420510020	110	1	10200603	5.00	SCC Descriptio	1.7940	0.0000	0.0049	ANCHOR GLASS CONTAINER/PLT 5
PA	Fayette	42051	420510020	111	1	10200603	5.00	SCC Descriptio	0.9000	0.0000	0.0033	ANCHOR GLASS CONTAINER/PLT 5
PA	Fayette	42051	420510072	032	1	10200602	10.00	MANEVU2002	1.2265	0.0000	0.0000	CROWN CORK & SEAL CO/SOUTH CONNELLSVILLE
PA	Fayette	42051	420510072	033	1	10200603	5.00	MANEVU2002	0.5480	0.0000	0.0020	CROWN CORK & SEAL CO/SOUTH CONNELLSVILLE
PA	Fayette	42051	420510167	031	1	10300603	5.00	SCC Descriptio	0.2500	0.0000	0.0002	DOMINION TRANS INC/NORTH SUMMIT
PA	Fayette	42051	420510167	032	1	10200603	10.50	MANEVU2002	5.4000	0.0000	0.0154	DOMINION TRANS INC/NORTH SUMMIT
PA	Franklin	42055	420550006	052	1	10300501	5.00	MANEVU2002	0.2620	0.0000	0.0000	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	053	1	10300501	5.00	MANEVU2002	0.1510	0.0000	0.0000	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	060	1	10300501	32.00	MANEVU2002	3.7610	0.0000	0.0000	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	061	1	10300501	32.00	MANEVU2002	3.7610	0.0000	0.0000	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	062	1	10300501	16.70	MANEVU2002	1.4190	0.0000	0.0156	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	073	1	10300501	4.30	MANEVU2002	0.4060	0.0000	0.0000	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550006	099	1	10300501	8.00	MANEVU2002	6.1630	0.0000	0.0007	US DEPT OF DEFENSE/LETTERKENNY ARMY DEPOT
PA	Franklin	42055	420550013	101	1	10200603	5.00	MANEVU2002	0.0217	0.0000	0.0000	CASTING TECH INC/WAYNESBORO
PA	Franklin	42055	420550016	033	1	10200602	21.00	MANEVU2002	2.0000	0.0000	0.0022	UNOVA IND AUTOMATION/LANDIS GARDNER DIV
PA	Franklin	42055	420550016	034	1	10200602	20.90	MANEVU2002	2.0000	0.0000	0.0022	UNOVA IND AUTOMATION/LANDIS GARDNER DIV
PA	Franklin	42055	420550018	031	1	10200602	16.80	MANEVU2002	1.4670	0.0000	0.0003	YORK REFRIG (FRICK)/WAYNESBORO
PA	Franklin	42055	420550018	032	1	10200602	10.50	MANEVU2002	0.2670	0.0000	0.0000	YORK REFRIG (FRICK)/WAYNESBORO
PA	Fulton	42057	420570001	031	1	10300603	29.60	MANEVU2002	4.1880	0.0000	0.0060	JLG IND/MCCONNELLSBURG
PA	Fulton	42057	420570001	130	1	10300501	0.00		0.1090	0.0000	0.0000	JLG IND/MCCONNELLSBURG
PA	Greene	42059	420590021	034	1	10200603	0.50	MANEVU2002	0.2000	0.0000	0.0005	DOMINION TRANS INC/CRAYNE STA
PA	Greene	42059	420590484	031	1	10200603	1.50	MANEVU2002	1.7000	0.0000	0.0026	KYOWA AMER CORP/WAYNESBURG PLT
PA	Greene	42059	420590634	031	1	10200602	21.00	MANEVU2002	4.3000	0.0000	0.0000	CONSOL COAL CO/ROBENA PREP PLT
PA	Huntingdon	42061	420610010	104	1	10300602	55.00	SCC Descriptio	6.5800	0.0000	0.0163	US SILICA/MAPLETON DEPOT PLT
PA	Huntingdon	42061	420610012	031	1	10200206	25.60	MANEVU2002	7.6100	0.0000	0.0318	PA DEPT OF CORR/HUNTINGDON SCI
PA	Huntingdon	42061	420610012	032	1	10200206	25.60	MANEVU2002	9.3500	0.0000	0.0144	PA DEPT OF CORR/HUNTINGDON SCI
PA	Huntingdon	42061	420610012	034	1	10200206	38.50	MANEVU2002	10.3600	0.0000	0.0011	PA DEPT OF CORR/HUNTINGDON SCI
PA	Huntingdon	42061	420610014	031	2	10300602	12.50	MANEVU2002	0.6900	0.0000	0.0005	CONTAINMENT SOLUTIONS/MT UNION PLT
PA	Huntingdon	42061	420610014	032	2	10300602	12.50	MANEVU2002	0.7200	0.0000	0.0011	CONTAINMENT SOLUTIONS/MT UNION PLT
PA	Huntingdon	42061	420610015	031	1	10200206	17.50	MANEVU2002	2.9300	0.0000	0.0000	PA DEPT OF CORR/SMITHFIELD SCI
PA	Huntingdon	42061	420610015	032	1	10200206	17.50	MANEVU2002	1.3900	0.0000	0.0000	PA DEPT OF CORR/SMITHFIELD SCI
PA	Huntingdon	42061	420610015	033	1	10200206	17.50	MANEVU2002	6.3300	0.0000	0.0313	PA DEPT OF CORR/SMITHFIELD SCI
PA	Huntingdon	42061	420610016	031	1	10200602	18.50	John Hulsberg	1.4000	0.0000	0.0038	AGY HUNTINGDON LLC/HUNTINGDON
PA	Huntingdon	42061	420610016	032	1	10200602	18.50	John Hulsberg	1.3000	0.0000	0.0035	AGY HUNTINGDON LLC/HUNTINGDON
PA	Huntingdon	42061	420610032	101	1	10200602	55.00	SCC Descriptio	0.7310	0.0000	0.0020	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	101	5	10200602	55.00	SCC Descriptio	0.7310	0.0000	0.0020	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	101	3	10200602	55.00	SCC Descriptio	0.2380	0.0000	0.0006	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	102	1	10200602	55.00	SCC Descriptio	0.6450	0.0000	0.0017	OWENS CORNING/HUNTINGDON MAT PLANT

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PA	Huntingdon	42061	420610032	102	5	10200602	55.00	SCC Descriptio	0.6450	0.0000	0.0017	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	102	3	10200602	55.00	SCC Descriptio	0.2100	0.0000	0.0006	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	103	1	10200602	55.00	SCC Descriptio	1.8460	0.0000	0.0050	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610032	103	3	10200602	55.00	SCC Descriptio	0.7540	0.0000	0.0020	OWENS CORNING/HUNTINGDON MAT PLANT
PA	Huntingdon	42061	420610466	001	2	10200501	2.10	MANEVU2002	0.3800	0.0000	0.0004	MEADWESTVACO/BLAIR PLT ALEXANDRIA
PA	Indiana	42063	420630014	031	1	10200603	70.00	MANEVU2002	15.0600	0.0000	0.0397	SPECIALTY TIRES AMER/INDIANA PLT
PA	Indiana	42063	420630018	039	3	10300602	30.10	MANEVU2002	0.1320	0.0000	0.0000	PA STATE SYS OF HIGHER ED/INDIANA UNIV
PA	Indiana	42063	420630018	040	3	10300602	30.10	MANEVU2002	0.2040	0.0000	0.0000	PA STATE SYS OF HIGHER ED/INDIANA UNIV
PA	Indiana	42063	420630027	031	1	10300603	5.00	SCC Descriptio	0.0353	0.0000	0.0001	DOMINION TRANS INC/ROCHESTER MILLS
PA	Indiana	42063	420630027	031	2	10300603	5.00	SCC Descriptio	0.0353	0.0000	0.0001	DOMINION TRANS INC/ROCHESTER MILLS
PA	Indiana	42063	420630074	031	1	10300603	0.30	MANEVU2002	0.0567	0.0000	0.0002	DOMINION TRANS INC/CHERRY TREE STA
PA	Indiana	42063	420630074	031	2	10300603	0.30	MANEVU2002	0.0567	0.0000	0.0002	DOMINION TRANS INC/CHERRY TREE STA
PA	Indiana	42063	420630094	031	1	10300603	5.00	SCC Descriptio	0.0181	0.0000	0.0001	SOMERSET GAS TRANS/COOKPORT STATION AEP
PA	Indiana	42063	420630094	031	2	10300603	5.00	SCC Descriptio	0.0181	0.0000	0.0001	SOMERSET GAS TRANS/COOKPORT STATION AEP
PA	Jefferson	42065	420650001	106	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0011	NAC CARBON PRODUCTS INC/PUNXSUTAWNEY
PA	Jefferson	42065	420650001	128	1	10300602	55.00	SCC Descriptio	0.4000	0.0000	0.0011	NAC CARBON PRODUCTS INC/PUNXSUTAWNEY
PA	Jefferson	42065	420650007	031	1	10200602	10.00	MANEVU2002	1.2000	0.0000	0.0000	OWENS BROCKWAY GLASS/CRENSHAW
PA	Jefferson	42065	420650032	034	1	10300603	5.50	MANEVU2002	0.6000	0.0000	0.0003	DOMINION TRANS INC/PUNXSUTAWNEY
PA	Jefferson	42065	420650041	134	1	10300603	5.00	SCC Descriptio	0.2000	0.0000	0.0005	DOMINION TRANS INC/STONEY RUN
PA	Jefferson	42065	420650520	032	1	10200603	5.00	SCC Descriptio	0.2995	0.0000	0.0008	BROOKVILLE WOOD PROD/BROOKVILLE
PA	Jefferson	42065	420650520	033	1	10200603	5.00	SCC Descriptio	0.6480	0.0000	0.0018	BROOKVILLE WOOD PROD/BROOKVILLE
PA	Jefferson	42065	420650535	031	1	10200603	5.00	SCC Descriptio	1.3420	0.0000	0.0031	HUNTINGTON FOAM CORP/BROCKWAY
PA	Juniata	42067	420670002	031	1	10301002	0.00		2.7000	0.0000	0.0021	ARMSTRONG CABINET PROD/THOMPSONTOWN
PA	Lackawanna	42069	420690010	031	1	10200602	18.00	John Hulsberg	1.1635	0.0000	0.0031	CHAMBERLAIN MFG CORP/SCRANTON
PA	Lackawanna	42069	420690010	032	1	10200602	18.00	John Hulsberg	0.6075	0.0000	0.0016	CHAMBERLAIN MFG CORP/SCRANTON
PA	Lackawanna	42069	420690010	033	1	10200602	34.00	John Hulsberg	0.9325	0.0000	0.0025	CHAMBERLAIN MFG CORP/SCRANTON
PA	Lackawanna	42069	420690022	G04	1	10300503	9.20	MANEVU2002	0.7750	0.0000	0.0000	PEI POWER CORP/ARCHBALD
PA	Lackawanna	42069	420690022	G04	2	10300503	9.20	MANEVU2002	0.7750	0.0000	0.0000	PEI POWER CORP/ARCHBALD
PA	Lackawanna	42069	420690029	B031	2	10200602	19.40	MANEVU2002	2.6100	0.0000	0.0052	GENTEX CORP/SIMPSON PROT CLOTHING
PA	Lackawanna	42069	420690029	B032	2	10200602	19.40	MANEVU2002	2.6100	0.0000	0.0052	GENTEX CORP/SIMPSON PROT CLOTHING
PA	Lackawanna	42069	420690032	031	2	10300602	42.00	MANEVU2002	14.8772	0.0000	0.1635	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690032	031	1	10300401	42.00	MANEVU2002	0.0228	0.0000	0.0001	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690032	032	2	10300602	42.00	MANEVU2002	12.9895	0.0000	0.1427	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690032	032	1	10300401	42.00	MANEVU2002	0.0105	0.0000	0.0000	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690032	033	1	10200602	15.00	MANEVU2002	5.9900	0.0000	0.0165	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690032	034	1	10300602	14.00	MANEVU2002	5.8200	0.0000	0.0141	CASCADES TISSUE GRP PA INC/RANSOM PLT
PA	Lackawanna	42069	420690092	031	1	10300602	60.30	MANEVU2002	3.0800	0.0000	0.0058	MOSES TAYLOR HOSP/SCRANTON
PA	Lackawanna	42069	420690096	031	1	10200602	12.50	MANEVU2002	0.2659	0.0000	0.0002	SANDVIK MATERIALS TECHNOLOGY/ SCOTT TWP
PA	Lackawanna	42069	420690096	032	1	10200602	12.50	MANEVU2002	2.8250	0.0000	0.0087	SANDVIK MATERIALS TECHNOLOGY/ SCOTT TWP
PA	Lackawanna	42069	420690125	032	1	10300602	25.20	MANEVU2002	1.3699	0.0000	0.0039	POLY HI SOLIDUR INC/SCRANTON PLT LAUREL LINE
PA	Lackawanna	42069	420690125	033	1	10300602	25.20	MANEVU2002	1.4973	0.0000	0.0043	POLY HI SOLIDUR INC/SCRANTON PLT LAUREL LINE
PA	Lackawanna	42069	420690205	031	1	10300102	24.60	MANEVU2002	7.1000	0.0000	0.0008	PA DPW/CLARKS SUMMIT STATE HOSP
PA	Lackawanna	42069	420690205	032	1	10300102	24.60	MANEVU2002	8.8245	0.0000	0.0000	PA DPW/CLARKS SUMMIT STATE HOSP
PA	Lackawanna	42069	420690208	031	1	10200602	41.80	MANEVU2002	1.6900	0.0000	0.0000	COMM CTL ENERGY CORP/BOILER HOUSE AT SCRANTON HIGH
PA	Lackawanna	42069	420690208	032	1	10200602	50.40	MANEVU2002	0.1900	0.0000	0.0000	COMM CTL ENERGY CORP/BOILER HOUSE AT SCRANTON HIGH
PA	Lackawanna	42069	420690618	032	1	10300603	9.80	MANEVU2002	0.1598	0.0000	0.0002	GLOBAL METALFORM/DAVIS ST PLT
PA	Lackawanna	42069	420690618	461618	1	10300603	9.90	MANEVU2002	0.3200	0.0000	0.0005	GLOBAL METALFORM/DAVIS ST PLT
PA	Lackawanna	42069	420690678	031	1	10300602	10.50	MANEVU2002	0.2250	0.0000	0.0000	CINRAM MFG INC/OLYPHANT
PA	Lackawanna	42069	420690678	032	1	10300602	12.60	MANEVU2002	0.3100	0.0000	0.0000	CINRAM MFG INC/OLYPHANT
PA	Lackawanna	42069	420690678	034	1	10300603	2.20	MANEVU2002	0.0575	0.0000	0.0000	CINRAM MFG INC/OLYPHANT
PA	Lackawanna	42069	420690678	035	1	10300603	2.20	MANEVU2002	0.0575	0.0000	0.0000	CINRAM MFG INC/OLYPHANT
PA	Lackawanna	42069	420690678	036	1	10300603	3.00	MANEVU2002	0.0775	0.0000	0.0000	CINRAM MFG INC/OLYPHANT

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PA	Lackawanna	42069	420690686	032	1	10200603	8.40	MANEVU2002	0.7800	0.0000	0.0015	METSO PAPER USA INC/SERVICE CENTER
PA	Lackawanna	42069	420690718	CU031	2	10200601	58.30	MANEVU2002	1.0790	0.0000	0.0011	THOMSON NO 1 LLC/SCRANTON DUNMORE FACILITY
PA	Lackawanna	42069	420690718	CU031	3	10200501	58.30	MANEVU2002	0.0030	0.0000	0.0000	THOMSON NO 1 LLC/SCRANTON DUNMORE FACILITY
PA	Lackawanna	42069	420690718	CU032	1	10200602	58.30	MANEVU2002	1.0820	0.0000	0.0019	THOMSON NO 1 LLC/SCRANTON DUNMORE FACILITY
PA	Lackawanna	42069	420690765	476571	2	10300602	35.70	MANEVU2002	5.2380	0.0000	0.0144	MERCY HOSP/SCRANTON
PA	Lackawanna	42069	420690765	476571	1	10300501	35.70	MANEVU2002	0.2520	0.0000	0.0005	MERCY HOSP/SCRANTON
PA	Lackawanna	42069	420692011	106	1	10200603	3.50	MANEVU2002	0.1662	0.0000	0.0001	EUREKA SECURITY PRIN/JESSUP
PA	Lackawanna	42069	420692115	032	1	10200602	25.00	MANEVU2002	1.6787	0.0000	0.0044	POLY HI SOLIDUR INC/KEYSER VLY CTR
PA	Lancaster	42071	420710014	031	2	10200602	91.40	John Hulsberg	6.3141	0.0000	0.0162	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	031	1	10200501	91.40	John Hulsberg	0.0109	0.0000	0.0000	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	032	2	10200602	78.50	MANEVU2002	2.5844	0.0000	0.0009	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	032	3	10200501	78.50	MANEVU2002	4.1996	0.0000	0.0000	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	033	2	10200602	14.30	MANEVU2002	2.4527	0.0000	0.0067	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	033	1	10200501	14.30	MANEVU2002	0.0033	0.0000	0.0000	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710014	034	1	10200602	55.00	SCC Descriptio	0.9450	0.0000	0.0030	MASTERFOODS USA DIV OF MARS INC/ELIZABETHTOWN CANDY PLT
PA	Lancaster	42071	420710035	031	1	10200601	185.00	John Hulsberg	1.4000	0.0000	0.0039	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	032	1	10200104	200.00	John Hulsberg	101.6000	0.0000	0.2791	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	033	3	10200601	215.00	John Hulsberg	0.2000	0.0000	0.0006	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	035	1	10200603	6.00	MANEVU2002	0.2000	0.0000	0.0006	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	036	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0013	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	341	1	10200602	55.00	SCC Descriptio	0.1000	0.0000	0.0003	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	351	2	10200603	5.00	SCC Descriptio	2.6000	0.0000	0.0067	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	360	1	10200603	5.00	SCC Descriptio	0.0190	0.0000	0.0000	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	430	1	10200603	5.00	SCC Descriptio	0.0415	0.0000	0.0001	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	540	2	10200603	5.00	SCC Descriptio	0.0305	0.0000	0.0001	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	541	2	10200603	5.00	SCC Descriptio	0.0305	0.0000	0.0001	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	550	1	10200603	5.00	SCC Descriptio	0.2000	0.0000	0.0005	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	610	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0010	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	620	1	10200603	5.00	SCC Descriptio	1.0890	0.0000	0.0028	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	620	3	10200603	5.00	SCC Descriptio	0.0110	0.0000	0.0000	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	630	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0010	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	C310	1	10200603	5.00	SCC Descriptio	2.5000	0.0000	0.0064	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	C340	1	10200602	55.00	SCC Descriptio	0.9000	0.0000	0.0024	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710035	C350	1	10200602	55.00	SCC Descriptio	1.3000	0.0000	0.0035	ARMSTRONG WORLD IND /FLOOR PLT
PA	Lancaster	42071	420710036	102A	1	10200602	55.00	SCC Descriptio	4.4154	0.0000	0.0116	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	102A	3	10200602	55.00	SCC Descriptio	2.2077	0.0000	0.0058	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	104	1	10200602	55.00	SCC Descriptio	23.4950	0.0000	0.0635	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	104	2	10200602	55.00	SCC Descriptio	23.4950	0.0000	0.0635	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	250	1	10200602	55.00	SCC Descriptio	5.4100	0.0000	0.0146	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	251	1	10200602	55.00	SCC Descriptio	4.4300	0.0000	0.0120	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	485	1	10200602	55.00	SCC Descriptio	0.7100	0.0000	0.0019	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710036	504	1	10200602	55.00	SCC Descriptio	0.9900	0.0000	0.0026	ARMSTRONG WORLD IND /MARIETTA CEILING PLT
PA	Lancaster	42071	420710037	031	1	10300208	19.00	MANEVU2002	7.5140	0.0000	0.0066	MASONIC HOMES/ELIZABETHTOWN
PA	Lancaster	42071	420710037	032	1	10300208	19.00	MANEVU2002	2.2940	0.0000	0.0000	MASONIC HOMES/ELIZABETHTOWN
PA	Lancaster	42071	420710037	033	1	10300208	12.40	MANEVU2002	1.9760	0.0000	0.0000	MASONIC HOMES/ELIZABETHTOWN
PA	Lancaster	42071	420710037	034	1	10300602	12.60	MANEVU2002	0.4099	0.0000	0.0012	MASONIC HOMES/ELIZABETHTOWN
PA	Lancaster	42071	420710056	1001	1	10300603	5.00	SCC Descriptio	0.0438	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	1001	3	10300603	5.00	SCC Descriptio	0.0219	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	1001	5	10300603	5.00	SCC Descriptio	0.0219	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	101	1	10300225	150.00	SCC Descriptio	20.0327	0.0000	0.0484	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	101	2	10300601	150.00	SCC Descriptio	0.1673	0.0000	0.0004	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	1011	1	10300603	5.00	SCC Descriptio	0.0298	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Lancaster	42071	420710056	1011	3	10300603	5.00	SCC Descriptio	0.0289	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	1011	5	10300603	5.00	SCC Descriptio	0.0289	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	134	1	10200603	5.00	SCC Descriptio	0.6000	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	135	1	10200501	0.00		0.1000	0.0000	0.0002	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	136A	1	10300501	0.00		0.0033	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	621	1	10300603	5.00	SCC Descriptio	0.0114	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	621	3	10300603	5.00	SCC Descriptio	0.0114	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	621	5	10300603	5.00	SCC Descriptio	0.0114	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	621	7	10300603	5.00	SCC Descriptio	0.0114	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	631	1	10300603	5.00	SCC Descriptio	0.0177	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	631	3	10300603	5.00	SCC Descriptio	0.0177	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	631	5	10300603	5.00	SCC Descriptio	0.0177	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	631	7	10300603	5.00	SCC Descriptio	0.0177	0.0000	0.0000	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	902	11	10300603	5.00	SCC Descriptio	0.0408	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	902	14	10300603	5.00	SCC Descriptio	0.0408	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	902	2	10300603	5.00	SCC Descriptio	0.0408	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	902	5	10300603	5.00	SCC Descriptio	0.0408	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710056	902	8	10300603	5.00	SCC Descriptio	0.0408	0.0000	0.0001	LANCASTER MALLEABLE /MANHEIM-KELLER
PA	Lancaster	42071	420710066	033	1	10200603	2.90	MANEVU2002	0.4200	0.0000	0.0012	ANVIL INTL INC/COLUMBIA FKA GRINNELL
PA	Lancaster	42071	420710066	034	1	10200602	55.00	SCC Descriptio	11.7500	0.0000	0.0220	ANVIL INTL INC/COLUMBIA FKA GRINNELL
PA	Lancaster	42071	420710066	202	1	10200602	25.10	MANEVU2002	0.0100	0.0000	0.0000	ANVIL INTL INC/COLUMBIA FKA GRINNELL
PA	Lancaster	42071	420710071	133	1	10200602	55.00	MANEVU2002	9.9700	0.0000	0.0252	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	133	3	10200602	55.00	MANEVU2002	9.9700	0.0000	0.0252	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	134	1	10200602	55.00	MANEVU2002	10.2950	0.0000	0.0249	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	134	3	10200602	55.00	MANEVU2002	10.2950	0.0000	0.0249	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	137	1	10200602	55.00	MANEVU2002	7.4850	0.0000	0.0230	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	137	3	10200602	55.00	MANEVU2002	7.4850	0.0000	0.0230	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	139	1	10200602	55.00	MANEVU2002	7.6500	0.0000	0.0202	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	139	3	10200602	55.00	MANEVU2002	7.6500	0.0000	0.0202	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	143	1	10200603	5.00	MANEVU2002	8.4000	0.0000	0.0249	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	144	1	10200603	5.00	MANEVU2002	10.1900	0.0000	0.0246	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	149	1	10200603	5.00	MANEVU2002	22.3500	0.0000	0.0639	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	150	1	10200603	5.00	MANEVU2002	16.0000	0.0000	0.0422	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	151	1	10200602	55.00	MANEVU2002	14.3010	0.0000	0.0314	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	151	3	10200602	55.00	MANEVU2002	1.5890	0.0000	0.0035	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	152	1	10200603	5.00	SCC Descriptio	1.9900	0.0000	0.0033	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	153	3	10200603	5.00	SCC Descriptio	0.8600	0.0000	0.0036	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	C01	1	10200603	10.80	MANEVU2002	4.5800	0.0000	0.0126	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	P103	1	10200603	5.00	SCC Descriptio	2.4700	0.0000	0.0057	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	P201	1	10200603	5.00	SCC Descriptio	0.9800	0.0000	0.0016	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	P202	1	10200603	5.00	SCC Descriptio	0.4400	0.0000	0.0019	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	P203	1	10200603	5.00	SCC Descriptio	1.1900	0.0000	0.0030	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710071	P701	1	10200603	5.00	SCC Descriptio	0.6700	0.0000	0.0015	ALUMAX MILL PROD INC/MILL PROD
PA	Lancaster	42071	420710073	039	1	10200602	25.00	MANEVU2002	0.0759	0.0000	0.0001	CNH AMERICA/NEW HOLLAND
PA	Lancaster	42071	420710073	039	2	10201002	25.00	MANEVU2002	0.0041	0.0000	0.0000	CNH AMERICA/NEW HOLLAND
PA	Lancaster	42071	420710073	049	1	10200602	25.00	MANEVU2002	3.8168	0.0000	0.0042	CNH AMERICA/NEW HOLLAND
PA	Lancaster	42071	420710073	049	2	10201002	25.00	MANEVU2002	0.0732	0.0000	0.0002	CNH AMERICA/NEW HOLLAND
PA	Lancaster	42071	420710074	033	1	10200104	45.00	MANEVU2002	1.5400	0.0000	0.0000	BURLE IND INC/LANCASTER
PA	Lancaster	42071	420710074	034	2	10200602	45.00	MANEVU2002	8.4500	0.0000	0.0158	BURLE IND INC/LANCASTER
PA	Lancaster	42071	420710079	099	1	10301002	0.00		1.3000	0.0000	0.0009	RUTT HANDCRAFTED CABINETRY LLC/EAST EARL
PA	Lancaster	42071	420710080	030	1	10200602	25.10	MANEVU2002	5.4600	0.0000	0.0162	RR DONNELLEY & SONS CO/NORTHEASTERN DIV LANCASTER EAST
PA	Lancaster	42071	420710080	C100	1	10200603	5.00	MANEVU2002	2.3900	0.0000	0.0071	RR DONNELLEY & SONS CO/NORTHEASTERN DIV LANCASTER EAST

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PA	Lancaster	42071	420710084	031	1	10200602	34.00	MANEVU2002	1.1200	0.0000	0.0028	BOLLMAN HAT CO/MAIN ST FACILITY
PA	Lancaster	42071	420710084	032	1	10200602	51.30	MANEVU2002	1.3300	0.0000	0.0025	BOLLMAN HAT CO/MAIN ST FACILITY
PA	Lancaster	42071	420710086	100	1	10300603	5.00	SCC Descriptio	8.4200	0.0000	0.0028	HIGH STEEL STRUCTURES/LANCASTER FACILITY
PA	Lancaster	42071	420710087	031	1	10200602	25.10	MANEVU2002	8.9429	0.0000	0.0246	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	031	2	10200501	25.10	MANEVU2002	0.2271	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	032	1	10200602	25.10	MANEVU2002	8.9429	0.0000	0.0246	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	032	2	10200501	25.10	MANEVU2002	0.2271	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	033	1	10200602	25.10	MANEVU2002	8.9429	0.0000	0.0246	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	033	2	10200501	25.10	MANEVU2002	0.2271	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	034	1	10200602	29.30	MANEVU2002	8.9324	0.0000	0.0245	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	034	2	10200501	29.30	MANEVU2002	0.2376	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	035	1	10200602	12.50	MANEVU2002	2.0800	0.0000	0.0055	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	036	1	10200602	12.50	MANEVU2002	2.0800	0.0000	0.0053	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	037	1	10200602	29.30	MANEVU2002	8.1168	0.0000	0.0223	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	037	2	10200501	29.30	MANEVU2002	0.2032	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	038	1	10200602	29.30	MANEVU2002	8.1168	0.0000	0.0223	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	038	2	10200501	29.30	MANEVU2002	0.2032	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	039	1	10200602	29.30	MANEVU2002	8.1168	0.0000	0.0223	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	039	2	10200501	29.30	MANEVU2002	0.2032	0.0000	0.0000	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	040	1	10200602	55.00	SCC Descriptio	0.3200	0.0000	0.0005	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	041	1	10200602	55.00	SCC Descriptio	0.3500	0.0000	0.0015	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	042	1	10200501	0.00		0.0203	0.0000	0.0001	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	C301	1	10200602	55.00	SCC Descriptio	1.6100	0.0000	0.0041	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710087	C401	1	10200602	55.00	SCC Descriptio	1.6100	0.0000	0.0041	DART CONTAINER CORP/LEOLA
PA	Lancaster	42071	420710089	031	1	10200602	1.70	MANEVU2002	0.1000	0.0000	0.0000	HERITAGE CUSTOM CABI/NEW HOLLAND
PA	Lancaster	42071	420710089	075	1	10200603	5.00	SCC Descriptio	0.0034	0.0000	0.0000	HERITAGE CUSTOM CABI/NEW HOLLAND
PA	Lancaster	42071	420710089	100	1	10200603	5.00	MANEVU2002	0.0123	0.0000	0.0000	HERITAGE CUSTOM CABI/NEW HOLLAND
PA	Lancaster	42071	420710089	110	1	10200603	5.00	SCC Descriptio	0.3000	0.0000	0.0001	HERITAGE CUSTOM CABI/NEW HOLLAND
PA	Lancaster	42071	420710091	031	1	10300501	5.00	SCC Descriptio	0.1732	0.0000	0.0000	VERSATEK ENT LLC/LITITZ
PA	Lancaster	42071	420710091	031	2	10300603	5.00	SCC Descriptio	0.0328	0.0000	0.0000	VERSATEK ENT LLC/LITITZ
PA	Lancaster	42071	420710092	BC04	1	10200603	43.60	MANEVU2002	0.0420	0.0000	0.0001	QUALITY CUSTOM CABIN/EARL
PA	Lancaster	42071	420710092	BC07	1	10200603	0.70	MANEVU2002	0.0420	0.0000	0.0001	QUALITY CUSTOM CABIN/EARL
PA	Lancaster	42071	420710092	BC11	1	10200603	0.70	MANEVU2002	0.3750	0.0000	0.0010	QUALITY CUSTOM CABIN/EARL
PA	Lancaster	42071	420710094	031	1	10200602	6.30	MANEVU2002	0.6000	0.0000	0.0015	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	032	1	10200602	6.30	MANEVU2002	0.6000	0.0000	0.0015	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	033	1	10200602	6.00	MANEVU2002	0.5000	0.0000	0.0012	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	101	1	10200602	55.00	MANEVU2002	0.5000	0.0000	0.0012	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	102	1	10200602	55.00	MANEVU2002	0.5000	0.0000	0.0012	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	103	1	10200602	55.00	MANEVU2002	0.5000	0.0000	0.0012	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	C01	1	10200602	55.00	MANEVU2002	0.4000	0.0000	0.0010	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	C02	1	10200602	55.00	MANEVU2002	0.6000	0.0000	0.0015	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	C03	1	10200602	55.00	MANEVU2002	0.4000	0.0000	0.0010	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710094	C04	1	10200602	55.00	MANEVU2002	0.4000	0.0000	0.0010	JL CLARK INC/LANCASTER
PA	Lancaster	42071	420710096	032	1	10300603	7.90	MANEVU2002	0.2600	0.0000	0.0005	BOLLMAN HAT CO/WILLOW ST FACILITY
PA	Lancaster	42071	420710096	033	1	10300603	5.00	SCC Descriptio	0.1700	0.0000	0.0002	BOLLMAN HAT CO/WILLOW ST FACILITY
PA	Lancaster	42071	420710106	031	1	10200501	0.00		0.3857	0.0000	0.0011	CONESTOGA WOOD SPECIALTIES/EAST EARL
PA	Lancaster	42071	420710106	031	2	10201002	0.00		0.9143	0.0000	0.0025	CONESTOGA WOOD SPECIALTIES/EAST EARL
PA	Lancaster	42071	420710111	031	1	10300603	3.90	MANEVU2002	0.3000	0.0000	0.0008	INTELLIGENCER PRINTING/INTELL PRINTING LANCASTER CNTY
PA	Lancaster	42071	420710111	032	1	10300603	3.40	MANEVU2002	0.3000	0.0000	0.0008	INTELLIGENCER PRINTING/INTELL PRINTING LANCASTER CNTY
PA	Lancaster	42071	420710121	031	2	10200602	22.00	MANEVU2002	1.9100	0.0000	0.0048	HERSHEY FOODS CORP/Y & S CANDIES
PA	Lancaster	42071	420710121	032	2	10200603	1.60	MANEVU2002	0.0035	0.0000	0.0000	HERSHEY FOODS CORP/Y & S CANDIES
PA	Lancaster	42071	420710121	032	1	10200602	1.60	MANEVU2002	0.0065	0.0000	0.0000	HERSHEY FOODS CORP/Y & S CANDIES

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PA	Lancaster	42071	420710121	033	1	10200603	2.10	MANEVU2002	0.0230	0.0000	0.0001	HERSHEY FOODS CORP/Y & S CANDIES
PA	Lancaster	42071	420710121	C0001	2	10200602	45.00	MANEVU2002	4.1900	0.0000	0.0106	HERSHEY FOODS CORP/Y & S CANDIES
PA	Lancaster	42071	420710122	030	2	10300602	55.00	SCC Descriptio	0.6200	0.0000	0.0001	RR DONNELLEY & SONS /NORTHEASTERN DIV LANCASTER WES
PA	Lancaster	42071	420710294	031	1	10200602	66.00	John Hulsberg	14.0000	0.0000	0.0378	KELLOGG USA INC/EAST HEMPFIELD
PA	Lancaster	42071	420710294	032	1	10200602	66.00	John Hulsberg	14.0000	0.0000	0.0378	KELLOGG USA INC/EAST HEMPFIELD
PA	Lancaster	42071	420710294	100	1	10200603	5.00	SCC Descriptio	8.6000	0.0000	0.0221	KELLOGG USA INC/EAST HEMPFIELD
PA	Lancaster	42071	420710306	110	1	10301002	0.00		1.4000	0.0000	0.0006	BUCK CO INC/QUARRYVILLE
PA	Lancaster	42071	420710307	031	1	10200602	41.50	MANEVU2002	4.7000	0.0000	0.0129	MT JOY WIRE CORP/MT JOY
PA	Lancaster	42071	420710307	034	1	10200602	55.00	SCC Descriptio	2.7000	0.0000	0.0074	MT JOY WIRE CORP/MT JOY
PA	Lancaster	42071	420710317	031	1	10300603	6.30	MANEVU2002	0.0400	0.0000	0.0000	RR DONNELLEY & SONS /LANCASTER STEELWAY FACILITY
PA	Lancaster	42071	420710317	032	1	10200602	10.50	MANEVU2002	0.7000	0.0000	0.0012	RR DONNELLEY & SONS /LANCASTER STEELWAY FACILITY
PA	Lancaster	42071	420710456	031	1	10200603	4.30	MANEVU2002	0.3000	0.0000	0.0000	MORGAN CORP/EPHRATA PLT
PA	Lancaster	42071	420710468	031	1	10200602	33.50	John Hulsberg	0.0220	0.0000	0.0000	DART CONTAINER CORP/EAST LAMPETER WAREHOUSE
PA	Lancaster	42071	420710468	032	1	10200602	33.50	John Hulsberg	0.0080	0.0000	0.0000	DART CONTAINER CORP/EAST LAMPETER WAREHOUSE
PA	Lancaster	42071	420710470	04	1	10301002	2.40	MANEVU2002	0.0140	0.0000	0.0000	MARK LINE IND OF PA /EPHRATA
PA	Lancaster	42071	420710486	104	1	10301002	0.00		0.2600	0.0000	0.0000	LIPPERT COMPONENTS I/DENVER
PA	Lancaster	42071	420710610	031	1	10300603	6.80	MANEVU2002	1.3100	0.0000	0.0024	LANCASTER LAB/LANCASTER
PA	Lancaster	42071	420710680	031	1	10200401	29.30	MANEVU2002	12.5400	0.0000	0.0000	LANCASTER HEALTH ALL/LANCASTER GEN HOSP
PA	Lancaster	42071	420710680	032	1	10200401	16.70	MANEVU2002	3.6528	0.0000	0.0265	LANCASTER HEALTH ALL/LANCASTER GEN HOSP
PA	Lancaster	42071	420710680	032	2	10200602	16.70	MANEVU2002	0.3472	0.0000	0.0021	LANCASTER HEALTH ALL/LANCASTER GEN HOSP
PA	Lancaster	42071	420710723	031	1	10200602	71.00	MANEVU2002	7.6600	0.0000	0.0177	PFIZER INC/LITITZ
PA	Lancaster	42071	420710723	033	1	10300501	2.30	MANEVU2002	0.1400	0.0000	0.0004	PFIZER INC/LITITZ
PA	Lancaster	42071	420710754	032	1	10300602	55.00	SCC Descriptio	6.4193	0.0000	0.0169	ARMSTRONG WORLD IND /INNOVATION CENTER-CORPORATE CAMPUS
PA	Lancaster	42071	420710754	032	2	10200501	55.00	SCC Descriptio	0.5607	0.0000	0.0000	ARMSTRONG WORLD IND /INNOVATION CENTER-CORPORATE CAMPUS
PA	Lancaster	42071	420710772	031	1	10200401	33.50	MANEVU2002	7.6247	0.0000	0.0034	VALLEY PROTEINS INC/TERRE HILL PLT
PA	Lancaster	42071	420710772	032	1	10200401	33.50	MANEVU2002	7.5885	0.0000	0.0033	VALLEY PROTEINS INC/TERRE HILL PLT
PA	Lancaster	42071	420712119	031	1	10200602	13.80	MANEVU2002	1.1500	0.0000	0.0032	PEPPERIDGE FARM INC/EAST COCALICO TWP PLT
PA	Lawrence	42073	420730023	033	1	10200602	42.00	MANEVU2002	0.8400	0.0000	0.0024	ELLWOOD QUALITY STEELS CO/NEW CASTLE PLT
PA	Lawrence	42073	420730023	034	1	10200602	10.40	MANEVU2002	3.2500	0.0000	0.0036	ELLWOOD QUALITY STEELS CO/NEW CASTLE PLT
PA	Lawrence	42073	420730023	102	1	10200602	55.00	SCC Descriptio	6.2397	0.0000	0.0171	ELLWOOD QUALITY STEELS CO/NEW CASTLE PLT
PA	Lawrence	42073	420730023	102	2	10200602	55.00	SCC Descriptio	0.6933	0.0000	0.0019	ELLWOOD QUALITY STEELS CO/NEW CASTLE PLT
PA	Lawrence	42073	420730023	132	1	10200603	5.00	SCC Descriptio	1.7000	0.0000	0.0045	ELLWOOD QUALITY STEELS CO/NEW CASTLE PLT
PA	Lawrence	42073	420730524	300	1	10200603	5.00	SCC Descriptio	15.4000	0.0000	0.0694	ELLWOOD CITY FORGE/ELLWOOD CITY
PA	Lawrence	42073	420730524	341	1	10200603	5.00	SCC Descriptio	1.0000	0.0000	0.0021	ELLWOOD CITY FORGE/ELLWOOD CITY
PA	Lawrence	42073	420730524	500A	1	10200603	5.00	SCC Descriptio	2.5000	0.0000	0.0063	ELLWOOD CITY FORGE/ELLWOOD CITY
PA	Lawrence	42073	420730524	500B	1	10200603	5.00	SCC Descriptio	4.1000	0.0000	0.0117	ELLWOOD CITY FORGE/ELLWOOD CITY
PA	Lawrence	42073	420730525	114	1	10300603	5.00	SCC Descriptio	1.9453	0.0000	0.0036	FLOWLINE DIV MARKOVI/NEW CASTLE
PA	Lebanon	42075	420750019	032	1	10200602	37.00	MANEVU2002	0.1100	0.0000	0.0000	ALCOA INC/LEBANON WORKS
PA	Lebanon	42075	420750019	034	1	10300603	3.00	MANEVU2002	0.6300	0.0000	0.0000	ALCOA INC/LEBANON WORKS
PA	Lebanon	42075	420750387	031A	1	10301002	22.50	MANEVU2002	1.3400	0.0000	0.0028	PA DEPT OF MILITARY /FT INDIANTOWN GAP
PA	Lebanon	42075	420750387	032A	1	10300103	9.60	MANEVU2002	0.0500	0.0000	0.0000	PA DEPT OF MILITARY /FT INDIANTOWN GAP
PA	Lebanon	42075	420750387	034A	1	10300501	285.00	MANEVU2002	9.3100	0.0000	0.0041	PA DEPT OF MILITARY /FT INDIANTOWN GAP
PA	Lebanon	42075	420750555	031	1	10300602	8.40	MANEVU2002	5.0400	0.0000	0.0105	QUAKER ALLOY INC/MYERSTOWN
PA	Lehigh	42077	420770003	033	1	10200401	76.00	John Hulsberg	12.3000	0.0000	0.0341	GEO SPECIALTY CHEM/TRIMET PROD GROUP
PA	Lehigh	42077	420770003	034	1	10200401	76.00	John Hulsberg	18.8000	0.0000	0.0521	GEO SPECIALTY CHEM/TRIMET PROD GROUP
PA	Lehigh	42077	420770003	035	1	10200401	30.60	John Hulsberg	13.4000	0.0000	0.0371	GEO SPECIALTY CHEM/TRIMET PROD GROUP
PA	Lehigh	42077	420770010	034	2	10200602	37.90	MANEVU2002	0.3169	0.0000	0.0000	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	034	1	10200401	37.90	MANEVU2002	0.0831	0.0000	0.0001	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	035	2	10200602	63.00	MANEVU2002	0.9074	0.0000	0.0000	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	035	1	10200401	63.00	MANEVU2002	0.0926	0.0000	0.0005	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	036	2	10200602	75.00	MANEVU2002	5.6154	0.0000	0.0000	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	036	4	10200602	75.00	MANEVU2002	1.4927	0.0000	0.0020	AGERE SYSTEMS INC/ALLENTOWN

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PA	Lehigh	42077	420770010	036	1	10200401	75.00	MANEVU2002	0.1516	0.0000	0.0000	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	036	3	10200401	75.00	MANEVU2002	0.0403	0.0000	0.0001	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	037	2	10200602	75.00	MANEVU2002	9.3906	0.0000	0.0000	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770010	037	1	10200401	75.00	MANEVU2002	0.1094	0.0000	0.0003	AGERE SYSTEMS INC/ALLENTOWN
PA	Lehigh	42077	420770011	031	1	10200104	13.40	John Hulsberg	10.0000	0.0000	0.0275	PA DPW/ALLENTOWN STATE HOSP
PA	Lehigh	42077	420770011	032	1	10200104	13.40	John Hulsberg	2.8000	0.0000	0.0077	PA DPW/ALLENTOWN STATE HOSP
PA	Lehigh	42077	420770011	034	1	10200104	13.40	John Hulsberg	6.1000	0.0000	0.0168	PA DPW/ALLENTOWN STATE HOSP
PA	Lehigh	42077	420770013	101A	1	10200602	55.00	MANEVU2002	1.1540	0.0000	0.0033	BOURAS ACQUISITION INC/PRIOR COATED METALS
PA	Lehigh	42077	420770013	C02	1	10200603	5.00	MANEVU2002	0.0011	0.0000	0.0000	BOURAS ACQUISITION INC/PRIOR COATED METALS
PA	Lehigh	42077	420770019	031	1	10300501	6.30	MANEVU2002	1.1000	0.0000	0.0000	LAFARGE CORP/WHITEHALL PLT
PA	Lehigh	42077	420770019	101	1	10300501	0.00	MANEVU2002	1.3474	0.0000	0.0028	LAFARGE CORP/WHITEHALL PLT
PA	Lehigh	42077	420770019	114	1	10300501	0.00	MANEVU2002	0.7364	0.0000	0.0017	LAFARGE CORP/WHITEHALL PLT
PA	Lehigh	42077	420770027	031	1	10300602	10.40	MANEVU2002	3.6200	0.0000	0.0084	RANSOM IND LP/MACUNGIE
PA	Lehigh	42077	420770032	031	1	10200401	67.10	MANEVU2002	10.5000	0.0000	0.0092	MACK TRUCKS INC/MACUNGIE
PA	Lehigh	42077	420770032	032	1	10200401	67.10	MANEVU2002	11.1000	0.0000	0.0171	MACK TRUCKS INC/MACUNGIE
PA	Lehigh	42077	420770035	034	2	10200602	57.50	MANEVU2002	1.2000	0.0000	0.0000	NESTLE PURINA/PETCARE PLT
PA	Lehigh	42077	420770035	035	2	10200602	92.90	MANEVU2002	7.6418	0.0000	0.0000	NESTLE PURINA/PETCARE PLT
PA	Lehigh	42077	420770035	035	1	10200401	92.90	MANEVU2002	5.5582	0.0000	0.0177	NESTLE PURINA/PETCARE PLT
PA	Lehigh	42077	420770041	031	1	10200602	20.10	John Hulsberg	2.4446	0.0000	0.0066	APOLLO METALS LTD/BETHLEHEM
PA	Lehigh	42077	420770041	032	1	10200602	16.70	John Hulsberg	2.4029	0.0000	0.0065	APOLLO METALS LTD/BETHLEHEM
PA	Lehigh	42077	420770041	032	2	10300504	16.70	John Hulsberg	0.1317	0.0000	0.0004	APOLLO METALS LTD/BETHLEHEM
PA	Lehigh	42077	420770052	031	2	10200602	76.90	John Hulsberg	1.3675	0.0000	0.0037	DIAGEO TOTAL LOGISTIC CONTROL LEHIGH VALLEY
PA	Lehigh	42077	420770052	032	2	10200602	76.90	John Hulsberg	1.5300	0.0000	0.0041	DIAGEO TOTAL LOGISTIC CONTROL LEHIGH VALLEY
PA	Lehigh	42077	420770052	033	1	10200602	97.50	John Hulsberg	1.4900	0.0000	0.0040	DIAGEO TOTAL LOGISTIC CONTROL LEHIGH VALLEY
PA	Lehigh	42077	420770052	034	1	10200501	11.10	MANEVU2002	0.0052	0.0000	0.0000	DIAGEO TOTAL LOGISTIC CONTROL LEHIGH VALLEY
PA	Lehigh	42077	420770053	031	1	10200602	29.00	MANEVU2002	3.7198	0.0000	0.0102	SAPUTO CHEESE /WHITEHALL
PA	Lehigh	42077	420770053	031	2	10200501	29.00	MANEVU2002	0.0992	0.0000	0.0000	SAPUTO CHEESE /WHITEHALL
PA	Lehigh	42077	420770053	032	1	10200602	29.00	MANEVU2002	3.7200	0.0000	0.0102	SAPUTO CHEESE /WHITEHALL
PA	Lehigh	42077	420770053	032	2	10200501	29.00	MANEVU2002	0.0980	0.0000	0.0000	SAPUTO CHEESE /WHITEHALL
PA	Lehigh	42077	420770065	031	2	10200602	77.60	MANEVU2002	5.5500	0.0000	0.0146	KRAFT FOODS NORTH AMERICA INC
PA	Lehigh	42077	420770065	032	1	10200602	77.60	MANEVU2002	0.9100	0.0000	0.0000	KRAFT FOODS NORTH AMERICA INC
PA	Lehigh	42077	420770068	102	1	10200603	5.00	SCC Descriptio	0.1700	0.0000	0.0004	STANLEY VIDMAR INC/STORAGE TECH
PA	Lehigh	42077	420770068	C01	1	10200603	5.00	SCC Descriptio	0.0500	0.0000	0.0001	STANLEY VIDMAR INC/STORAGE TECH
PA	Lehigh	42077	420770071	031	1	10200504	5.00	MANEVU2002	0.5000	0.0000	0.0000	ALLEN ORGAN CO/MACUNGIE
PA	Lehigh	42077	420770076	001	1	10300602	10.50	MANEVU2002	1.2390	0.0000	0.0000	SACRED HEART HOSP/BOILER HOUSE
PA	Lehigh	42077	420770076	002	1	10300602	10.50	MANEVU2002	0.7000	0.0000	0.0022	SACRED HEART HOSP/BOILER HOUSE
PA	Lehigh	42077	420770076	003	1	10300602	10.50	MANEVU2002	0.5600	0.0000	0.0040	SACRED HEART HOSP/BOILER HOUSE
PA	Lehigh	42077	420770076	004	1	10300602	10.50	MANEVU2002	1.0920	0.0000	0.0000	SACRED HEART HOSP/BOILER HOUSE
PA	Lehigh	42077	420770146	031	1	10200603	4.20	John Hulsberg	0.5116	0.0000	0.0013	INSULATION CORP AMER/ALLENTOWN
PA	Lehigh	42077	420770174	032	1	10200602	9.90	MANEVU2002	0.7700	0.0000	0.0016	CARPENTER CO/UPPER MACUNGIE
PA	Lehigh	42077	420770393	031	1	10300504	16.70	MANEVU2002	0.8600	0.0000	0.0024	SYNTHETIC THREAD CO /BETHLEHEM
PA	Lehigh	42077	420770562	002	2	10200603	7.70	MANEVU2002	1.4400	0.0000	0.0032	ST LUKES HOSP/MAIN BOILER PLT
PA	Lehigh	42077	420770562	003	2	10200603	7.70	MANEVU2002	2.1880	0.0000	0.0041	ST LUKES HOSP/MAIN BOILER PLT
PA	Lehigh	42077	420770562	004	2	10200603	7.70	MANEVU2002	1.2830	0.0000	0.0032	ST LUKES HOSP/MAIN BOILER PLT
PA	Lehigh	42077	420770562	005	1	10200603	6.50	MANEVU2002	3.0320	0.0000	0.0073	ST LUKES HOSP/MAIN BOILER PLT
PA	Lehigh	42077	420770562	006	1	10200603	6.50	MANEVU2002	2.5300	0.0000	0.0044	ST LUKES HOSP/MAIN BOILER PLT
PA	Lehigh	42077	420770565	002	2	10200602	21.00	MANEVU2002	3.7005	0.0000	0.0000	LEHIGH VALLEY HOSP/17TH & CHEW STS
PA	Lehigh	42077	420770565	003	1	10200603	10.50	MANEVU2002	0.9978	0.0000	0.0082	LEHIGH VALLEY HOSP/17TH & CHEW STS
PA	Lehigh	42077	420770566	001	1	10200602	16.70	MANEVU2002	0.8800	0.0000	0.0000	CEDAR CREST COLL/BOILER HOUSE
PA	Lehigh	42077	420770566	002	1	10200602	16.70	MANEVU2002	0.3700	0.0000	0.0000	CEDAR CREST COLL/BOILER HOUSE
PA	Lehigh	42077	420770566	003	1	10200602	2.50	MANEVU2002	0.1200	0.0000	0.0008	CEDAR CREST COLL/BOILER HOUSE
PA	Lehigh	42077	420770567	001	1	10200602	29.30	MANEVU2002	2.0068	0.0000	0.0040	HAB IND INC/ALLENTOWN PLT

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PA	Lehigh	42077	420770567	002	1	10200602	29.30	MANEVU2002	2.0072	0.0000	0.0040	HAB IND INC/ALLENTOWN PLT
PA	Lehigh	42077	420770589	032	2	10200602	49.00	MANEVU2002	0.5295	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	032	1	10200501	49.00	MANEVU2002	0.0005	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	033	2	10200602	13.40	MANEVU2002	0.7732	0.0000	0.0068	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	033	1	10200501	13.40	MANEVU2002	0.0068	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	035	2	10200602	21.50	MANEVU2002	0.8560	0.0000	0.0011	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	035	1	10200501	21.50	MANEVU2002	0.1440	0.0000	0.0002	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	037	2	10200602	50.10	MANEVU2002	4.4347	0.0000	0.0297	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	037	1	10200501	50.10	MANEVU2002	0.0953	0.0000	0.0001	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	040	2	10200602	41.90	MANEVU2002	2.3355	0.0000	0.0121	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	040	1	10200501	41.90	MANEVU2002	0.0045	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	041	2	10200602	35.00	MANEVU2002	0.4800	0.0000	0.0003	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	042	1	10200603	0.50	MANEVU2002	0.0031	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770589	043	1	10200501	0.80	MANEVU2002	0.0300	0.0000	0.0000	AIR PROD & CHEM INC/TREXLERTOWN PLT
PA	Lehigh	42077	420770590	031	1	10200602	18.10	MANEVU2002	2.4932	0.0000	0.0142	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770590	031	2	10200501	18.10	MANEVU2002	0.0168	0.0000	0.0000	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770590	032	1	10200602	29.40	MANEVU2002	2.7666	0.0000	0.0000	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770590	032	2	10200501	29.40	MANEVU2002	0.0434	0.0000	0.0000	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770590	033	1	10200602	29.40	MANEVU2002	3.8010	0.0000	0.0000	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770590	033	2	10200501	29.40	MANEVU2002	0.0290	0.0000	0.0000	TRIQUINT OPTOELECTRONICS INC
PA	Lehigh	42077	420770593	031	1	10200602	13.40	MANEVU2002	1.1550	0.0000	0.0019	HOUGHTON INTL INC/ALLENTOWN FACILITY
PA	Lehigh	42077	420770593	032	1	10200602	13.40	MANEVU2002	1.1550	0.0000	0.0019	HOUGHTON INTL INC/ALLENTOWN FACILITY
PA	Lehigh	42077	420770594	C05	1	10300603	5.00	SCC Descriptio	0.1900	0.0000	0.0003	VICTAULIC CO AMER/ALBURTIS FAC
PA	Lehigh	42077	420770671	001	3	10200501	25.00	MANEVU2002	0.1943	0.0000	0.0000	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Lehigh	42077	420770671	001	4	10200602	25.00	MANEVU2002	3.1727	0.0000	0.0000	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Lehigh	42077	420770671	002	3	10200602	25.00	MANEVU2002	3.5295	0.0000	0.0264	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Lehigh	42077	420770671	002	2	10200501	25.00	MANEVU2002	0.1912	0.0000	0.0005	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Lehigh	42077	420770671	003	1	10200602	27.00	MANEVU2002	5.3354	0.0000	0.0076	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Lehigh	42077	420770671	003	2	10200501	27.00	MANEVU2002	0.3266	0.0000	0.0022	LEHIGH VALLEY HOSP/S CEDAR CREST
PA	Luzerne	42079	420790008	032	1	10300603	5.00	John Hulsberg	0.4137	0.0000	0.0011	BPB MFG INC/ HARDING
PA	Luzerne	42079	420790008	C01A	1	10300602	55.00	SCC Descriptio	0.5744	0.0000	0.0016	BPB MFG INC/ HARDING
PA	Luzerne	42079	420790013	001	1	10300603	8.00	MANEVU2002	1.3179	0.0000	0.0006	CERTAIN TEED PROD CO/MOUNTAINTOP
PA	Luzerne	42079	420790013	003	1	10200602	55.00	SCC Descriptio	1.0427	0.0000	0.0027	CERTAIN TEED PROD CO/MOUNTAINTOP
PA	Luzerne	42079	420790014	033	2	10200202	31.20	MANEVU2002	447.3957	0.0000	1.1799	UGI DEVELOPMENT CO/HUNLOCK POWER STA
PA	Luzerne	42079	420790027	031	1	10300102	47.00	MANEVU2002	13.1000	0.0000	0.0072	PA DEPT OF CORR/DALLAS SCI
PA	Luzerne	42079	420790027	032	1	10300102	47.00	MANEVU2002	17.9500	0.0000	0.0355	PA DEPT OF CORR/DALLAS SCI
PA	Luzerne	42079	420790035	033	1	10300102	27.10	MANEVU2002	3.8655	0.0000	0.0000	PA DPW/WHITE HAVEN CTR
PA	Luzerne	42079	420790035	034	1	10300102	27.10	MANEVU2002	16.8570	0.0000	0.0074	PA DPW/WHITE HAVEN CTR
PA	Luzerne	42079	420790035	035	1	10300102	16.50	MANEVU2002	5.8050	0.0000	0.0364	PA DPW/WHITE HAVEN CTR
PA	Luzerne	42079	420790058	031	1	10200603	5.00	SCC Descriptio	21.9400	0.0000	0.0313	TRANSCONTINENTAL GAS/BEAR CREEK STA 515
PA	Luzerne	42079	420790058	041	1	10300603	4.00	MANEVU2002	0.6200	0.0000	0.0000	TRANSCONTINENTAL GAS/BEAR CREEK STA 515
PA	Luzerne	42079	420790059	031	2	10200601	20.90	MANEVU2002	8.5989	0.0000	0.0208	HERSHEY FOODS CORP/HAZLETON PLT
PA	Luzerne	42079	420790059	031	3	10200401	20.90	MANEVU2002	0.0011	0.0000	0.0000	HERSHEY FOODS CORP/HAZLETON PLT
PA	Luzerne	42079	420790062	031	1	10200602	12.60	MANEVU2002	1.4773	0.0000	0.0024	FAIRCHILD SEMICONDUCTOR CORP/ WRIGHT TWP
PA	Luzerne	42079	420790062	032	1	10200602	12.60	MANEVU2002	1.4773	0.0000	0.0024	FAIRCHILD SEMICONDUCTOR CORP/ WRIGHT TWP
PA	Luzerne	42079	420790066	001	1	10200603	5.20	John Hulsberg	0.6500	0.0000	0.0017	OFFSET PAPERBACK MFG/DALLAS
PA	Luzerne	42079	420790067	201	1	10200603	6.90	MANEVU2002	1.3192	0.0000	0.0045	STROEHMANN BAKERIES/VALMONT
PA	Luzerne	42079	420790067	202	1	10200603	4.20	MANEVU2002	0.6830	0.0000	0.0000	STROEHMANN BAKERIES/VALMONT
PA	Luzerne	42079	420790068	105	1	10200601	150.00	SCC Descriptio	0.0850	0.0000	0.0004	BERWICK OFFRAY LLC/BERWICK
PA	Lycoming	42081	420810011	031	1	10200602	41.00	John Hulsberg	5.2400	0.0000	0.0142	LONZA INC/WILLIAMSPORT PLT
PA	Lycoming	42081	420810011	032	1	10200602	41.00	John Hulsberg	8.3000	0.0000	0.0224	LONZA INC/WILLIAMSPORT PLT
PA	Lycoming	42081	420810011	033	1	10200603	5.00	John Hulsberg	1.0860	0.0000	0.0028	LONZA INC/WILLIAMSPORT PLT

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Lycoming	42081	420810011	034	1	10200603	3.00	John Hulsberg	0.6510	0.0000	0.0017	LONZA INC/WILLIAMSPORT PLT
PA	Lycoming	42081	420810011	035	1	10200603	3.10	John Hulsberg	0.3650	0.0000	0.0009	LONZA INC/WILLIAMSPORT PLT
PA	Lycoming	42081	420810013	041	1	10200401	16.80	John Hulsberg	2.7300	0.0000	0.0076	KOPPERS IND/RR TIE PLT
PA	Lycoming	42081	420810021	032	1	10200603	8.40	MANEVU2002	0.3000	0.0000	0.0000	ANDRITZ INC/MUNCY FOUNDRY
PA	Lycoming	42081	420810021	037	1	10200602	12.00	John Hulsberg	0.5000	0.0000	0.0014	ANDRITZ INC/MUNCY FOUNDRY
PA	Lycoming	42081	420810021	038	1	10200602	12.00	John Hulsberg	0.4000	0.0000	0.0011	ANDRITZ INC/MUNCY FOUNDRY
PA	Lycoming	42081	420810021	039	1	10200602	55.00	SCC Descriptio	4.3000	0.0000	0.0057	ANDRITZ INC/MUNCY FOUNDRY
PA	Lycoming	42081	420810036	036	1	10200603	3.50	MANEVU2002	0.9800	0.0000	0.0000	TRANSCONTINENTAL GAS/SALLADASBURG STATION 520
PA	Lycoming	42081	420810043	031	1	10200603	4.20	John Hulsberg	0.1500	0.0000	0.0004	STROEHMANN BAKERIES/LYCOMING CREEK ROLL PLT
PA	Lycoming	42081	420810043	032	1	10200603	5.30	John Hulsberg	0.3700	0.0000	0.0010	STROEHMANN BAKERIES/LYCOMING CREEK ROLL PLT
PA	Lycoming	42081	420810044	031	1	10200907	173.20	MANEVU2002	208.3000	0.0000	0.6409	KOPPERS IND/COGEN PLT
PA	Lycoming	42081	420810424	031	1	10200603	2.40	MANEVU2002	0.1350	0.0000	0.0000	ROCHELLE FURNITURE/MONTGOMERY PLT
PA	Lycoming	42081	420810821	031	1	10200602	25.00	MANEVU2002	5.5400	0.0000	0.0000	DIVINE PROVIDENCE HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810821	032	1	10200602	25.00	MANEVU2002	0.1430	0.0000	0.0002	DIVINE PROVIDENCE HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810821	033	1	10200602	12.50	MANEVU2002	0.5080	0.0000	0.0036	DIVINE PROVIDENCE HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810821	035	1	10300501	2.90	MANEVU2002	0.0675	0.0000	0.0000	DIVINE PROVIDENCE HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810979	031	1	10200602	55.00	SCC Descriptio	0.5810	0.0000	0.0013	MUNCY VALLEY HOSPITAL/MUNCY VALLEY HOSPITAL
PA	Lycoming	42081	420810980	031	1	10200602	21.00	MANEVU2002	8.9600	0.0000	0.0256	WILLIAMSPORT HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810980	033	1	10300603	5.00	SCC Descriptio	0.9200	0.0000	0.0011	WILLIAMSPORT HOSP/WILLIAMSPORT
PA	Lycoming	42081	420810980	034	1	10300603	5.00	SCC Descriptio	0.6370	0.0000	0.0001	WILLIAMSPORT HOSP/WILLIAMSPORT
PA	McKean	42083	420830002	211	1	10300603	5.00	SCC Descriptio	0.8000	0.0000	0.0027	PGH CORNING CORP/PORT ALLEGANY
PA	McKean	42083	420830003	031A	3	10200202	108.00	MANEVU2002	205.8092	0.0000	0.5428	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	031A	1	10200202	108.00	MANEVU2002	110.8204	0.0000	0.0609	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	031A	4	10200404	108.00	MANEVU2002	1.9958	0.0000	0.0053	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	031A	2	10200404	108.00	MANEVU2002	1.0746	0.0000	0.0006	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	032A	3	10200202	84.00	MANEVU2002	104.3791	0.0000	0.2982	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	032A	1	10200202	84.00	MANEVU2002	56.2041	0.0000	0.0185	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	032A	4	10200404	84.00	MANEVU2002	2.2209	0.0000	0.0063	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	032A	2	10200404	84.00	MANEVU2002	1.1959	0.0000	0.0004	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	4	10200204	90.00	MANEVU2002	45.2383	0.0000	0.1094	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	1	10200204	90.00	MANEVU2002	24.3591	0.0000	0.0562	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	5	10200404	90.00	MANEVU2002	6.1619	0.0000	0.0156	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	2	10200404	90.00	MANEVU2002	3.3179	0.0000	0.0080	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	6	10200602	90.00	MANEVU2002	0.6648	0.0000	0.0015	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	033A	3	10200602	90.00	MANEVU2002	0.3580	0.0000	0.0009	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	034A	2	10200404	59.10	MANEVU2002	5.2650	0.0000	0.0197	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	034A	1	10200404	59.10	MANEVU2002	2.8350	0.0000	0.0106	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	043A	1	10200603	2.60	MANEVU2002	0.2000	0.0000	0.0006	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	044	2	10200602	8.70	MANEVU2002	0.6226	0.0000	0.0000	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	044	1	10200501	8.70	MANEVU2002	0.3774	0.0000	0.0010	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830003	048	1	10200603	1.20	MANEVU2002	2.5000	0.0000	0.0077	HONEYWELL INTL INC/FARMERS VALLEY
PA	McKean	42083	420830004	033	2	10200701	99.00	MANEVU2002	15.7383	0.0000	0.0052	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	033	1	10200602	99.00	MANEVU2002	1.7817	0.0000	0.0069	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	034	2	10200701	99.00	MANEVU2002	1.6620	0.0000	0.0002	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	034	1	10200602	99.00	MANEVU2002	0.8180	0.0000	0.0026	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	037	1	10200204	169.00	MANEVU2002	169.3500	0.0000	0.4466	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	041	1	10200701	33.40	MANEVU2002	7.2153	0.0000	0.0254	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	043	2	10200701	40.00	MANEVU2002	8.2600	0.0000	0.0254	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	044	2	10200701	14.30	MANEVU2002	3.1700	0.0000	0.0087	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	046	2	10200701	14.00	MANEVU2002	2.8900	0.0000	0.0089	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	047	2	10200603	3.00	MANEVU2002	1.3200	0.0000	0.0036	AMER REF GROUP/BRADFORD
PA	McKean	42083	420830004	048	2	10200603	3.80	MANEVU2002	0.0042	0.0000	0.0000	AMER REF GROUP/BRADFORD

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PA	McKean	42083	420830498	025	1	10200602	20.00	MANEVU2002	0.8000	0.0000	0.0020	TEMPLE INLAND FOREST/MT JEWETT COMPLEX
PA	Mercer	42085	420850019	031	1	10200602	14.70	MANEVU2002	2.4273	0.0000	0.0061	WHEATLAND TUBE DIV/SHARON PLT
PA	Mercer	42085	420850019	101	1	10200602	55.00	SCC Descriptio	29.0000	0.0000	0.0829	WHEATLAND TUBE DIV/SHARON PLT
PA	Mercer	42085	420850019	102	1	10200602	55.00	SCC Descriptio	3.2600	0.0000	0.0097	WHEATLAND TUBE DIV/SHARON PLT
PA	Mercer	42085	420850019	103	1	10200602	55.00	SCC Descriptio	2.1400	0.0000	0.0056	WHEATLAND TUBE DIV/SHARON PLT
PA	Mercer	42085	420850020	031	1	10200602	13.40	MANEVU2002	3.5250	0.0000	0.0097	GE CO/GROVE CITY
PA	Mercer	42085	420850022	031	1	10200603	3.50	MANEVU2002	0.4900	0.0000	0.0007	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	032	1	10200603	3.50	MANEVU2002	0.4900	0.0000	0.0007	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	033	1	10200603	3.50	MANEVU2002	0.4900	0.0000	0.0007	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	034	1	10200603	3.50	MANEVU2002	0.4900	0.0000	0.0007	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	035	1	10200603	4.20	MANEVU2002	1.3400	0.0000	0.0034	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	036	1	10200603	4.20	MANEVU2002	1.3400	0.0000	0.0034	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	037	1	10200603	5.20	MANEVU2002	1.6500	0.0000	0.0042	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	038	1	10200603	6.30	MANEVU2002	0.8800	0.0000	0.0032	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	039	1	10200603	6.30	MANEVU2002	0.8800	0.0000	0.0032	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850022	103	2	10200603	8.40	MANEVU2002	2.6800	0.0000	0.0068	SHARON TUBE CO/SHARON
PA	Mercer	42085	420850023	031	1	10200603	5.40	MANEVU2002	0.5277	0.0000	0.0014	SALEM TUBE INC/SALEM TUBE INC
PA	Mercer	42085	420850046	001	1	10200603	5.00	SCC Descriptio	2.6800	0.0000	0.0074	GREENVILLE METALS INC/TRANSFER
PA	Mercer	42085	420850060	031	1	10200205	20.90	MANEVU2002	10.2083	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	031	3	10200502	20.90	MANEVU2002	0.0017	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	032	1	10200205	20.90	MANEVU2002	6.9989	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	032	2	10200502	20.90	MANEVU2002	0.0011	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	033	2	10200502	20.90	MANEVU2002	0.1710	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	033	1	10200602	20.90	MANEVU2002	0.0001	0.0000	0.0000	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850060	034	1	10300603	5.00	SCC Descriptio	0.2585	0.0000	0.0009	GROVE CITY COLL/GROVE CITY
PA	Mercer	42085	420850332	031	1	10200602	25.20	MANEVU2002	1.8650	0.0000	0.0045	WHEATLAND TUBE CO DI/WHEATLAND TUBE DIV
PA	Mercer	42085	420850332	032	1	10200602	16.80	MANEVU2002	1.2450	0.0000	0.0030	WHEATLAND TUBE CO DI/WHEATLAND TUBE DIV
PA	Mercer	42085	420850332	033	1	10200602	42.00	MANEVU2002	3.1795	0.0000	0.0087	WHEATLAND TUBE CO DI/WHEATLAND TUBE DIV
PA	Mercer	42085	420850332	101	1	10200602	55.00	SCC Descriptio	42.1000	0.0000	0.1110	WHEATLAND TUBE CO DI/WHEATLAND TUBE DIV
PA	Mercer	42085	420850409	031	1	10300602	33.50	MANEVU2002	2.1400	0.0000	0.0054	DUFERCO FARRELL CORP/FARRELL PLT
PA	Mercer	42085	420850522	031	1	10200603	5.30	MANEVU2002	0.7783	0.0000	0.0018	DAMASCUS BISHOP TUBE/GREENVILLE
PA	Mercer	42085	420850522	102	1	10200602	55.00	SCC Descriptio	0.4519	0.0000	0.0014	DAMASCUS BISHOP TUBE/GREENVILLE
PA	Mifflin	42087	420870003	032	1	10200603	6.00	MANEVU2002	1.2560	0.0000	0.0000	STD STEEL/BURNHAM
PA	Mifflin	42087	420870003	037	1	10200602	19.90	MANEVU2002	1.7350	0.0000	0.0000	STD STEEL/BURNHAM
PA	Mifflin	42087	420870003	038	1	10200602	12.00	MANEVU2002	0.9850	0.0000	0.0000	STD STEEL/BURNHAM
PA	Mifflin	42087	420870010	032	1	10200602	15.00	MANEVU2002	1.0200	0.0000	0.0020	CNH AMER LLC/BELLEVILLE
PA	Mifflin	42087	420870010	033	1	10200602	15.00	MANEVU2002	1.2000	0.0000	0.0038	CNH AMER LLC/BELLEVILLE
PA	Mifflin	42087	420870010	099	4	10200603	5.00	SCC Descriptio	7.2000	0.0000	0.0063	CNH AMER LLC/BELLEVILLE
PA	Mifflin	42087	420870013	031	1	10300603	11.60	MANEVU2002	0.0082	0.0000	0.0000	TRINITY PKG/LEWISTOWN DIV
PA	Mifflin	42087	420870030	099	1	10200603	5.00	SCC Descriptio	1.2400	0.0000	0.0012	DONSCO/BELLEVILLE
PA	Monroe	42089	420890008	030	1	10300602	55.00	SCC Descriptio	8.9100	0.0000	0.0069	US DEPT DEFENSE/TOBYHANA ARMY DEPOT
PA	Monroe	42089	420890008	038	1	10300503	5.00	SCC Descriptio	2.2300	0.0000	0.0000	US DEPT DEFENSE/TOBYHANA ARMY DEPOT
PA	Monroe	42089	420890008	040	1	10300503	5.00	SCC Descriptio	0.3100	0.0000	0.0001	US DEPT DEFENSE/TOBYHANA ARMY DEPOT
PA	Monroe	42089	420890018	031	1	10200601	72.40	MANEVU2002	0.7634	0.0000	0.0007	ROCK TENN CO/DELAWARE WATER GAP
PA	Monroe	42089	420890018	033	1	10200602	98.50	MANEVU2002	6.0786	0.0000	0.0174	ROCK TENN CO/DELAWARE WATER GAP
PA	Monroe	42089	420890018	033	2	10200501	98.50	MANEVU2002	0.0014	0.0000	0.0000	ROCK TENN CO/DELAWARE WATER GAP
PA	Monroe	42089	420890020	C01	1	10200603	5.00	SCC Descriptio	0.0045	0.0000	0.0000	MACK PRINTING CO/HUGHES PRINTING DIV
PA	Monroe	42089	420890539	031	1	10200401	21.00	MANEVU2002	11.2000	0.0000	0.0271	AVENTIS PASTEUR/SWIFTWATER FAC
PA	Monroe	42089	420890539	032	1	10200401	21.00	MANEVU2002	10.1000	0.0000	0.0433	AVENTIS PASTEUR/SWIFTWATER FAC
PA	Monroe	42089	420890539	036	1	10200401	29.50	MANEVU2002	11.8000	0.0000	0.0246	AVENTIS PASTEUR/SWIFTWATER FAC
PA	Monroe	42089	420890539	037	1	10200401	14.70	MANEVU2002	1.8000	0.0000	0.0000	AVENTIS PASTEUR/SWIFTWATER FAC
PA	Monroe	42089	420890539	038	1	10200401	14.70	MANEVU2002	0.2318	0.0000	0.0000	AVENTIS PASTEUR/SWIFTWATER FAC

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PA	Montgomery	42091	420250106	031	2	10200602	55.00	SCC Descriptio	2.1733	0.0000	0.0060	PENN COLOR/HATFIELD
PA	Montgomery	42091	420250106	031	1	10200501	55.00	SCC Descriptio	1.4367	0.0000	0.0039	PENN COLOR/HATFIELD
PA	Montgomery	42091	420910006	031	1	10200501	4.10	MANEVU2002	0.0039	0.0000	0.0000	JEFFERSON SMURFIT CO/NORTH WALES
PA	Montgomery	42091	420910006	031	2	10200603	4.10	MANEVU2002	0.0251	0.0000	0.0000	JEFFERSON SMURFIT CO/NORTH WALES
PA	Montgomery	42091	420910006	032	1	10200501	6.30	MANEVU2002	0.0208	0.0000	0.0000	JEFFERSON SMURFIT CO/NORTH WALES
PA	Montgomery	42091	420910006	032	2	10200603	6.30	MANEVU2002	0.1862	0.0000	0.0000	JEFFERSON SMURFIT CO/NORTH WALES
PA	Montgomery	42091	420910007	035	2	10300602	56.20	MANEVU2002	10.2300	0.0000	0.0214	PA DPW/NORRISTOWN STATE HOSP
PA	Montgomery	42091	420910007	036	2	10300602	56.20	MANEVU2002	0.0791	0.0000	0.0000	PA DPW/NORRISTOWN STATE HOSP
PA	Montgomery	42091	420910007	036	1	10300501	56.20	MANEVU2002	0.0009	0.0000	0.0000	PA DPW/NORRISTOWN STATE HOSP
PA	Montgomery	42091	420910008	041	1	10200104	21.20	MANEVU2002	23.0000	0.0000	0.0733	PA DEPT OF CORR/GRATERFORD SCI
PA	Montgomery	42091	420910008	042	1	10200104	21.20	MANEVU2002	15.3000	0.0000	0.0000	PA DEPT OF CORR/GRATERFORD SCI
PA	Montgomery	42091	420910008	043	1	10200104	21.20	MANEVU2002	17.2000	0.0000	0.0151	PA DEPT OF CORR/GRATERFORD SCI
PA	Montgomery	42091	420910009	031	3	10200501	25.10	MANEVU2002	0.0036	0.0000	0.0000	CABOT SUPERMETALS/BOYERTOWN
PA	Montgomery	42091	420910009	031	2	10200602	25.10	MANEVU2002	0.4864	0.0000	0.0013	CABOT SUPERMETALS/BOYERTOWN
PA	Montgomery	42091	420910009	032	2	10200602	50.30	MANEVU2002	4.4095	0.0000	0.0000	CABOT SUPERMETALS/BOYERTOWN
PA	Montgomery	42091	420910009	032	1	10200401	50.30	MANEVU2002	5.8005	0.0000	0.0312	CABOT SUPERMETALS/BOYERTOWN
PA	Montgomery	42091	420910009	034	1	10200602	62.80	MANEVU2002	2.0100	0.0000	0.0007	CABOT SUPERMETALS/BOYERTOWN
PA	Montgomery	42091	420910011	031	1	10200602	14.80	MANEVU2002	3.6800	0.0000	0.0065	KNOLL INC/EAST GREENVILLE MFG
PA	Montgomery	42091	420910011	032	1	10200602	14.80	MANEVU2002	1.2100	0.0000	0.0021	KNOLL INC/EAST GREENVILLE MFG
PA	Montgomery	42091	420910028	031	1	10200502	49.40	John Hulsberg	0.2000	0.0000	0.0005	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	032	1	10200502	49.40	John Hulsberg	0.2000	0.0000	0.0005	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	033	2	10200601	112.00	John Hulsberg	8.7996	0.0000	0.0226	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	033	1	10200501	112.00	John Hulsberg	0.0004	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	034	2	10200601	122.40	John Hulsberg	1.3948	0.0000	0.0036	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	034	1	10200501	122.40	John Hulsberg	0.0052	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	035	1	10200602	93.40	John Hulsberg	30.2893	0.0000	0.0819	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	035	2	10200502	93.40	John Hulsberg	0.0107	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	038	1	10200601	206.00	MANEVU2002	0.0055	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	041	2	10200601	168.80	MANEVU2002	9.5997	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	041	1	10200501	168.80	MANEVU2002	0.0003	0.0000	0.0000	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	042	2	10200601	249.00	John Hulsberg	21.6846	0.0000	0.0167	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	042	1	10200501	249.00	John Hulsberg	0.3154	0.0000	0.0007	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	C100	1	10200602	55.00	SCC Descriptio	0.4000	0.0000	0.0010	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910028	C161	1	10200602	55.00	SCC Descriptio	0.4000	0.0000	0.0010	MERCK & CO/WEST POINT
PA	Montgomery	42091	420910034	033	1	10300501	2.70	MANEVU2002	0.4500	0.0000	0.0013	HIGHWAY MATERIALS INC/PLYMOUTH MEETING QUARRY
PA	Montgomery	42091	420910037	101	1	10200602	55.00	SCC Descriptio	1.9779	0.0000	0.0043	GREENE TWEED & CO INC/KULPSVILLE
PA	Montgomery	42091	420910037	101	2	10200401	55.00	SCC Descriptio	0.0121	0.0000	0.0000	GREENE TWEED & CO INC/KULPSVILLE
PA	Montgomery	42091	420910040	031	1	10200401	20.00	MANEVU2002	3.0681	0.0000	0.0128	SUPERIOR TUBE CO/LOWER PROVIDENCE
PA	Montgomery	42091	420910040	031	2	10200602	20.00	MANEVU2002	0.3919	0.0000	0.0000	SUPERIOR TUBE CO/LOWER PROVIDENCE
PA	Montgomery	42091	420910040	032	1	10200401	25.00	MANEVU2002	5.1843	0.0000	0.0057	SUPERIOR TUBE CO/LOWER PROVIDENCE
PA	Montgomery	42091	420910040	032	2	10200602	25.00	MANEVU2002	0.7457	0.0000	0.0000	SUPERIOR TUBE CO/LOWER PROVIDENCE
PA	Montgomery	42091	420910041	031	2	10200602	22.00	MANEVU2002	5.3428	0.0000	0.0000	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	031	1	10200501	22.00	MANEVU2002	0.2072	0.0000	0.0001	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	032	2	10200602	22.00	MANEVU2002	0.1541	0.0000	0.0000	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	032	1	10200501	22.00	MANEVU2002	0.0109	0.0000	0.0001	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	033	2	10200602	25.00	MANEVU2002	1.0606	0.0000	0.0000	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	033	1	10200501	25.00	MANEVU2002	0.1844	0.0000	0.0004	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	034	2	10200602	25.00	MANEVU2002	4.5826	0.0000	0.0000	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910041	034	1	10200501	25.00	MANEVU2002	0.2574	0.0000	0.0005	ROHM & HAAS CO/SPRINGHOUSE
PA	Montgomery	42091	420910045	031	1	10300602	14.60	MANEVU2002	1.0100	0.0000	0.0007	UNISYS CORP/BLUE BELL
PA	Montgomery	42091	420910045	032	2	10300602	14.60	MANEVU2002	0.0100	0.0000	0.0000	UNISYS CORP/BLUE BELL
PA	Montgomery	42091	420910054	001A	3	10200603	5.00	MANEVU2002	0.7078	0.0000	0.0019	UPPER MORELAND HATBORO JT SEW AUTH/WILLOW GROVE

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PA	Montgomery	42091	420910054	001A	1	10200603	5.00	MANEVU2002	0.0071	0.0000	0.0000	UPPER MORELAND HATBORO JT SEW AUTH/WILLOW GROVE
PA	Montgomery	42091	420910054	C03	1	10200603	5.00	MANEVU2002	1.1113	0.0000	0.0031	UPPER MORELAND HATBORO JT SEW AUTH/WILLOW GROVE
PA	Montgomery	42091	420910058	011	1	10200602	98.00	MANEVU2002	2.4628	0.0000	0.0035	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910058	011	2	10200502	98.00	MANEVU2002	0.0172	0.0000	0.0000	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910058	012	1	10200602	98.00	MANEVU2002	5.8034	0.0000	0.0147	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910058	012	2	10200502	98.00	MANEVU2002	0.0066	0.0000	0.0000	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910058	013	1	10200602	98.00	MANEVU2002	5.3363	0.0000	0.0141	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910058	013	2	10200502	98.00	MANEVU2002	0.0137	0.0000	0.0000	OCCIDENTAL CHEM CORP/POTTSTOWN
PA	Montgomery	42091	420910065	031	1	10200401	25.40	MANEVU2002	4.0600	0.0000	0.0076	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910065	033	1	10200401	56.40	MANEVU2002	24.4795	0.0000	0.0646	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910065	033	2	10200602	56.40	MANEVU2002	1.7475	0.0000	0.0058	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910065	034	1	10200401	56.40	MANEVU2002	24.0251	0.0000	0.0634	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910065	034	2	10200602	56.40	MANEVU2002	1.6149	0.0000	0.0059	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910065	102	1	10300602	55.00	SCC Descriptio	0.0012	0.0000	0.0000	MOYER PACKING CO/SOUDERTON RENDERING DIV
PA	Montgomery	42091	420910067	210	1	10300603	4.20	MANEVU2002	0.4500	0.0000	0.0013	PALMER PROD INC/SKIPPACK
PA	Montgomery	42091	420910067	220	1	10300603	0.60	MANEVU2002	0.0430	0.0000	0.0001	PALMER PROD INC/SKIPPACK
PA	Montgomery	42091	420910067	230	1	10300501	0.80	MANEVU2002	0.0400	0.0000	0.0000	PALMER PROD INC/SKIPPACK
PA	Montgomery	42091	420910067	240	1	10300603	3.00	MANEVU2002	0.1150	0.0000	0.0000	PALMER PROD INC/SKIPPACK
PA	Montgomery	42091	420910070	031	1	10300603	5.00	SCC Descriptio	1.0000	0.0000	0.0001	ALLEGRO MICRO SYS INC/WILLOW GROVE
PA	Montgomery	42091	420910070	032	1	10300501	0.00		0.2000	0.0000	0.0001	ALLEGRO MICRO SYS INC/WILLOW GROVE
PA	Montgomery	42091	420910073	031	1	10200603	3.40	MANEVU2002	1.0700	0.0000	0.0022	COLORCON/UPPER GWYNEDD
PA	Montgomery	42091	420910074	031	1	10200501	16.00	MANEVU2002	4.2300	0.0000	0.0139	COOPERS CREEK CHEM CORP/CONSHOHOCKEN
PA	Montgomery	42091	420910075	031	1	10200602	5.00	MANEVU2002	0.7440	0.0000	0.0000	TORQUE TRACTION MFG TECH INC/POTTSTOWN
PA	Montgomery	42091	420910075	201	1	10200602	17.50	MANEVU2002	3.7000	0.0000	0.0085	TORQUE TRACTION MFG TECH INC/POTTSTOWN
PA	Montgomery	42091	420910075	202	1	10200602	17.50	MANEVU2002	3.7000	0.0000	0.0085	TORQUE TRACTION MFG TECH INC/POTTSTOWN
PA	Montgomery	42091	420910078	099	1	10200603	5.00	MANEVU2002	1.5000	0.0000	0.0005	VISTEON SYSTEMS LLC/N PENN ELECTRONICS DIV
PA	Montgomery	42091	420910081	031	1	10200603	5.30	MANEVU2002	0.6781	0.0000	0.0008	HANDY & HARMAN TUBE /EAST NORRITON
PA	Montgomery	42091	420910081	032	1	10200603	4.20	MANEVU2002	0.5086	0.0000	0.0006	HANDY & HARMAN TUBE /EAST NORRITON
PA	Montgomery	42091	420910081	033	1	10200603	4.20	MANEVU2002	0.5086	0.0000	0.0006	HANDY & HARMAN TUBE /EAST NORRITON
PA	Montgomery	42091	420910090	104	2	10300603	0.60	MANEVU2002	0.0400	0.0000	0.0001	PRECISION TUBE COMPANY
PA	Montgomery	42091	420910090	106	2	10300603	2.50	MANEVU2002	0.2840	0.0000	0.0008	PRECISION TUBE COMPANY
PA	Montgomery	42091	420910098	031	1	10200603	2.90	MANEVU2002	0.0080	0.0000	0.0001	UNIFORM TUBES INC/COLLEGEVILLE
PA	Montgomery	42091	420910098	032	1	10200603	2.90	MANEVU2002	0.4300	0.0000	0.0006	UNIFORM TUBES INC/COLLEGEVILLE
PA	Montgomery	42091	420910098	033	1	10200603	1.40	MANEVU2002	0.3670	0.0000	0.0004	UNIFORM TUBES INC/COLLEGEVILLE
PA	Montgomery	42091	420910102	031	2	10200602	21.00	MANEVU2002	2.4580	0.0000	0.0086	ORTHO MCNEIL PHARMACEUTICALS/L GWYNEDD
PA	Montgomery	42091	420910102	032	2	10200602	21.00	MANEVU2002	0.5420	0.0000	0.0029	ORTHO MCNEIL PHARMACEUTICALS/L GWYNEDD
PA	Montgomery	42091	420910102	033	2	10200602	25.10	MANEVU2002	1.2670	0.0000	0.0029	ORTHO MCNEIL PHARMACEUTICALS/L GWYNEDD
PA	Montgomery	42091	420910103	032	1	10200504	9.00	MANEVU2002	0.9000	0.0000	0.0000	FINNAREN & HALEY/CONSHOHOCKEN
PA	Montgomery	42091	420910104	031	5	10300501	5.00	MANEVU2002	0.0140	0.0000	0.0000	MARKEL CORP/NORRISTOWN
PA	Montgomery	42091	420910104	032	2	10300603	5.00	MANEVU2002	0.4100	0.0000	0.0000	MARKEL CORP/NORRISTOWN
PA	Montgomery	42091	420910107	C01	1	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0008	MOYCO TECH INC/MONTGOMERYVILLE
PA	Montgomery	42091	420910112	030	1	10200602	48.00	MANEVU2002	0.0005	0.0000	0.0000	SPS TECH INC/ABINGTON
PA	Montgomery	42091	420910112	030	2	10200404	48.00	MANEVU2002	4.8795	0.0000	0.0000	SPS TECH INC/ABINGTON
PA	Montgomery	42091	420910112	037	4	10300603	1.00	MANEVU2002	1.4700	0.0000	0.0040	SPS TECH INC/ABINGTON
PA	Montgomery	42091	420910112	039	4	10200602	27.00	MANEVU2002	1.8352	0.0000	0.0000	SPS TECH INC/ABINGTON
PA	Montgomery	42091	420910112	039	3	10200404	27.00	MANEVU2002	4.9848	0.0000	0.0121	SPS TECH INC/ABINGTON
PA	Montgomery	42091	420910115	031	1	10200603	6.00	MANEVU2002	0.5955	0.0000	0.0000	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	031	2	10201002	6.00	MANEVU2002	0.0745	0.0000	0.0002	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	C04	1	10200602	55.00	SCC Descriptio	0.0160	0.0000	0.0000	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	C04	3	10200602	55.00	SCC Descriptio	0.0160	0.0000	0.0000	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	C05	1	10200602	55.00	SCC Descriptio	1.2782	0.0000	0.0034	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	C05	2	10201002	55.00	SCC Descriptio	0.0164	0.0000	0.0000	BROWN PRINTING CO/EAST GREENVILLE

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PA	Montgomery	42091	420910115	C06	1	10200602	55.00	SCC Descriptio	1.7139	0.0000	0.0051	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910115	C07	1	10200602	55.00	SCC Descriptio	0.3100	0.0000	0.0008	BROWN PRINTING CO/EAST GREENVILLE
PA	Montgomery	42091	420910117	119	1	10300501	2.20	MANEVU2002	0.0109	0.0000	0.0000	GASBOY INTL INC/LANSDALE
PA	Montgomery	42091	420910120	031	2	10200602	25.00	MANEVU2002	1.9820	0.0000	0.0000	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	031	1	10200401	25.00	MANEVU2002	0.0580	0.0000	0.0002	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	032	2	10200602	49.00	MANEVU2002	3.1609	0.0000	0.0000	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	032	1	10200401	49.00	MANEVU2002	0.0391	0.0000	0.0001	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	033	2	10200602	49.00	MANEVU2002	7.4500	0.0000	0.0098	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	034	2	10200602	25.00	MANEVU2002	1.4355	0.0000	0.0000	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	034	1	10200401	25.00	MANEVU2002	0.0045	0.0000	0.0000	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	037	2	10200602	34.50	MANEVU2002	2.8000	0.0000	0.0040	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	038	2	10200602	34.50	MANEVU2002	3.3400	0.0000	0.0073	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	039	2	10200602	34.50	MANEVU2002	4.1100	0.0000	0.0086	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	042	2	10200602	25.10	MANEVU2002	1.2400	0.0000	0.0041	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	043	2	10200602	25.10	MANEVU2002	3.2100	0.0000	0.0063	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	051	1	10300602	33.50	MANEVU2002	0.7100	0.0000	0.0010	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910120	052	1	10300602	33.50	MANEVU2002	0.3700	0.0000	0.0012	GLAXO SMITHKLINE/RESEARCH & DEV
PA	Montgomery	42091	420910121	031	1	10200603	5.00	MANEVU2002	0.7900	0.0000	0.0015	STROEHMANN BAKERIES LC
PA	Montgomery	42091	420910121	032	1	10200603	5.00	MANEVU2002	0.7800	0.0000	0.0029	STROEHMANN BAKERIES LC
PA	Montgomery	42091	420910158	031	1	10200602	12.50	MANEVU2002	0.3830	0.0000	0.0000	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	032	2	10200602	31.00	MANEVU2002	0.0050	0.0000	0.0000	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	033	1	10200602	2.50	MANEVU2002	0.1340	0.0000	0.0001	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	034	2	10200602	12.50	MANEVU2002	0.1780	0.0000	0.0000	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	035	2	10200602	12.50	MANEVU2002	0.2280	0.0000	0.0000	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	036	1	10200602	1.50	MANEVU2002	0.0140	0.0000	0.0001	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910158	071	2	10200602	1.30	MANEVU2002	0.5750	0.0000	0.0000	HILL SCH/POTTSTOWN
PA	Montgomery	42091	420910177	031	1	10200602	26.40	MANEVU2002	0.7178	0.0000	0.0001	TYCO HEALTHCARE RETAIL GROUP/FKA CONFAB MFG PLT
PA	Montgomery	42091	420910177	032	1	10200602	26.40	MANEVU2002	0.7178	0.0000	0.0001	TYCO HEALTHCARE RETAIL GROUP/FKA CONFAB MFG PLT
PA	Montgomery	42091	420910177	033	1	10200603	9.00	MANEVU2002	0.2337	0.0000	0.0000	TYCO HEALTHCARE RETAIL GROUP/FKA CONFAB MFG PLT
PA	Montgomery	42091	420910179	001	1	10200501	57.10	MANEVU2002	5.1700	0.0000	0.0023	EXELON GENERATION CO/LIMERICK GENERATING STATION
PA	Montgomery	42091	420910179	002	1	10200501	57.10	MANEVU2002	2.6100	0.0000	0.0000	EXELON GENERATION CO/LIMERICK GENERATING STATION
PA	Montgomery	42091	420910179	003	1	10200501	57.10	MANEVU2002	1.3000	0.0000	0.0000	EXELON GENERATION CO/LIMERICK GENERATING STATION
PA	Montgomery	42091	420910182	031	1	10200501	23.50	MANEVU2002	0.0018	0.0000	0.0000	USAF/WILLOW GROVE AIR RESERVE STA
PA	Montgomery	42091	420910182	031	2	10200602	23.50	MANEVU2002	0.5982	0.0000	0.0000	USAF/WILLOW GROVE AIR RESERVE STA
PA	Montgomery	42091	420910182	032	1	10200501	23.50	MANEVU2002	0.0018	0.0000	0.0000	USAF/WILLOW GROVE AIR RESERVE STA
PA	Montgomery	42091	420910182	032	2	10200602	23.50	MANEVU2002	0.5982	0.0000	0.0000	USAF/WILLOW GROVE AIR RESERVE STA
PA	Montgomery	42091	420910182	033	1	10200603	6.60	MANEVU2002	0.3000	0.0000	0.0000	USAF/WILLOW GROVE AIR RESERVE STA
PA	Montgomery	42091	420910185	032	2	10200603	8.40	John Hulsberg	0.4000	0.0000	0.0010	JOHN MIDDLETON INC/KING OF PRUSSIA
PA	Montgomery	42091	420910185	C01	3	10200602	55.00	SCC Descriptio	10.3800	0.0000	0.0281	JOHN MIDDLETON INC/KING OF PRUSSIA
PA	Montgomery	42091	420910234	C01	1	10200602	12.50	MANEVU2002	0.0400	0.0000	0.0000	PHILA NEWSPAPER INC/SCHUYLKILL PRINTING PLT
PA	Montgomery	42091	420910234	C02	1	10200602	12.60	MANEVU2002	0.1000	0.0000	0.0000	PHILA NEWSPAPER INC/SCHUYLKILL PRINTING PLT
PA	Montgomery	42091	420910234	C03	1	10200602	12.60	MANEVU2002	0.1100	0.0000	0.0000	PHILA NEWSPAPER INC/SCHUYLKILL PRINTING PLT
PA	Montgomery	42091	420910234	C04	1	10200602	18.70	MANEVU2002	0.5500	0.0000	0.0000	PHILA NEWSPAPER INC/SCHUYLKILL PRINTING PLT
PA	Montgomery	42091	420910234	MC30	1	10300603	1.20	MANEVU2002	0.2600	0.0000	0.0002	PHILA NEWSPAPER INC/SCHUYLKILL PRINTING PLT
PA	Montgomery	42091	420910240	031	1	10300501	14.00	MANEVU2002	0.0019	0.0000	0.0000	PLYMOUTH MTG MALL/PLYMOUTH MEETING
PA	Montgomery	42091	420910240	031	2	10300603	14.00	MANEVU2002	0.3281	0.0000	0.0000	PLYMOUTH MTG MALL/PLYMOUTH MEETING
PA	Montgomery	42091	420910240	032	1	10300501	14.00	John Hulsberg	0.0001	0.0000	0.0000	PLYMOUTH MTG MALL/PLYMOUTH MEETING
PA	Montgomery	42091	420910240	032	2	10300601	14.00	John Hulsberg	0.4599	0.0000	0.0000	PLYMOUTH MTG MALL/PLYMOUTH MEETING
PA	Montgomery	42091	420910251	031	2	10200603	6.30	MANEVU2002	0.7300	0.0000	0.0017	TSG INC/(DIV OF SYNFIN IND) NORTH WALES
PA	Montgomery	42091	420910251	032	2	10200602	10.50	MANEVU2002	1.2170	0.0000	0.0028	TSG INC/(DIV OF SYNFIN IND) NORTH WALES
PA	Montgomery	42091	420910251	102	1	10200603	9.00	MANEVU2002	0.2530	0.0000	0.0006	TSG INC/(DIV OF SYNFIN IND) NORTH WALES
PA	Montgomery	42091	420910269	101	1	10200602	32.90	MANEVU2002	1.3290	0.0000	0.0007	LOWER MERION SCH DIST/ARDMORE

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PA	Montgomery	42091	420910271	101	2	10300602	16.80	MANEVU2002	0.0452	0.0000	0.0001	US DEPT OF AGRIC/EASTERN REGIONAL RESEARCH CTR
PA	Montgomery	42091	420910271	101	1	10300401	16.80	MANEVU2002	2.0648	0.0000	0.0052	US DEPT OF AGRIC/EASTERN REGIONAL RESEARCH CTR
PA	Montgomery	42091	420910271	102	1	10200602	17.30	MANEVU2002	0.0599	0.0000	0.0000	US DEPT OF AGRIC/EASTERN REGIONAL RESEARCH CTR
PA	Montgomery	42091	420910271	102	2	10300401	17.30	MANEVU2002	0.4181	0.0000	0.0011	US DEPT OF AGRIC/EASTERN REGIONAL RESEARCH CTR
PA	Montgomery	42091	420910294	C01	1	10200602	55.00	SCC Descriptio	0.4800	0.0000	0.0013	GLOBAL PKG/OAKS
PA	Montgomery	42091	420910310	031	2	10200602	31.40	MANEVU2002	1.8499	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	031	1	10200501	31.40	MANEVU2002	0.0001	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	032	2	10200602	56.80	MANEVU2002	2.1369	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	032	1	10200501	56.80	MANEVU2002	0.0131	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	033	2	10200602	56.80	MANEVU2002	4.3560	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	033	1	10200501	56.80	MANEVU2002	0.0140	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	034	2	10200602	56.80	MANEVU2002	4.0880	0.0000	0.0305	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	034	1	10200501	56.80	MANEVU2002	0.0320	0.0000	0.0000	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	035	1	10200501	1.30	MANEVU2002	0.0400	0.0000	0.0001	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910310	041	1	10200501	18.90	MANEVU2002	0.2100	0.0000	0.0004	GLAXO SMITHKLINE/UPPER PROVIDENCE
PA	Montgomery	42091	420910384	B01	1	10200602	25.10	MANEVU2002	1.4699	0.0000	0.0027	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B01	2	10200504	25.10	MANEVU2002	0.4101	0.0000	0.0000	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B02	1	10200602	25.00	MANEVU2002	3.0687	0.0000	0.0084	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B02	2	10200504	25.00	MANEVU2002	0.9813	0.0000	0.0000	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B04	2	10200602	13.00	MANEVU2002	0.6209	0.0000	0.0000	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B04	1	10200504	13.00	MANEVU2002	1.3191	0.0000	0.0029	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B06	1	10200602	25.00	MANEVU2002	1.3164	0.0000	0.0027	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910384	B06	2	10200504	25.00	MANEVU2002	0.5636	0.0000	0.0000	MCNEIL CONSUMER & SPECIALTY PHARMACEUTICAL/FORT WASHINGTON
PA	Montgomery	42091	420910390	031	1	10300603	5.00	MANEVU2002	0.3700	0.0000	0.0007	A TALONE INC/ARDMORE
PA	Montgomery	42091	420910394	001	1	10200602	55.00	SCC Descriptio	18.9000	0.0000	0.0457	LONZA INC/RIVERSIDE
PA	Montgomery	42091	420910394	106	1	10200602	55.00	SCC Descriptio	6.5000	0.0000	0.0179	LONZA INC/RIVERSIDE
PA	Montgomery	42091	420910394	C30	1	10200602	25.10	MANEVU2002	2.9200	0.0000	0.0006	LONZA INC/RIVERSIDE
PA	Montgomery	42091	420910394	C31	1	10200602	25.10	MANEVU2002	2.8200	0.0000	0.0003	LONZA INC/RIVERSIDE
PA	Montgomery	42091	420910414	031	2	10200602	27.40	MANEVU2002	1.3900	0.0000	0.0000	ABINGTON MEM HOSP/ABINGTON
PA	Montgomery	42091	420910414	032	2	10200602	20.80	MANEVU2002	0.9700	0.0000	0.0048	ABINGTON MEM HOSP/ABINGTON
PA	Montgomery	42091	420910414	033	2	10200602	20.80	MANEVU2002	1.1600	0.0000	0.0076	ABINGTON MEM HOSP/ABINGTON
PA	Montgomery	42091	420910414	034	2	10200602	39.20	MANEVU2002	4.1300	0.0000	0.0000	ABINGTON MEM HOSP/ABINGTON
PA	Montgomery	42091	420910462	031	2	10300602	14.70	MANEVU2002	2.6195	0.0000	0.0075	MONTGOMERY CNTY GERIATRIC & REHAB CTR/ROYERSFORD
PA	Montgomery	42091	420910462	031	3	10300501	14.70	MANEVU2002	0.0105	0.0000	0.0000	MONTGOMERY CNTY GERIATRIC & REHAB CTR/ROYERSFORD
PA	Montgomery	42091	420910462	034	1	10300603	2.90	MANEVU2002	0.2993	0.0000	0.0000	MONTGOMERY CNTY GERIATRIC & REHAB CTR/ROYERSFORD
PA	Montgomery	42091	420910462	034	2	10300501	2.90	MANEVU2002	0.0007	0.0000	0.0000	MONTGOMERY CNTY GERIATRIC & REHAB CTR/ROYERSFORD
PA	Montgomery	42091	420910490	CU 90	1	10200501	45.00	MANEVU2002	0.0390	0.0000	0.0000	US DEPT NAVY/NAVAL AIR STA JNT RES BASE
PA	Montgomery	42091	420910490	CU 90	2	10200602	45.00	MANEVU2002	2.2610	0.0000	0.0000	US DEPT NAVY/NAVAL AIR STA JNT RES BASE
PA	Montgomery	42091	420910490	CU 91	2	10200602	45.00	MANEVU2002	1.1000	0.0000	0.0000	US DEPT NAVY/NAVAL AIR STA JNT RES BASE
PA	Montgomery	42091	420910490	CU2	1	10300603	0.50	MANEVU2002	0.3000	0.0000	0.0001	US DEPT NAVY/NAVAL AIR STA JNT RES BASE
PA	Montgomery	42091	420910493	031	2	10301002	0.00		0.0007	0.0000	0.0000	BLOMMER CHOC CO/E GREENVILLE PLT
PA	Montgomery	42091	420910493	032	1	10300603	6.60	John Hulsberg	2.2400	0.0000	0.0059	BLOMMER CHOC CO/E GREENVILLE PLT
PA	Montgomery	42091	420910493	109	5	10300603	5.00	SCC Descriptio	0.4590	0.0000	0.0012	BLOMMER CHOC CO/E GREENVILLE PLT
PA	Montgomery	42091	420910493	109	1	10300603	5.00	SCC Descriptio	0.4455	0.0000	0.0012	BLOMMER CHOC CO/E GREENVILLE PLT
PA	Montgomery	42091	420910493	109	3	10300603	5.00	SCC Descriptio	0.4455	0.0000	0.0012	BLOMMER CHOC CO/E GREENVILLE PLT
PA	Montgomery	42091	420910529	031	2	10200602	66.00	MANEVU2002	0.7296	0.0000	0.0000	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	031	1	10200501	66.00	MANEVU2002	3.7704	0.0000	0.0112	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	032	2	10200602	66.00	MANEVU2002	5.6936	0.0000	0.0000	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	032	1	10200501	66.00	MANEVU2002	0.0064	0.0000	0.0000	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	033	2	10200602	66.00	MANEVU2002	2.8985	0.0000	0.0006	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	033	3	10200501	66.00	MANEVU2002	0.0015	0.0000	0.0000	WYETH PHARMACEUTICALS/COLLEGEVILLE
PA	Montgomery	42091	420910529	038	1	10200603	29.40	MANEVU2002	0.2000	0.0000	0.0000	WYETH PHARMACEUTICALS/COLLEGEVILLE

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PA	Montgomery	42091	420910586	101	1	10300603	5.00	SCC Descriptio	0.0382	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	101	3	10300603	5.00	SCC Descriptio	0.0382	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	102	1	10300603	5.00	SCC Descriptio	0.0360	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	103	1	10300603	5.00	SCC Descriptio	0.0240	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	103	3	10300603	5.00	SCC Descriptio	0.0240	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	104	1	10300603	5.00	SCC Descriptio	0.0223	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	104	3	10300603	5.00	SCC Descriptio	0.0223	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	105	1	10300603	5.00	SCC Descriptio	0.0205	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	105	3	10300603	5.00	SCC Descriptio	0.0205	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	106	1	10300603	5.00	SCC Descriptio	0.0222	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910586	106	3	10300603	5.00	SCC Descriptio	0.0222	0.0000	0.0000	US CAN CO/HORSHAM
PA	Montgomery	42091	420910592	100	1	10300602	14.70	MANEVU2002	1.0170	0.0000	0.0020	TENET HEALTH SYSTEM /ELKINS PARK HOSP
PA	Montgomery	42091	420910592	101	1	10300602	25.10	MANEVU2002	0.1740	0.0000	0.0003	TENET HEALTH SYSTEM /ELKINS PARK HOSP
PA	Montgomery	42091	420910592	102	1	10300501	0.00		0.1570	0.0000	0.0003	TENET HEALTH SYSTEM /ELKINS PARK HOSP
PA	Montgomery	42091	420910592	103	1	10300501	0.00		0.1200	0.0000	0.0003	TENET HEALTH SYSTEM /ELKINS PARK HOSP
PA	Montgomery	42091	420910619	031	1	10300504	8.10	MANEVU2002	0.7110	0.0000	0.0000	SPARTECH VY CAL PLASTICS/VY-CAL PLT
PA	Montgomery	42091	420910619	032	1	10300504	7.30	MANEVU2002	0.4770	0.0000	0.0027	SPARTECH VY CAL PLASTICS/VY-CAL PLT
PA	Montgomery	42091	420910660	031	1	10200401	50.00	MANEVU2002	25.5908	0.0000	0.0703	HATFIELD QUALITY MEATS INC
PA	Montgomery	42091	420910660	031	2	10200602	50.00	MANEVU2002	0.9092	0.0000	0.0000	HATFIELD QUALITY MEATS INC
PA	Montgomery	42091	420910660	032	1	10200401	27.40	MANEVU2002	1.0970	0.0000	0.0030	HATFIELD QUALITY MEATS INC
PA	Montgomery	42091	420910660	032	2	10200602	27.40	MANEVU2002	1.6230	0.0000	0.0041	HATFIELD QUALITY MEATS INC
PA	Montgomery	42091	420910660	033	1	10200401	27.40	MANEVU2002	14.3000	0.0000	0.0361	HATFIELD QUALITY MEATS INC
PA	Montgomery	42091	420910749	101	1	10300601	150.00	SCC Descriptio	1.8400	0.0000	0.0069	GLASGOW INC/SPRINGHOUSE ASPHALT PLANT/OLD
PA	Montgomery	42091	420910810	033	2	10300602	24.30	MANEVU2002	0.8800	0.0000	0.0020	GEORGIA PACIFIC CORP/PHILADELPHIA BOX PLT
PA	Montgomery	42091	420910826	031	2	10200602	33.50	MANEVU2002	2.3687	0.0000	0.0000	LOCKHEED MARTIN CORP/MISSILES & SPACE OPR
PA	Montgomery	42091	420910826	031	1	10200501	33.50	MANEVU2002	0.0013	0.0000	0.0000	LOCKHEED MARTIN CORP/MISSILES & SPACE OPR
PA	Montgomery	42091	420910826	032	1	10200602	33.50	MANEVU2002	0.1300	0.0000	0.0000	LOCKHEED MARTIN CORP/MISSILES & SPACE OPR
PA	Montgomery	42091	420910826	033	1	10200602	33.50	MANEVU2002	0.5500	0.0000	0.0005	LOCKHEED MARTIN CORP/MISSILES & SPACE OPR
PA	Montgomery	42091	420910859	CU002	1	10200602	25.10	MANEVU2002	3.4940	0.0000	0.0061	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910859	CU002	2	10300504	25.10	MANEVU2002	0.0060	0.0000	0.0000	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910859	CU003	1	10200602	25.10	MANEVU2002	3.4940	0.0000	0.0061	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910859	CU003	2	10300504	25.10	MANEVU2002	0.0060	0.0000	0.0000	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910859	CU004	1	10200602	25.10	MANEVU2002	3.4940	0.0000	0.0061	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910859	CU004	2	10300504	25.10	MANEVU2002	0.0060	0.0000	0.0000	MAIN LINE HOSPITALS INC DBA THE LANKENAU HOSP
PA	Montgomery	42091	420910871	031	1	10200602	25.10	MANEVU2002	1.0000	0.0000	0.0020	MAIN LINE HOSPITALS INC/BRYN MAWR HOSP
PA	Montgomery	42091	420910871	032	3	10200602	25.10	MANEVU2002	2.1422	0.0000	0.0085	MAIN LINE HOSPITALS INC/BRYN MAWR HOSP
PA	Montgomery	42091	420910871	032	4	10300401	25.10	MANEVU2002	2.7368	0.0000	0.0000	MAIN LINE HOSPITALS INC/BRYN MAWR HOSP
PA	Montgomery	42091	420910871	033	2	10300602	31.30	MANEVU2002	1.4419	0.0000	0.0000	MAIN LINE HOSPITALS INC/BRYN MAWR HOSP
PA	Montgomery	42091	420910871	033	1	10200401	31.30	MANEVU2002	1.8651	0.0000	0.0059	MAIN LINE HOSPITALS INC/BRYN MAWR HOSP
PA	Montgomery	42091	420910874	031	1	10200602	29.60	MANEVU2002	4.3700	0.0000	0.0086	ATOFINA CHEM INC/KING OF PRUSSIA
PA	Montgomery	42091	420910886	CU1	1	10300602	10.40	MANEVU2002	0.4540	0.0000	0.0034	HOLY REDEEMER HOSP & MED CTR/ABINGTON
PA	Montgomery	42091	420910886	CU2	1	10300602	10.40	MANEVU2002	2.4500	0.0000	0.0000	HOLY REDEEMER HOSP & MED CTR/ABINGTON
PA	Montgomery	42091	420910886	CU3	3	10300602	17.30	MANEVU2002	1.4500	0.0000	0.0000	HOLY REDEEMER HOSP & MED CTR/ABINGTON
PA	Montgomery	42091	420911000	031	1	10300401	12.00	MANEVU2002	1.4000	0.0000	0.0126	URSINUS COLL/COLLEGEVILLE
PA	Montgomery	42091	420911000	032	1	10300401	12.00	MANEVU2002	10.6000	0.0000	0.0128	URSINUS COLL/COLLEGEVILLE
PA	Montgomery	42091	420911000	033	1	10300504	2.70	MANEVU2002	0.3000	0.0000	0.0003	URSINUS COLL/COLLEGEVILLE
PA	Montgomery	42091	420911000	034	1	10200501	0.70	MANEVU2002	0.7000	0.0000	0.0003	URSINUS COLL/COLLEGEVILLE
PA	Montgomery	42091	420912002	031	2	10200602	16.70	MANEVU2002	0.3430	0.0000	0.0000	POTTSTOWN MEM MED CTR/POTTSTOWN
PA	Montgomery	42091	420912002	032	2	10200602	20.90	MANEVU2002	0.7865	0.0000	0.0000	POTTSTOWN MEM MED CTR/POTTSTOWN
PA	Montgomery	42091	420912002	032	1	10200401	20.90	MANEVU2002	0.3655	0.0000	0.0008	POTTSTOWN MEM MED CTR/POTTSTOWN
PA	Montgomery	42091	420912002	033	2	10200602	20.90	MANEVU2002	0.7868	0.0000	0.0000	POTTSTOWN MEM MED CTR/POTTSTOWN
PA	Montgomery	42091	420912002	033	1	10200401	20.90	MANEVU2002	0.3652	0.0000	0.0008	POTTSTOWN MEM MED CTR/POTTSTOWN

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PA	Montgomery	42091	420912055	031	1	10200501	0.00		0.6360	0.0000	0.0004	SPRAY PRODUCTS CORPORATION
PA	Montour	42093	420930004	031	1	10300102	28.60	MANEVU2002	7.1800	0.0000	0.0000	PA DPW/DANVILLE STATE HOSP
PA	Montour	42093	420930004	032	1	10300102	28.60	MANEVU2002	5.8130	0.0000	0.0000	PA DPW/DANVILLE STATE HOSP
PA	Montour	42093	420930004	033	1	10300102	28.60	MANEVU2002	4.1900	0.0000	0.0000	PA DPW/DANVILLE STATE HOSP
PA	Montour	42093	420930004	035	1	10300501	25.60	MANEVU2002	4.3000	0.0000	0.0132	PA DPW/DANVILLE STATE HOSP
PA	Montour	42093	420930015	CU031	1	10200602	38.00	MANEVU2002	10.1000	0.0000	0.0178	GEISINGER MED CTR/DANVILLE
PA	Northampton	42095	420950006	039	1	10200501	2.90	MANEVU2002	0.2400	0.0000	0.0002	HERCULES CEMENT CO LP/STOCKERTOWN
PA	Northampton	42095	420950006	040	1	10200501	2.90	MANEVU2002	0.2400	0.0000	0.0002	HERCULES CEMENT CO LP/STOCKERTOWN
PA	Northampton	42095	420950012	101	1	10300501	0.00	MANEVU2002	2.8711	0.0000	0.0110	KEYSTONE PORTLAND CEMENT/EAST ALLEN
PA	Northampton	42095	420950012	102	1	10300501	0.00	MANEVU2002	2.6516	0.0000	0.0061	KEYSTONE PORTLAND CEMENT/EAST ALLEN
PA	Northampton	42095	420950019	001	2	10200602	10.00	MANEVU2002	0.3300	0.0000	0.0002	GAF PREMIUM PROD INC/WIND GAP
PA	Northampton	42095	420950019	002	2	10200602	11.70	MANEVU2002	0.3900	0.0000	0.0002	GAF PREMIUM PROD INC/WIND GAP
PA	Northampton	42095	420950020	032	1	10300401	30.00	MANEVU2002	1.1001	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	032	3	10300602	30.00	MANEVU2002	0.8599	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	033	1	10300401	30.00	MANEVU2002	0.8211	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	033	2	10300602	30.00	MANEVU2002	0.1789	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	035	2	10300501	1.00	MANEVU2002	0.1300	0.0000	0.0001	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	036	1	10300602	0.50	MANEVU2002	0.3000	0.0000	0.0001	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	037	1	10300401	37.50	MANEVU2002	9.3213	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	037	2	10300602	37.50	MANEVU2002	0.0587	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	038	1	10300401	37.50	MANEVU2002	7.1108	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950020	038	2	10300602	37.50	MANEVU2002	0.4392	0.0000	0.0000	LAFAYETTE COLL/EASTON
PA	Northampton	42095	420950023	01	1	10200501	5.80	MANEVU2002	0.9230	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	89	1	10200602	55.00	MANEVU2002	0.0339	0.0000	0.0001	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	89	3	10200602	55.00	MANEVU2002	0.0339	0.0000	0.0001	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	91	1	10200602	55.00	MANEVU2002	0.0872	0.0000	0.0002	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	91	3	10200602	55.00	MANEVU2002	0.0872	0.0000	0.0002	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	92	1	10200602	55.00	MANEVU2002	0.0132	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	92	3	10200602	55.00	MANEVU2002	0.0132	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	96	1	10200602	55.00	MANEVU2002	0.0136	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	96	3	10200602	55.00	MANEVU2002	0.0136	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	97	1	10200602	55.00	SCC Descriptio	0.0129	0.0000	0.0000	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950023	98	1	10200602	55.00	MANEVU2002	0.0307	0.0000	0.0001	MACK PRINTING CO/WILSON BORO
PA	Northampton	42095	420950029	031	2	10200602	16.80	John Hulsberg	2.0450	0.0000	0.0055	AMER NICKELOID CO/WALNUTPORT
PA	Northampton	42095	420950029	032	2	10200602	29.30	John Hulsberg	0.2120	0.0000	0.0006	AMER NICKELOID CO/WALNUTPORT
PA	Northampton	42095	420950035	033	2	10200602	25.10	MANEVU2002	1.6710	0.0000	0.0084	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	034	2	10200602	36.40	MANEVU2002	5.1800	0.0000	0.0074	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	109	1	10200603	5.00	SCC Descriptio	0.0420	0.0000	0.0001	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	110	1	10200603	5.00	SCC Descriptio	0.7600	0.0000	0.0021	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	112	1	10200603	5.00	SCC Descriptio	0.7600	0.0000	0.0021	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	113	1	10200603	5.00	SCC Descriptio	0.7600	0.0000	0.0021	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	114	1	10200603	5.00	SCC Descriptio	0.7600	0.0000	0.0021	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	115	1	10200603	5.00	SCC Descriptio	0.7600	0.0000	0.0021	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	351A	1	10200603	5.00	SCC Descriptio	0.5700	0.0000	0.0015	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950035	351A	3	10200603	5.00	SCC Descriptio	0.5700	0.0000	0.0015	ELEMENTIS PIGMENTS INC/EASTON
PA	Northampton	42095	420950047	101A	1	10200802	5.00	MANEVU2002	24.1948	0.0000	0.0585	MFS INC/MINERAL WOOL PLT 1
PA	Northampton	42095	420950047	101A	2	10300603	5.00	MANEVU2002	0.6568	0.0000	0.0015	MFS INC/MINERAL WOOL PLT 1
PA	Northampton	42095	420950047	103A	1	10200802	5.00	MANEVU2002	24.1948	0.0000	0.0585	MFS INC/MINERAL WOOL PLT 1
PA	Northampton	42095	420950047	103A	2	10300603	5.00	MANEVU2002	0.6568	0.0000	0.0015	MFS INC/MINERAL WOOL PLT 1
PA	Northampton	42095	420950054	102	1	10200603	8.60	MANEVU2002	0.0800	0.0000	0.0002	CF MARTIN & CO INC/U NAZARETH
PA	Northampton	42095	420950054	103	1	10300602	55.00	SCC Descriptio	1.1000	0.0000	0.0027	CF MARTIN & CO INC/U NAZARETH
PA	Northampton	42095	420950056	031	1	10200603	6.30	John Hulsberg	0.1800	0.0000	0.0005	STROEHMANN BAKERIES/PALMER

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PA	Northampton	42095	420950056	032	1	10200603	6.30	MANEVU2002	0.3600	0.0000	0.0002	STROEHMANN BAKERIES/PALMER
PA	Northampton	42095	420950056	034	1	10300602	55.00	SCC Descriptio	0.0081	0.0000	0.0000	STROEHMANN BAKERIES/PALMER
PA	Northampton	42095	420950056	103	1	10200603	5.00	MANEVU2002	0.7600	0.0000	0.0023	STROEHMANN BAKERIES/PALMER
PA	Northampton	42095	420950057	031	1	10300401	48.50	MANEVU2002	3.2437	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	031	2	10300602	48.50	MANEVU2002	1.2563	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	032	2	10300602	48.50	MANEVU2002	2.7661	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	032	1	10300401	48.50	MANEVU2002	11.3339	0.0000	0.0747	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	033	1	10300401	48.50	MANEVU2002	17.3800	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	034	1	10200401	48.50	MANEVU2002	11.1793	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	034	2	10200602	48.50	MANEVU2002	0.7207	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	035	2	10200602	48.50	MANEVU2002	1.2600	0.0000	0.0084	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	036	2	10200602	44.00	MANEVU2002	0.4656	0.0000	0.0000	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950057	036	1	10200401	44.00	MANEVU2002	10.1044	0.0000	0.0122	LEHIGH UNIV/PACKER & MOUNTAINTOP CAMPUSES
PA	Northampton	42095	420950064	001	1	10200501	5.20	MANEVU2002	0.8790	0.0000	0.0021	FEDCHEM LLC
PA	Northampton	42095	420950064	002	1	10200501	0.80	MANEVU2002	0.1300	0.0000	0.0003	FEDCHEM LLC
PA	Northampton	42095	420950108	031	2	10200602	10.40	MANEVU2002	1.4070	0.0000	0.0037	JUST BORN INC/BETHLEHEM
PA	Northampton	42095	420950108	032	2	10200602	10.40	MANEVU2002	1.5480	0.0000	0.0041	JUST BORN INC/BETHLEHEM
PA	Northampton	42095	420950108	033	2	10200602	11.70	MANEVU2002	2.4630	0.0000	0.0065	JUST BORN INC/BETHLEHEM
PA	Northampton	42095	420950108	034	2	10200602	16.70	MANEVU2002	3.0260	0.0000	0.0080	JUST BORN INC/BETHLEHEM
PA	Northampton	42095	420950110	231	1	10200602	55.00	SCC Descriptio	11.2000	0.0000	0.0303	LEHIGH FORGE CORP/BETHLEHEM
PA	Northampton	42095	420950110	264	1	10200602	55.00	SCC Descriptio	1.0600	0.0000	0.0029	LEHIGH FORGE CORP/BETHLEHEM
PA	Northampton	42095	420950110	499	1	10201002	0.00		0.1300	0.0000	0.0004	LEHIGH FORGE CORP/BETHLEHEM
PA	Northampton	42095	420950110	540	1	10200602	55.00	SCC Descriptio	11.8500	0.0000	0.0320	LEHIGH FORGE CORP/BETHLEHEM
PA	Northampton	42095	420950127	031	1	10200501	4.90	John Hulsberg	1.0800	0.0000	0.0028	ESSROC/NAZARETH CEMENT PLT 3
PA	Northampton	42095	420950127	101	3	10200501	0.00		1.0104	0.0000	0.0026	ESSROC/NAZARETH CEMENT PLT 3
PA	Northampton	42095	420950127	102	3	10200501	0.00		0.9111	0.0000	0.0023	ESSROC/NAZARETH CEMENT PLT 3
PA	Northampton	42095	420950127	103	3	10200501	0.00		0.7601	0.0000	0.0020	ESSROC/NAZARETH CEMENT PLT 3
PA	Northampton	42095	420950127	104	3	10200501	0.00		1.0203	0.0000	0.0026	ESSROC/NAZARETH CEMENT PLT 3
PA	Northampton	42095	420950158	001	2	10200602	14.30	MANEVU2002	1.6330	0.0000	0.0052	EASTON HOSP/EASTON
PA	Northampton	42095	420950158	002	1	10200602	14.30	MANEVU2002	1.6793	0.0000	0.0046	EASTON HOSP/EASTON
PA	Northampton	42095	420950158	003	2	10200602	14.30	MANEVU2002	1.5293	0.0000	0.0025	EASTON HOSP/EASTON
PA	Northampton	42095	420950158	004	1	10200603	8.30	MANEVU2002	1.2425	0.0000	0.0046	EASTON HOSP/EASTON
PA	Northampton	42095	420950158	005	1	10200603	2.30	MANEVU2002	0.1820	0.0000	0.0002	EASTON HOSP/EASTON
PA	Northampton	42095	420950158	006	1	10200603	2.30	MANEVU2002	0.0616	0.0000	0.0001	EASTON HOSP/EASTON
PA	Northampton	42095	420950253	031	1	10300603	5.00	SCC Descriptio	0.1500	0.0000	0.0001	UNITED PANEL INC/MT BETHEL
PA	Northampton	42095	420950568	001	1	10300501	21.00	MANEVU2002	2.9600	0.0000	0.0081	NORTHAMPTON CNTY/GRACEDALE CNTY HOME BOILER PLT
PA	Northampton	42095	420950568	002	1	10300501	35.00	MANEVU2002	1.4800	0.0000	0.0041	NORTHAMPTON CNTY/GRACEDALE CNTY HOME BOILER PLT
PA	Northampton	42095	420950568	003	1	10300501	42.00	MANEVU2002	1.4800	0.0000	0.0041	NORTHAMPTON CNTY/GRACEDALE CNTY HOME BOILER PLT
PA	Northampton	42095	420950835	05	1	10300501	1.30	MANEVU2002	0.1300	0.0000	0.0000	GRAND CTL SANI LDFL /PLAINFIELD
PA	Northumberland	42097	420970001	031	1	10200501	16.80	MANEVU2002	2.4600	0.0000	0.0054	RESILITE SPORTS PROD/NORTHUMBERLAND PLT
PA	Northumberland	42097	420970006	P103	1	10200602	55.00	SCC Descriptio	0.2900	0.0000	0.0006	ACF IND/AMCAR DIV
PA	Northumberland	42097	420970013	036	1	10200601	108.00	MANEVU2002	3.3800	0.0000	0.0033	CONAGRA/MILTON PLT
PA	Northumberland	42097	420970013	037	1	10200602	32.00	MANEVU2002	0.9000	0.0000	0.0008	CONAGRA/MILTON PLT
PA	Northumberland	42097	420970013	039	1	10200601	92.00	MANEVU2002	13.7000	0.0000	0.0301	CONAGRA/MILTON PLT
PA	Northumberland	42097	420970013	040	1	10200602	96.80	MANEVU2002	5.9700	0.0000	0.0125	CONAGRA/MILTON PLT
PA	Northumberland	42097	420970013	043	1	10200601	150.00	SCC Descriptio	9.1300	0.0000	0.0251	CONAGRA/MILTON PLT
PA	Northumberland	42097	420970014	CU035	2	10300601	150.00	SCC Descriptio	6.3975	0.0000	0.0000	MERCK & CO/CHEROKEE PLT
PA	Northumberland	42097	420970014	CU035	1	10300501	150.00	SCC Descriptio	0.0025	0.0000	0.0000	MERCK & CO/CHEROKEE PLT
PA	Northumberland	42097	420970014	CU036	2	10300601	150.00	SCC Descriptio	9.1975	0.0000	0.0000	MERCK & CO/CHEROKEE PLT
PA	Northumberland	42097	420970014	CU036	1	10300501	150.00	SCC Descriptio	0.0025	0.0000	0.0000	MERCK & CO/CHEROKEE PLT
PA	Northumberland	42097	420970014	CU037	2	10300601	150.00	SCC Descriptio	8.3946	0.0000	0.0341	MERCK & CO/CHEROKEE PLT
PA	Northumberland	42097	420970014	CU037	1	10300501	150.00	SCC Descriptio	0.0054	0.0000	0.0000	MERCK & CO/CHEROKEE PLT

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PA	Northumberland	42097	420970020	031	1	10200602	35.00	MANEVU2002	8.0400	0.0000	0.0062	SUNBURY PROPERTY/KNIGHT CELOTEX/SUNBURY PLT
PA	Northumberland	42097	420970020	032	1	10200602	35.00	MANEVU2002	8.0500	0.0000	0.0469	SUNBURY PROPERTY/KNIGHT CELOTEX/SUNBURY PLT
PA	Northumberland	42097	420970032	031	1	10200603	8.30	John Hulsberg	0.1673	0.0000	0.0004	BUTTER KRUST BAKING CO INC/SUNBURY PLT #1
PA	Northumberland	42097	420970032	033	1	10200603	0.90	John Hulsberg	0.1571	0.0000	0.0004	BUTTER KRUST BAKING CO INC/SUNBURY PLT #1
PA	Northumberland	42097	420970032	034	1	10200603	5.00	SCC Descriptio	0.1954	0.0000	0.0000	BUTTER KRUST BAKING CO INC/SUNBURY PLT #1
PA	Northumberland	42097	420970032	035	1	10200603	5.00	SCC Descriptio	0.0837	0.0000	0.0000	BUTTER KRUST BAKING CO INC/SUNBURY PLT #1
PA	Philadelphia	42101	4210101501	020	2	10200701	495.00	TITLE V PERM	178.3000	0.4898	0.4898	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	020	1	10200401	495.00	TITLE V PERM	65.0000	0.1786	0.1786	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	021	2	10200701	495.00	TITLE V PERM	135.2000	0.3714	0.3714	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	021	1	10200401	495.00	TITLE V PERM	49.3000	0.1354	0.1354	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	022	2	10200701	495.00	TITLE V PERM	178.3000	0.4898	0.4898	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	022	1	10200401	495.00	TITLE V PERM	65.0000	0.1786	0.1786	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	023	2	10200701	660.00	TITLE V PERM	265.0000	0.7280	0.7280	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	023	1	10200401	660.00	TITLE V PERM	96.7000	0.2657	0.2657	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101501	538	1	10200701	165.00	TITLE V PERM	1.3000	0.0010	0.0010	SUNOCO INC. (R&M)
PA	Philadelphia	42101	4210101531	024	1	10200602	55.00	SCC Descriptio	1.6750	0.0037	0.0037	ROHM & HAAS COMPANY
PA	Philadelphia	42101	4210101531	024	3	10200501	55.00	SCC Descriptio	0.4220	0.0009	0.0009	ROHM & HAAS COMPANY
PA	Philadelphia	42101	4210101531	025	1	10200602	55.00	SCC Descriptio	1.6750	0.0037	0.0037	ROHM & HAAS COMPANY
PA	Philadelphia	42101	4210101531	025	3	10200501	55.00	SCC Descriptio	0.4220	0.0009	0.0009	ROHM & HAAS COMPANY
PA	Philadelphia	42101	4210101551	050	2	10200601	260.00	TOM WEIR FIL	9.5598	0.0263	0.0263	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	050	1	10200401	260.00	TOM WEIR FIL	5.2782	0.0001	0.0001	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	051	2	10200601	260.00	TOM WEIR FIL	9.6456	0.0265	0.0265	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	051	1	10200401	260.00	TOM WEIR FIL	0.3330	0.0009	0.0009	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	052	1	10200401	381.00	TOM WEIR FIL	20.6100	0.0566	0.0566	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	052	2	10200601	381.00	TOM WEIR FIL	56.5872	0.1555	0.1555	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101551	053	1	10300501	0.00		0.0331	0.0001	0.0001	SUNOCO CHEMICALS (FORMER ALLIED SIGNAL)
PA	Philadelphia	42101	4210101564	001	1	10200401	0.00		1.2280	0.0000	0.0034	THE BUDD CO
PA	Philadelphia	42101	4210101564	002	1	10200401	87.30	TOM WEIR FIL	17.5300	0.0000	0.0485	THE BUDD CO
PA	Philadelphia	42101	4210101564	002	2	10200602	87.30	TOM WEIR FIL	3.9527	0.0000	0.0107	THE BUDD CO
PA	Philadelphia	42101	4210101569	029	1	10300603	5.00	SCC Descriptio	0.7715	0.0026	0.0026	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	031	1	10200602	55.00	SCC Descriptio	0.2803	0.0009	0.0009	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	031	2	10200602	55.00	SCC Descriptio	0.2803	0.0009	0.0009	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	041	1	10300603	0.40	EP DESCRIPTI	0.0694	0.0002	0.0002	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	042	1	10300603	0.30	EP DESCRIPTI	0.0489	0.0002	0.0002	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	043	1	10300603	1.80	EP DESCRIPTI	0.3145	0.0010	0.0010	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	044	1	10300603	0.40	EP DESCRIPTI	0.0694	0.0002	0.0002	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101569	045	1	10300603	0.40	EP DESCRIPTI	0.0694	0.0002	0.0002	KVAERNER PHILADELPHIA SHIPYARD, INC.
PA	Philadelphia	42101	4210101585	124	1	10200603	5.00	SCC Descriptio	1.5950	0.0000	0.0041	KURZ-HASTINGS INC
PA	Philadelphia	42101	4210101585	124	2	10201002	5.00	SCC Descriptio	0.1431	0.0003	0.0003	KURZ-HASTINGS INC
PA	Philadelphia	42101	4210101585	125	1	10300603	5.00	SCC Descriptio	0.0040	0.0000	0.0000	KURZ-HASTINGS INC
PA	Philadelphia	42101	4210101585	125	2	10301002	5.00	SCC Descriptio	0.0002	0.0000	0.0000	KURZ-HASTINGS INC
PA	Philadelphia	42101	4210101591	001	2	10200601	1.90	EU DESCRIPT	0.3802	0.0050	0.0050	PERFECSEAL
PA	Philadelphia	42101	4210101591	001	9	10200501	1.90	EU DESCRIPT	0.0780	0.0000	0.0002	PERFECSEAL
PA	Philadelphia	42101	4210101591	010	1	10200601	150.00	SCC Descriptio	0.0473	0.0002	0.0002	PERFECSEAL
PA	Philadelphia	42101	4210101617	003	2	10200603	5.00	SCC Descriptio	0.0960	0.0003	0.0003	PUROLITE INC.
PA	Philadelphia	42101	4210101617	004	2	10200603	5.00	SCC Descriptio	1.3400	0.0039	0.0039	PUROLITE INC.
PA	Philadelphia	42101	4210101617	005	2	10200603	5.00	SCC Descriptio	1.3400	0.0039	0.0039	PUROLITE INC.
PA	Philadelphia	42101	4210102005	002	2	10200603	5.00	SCC Descriptio	0.2695	0.0000	0.0007	M A BRUDER & SONS
PA	Philadelphia	42101	4210102005	007	1	10200603	5.00	SCC Descriptio	0.1652	0.0000	0.0004	M A BRUDER & SONS
PA	Philadelphia	42101	4210102051	004	2	10200401	5.60	EU DESCRIPT	0.4512	0.0013	0.0013	SMURFIT-STONE CONTAINER CORPORATION
PA	Philadelphia	42101	4210102051	004	1	10200602	5.60	EU DESCRIPT	0.1984	0.0006	0.0006	SMURFIT-STONE CONTAINER CORPORATION
PA	Philadelphia	42101	4210102054	001	2	10200401	15.00	EU DESCRIPT	0.7985	0.0000	0.0022	TASTY BAKING CO

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PA	Philadelphia	42101	4210102054	001	1	10200602	15.00	EU DESCRIPT	0.4170	0.0000	0.0012	TASTY BAKING CO
PA	Philadelphia	42101	4210102054	002	1	10200602	42.00	EU DESCRIPT	3.0990	0.0162	0.0162	TASTY BAKING CO
PA	Philadelphia	42101	4210102054	002	2	10200401	42.00	EU DESCRIPT	6.9713	0.0009	0.0009	TASTY BAKING CO
PA	Philadelphia	42101	4210102059	001	1	10200401	12.50	TOM WEIR FIL	6.3399	0.0176	0.0176	INOLEX CHEMICAL COMPANY
PA	Philadelphia	42101	4210102059	001	3	10200602	12.50	TOM WEIR FIL	1.1484	0.0015	0.0015	INOLEX CHEMICAL COMPANY
PA	Philadelphia	42101	4210102059	002	1	10200401	52.00	TOM WEIR FIL	25.3596	0.1077	0.1077	INOLEX CHEMICAL COMPANY
PA	Philadelphia	42101	4210102059	002	3	10200602	52.00	TOM WEIR FIL	4.5940	0.0069	0.0069	INOLEX CHEMICAL COMPANY
PA	Philadelphia	42101	4210102059	003	3	10300603	5.00	SCC Descriptio	0.9449	0.0007	0.0007	INOLEX CHEMICAL COMPANY
PA	Philadelphia	42101	4210102065	001	1	10200603	5.00	SCC Descriptio	1.5372	0.0010	0.0010	E I DUPONT MARSHALL LABORATORY
PA	Philadelphia	42101	4210102074	011	1	10200503	5.00	SCC Descriptio	0.1833	0.0000	0.0005	LAWRENCE MCFADDEN CO.
PA	Philadelphia	42101	4210102074	012	1	10200503	5.00	SCC Descriptio	0.0266	0.0000	0.0001	LAWRENCE MCFADDEN CO.
PA	Philadelphia	42101	4210102131	001	1	10300602	55.00	SCC Descriptio	0.0360	0.0000	0.0001	ANGELICA TEXTILE SERVICES
PA	Philadelphia	42101	4210102131	002	1	10300501	55.00	SCC Descriptio	0.6238	0.0000	0.0017	ANGELICA TEXTILE SERVICES
PA	Philadelphia	42101	4210102131	002	2	10300602	55.00	SCC Descriptio	1.0820	0.0000	0.0027	ANGELICA TEXTILE SERVICES
PA	Philadelphia	42101	4210102255	002	1	10200501	1.40	EP DESCRIPTI	0.3727	0.0000	0.0010	SMITH- EDWARDS- DUNLAP COMPANY
PA	Philadelphia	42101	4210102255	002	2	10200501	1.40	EP DESCRIPTI	0.0414	0.0000	0.0001	SMITH- EDWARDS- DUNLAP COMPANY
PA	Philadelphia	42101	4210102260	002	2	10200603	5.00	SCC Descriptio	0.0814	0.0000	0.0002	GRAPHIC ARTS, INCORPORATED
PA	Philadelphia	42101	4210103048	003	1	10200603	5.00	SCC Descriptio	1.2530	0.0093	0.0093	NORTHEAST FOODS - PHILADELPHIA BAKING CO
PA	Philadelphia	42101	4210103058	001	1	10200401	0.00		3.1181	0.0103	0.0103	CALEDONIAN DYE WORKS
PA	Philadelphia	42101	4210103062	001	2	10200603	5.00	SCC Descriptio	0.5015	0.0049	0.0049	ASHLAND CHEMICAL-PHILADELPHIA CPD PLANT
PA	Philadelphia	42101	4210103062	001	1	10200501	5.00	SCC Descriptio	0.0049	0.0002	0.0002	ASHLAND CHEMICAL-PHILADELPHIA CPD PLANT
PA	Philadelphia	42101	4210103062	004	2	10200602	55.00	SCC Descriptio	1.3373	0.0061	0.0061	ASHLAND CHEMICAL-PHILADELPHIA CPD PLANT
PA	Philadelphia	42101	4210103062	004	1	10200501	55.00	SCC Descriptio	0.0130	0.0005	0.0005	ASHLAND CHEMICAL-PHILADELPHIA CPD PLANT
PA	Philadelphia	42101	4210103103	001	1	10200603	5.00	SCC Descriptio	0.2000	0.0009	0.0009	FABRICON PRODUCTS INC.
PA	Philadelphia	42101	4210103103	001	2	10200501	5.00	SCC Descriptio	0.0240	0.0001	0.0001	FABRICON PRODUCTS INC.
PA	Philadelphia	42101	4210103103	002	1	10200603	5.00	SCC Descriptio	0.0400	0.0002	0.0002	FABRICON PRODUCTS INC.
PA	Philadelphia	42101	4210103164	004	1	10200603	5.00	SCC Descriptio	0.6609	0.0020	0.0020	LA FRANCE CORPORATION
PA	Philadelphia	42101	4210103175	001	1	10200504	0.00		1.4309	0.0045	0.0045	LUITHLEN DYE CO
PA	Philadelphia	42101	4210103175	002	1	10200504	0.00		1.4309	0.0045	0.0045	LUITHLEN DYE CO
PA	Philadelphia	42101	4210103201	075	1	10200603	5.00	SCC Descriptio	0.1891	0.0010	0.0010	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103201	07A	1	10200602	55.00	SCC Descriptio	1.6686	0.0000	0.0045	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103201	07B	1	10201002	0.00		0.5940	0.0000	0.0016	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103201	08A	1	10200602	55.00	SCC Descriptio	0.9188	0.0071	0.0071	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103201	08B	1	10201002	0.00		0.5940	0.0000	0.0016	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103201	08C	1	10200401	0.00		2.6312	0.0000	0.0073	KRAFT FOODS N.A., INC. - NABISCO
PA	Philadelphia	42101	4210103217	019	1	10200602	55.00	SCC Descriptio	0.1045	0.0005	0.0005	GEII INSPECTION & REPAIR SERVICES
PA	Philadelphia	42101	4210103281	001	1	10300603	5.00	SCC Descriptio	0.3470	0.0000	0.0009	ROYAL-PIONEER CO
PA	Philadelphia	42101	4210103294	003	1	10200602	55.00	SCC Descriptio	0.1540	0.0000	0.0004	SEAGULL LIGHTING
PA	Philadelphia	42101	4210103462	001	1	10200401	21.60	EU DESCRIPT	5.8100	0.0161	0.0161	DELAWARE VALLEY WOOL SCOURING CO.
PA	Philadelphia	42101	4210103487	001	1	10200603	5.00	SCC Descriptio	0.0213	0.0000	0.0001	ARDEX LABORATORIES, INC.
PA	Philadelphia	42101	4210103487	003	1	10200603	5.00	SCC Descriptio	0.0259	0.0000	0.0001	ARDEX LABORATORIES, INC.
PA	Philadelphia	42101	4210103531	001	1	10200401	13.40	TOM WEIR FIL	7.2277	0.0280	0.0280	REGAL CORRUGATED BOX COMPANY INC.
PA	Philadelphia	42101	4210103531	002	1	10200401	0.00		0.3055	0.0055	0.0055	REGAL CORRUGATED BOX COMPANY INC.
PA	Philadelphia	42101	4210103811	001	2	10300603	5.00	SCC Descriptio	0.2500	0.0000	0.0007	ARBILL INDUSTRIES, INC.
PA	Philadelphia	42101	4210103811	002	2	10300603	5.00	SCC Descriptio	0.2626	0.0023	0.0023	ARBILL INDUSTRIES, INC.
PA	Philadelphia	42101	4210103820	001	1	10300603	8.40	EU DESCRIPT	0.1826	0.0004	0.0004	RICHARDSAPEX INC - PHILADELPHIA FACILITY
PA	Philadelphia	42101	4210103820	001	2	10300404	8.40	EU DESCRIPT	0.8824	0.0038	0.0038	RICHARDSAPEX INC - PHILADELPHIA FACILITY
PA	Philadelphia	42101	4210103887	004	5	10301002	0.00		0.0217	0.0000	0.0001	CARDONE INDUSTRIES INC.
PA	Philadelphia	42101	4210104172	007	1	10200603	5.00	SCC Descriptio	1.7078	0.0004	0.0004	SEPTA BERRIDGE/COURTLAND MAINT SHOP
PA	Philadelphia	42101	4210104902	001	1	10200401	283.00	TOM WEIR FIL	23.9000	0.0000	0.0662	TRIGEN - EDISON
PA	Philadelphia	42101	4210104902	002	1	10200401	283.00	TOM WEIR FIL	19.5000	0.0000	0.0540	TRIGEN - EDISON
PA	Philadelphia	42101	4210104902	003	1	10200401	335.00	TOM WEIR FIL	42.7000	0.0000	0.1182	TRIGEN - EDISON

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PA	Philadelphia	42101	4210104902	004	1	10200401	335.00	TOM WEIR FIL	44.4000	0.0000	0.1230	TRIGEN - EDISON
PA	Philadelphia	42101	4210104907	004	1	10200603	5.00	SCC Descriptio	0.5300	0.0384	0.0384	PECO ELECTRIC SHOP - OREGON
PA	Philadelphia	42101	4210104921	006	1	10200603	5.00	SCC Descriptio	0.3194	0.0001	0.0001	PHILADELPHIA GAS WORKS - PASSYUNK PLANT
PA	Philadelphia	42101	4210104921	007	1	10200603	5.00	SCC Descriptio	0.3690	0.0000	0.0009	PHILADELPHIA GAS WORKS - PASSYUNK PLANT
PA	Philadelphia	42101	4210104921	020	1	10200602	55.00	SCC Descriptio	1.9840	0.0000	0.0054	PHILADELPHIA GAS WORKS - PASSYUNK PLANT
PA	Philadelphia	42101	4210104921	021	1	10200602	55.00	SCC Descriptio	0.5402	0.0000	0.0015	PHILADELPHIA GAS WORKS - PASSYUNK PLANT
PA	Philadelphia	42101	4210104921	022	1	10200602	55.00	SCC Descriptio	3.1580	0.0000	0.0085	PHILADELPHIA GAS WORKS - PASSYUNK PLANT
PA	Philadelphia	42101	4210104922	010	2	10200603	5.00	SCC Descriptio	0.0741	0.0000	0.0002	PHILADELPHIA GAS WORKS - RICHMOND PLANT
PA	Philadelphia	42101	4210104922	010	1	10200603	5.00	SCC Descriptio	0.0453	0.0000	0.0001	PHILADELPHIA GAS WORKS - RICHMOND PLANT
PA	Philadelphia	42101	4210105003	001	1	10200501	0.00		1.3800	0.0059	0.0059	KINDER-MORGAN LIQUID TERMINALS CORPORATI
PA	Philadelphia	42101	4210105003	109	1	10200501	0.00		2.7500	0.0054	0.0054	KINDER-MORGAN LIQUID TERMINALS CORPORATI
PA	Philadelphia	42101	4210105013	023	2	10200602	55.00	SCC Descriptio	2.3018	0.0017	0.0017	ST SERVICES PHILADELPHIA TERMINAL
PA	Philadelphia	42101	4210105811	010	1	10200602	55.00	SCC Descriptio	1.9665	0.0143	0.0143	INTERSTATE BRANDS CORPORATION
PA	Philadelphia	42101	4210105811	010	3	10200401	55.00	SCC Descriptio	1.6958	0.0012	0.0012	INTERSTATE BRANDS CORPORATION
PA	Philadelphia	42101	4210105811	011	1	10200602	55.00	SCC Descriptio	1.9665	0.0146	0.0146	INTERSTATE BRANDS CORPORATION
PA	Philadelphia	42101	4210105811	011	3	10200401	55.00	SCC Descriptio	1.6958	0.0012	0.0012	INTERSTATE BRANDS CORPORATION
PA	Philadelphia	42101	4210106512	002	1	10300504	5.60	EU DESCRIPT	0.9130	0.0000	0.0025	PHILADELPHIAN CONDOMINIUMS
PA	Philadelphia	42101	4210106512	003	1	10300504	5.60	EU DESCRIPT	0.8494	0.0000	0.0023	PHILADELPHIAN CONDOMINIUMS
PA	Philadelphia	42101	4210106512	004	1	10300504	1.90	EU DESCRIPT	0.7340	0.0037	0.0037	PHILADELPHIAN CONDOMINIUMS
PA	Philadelphia	42101	4210106513	001	2	10300501	55.00	SCC Descriptio	1.1000	0.0002	0.0002	BELLEVUE
PA	Philadelphia	42101	4210106513	001	1	10300602	55.00	SCC Descriptio	0.2100	0.0000	0.0006	BELLEVUE
PA	Philadelphia	42101	4210106513	002	1	10300602	55.00	SCC Descriptio	0.0700	0.0000	0.0002	BELLEVUE
PA	Philadelphia	42101	4210106526	001	2	10300504	5.60	EP DESCRIPTI	0.1950	0.0000	0.0005	PARK TOWNE PLACE APARTMENTS
PA	Philadelphia	42101	4210106526	001	1	10300602	5.60	EP DESCRIPTI	0.5503	0.0000	0.0015	PARK TOWNE PLACE APARTMENTS
PA	Philadelphia	42101	4210106526	002	2	10300504	55.00	SCC Descriptio	0.3900	0.0000	0.0010	PARK TOWNE PLACE APARTMENTS
PA	Philadelphia	42101	4210106526	002	1	10300602	55.00	SCC Descriptio	1.1006	0.0000	0.0030	PARK TOWNE PLACE APARTMENTS
PA	Philadelphia	42101	4210107297	001	1	10300603	5.00	SCC Descriptio	0.2507	0.0002	0.0002	LAUREL LINEN SERVICE INC.
PA	Philadelphia	42101	4210107297	001	2	10300401	5.00	SCC Descriptio	0.7130	0.0063	0.0063	LAUREL LINEN SERVICE INC.
PA	Philadelphia	42101	4210107721	002	1	10300501	1.10	EP DESCRIPTI	0.0723	0.0000	0.0002	PEARL PRESSMAN LIBERTY
PA	Philadelphia	42101	4210108008	001	2	10300504	3.80	EU DESCRIPT	1.0997	0.0000	0.0027	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108008	001	1	10300602	3.80	EU DESCRIPT	2.2330	0.0134	0.0134	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108008	002	1	10300603	2.30	EU DESCRIPT	0.0218	0.0045	0.0045	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108008	002	2	10300504	2.30	EU DESCRIPT	0.0220	0.0000	0.0001	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108008	003	1	10300602	4.70	EU DESCRIPT	2.0277	0.0061	0.0061	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108008	003	2	10300504	4.70	EU DESCRIPT	0.0515	0.0000	0.0001	NAZARETH HOSPITAL
PA	Philadelphia	42101	4210108009	001	1	10300401	4.70	EU DESCRIPT	1.6431	0.0044	0.0044	JOHN F. KENNEDY MEDICAL CENTER
PA	Philadelphia	42101	4210108009	002	1	10300401	4.70	EU DESCRIPT	1.6431	0.0044	0.0044	JOHN F. KENNEDY MEDICAL CENTER
PA	Philadelphia	42101	4210108011	001	2	10300504	55.00	SCC Descriptio	3.7272	0.0000	0.0092	JEANES HOSPITAL
PA	Philadelphia	42101	4210108011	001	1	10300602	55.00	SCC Descriptio	0.0218	0.0019	0.0019	JEANES HOSPITAL
PA	Philadelphia	42101	4210108011	002	2	10300504	55.00	SCC Descriptio	1.5607	0.0042	0.0042	JEANES HOSPITAL
PA	Philadelphia	42101	4210108011	003	2	10300504	55.00	SCC Descriptio	3.2676	0.0071	0.0071	JEANES HOSPITAL
PA	Philadelphia	42101	4210108011	003	1	10300602	55.00	SCC Descriptio	0.0289	0.0000	0.0001	JEANES HOSPITAL
PA	Philadelphia	42101	4210108016	002	1	10300602	55.00	SCC Descriptio	1.6419	0.0317	0.0317	SAINT AGNES HOSPITAL
PA	Philadelphia	42101	4210108016	003	1	10300602	55.00	SCC Descriptio	1.6191	0.0029	0.0029	SAINT AGNES HOSPITAL
PA	Philadelphia	42101	4210108016	004	1	10300602	55.00	SCC Descriptio	0.0225	0.0000	0.0001	SAINT AGNES HOSPITAL
PA	Philadelphia	42101	4210108023	001	1	10200602	55.00	SCC Descriptio	1.0810	0.0000	0.0029	PRESBYTERIAN MEDICAL CENTER
PA	Philadelphia	42101	4210108023	002	1	10200602	55.00	SCC Descriptio	0.7205	0.0000	0.0019	PRESBYTERIAN MEDICAL CENTER
PA	Philadelphia	42101	4210108023	003	1	10200602	55.00	SCC Descriptio	1.1930	0.0051	0.0051	PRESBYTERIAN MEDICAL CENTER
PA	Philadelphia	42101	4210108024	001	1	10300602	55.00	SCC Descriptio	0.1807	0.0008	0.0008	KIRKBRIDE CENTER
PA	Philadelphia	42101	4210108024	001	2	10300501	55.00	SCC Descriptio	0.0240	0.0000	0.0001	KIRKBRIDE CENTER
PA	Philadelphia	42101	4210108024	002	1	10300602	55.00	SCC Descriptio	0.1807	0.0008	0.0008	KIRKBRIDE CENTER
PA	Philadelphia	42101	4210108024	002	2	10300501	55.00	SCC Descriptio	0.0120	0.0000	0.0000	KIRKBRIDE CENTER

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PA	Philadelphia	42101	4210108024	003	2	10300501	55.00	SCC Descriptio	0.1200	0.0000	0.0003	KIRKBRIDE CENTER
PA	Philadelphia	42101	4210108031	001	2	10300401	0.00		3.0501	0.0044	0.0044	FRIENDS HOSPITAL
PA	Philadelphia	42101	4210108031	001	3	10300401	0.00		3.0501	0.0044	0.0044	FRIENDS HOSPITAL
PA	Philadelphia	42101	4210108031	001	1	10300401	0.00		3.1425	0.0045	0.0045	FRIENDS HOSPITAL
PA	Philadelphia	42101	4210108034	001	2	10300602	55.00	SCC Descriptio	1.2500	0.0074	0.0074	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	001	1	10300401	55.00	SCC Descriptio	0.0200	0.0001	0.0001	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	002	2	10300602	2.80	EU DESCRIPT	1.2500	0.0082	0.0082	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	002	1	10300401	2.80	EU DESCRIPT	1.5200	0.0100	0.0100	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	003	2	10300602	2.80	EU DESCRIPT	1.2500	0.0177	0.0177	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	004	1	10200401	8.40	EU DESCRIPT	7.1700	0.0230	0.0230	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108034	004	2	10300602	8.40	EU DESCRIPT	3.5900	0.0115	0.0115	ALBERT EINSTEIN MEDICAL CENTER
PA	Philadelphia	42101	4210108037	001	1	10300602	55.00	SCC Descriptio	0.1555	0.0003	0.0003	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108037	001	2	10300401	55.00	SCC Descriptio	0.0541	0.0010	0.0010	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108037	002	1	10300602	55.00	SCC Descriptio	0.1760	0.0004	0.0004	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108037	003	1	10300504	0.00		3.0550	0.0000	0.0084	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108037	004	1	10300504	0.00		2.2200	0.0000	0.0061	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108037	005	1	10300603	5.00	SCC Descriptio	0.2340	0.0049	0.0049	TENET - MEDICAL COL. OF PA - MAIN CAMPUS
PA	Philadelphia	42101	4210108039	001	1	10300602	20.10	EU DESCRIPT	0.0996	0.0000	0.0002	GERMANTOWN COMMUNITY HEALTH SERVICES
PA	Philadelphia	42101	4210108039	002	1	10300602	20.10	EU DESCRIPT	0.0845	0.0000	0.0002	GERMANTOWN COMMUNITY HEALTH SERVICES
PA	Philadelphia	42101	4210108039	003	1	10300602	11.70	EU DESCRIPT	0.0550	0.0000	0.0001	GERMANTOWN COMMUNITY HEALTH SERVICES
PA	Philadelphia	42101	4210108043	001	2	10300602	22.30	EU DESCRIPT	0.0137	0.0000	0.0000	MERCY HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108043	002	2	10300602	12.10	EU DESCRIPT	0.0103	0.0001	0.0001	MERCY HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108043	003	3	10300501	22.30	EU DESCRIPT	1.2228	0.0000	0.0033	MERCY HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108053	001	1	10300602	55.00	SCC Descriptio	0.3270	0.0042	0.0042	TEMPLE UNIV HOSPITAL - EPISCOPAL CAMPUS
PA	Philadelphia	42101	4210108053	001	2	10300401	55.00	SCC Descriptio	2.2485	0.0057	0.0057	TEMPLE UNIV HOSPITAL - EPISCOPAL CAMPUS
PA	Philadelphia	42101	4210108053	002	1	10300602	55.00	SCC Descriptio	1.3635	0.0231	0.0231	TEMPLE UNIV HOSPITAL - EPISCOPAL CAMPUS
PA	Philadelphia	42101	4210108054	002	1	10300501	0.00		0.1880	0.0000	0.0005	HAHNEMANN HOSP
PA	Philadelphia	42101	4210108054	003	1	10300501	0.00		0.1337	0.0000	0.0004	HAHNEMANN HOSP
PA	Philadelphia	42101	4210108054	004	1	10300602	55.00	SCC Descriptio	0.0766	0.0000	0.0002	HAHNEMANN HOSP
PA	Philadelphia	42101	4210108054	005	1	10300602	55.00	SCC Descriptio	0.0195	0.0000	0.0000	HAHNEMANN HOSP
PA	Philadelphia	42101	4210108069	003	2	10200501	55.00	SCC Descriptio	1.7921	0.0000	0.0044	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	003	1	10300602	55.00	SCC Descriptio	0.7947	0.0000	0.0020	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	004	2	10200501	55.00	SCC Descriptio	1.5219	0.0043	0.0043	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	004	1	10300602	55.00	SCC Descriptio	0.6222	0.0018	0.0018	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	005	2	10200501	55.00	SCC Descriptio	1.5772	0.0085	0.0085	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	005	1	10300602	55.00	SCC Descriptio	0.6895	0.0037	0.0037	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	006	2	10200501	55.00	SCC Descriptio	0.4189	0.0000	0.0010	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	006	1	10300602	55.00	SCC Descriptio	0.1554	0.0000	0.0004	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	015	2	10300502	55.00	SCC Descriptio	0.0020	0.0000	0.0000	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	016	2	10300502	55.00	SCC Descriptio	0.0017	0.0000	0.0000	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108069	017	2	10300502	55.00	SCC Descriptio	0.0022	0.0000	0.0000	THE CHILDREN`S HOSPITAL OF PHILADELPHIA
PA	Philadelphia	42101	4210108576	001	1	10300603	1.90	EU DESCRIPT	0.2905	0.0000	0.0008	SAINT CHRISTOPHERS HOSPITAL FOR CHILDREN
PA	Philadelphia	42101	4210108576	002	1	10300603	2.80	EU DESCRIPT	1.2130	0.0000	0.0032	SAINT CHRISTOPHERS HOSPITAL FOR CHILDREN
PA	Philadelphia	42101	4210108576	002	2	10300504	2.80	EU DESCRIPT	0.0492	0.0000	0.0001	SAINT CHRISTOPHERS HOSPITAL FOR CHILDREN
PA	Philadelphia	42101	4210108576	003	2	10300504	4.70	EU DESCRIPT	0.4579	0.0000	0.0012	SAINT CHRISTOPHERS HOSPITAL FOR CHILDREN
PA	Philadelphia	42101	4210108576	003	1	10300601	4.70	EU DESCRIPT	0.6846	0.0000	0.0019	SAINT CHRISTOPHERS HOSPITAL FOR CHILDREN
PA	Philadelphia	42101	4210108904	001	2	10300501	55.00	SCC Descriptio	1.1623	0.0020	0.0020	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	001	1	10300602	55.00	SCC Descriptio	0.0200	0.0000	0.0001	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	002	2	10300501	55.00	SCC Descriptio	2.4158	0.0017	0.0017	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	002	1	10300602	55.00	SCC Descriptio	0.3900	0.0000	0.0010	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	006	2	10300501	5.00	SCC Descriptio	0.3011	0.0000	0.0008	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	006	1	10300603	5.00	SCC Descriptio	0.3070	0.0000	0.0008	SAINT JOSEPH`S UNIVERSITY

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PA	Philadelphia	42101	4210108904	007	1	10300603	5.00	SCC Descriptio	0.0223	0.0000	0.0001	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	008	1	10300603	5.00	SCC Descriptio	0.0015	0.0000	0.0000	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	009	1	10300501	55.00	SCC Descriptio	0.5534	0.0000	0.0015	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108904	009	2	10300602	55.00	SCC Descriptio	0.2750	0.0000	0.0007	SAINT JOSEPH`S UNIVERSITY
PA	Philadelphia	42101	4210108905	001	1	10300501	5.00	SCC Descriptio	0.0433	0.0000	0.0001	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	001	2	10300603	5.00	SCC Descriptio	0.2030	0.0000	0.0005	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	005	1	10300603	5.00	SCC Descriptio	0.1225	0.0001	0.0001	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	006	1	10300603	5.00	SCC Descriptio	0.6505	0.0000	0.0017	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	008	2	10300602	41.20	TOM WEIR FIL	4.6080	0.0148	0.0148	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	008	1	10300401	41.20	TOM WEIR FIL	5.7240	0.0184	0.0184	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	009	2	10300602	41.20	TOM WEIR FIL	3.5600	0.0107	0.0107	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	009	1	10300401	41.20	TOM WEIR FIL	13.6500	0.0410	0.0410	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	010	2	10300602	41.20	TOM WEIR FIL	2.1610	0.0036	0.0036	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	010	1	10300401	41.20	TOM WEIR FIL	12.9780	0.0216	0.0216	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	011	2	10300602	43.80	TOM WEIR FIL	1.5250	0.0003	0.0003	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	011	1	10300401	43.80	TOM WEIR FIL	7.7650	0.0017	0.0017	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	014	1	10300501	5.00	SCC Descriptio	0.6302	0.0000	0.0017	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	014	2	10300603	5.00	SCC Descriptio	1.7095	0.0000	0.0045	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	015	1	10300603	5.00	SCC Descriptio	0.6650	0.0000	0.0018	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	016	1	10300501	55.00	SCC Descriptio	0.2101	0.0000	0.0006	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	016	2	10300602	55.00	SCC Descriptio	0.5700	0.0000	0.0014	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	017	1	10300501	55.00	SCC Descriptio	0.2101	0.0002	0.0002	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	017	2	10300602	55.00	SCC Descriptio	0.5700	0.0004	0.0004	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	018	1	10300501	55.00	SCC Descriptio	0.2101	0.0002	0.0002	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108905	018	2	10300602	55.00	SCC Descriptio	0.5700	0.0004	0.0004	TEMPLE UNIVERSITY MAIN CAMPUS,FACILITIES
PA	Philadelphia	42101	4210108906	001	1	10300602	50.00	TOM WEIR FIL	1.6400	0.0024	0.0024	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	001	2	10300401	50.00	TOM WEIR FIL	24.6800	0.0356	0.0356	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	002	1	10300602	76.40	TOM WEIR FIL	2.5800	0.0052	0.0052	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	002	2	10300401	76.40	TOM WEIR FIL	7.4700	0.0149	0.0149	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	003	1	10300602	50.00	TOM WEIR FIL	1.4500	0.0032	0.0032	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	003	2	10300401	50.00	TOM WEIR FIL	20.6700	0.0459	0.0459	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	005	1	10300603	5.00	SCC Descriptio	0.0180	0.0000	0.0000	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108906	006	1	10300603	5.00	SCC Descriptio	0.0700	0.0000	0.0002	TEMPLE UNIVERSITY HEALTH SCIENCES CAMPUS
PA	Philadelphia	42101	4210108912	002	1	10300603	5.00	SCC Descriptio	0.1250	0.0000	0.0003	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	003	1	10300603	5.00	SCC Descriptio	0.0566	0.0000	0.0001	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	004	1	10300603	5.00	SCC Descriptio	0.0840	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	005	1	10300603	5.00	SCC Descriptio	0.0228	0.0000	0.0001	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	006	1	10300603	5.00	SCC Descriptio	0.0885	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	007	1	10300603	5.00	SCC Descriptio	0.0843	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	008	1	10300603	5.00	SCC Descriptio	0.0247	0.0000	0.0001	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	009	3	10200503	5.00	SCC Descriptio	0.0610	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	009	4	10300603	5.00	SCC Descriptio	0.0576	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108912	014	1	10300603	5.00	SCC Descriptio	0.0840	0.0000	0.0002	UNIVERSITY OF PENNSYLVANIA
PA	Philadelphia	42101	4210108918	001	1	10300602	6.80	EU DESCRIPT	1.0280	0.0000	0.0025	GIRARD COLLEGE POWER PLANT
PA	Philadelphia	42101	4210108918	002	1	10300602	6.80	EU DESCRIPT	0.6730	0.0000	0.0017	GIRARD COLLEGE POWER PLANT
PA	Philadelphia	42101	4210108918	003	1	10300602	6.80	EU DESCRIPT	1.0990	0.0000	0.0027	GIRARD COLLEGE POWER PLANT
PA	Philadelphia	42101	4210108927	001	1	10300602	55.00	SCC Descriptio	0.7491	0.0007	0.0007	WISTAR INSTITUTE
PA	Philadelphia	42101	4210108927	002	1	10300602	55.00	SCC Descriptio	0.7337	0.0024	0.0024	WISTAR INSTITUTE
PA	Philadelphia	42101	4210108927	003	1	10300602	55.00	SCC Descriptio	0.7335	0.0020	0.0020	WISTAR INSTITUTE
PA	Philadelphia	42101	4210109039	001	1	10300501	5.00	SCC Descriptio	1.3620	0.0000	0.0036	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109039	002	1	10300501	55.00	SCC Descriptio	1.7434	0.0000	0.0047	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109039	002	2	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	CONVENT OF THE SISTERS OF ST JOSEPH

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PA	Philadelphia	42101	4210109039	003	1	10300501	55.00	SCC Descriptio	0.7627	0.0000	0.0020	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109039	003	2	10300602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109039	004	1	10300603	5.00	SCC Descriptio	0.0300	0.0000	0.0001	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109039	005	1	10300603	5.00	SCC Descriptio	0.0084	0.0000	0.0000	CONVENT OF THE SISTERS OF ST JOSEPH
PA	Philadelphia	42101	4210109502	001	1	10300501	55.00	SCC Descriptio	1.4411	0.0000	0.0038	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	001	2	10300602	55.00	SCC Descriptio	0.2768	0.0037	0.0037	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	002	1	10300501	55.00	SCC Descriptio	1.4378	0.0009	0.0009	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	002	2	10300602	55.00	SCC Descriptio	0.2835	0.0037	0.0037	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	003	1	10300501	55.00	SCC Descriptio	1.3524	0.0013	0.0013	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	003	2	10300602	55.00	SCC Descriptio	0.2800	0.0037	0.0037	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	004	1	10300501	55.00	SCC Descriptio	0.6504	0.0000	0.0017	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	004	2	10300602	55.00	SCC Descriptio	0.3819	0.0000	0.0009	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	005	1	10300501	55.00	SCC Descriptio	0.6502	0.0000	0.0017	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	005	2	10300602	55.00	SCC Descriptio	0.3818	0.0000	0.0009	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	006	3	10300601	150.00	SCC Descriptio	0.9387	0.0000	0.0025	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	007	2	10300601	150.00	SCC Descriptio	0.9387	0.0000	0.0025	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	008	2	10300601	150.00	SCC Descriptio	0.2173	0.0000	0.0006	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	009	2	10300601	150.00	SCC Descriptio	0.0811	0.0000	0.0002	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	010	2	10300601	150.00	SCC Descriptio	0.0811	0.0000	0.0002	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	011	2	10300602	55.00	SCC Descriptio	0.0586	0.0000	0.0001	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	021	1	10300501	150.00	SCC Descriptio	0.6574	0.0000	0.0018	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109502	021	2	10300601	150.00	SCC Descriptio	1.0692	0.0000	0.0029	PHILADELPHIA INTERNATIONAL AIRPORT
PA	Philadelphia	42101	4210109513	004	1	10300501	0.00		0.0975	0.0000	0.0003	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	005	1	10300603	5.00	SCC Descriptio	0.0028	0.0001	0.0001	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	006	1	10300603	5.00	SCC Descriptio	0.0079	0.0001	0.0001	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	007	1	10300603	5.00	SCC Descriptio	0.1631	0.0001	0.0001	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	008	2	10300701	0.00		0.3073	0.0000	0.0008	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	008	1	10300501	0.00		0.0001	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	009	2	10300701	0.00		0.1312	0.0000	0.0004	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	009	1	10300501	0.00		0.0001	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	010	2	10300701	0.00		0.0009	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	010	1	10300501	0.00		0.0001	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	011	2	10300701	5.00	SCC Descriptio	0.4132	0.0000	0.0011	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	011	3	10300603	5.00	SCC Descriptio	0.1273	0.0000	0.0003	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	012	2	10300701	5.00	SCC Descriptio	0.3554	0.0000	0.0009	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	012	3	10300603	5.00	SCC Descriptio	0.0149	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	012	1	10300501	5.00	SCC Descriptio	0.0020	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	013	2	10300701	5.00	SCC Descriptio	0.6082	0.0000	0.0016	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	013	3	10300603	5.00	SCC Descriptio	0.2043	0.0006	0.0006	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	013	1	10300501	5.00	SCC Descriptio	0.0002	0.0000	0.0000	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	015	1	10300799	0.00		0.2777	0.0008	0.0008	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	016	1	10300799	0.00		0.2777	0.0008	0.0008	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	017	1	10300799	0.00		0.2777	0.0008	0.0008	NORTHEAST WPCP
PA	Philadelphia	42101	4210109513	018	1	10300799	0.00		0.2777	0.0008	0.0008	NORTHEAST WPCP
PA	Philadelphia	42101	4210109515	008	1	10300501	0.00		0.0516	0.0000	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	008	2	10300701	0.00		0.0431	0.0000	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	009	1	10300501	0.00		0.0274	0.0000	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	009	2	10300701	0.00		0.0018	0.0000	0.0000	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	010	2	10300701	0.00		0.5625	0.0002	0.0002	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	010	1	10300501	0.00		0.1902	0.0001	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	011	2	10300701	0.00		1.0319	0.0002	0.0002	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	011	1	10300501	0.00		0.2037	0.0001	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)

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PA	Philadelphia	42101	4210109515	012	2	10300701	0.00		0.5261	0.0002	0.0002	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	012	1	10300501	0.00		0.0615	0.0001	0.0001	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	014	1	10300501	0.00		0.5099	0.0000	0.0014	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	015	1	10300501	0.00		0.1553	0.0000	0.0004	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	016	2	10300603	5.00	SCC Descriptio	0.1135	0.0000	0.0003	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	017	1	10300799	0.00		0.3831	0.0014	0.0014	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	018	1	10300799	0.00		0.3831	0.0014	0.0014	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	019	1	10300799	0.00		0.3831	0.0014	0.0014	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109515	020	1	10300799	0.00		0.3831	0.0014	0.0014	PHILADELPHIA WATER DEPT. (S W / B R C)
PA	Philadelphia	42101	4210109519	001	2	10300603	5.00	SCC Descriptio	0.4020	0.0075	0.0075	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	005	2	10300603	5.00	SCC Descriptio	2.8740	0.0000	0.0076	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	016	2	10300603	5.00	SCC Descriptio	1.4955	0.0125	0.0125	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	024	2	10300603	5.00	SCC Descriptio	0.2270	0.0008	0.0008	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	032	1	10300603	5.00	SCC Descriptio	0.7910	0.0015	0.0015	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	044	1	10300603	5.00	SCC Descriptio	0.2465	0.0005	0.0005	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	046	2	10300603	5.00	SCC Descriptio	0.1215	0.0003	0.0003	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	050	2	10300603	5.00	SCC Descriptio	0.1245	0.0003	0.0003	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109519	053	1	10300501	0.00		0.1687	0.0000	0.0005	HOUSE OF CORRECTIONS
PA	Philadelphia	42101	4210109703	001	1	10200603	5.00	SCC Descriptio	0.0049	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	001	2	10200603	5.00	SCC Descriptio	0.0037	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	002	1	10200603	5.00	SCC Descriptio	0.0029	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	002	2	10200603	5.00	SCC Descriptio	0.0045	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	003	1	10200603	5.00	SCC Descriptio	0.0196	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	003	2	10200603	5.00	SCC Descriptio	0.0004	0.0000	0.0000	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	004	1	10200603	5.00	SCC Descriptio	0.0063	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	004	2	10200603	5.00	SCC Descriptio	0.0176	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	005	1	10200603	5.00	SCC Descriptio	0.0184	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	005	2	10200603	5.00	SCC Descriptio	0.0043	0.0021	0.0021	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	006	1	10200603	5.00	SCC Descriptio	0.0005	0.0000	0.0000	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	007	1	10200603	5.00	SCC Descriptio	0.0055	0.0000	0.0000	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	008	1	10200603	5.00	SCC Descriptio	0.0245	0.0001	0.0001	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	009	1	10200603	5.00	SCC Descriptio	0.2466	0.0008	0.0008	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	010	1	10200603	5.00	SCC Descriptio	0.2016	0.0007	0.0007	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	011	1	10200603	5.00	SCC Descriptio	0.2562	0.0009	0.0009	UNITED STATES MINT
PA	Philadelphia	42101	4210109703	012	1	10200603	5.00	SCC Descriptio	0.1049	0.0003	0.0003	UNITED STATES MINT
PA	Philadelphia	42101	4210109705	001	1	10300501	29.40	EU DESCRIPT	4.3560	0.0056	0.0056	V A MEDICAL CENTER
PA	Philadelphia	42101	4210109705	002	1	10300501	29.40	EU DESCRIPT	4.3560	0.0056	0.0056	V A MEDICAL CENTER
PA	Philadelphia	42101	4210109705	003	1	10300501	29.40	EU DESCRIPT	4.3560	0.0056	0.0056	V A MEDICAL CENTER
PA	Philadelphia	42101	4210109705	006	3	10300603	5.00	SCC Descriptio	0.4403	0.0007	0.0007	V A MEDICAL CENTER
PA	Philadelphia	42101	4210109705	006	1	10300603	5.00	SCC Descriptio	0.4875	0.0002	0.0002	V A MEDICAL CENTER
PA	Philadelphia	42101	4210109707	001	1	10200402	55.00	SCC Descriptio	4.4374	0.0000	0.0122	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	003	2	10200602	55.00	SCC Descriptio	0.0021	0.0000	0.0000	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	005	1	10300501	0.00		0.0173	0.0000	0.0000	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	006	1	10301002	0.00		0.0151	0.0001	0.0001	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	007	1	10300501	0.00		0.0082	0.0000	0.0000	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	019	1	10300603	5.00	SCC Descriptio	0.0004	0.0000	0.0000	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109707	020	1	10300603	5.00	SCC Descriptio	0.0021	0.0000	0.0000	NAVAL SUPPORT ACTIVITY , PHILADELPHIA
PA	Philadelphia	42101	4210109715	001	1	10200401	207.00	TOM WEIR FIL	13.7520	0.0000	0.0381	PAID BOILER STEAM PLANT
PA	Philadelphia	42101	4210109715	001	2	10200601	207.00	TOM WEIR FIL	0.5467	0.0000	0.0015	PAID BOILER STEAM PLANT
PA	Philadelphia	42101	4210109715	002	1	10200401	207.00	TOM WEIR FIL	0.1444	0.0000	0.0004	PAID BOILER STEAM PLANT
PA	Philadelphia	42101	4210109715	002	2	10200601	207.00	TOM WEIR FIL	0.0006	0.0000	0.0000	PAID BOILER STEAM PLANT
PA	Philadelphia	42101	4210109715	003	1	10200401	207.00	TOM WEIR FIL	14.8853	0.0000	0.0412	PAID BOILER STEAM PLANT

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PA	Philadelphia	42101	4210109715	003	2	10200601	207.00	TOM WEIR FIL	0.0464	0.0000	0.0001	PAID BOILER STEAM PLANT
PA	Philadelphia	42101	4210109723	001	1	10300501	6.60	EU DESCRIPT	3.0000	0.0000	0.0080	WILLIAM J. GREEN FEDERAL BUILDING - GSA
PA	Philadelphia	42101	4210109723	002	1	10300501	6.60	EU DESCRIPT	1.8000	0.0000	0.0048	WILLIAM J. GREEN FEDERAL BUILDING - GSA
PA	Philadelphia	42101	4210109723	003	1	10300501	6.60	EU DESCRIPT	0.9000	0.0000	0.0024	WILLIAM J. GREEN FEDERAL BUILDING - GSA
PA	Philadelphia	42101	4210109723	004	1	10300501	1.20	EU DESCRIPT	0.3600	0.0000	0.0010	WILLIAM J. GREEN FEDERAL BUILDING - GSA
PA	Philadelphia	42101	4210109724	001	1	10200501	0.00		0.0055	0.0000	0.0000	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	010	1	10300603	5.00	SCC Descriptio	0.0090	0.0002	0.0002	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	012	1	10200501	0.00		0.0060	0.0000	0.0000	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	013	1	10200501	0.00		0.0060	0.0000	0.0000	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	014	1	10200501	0.00		0.0638	0.0000	0.0002	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	015	1	10200501	0.00		0.0002	0.0000	0.0000	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Philadelphia	42101	4210109724	019	1	10300603	5.00	SCC Descriptio	0.2323	0.0000	0.0006	NAVAL SURFACE WARFARE CENTER CD-SSES
PA	Potter	42105	421050002	031A	1	10300603	3.30	MANEVU2002	1.2000	0.0000	0.0040	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	033A	1	10300603	5.10	MANEVU2002	0.2000	0.0000	0.0003	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	041	1	10200603	10.00	MANEVU2002	1.4000	0.0000	0.0060	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	042	1	10200603	10.00	MANEVU2002	0.3000	0.0000	0.0006	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	043	1	10200603	10.00	MANEVU2002	2.2000	0.0000	0.0085	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	044	1	10200602	18.00	MANEVU2002	0.4000	0.0000	0.0001	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	045	1	10200602	15.40	MANEVU2002	5.8000	0.0000	0.0147	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	046	1	10200603	6.50	MANEVU2002	2.4000	0.0000	0.0082	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	047	1	10200603	6.50	MANEVU2002	0.4000	0.0000	0.0016	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	051	1	10200602	15.40	MANEVU2002	7.4000	0.0000	0.0211	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050002	052	1	10200602	15.40	MANEVU2002	4.3000	0.0000	0.0080	DOMINION TRANS INC/GREENLICK STATION
PA	Potter	42105	421050003	039	1	10200602	14.00	MANEVU2002	2.8000	0.0000	0.0077	DOMINION TRANS INC/HARRISON STATION
PA	Potter	42105	421050003	040	1	10200603	6.50	MANEVU2002	2.8000	0.0000	0.0077	DOMINION TRANS INC/HARRISON STATION
PA	Potter	42105	421050003	041	1	10200603	6.50	MANEVU2002	2.8000	0.0000	0.0077	DOMINION TRANS INC/HARRISON STATION
PA	Potter	42105	421050003	042	1	10200603	6.50	MANEVU2002	6.1000	0.0000	0.0168	DOMINION TRANS INC/HARRISON STATION
PA	Potter	42105	421050003	057	1	10300602	25.20	MANEVU2002	2.2000	0.0000	0.0000	DOMINION TRANS INC/HARRISON STATION
PA	Potter	42105	421050004	041	1	10200603	4.20	MANEVU2002	1.0624	0.0000	0.0006	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	042	1	10200602	24.50	MANEVU2002	4.9000	0.0000	0.0000	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	043	1	10200602	24.50	MANEVU2002	5.7000	0.0000	0.0000	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	044	1	10200602	24.50	MANEVU2002	3.4000	0.0000	0.0000	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	045	1	10200602	24.50	MANEVU2002	2.6000	0.0000	0.0000	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	052	1	10200602	11.00	MANEVU2002	4.8000	0.0000	0.0132	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050004	053	1	10200602	11.00	MANEVU2002	4.8000	0.0000	0.0132	DOMINION TRANS INC/ELLISBURG STATION
PA	Potter	42105	421050006	031	1	10300602	14.60	MANEVU2002	0.5750	0.0000	0.0013	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	031	2	10300602	14.60	MANEVU2002	0.5750	0.0000	0.0013	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	032	1	10300602	13.80	MANEVU2002	0.6250	0.0000	0.0014	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	032	2	10300602	13.80	MANEVU2002	0.6250	0.0000	0.0014	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	033	1	10300602	13.80	MANEVU2002	0.6150	0.0000	0.0014	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	033	2	10300602	13.80	MANEVU2002	0.6150	0.0000	0.0014	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	035	1	10300602	5.00	MANEVU2002	0.1100	0.0000	0.0000	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	P106	1	10300603	5.00	SCC Descriptio	0.4900	0.0000	0.0008	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050006	P108	1	10300603	5.00	SCC Descriptio	0.4900	0.0000	0.0008	TRANSCONTINENTAL GAS/WHARTON STATION 535
PA	Potter	42105	421050027	031	1	10200603	7.00	MANEVU2002	1.7000	0.0000	0.0000	DOMINION TRANS INC/STATE LINE STATION
PA	Potter	42105	421050027	033	1	10200603	4.20	MANEVU2002	0.2000	0.0000	0.0013	DOMINION TRANS INC/STATE LINE STATION
PA	Potter	42105	421050027	P203	1	10300603	5.00	SCC Descriptio	0.0010	0.0000	0.0000	DOMINION TRANS INC/STATE LINE STATION
PA	Potter	42105	421050027	P203	2	10300603	5.00	SCC Descriptio	0.0010	0.0000	0.0000	DOMINION TRANS INC/STATE LINE STATION
PA	Schuylkill	42107	421070003	032	1	10200401	23.00	MANEVU2002	2.6000	0.0000	0.0069	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	033	1	10200401	47.70	MANEVU2002	6.5100	0.0000	0.0172	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	034	1	10300401	53.20	MANEVU2002	7.8100	0.0000	0.0206	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	035	2	10301002	6.60	MANEVU2002	0.1355	0.0000	0.0004	GUILFORD MILLS INC/PENN DYE & FINISHING PLT

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PA	Schuylkill	42107	421070003	035	1	10300401	6.60	MANEVU2002	12.9845	0.0000	0.0328	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	107	5	10201002	0.00		0.0080	0.0000	0.0000	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	107	3	10201002	0.00		0.7920	0.0000	0.0020	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	108	5	10201002	0.00		0.0233	0.0000	0.0001	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070003	108	3	10201002	0.00		2.3067	0.0000	0.0063	GUILFORD MILLS INC/PENN DYE & FINISHING PLT
PA	Schuylkill	42107	421070007	031	1	10200401	50.40	MANEVU2002	1.1700	0.0000	0.0030	SARA LEE /RUSH TWP PLT
PA	Schuylkill	42107	421070007	033A	1	10200401	14.60	MANEVU2002	0.5330	0.0000	0.0010	SARA LEE /RUSH TWP PLT
PA	Schuylkill	42107	421070007	034	1	10200401	50.40	MANEVU2002	1.3500	0.0000	0.0030	SARA LEE /RUSH TWP PLT
PA	Schuylkill	42107	421070021	129	2	10300603	5.00	SCC Descriptio	1.0920	0.0000	0.0029	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070021	130	3	10300603	5.00	SCC Descriptio	0.1180	0.0000	0.0003	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070021	190	1	10300603	8.20	MANEVU2002	1.3270	0.0000	0.0036	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070021	220	1	10300603	9.10	MANEVU2002	1.0670	0.0000	0.0029	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070021	225	1	10300603	5.00	SCC Descriptio	0.2070	0.0000	0.0006	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070021	226	1	10300603	5.00	SCC Descriptio	0.0220	0.0000	0.0000	HONEYWELL INC/POTTSVILLE PLT
PA	Schuylkill	42107	421070024	058	1	10200501	0.00		8.7100	0.0000	0.0019	SCHUYLKILL ENERGY RES/ST NICHOLAS COGEN
PA	Schuylkill	42107	421070024	CU058	1	10200501	87.00	MANEVU2002	8.7100	0.0000	0.0019	SCHUYLKILL ENERGY RES/ST NICHOLAS COGEN
PA	Schuylkill	42107	421070090	CUO1	1	10200501	12.60	John Hulsberg	2.4000	0.0000	0.0062	SILBERLINE MFG CO/LINCOLN DR PLT
PA	Schuylkill	42107	421070090	CUO2	1	10200501	10.50	John Hulsberg	0.1000	0.0000	0.0003	SILBERLINE MFG CO/LINCOLN DR PLT
PA	Schuylkill	42107	421070931	P2	1	10300602	55.00	SCC Descriptio	2.1000	0.0000	0.0055	ALCOA EXTRUSIONS INC/CRESSONA OPR
PA	Schuylkill	42107	421070931	PB02	1	10200602	33.50	MANEVU2002	3.2000	0.0000	0.0000	ALCOA EXTRUSIONS INC/CRESSONA OPR
PA	Schuylkill	42107	421070931	PB03	1	10200602	33.50	MANEVU2002	2.8000	0.0000	0.0000	ALCOA EXTRUSIONS INC/CRESSONA OPR
PA	Schuylkill	42107	421070931	SOW1	1	10200602	2.50	MANEVU2002	0.1401	0.0000	0.0002	ALCOA EXTRUSIONS INC/CRESSONA OPR
PA	Snyder	42109	421090001	031	2	10200903	10.20	MANEVU2002	1.8000	0.0000	0.0095	WOOD MODE INC/KREAMER PLT
PA	Snyder	42109	421090001	032	2	10200603	16.50	MANEVU2002	0.0448	0.0000	0.0001	WOOD MODE INC/KREAMER PLT
PA	Snyder	42109	421090001	033	4	10200903	32.00	MANEVU2002	33.5496	0.0000	0.0147	WOOD MODE INC/KREAMER PLT
PA	Snyder	42109	421090001	033	3	10200602	32.00	MANEVU2002	0.2504	0.0000	0.0004	WOOD MODE INC/KREAMER PLT
PA	Snyder	42109	421090007	031	1	10300208	20.00	MANEVU2002	7.1500	0.0000	0.0244	SUSQUEHANNA UNIV/SELINSGROVE CAMPUS
PA	Snyder	42109	421090007	032	1	10300208	20.00	MANEVU2002	6.8600	0.0000	0.0000	SUSQUEHANNA UNIV/SELINSGROVE CAMPUS
PA	Snyder	42109	421090008	031	1	10300102	60.00	MANEVU2002	12.7318	0.0000	0.0000	PA DPW/SELINSGROVE CTR
PA	Snyder	42109	421090008	032	1	10300102	60.00	MANEVU2002	11.3237	0.0000	0.0000	PA DPW/SELINSGROVE CTR
PA	Snyder	42109	421090008	033	2	10300602	51.00	MANEVU2002	3.0300	0.0000	0.0170	PA DPW/SELINSGROVE CTR
PA	Snyder	42109	421090008	034	1	10300501	0.00		0.0782	0.0000	0.0000	PA DPW/SELINSGROVE CTR
PA	Somerset	42111	421110003	031	1	10300208	27.10	MANEVU2002	10.0253	0.0000	0.0000	PA DEPT OF CORR/LAUREL HIGHLANDS SCI
PA	Somerset	42111	421110003	032	1	10300208	27.10	MANEVU2002	3.7288	0.0000	0.0361	PA DEPT OF CORR/LAUREL HIGHLANDS SCI
PA	Somerset	42111	421110003	033	1	10300208	27.10	MANEVU2002	9.5363	0.0000	0.0000	PA DEPT OF CORR/LAUREL HIGHLANDS SCI
PA	Somerset	42111	421110013	032	1	10200602	55.00	SCC Descriptio	13.3000	0.0000	0.0263	NORTH AMERICAN HOGANAS INC/STONY CREEK PLT
PA	Tioga	42117	421170020	032	1	10200602	16.70	John Hulsberg	0.6450	0.0000	0.0017	OSRAM SYLVANIA PROD /WELLSBORO PLT
PA	Tioga	42117	421170020	033	1	10200602	55.00	SCC Descriptio	0.2830	0.0000	0.0007	OSRAM SYLVANIA PROD /WELLSBORO PLT
PA	Tioga	42117	421170022	031	1	10300603	25.20	MANEVU2002	0.6000	0.0000	0.0002	DOMINION TRANS INC/SABINSVILLE STATION
PA	Tioga	42117	421170023	035	1	10200602	31.60	MANEVU2002	7.4550	0.0000	0.0213	WESTFIELD TANNING CO/WESTFIELD PLT
PA	Tioga	42117	421170023	036	1	10200602	31.60	MANEVU2002	7.4550	0.0000	0.0213	WESTFIELD TANNING CO/WESTFIELD PLT
PA	Tioga	42117	421170048	033	3	10200602	24.20	MANEVU2002	1.2363	0.0000	0.0001	DOMINION TRANS INC/TIOGA STATION
PA	Tioga	42117	421170048	036	1	10200603	2.90	MANEVU2002	0.4000	0.0000	0.0007	DOMINION TRANS INC/TIOGA STATION
PA	Tioga	42117	421170050	033	1	10300603	1.50	MANEVU2002	0.9000	0.0000	0.0000	DOMINION TRANS INC/BOOM STATION
PA	Tioga	42117	421170913	CU031	2	10200602	25.00	MANEVU2002	2.9710	0.0000	0.0000	EAGLE FAMILY FOODS INC/WELLSBORO PLT
PA	Tioga	42117	421170913	CU031	1	10200501	25.00	MANEVU2002	0.0268	0.0000	0.0001	EAGLE FAMILY FOODS INC/WELLSBORO PLT
PA	Tioga	42117	421170913	CU032	1	10200602	11.70	MANEVU2002	2.2330	0.0000	0.0074	EAGLE FAMILY FOODS INC/WELLSBORO PLT
PA	Tioga	42117	421170913	CU033	1	10200501	11.70	MANEVU2002	0.3450	0.0000	0.0011	EAGLE FAMILY FOODS INC/WELLSBORO PLT
PA	Tioga	42117	421170913	CU034	1	10200602	6.20	MANEVU2002	1.2760	0.0000	0.0035	EAGLE FAMILY FOODS INC/WELLSBORO PLT
PA	Union	42119	421190001	031	1	10200906	12.10	MANEVU2002	5.8000	0.0000	0.0045	PA HOUSE/LEWISBURG (EAST BUFFALO) FURNI
PA	Union	42119	421190001	032	1	10200906	9.20	MANEVU2002	11.1000	0.0000	0.0244	PA HOUSE/LEWISBURG (EAST BUFFALO) FURNI
PA	Union	42119	421190001	033	1	10200906	9.20	MANEVU2002	3.1000	0.0000	0.0000	PA HOUSE/LEWISBURG (EAST BUFFALO) FURNI

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PA	Union	42119	421190001	034	1	10200602	10.50	MANEVU2002	0.0187	0.0000	0.0000	PA HOUSE/LEWISBURG (EAST BUFFALO) FURNI
PA	Union	42119	421190001	036	1	10200602	18.80	MANEVU2002	0.1000	0.0000	0.0000	PA HOUSE/LEWISBURG (EAST BUFFALO) FURNI
PA	Union	42119	421190002	034	4	10300602	88.80	MANEVU2002	0.0037	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	034	3	10300501	88.80	MANEVU2002	0.1863	0.0000	0.0002	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	037	1	10300501	55.00	SCC Descriptio	0.2687	0.0000	0.0001	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	037	2	10300602	55.00	SCC Descriptio	0.0430	0.0000	0.0001	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	037	3	10301002	55.00	SCC Descriptio	0.0283	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	037A	1	10300501	55.00	SCC Descriptio	0.1664	0.0000	0.0001	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	037A	2	10300602	55.00	SCC Descriptio	0.0436	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	038	4	10300602	85.20	MANEVU2002	0.3392	0.0000	0.0016	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	038	3	10300501	85.20	MANEVU2002	0.0008	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	040	1	10300602	92.00	MANEVU2002	2.3200	0.0000	0.0051	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	P103	1	10300501	55.00	SCC Descriptio	0.0051	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	P103	3	10301002	55.00	SCC Descriptio	0.0029	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190002	P103	2	10300602	55.00	SCC Descriptio	0.0001	0.0000	0.0000	BUCKNELL UNIV/LEWISBURG CAMPUS
PA	Union	42119	421190004	031	1	10200903	5.00	MANEVU2002	1.2000	0.0000	0.0016	YORKTOWNE INC/8TH & WALNUT STS AND 10TH ST
PA	Union	42119	421190007	031	2	10200601	162.50	MANEVU2002	58.4000	0.0000	0.1412	NGC IND/MILTON PLT
PA	Union	42119	421190007	033	2	10200602	68.90	MANEVU2002	0.1100	0.0000	0.0000	NGC IND/MILTON PLT
PA	Union	42119	421190008	037	1	10300602	33.50	MANEVU2002	0.9864	0.0000	0.0007	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190008	038	1	10300602	33.50	MANEVU2002	1.4753	0.0000	0.0000	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190008	045	1	10200602	16.70	MANEVU2002	0.3046	0.0000	0.0022	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190008	046	1	10200602	33.50	MANEVU2002	0.3650	0.0000	0.0005	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190008	CU041	1	10300603	3.00	MANEVU2002	0.1330	0.0000	0.0003	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190008	CU044	1	10300603	4.00	MANEVU2002	0.1330	0.0000	0.0003	US DOJ/US PENITENTIARY LEWISBURG
PA	Union	42119	421190028	034	1	10300501	0.00		2.1900	0.0000	0.0000	PA DPW/LAURELTON CTR
PA	Union	42119	421190418	CU031	1	10200906	5.00	MANEVU2002	2.7000	0.0000	0.0047	YORKTOWNE INC/IND PARK PLT
PA	Union	42119	421190418	CU032	1	10200906	5.00	MANEVU2002	2.1000	0.0000	0.0002	YORKTOWNE INC/IND PARK PLT
PA	Venango	42121	421210006	035	1	10300208	44.80	MANEVU2002	12.3100	0.0000	0.0000	PA DPW/POLK CTR
PA	Venango	42121	421210006	036	1	10300208	44.80	MANEVU2002	13.6900	0.0000	0.0030	PA DPW/POLK CTR
PA	Venango	42121	421210006	037	1	10300208	44.80	MANEVU2002	9.7500	0.0000	0.0300	PA DPW/POLK CTR
PA	Venango	42121	421210006	038	1	10300603	2.50	MANEVU2002	0.0012	0.0000	0.0000	PA DPW/POLK CTR
PA	Venango	42121	421210009	031	2	10200602	31.70	MANEVU2002	0.2376	0.0000	0.0000	CALUMET LUBRICANTS CO/ROUSEVILLE PLT
PA	Venango	42121	421210009	032	3	10200602	144.40	MANEVU2002	0.2802	0.0000	0.0000	CALUMET LUBRICANTS CO/ROUSEVILLE PLT
PA	Venango	42121	421210009	038	1	10200401	94.00	MANEVU2002	13.2566	0.0000	0.0000	CALUMET LUBRICANTS CO/ROUSEVILLE PLT
PA	Venango	42121	421210009	038	2	10200602	94.00	MANEVU2002	4.5734	0.0000	0.0000	CALUMET LUBRICANTS CO/ROUSEVILLE PLT
PA	Venango	42121	421210010	034	1	10300602	25.00	MANEVU2002	1.7935	0.0000	0.0000	MERISOL ANTIOXIDANTS/OIL CITY
PA	Venango	42121	421210010	101	1	10300602	20.00	MANEVU2002	5.2851	0.0000	0.0157	MERISOL ANTIOXIDANTS/OIL CITY
PA	Venango	42121	421210982	032	1	10200603	37.70	MANEVU2002	1.7700	0.0000	0.0045	OMG AMER/SUGARCREEK TWP
PA	Warren	42123	421230002	031	1	10200204	65.00	MANEVU2002	0.3685	0.0000	0.0027	ELLWOOD NATL FORGE CO/IRVINE
PA	Warren	42123	421230002	032	1	10200602	75.00	MANEVU2002	9.1700	0.0000	0.0121	ELLWOOD NATL FORGE CO/IRVINE
PA	Warren	42123	421230002	103	1	10200602	55.00	MANEVU2002	0.1155	0.0000	0.0003	ELLWOOD NATL FORGE CO/IRVINE
PA	Warren	42123	421230002	111	2	10200602	55.00	MANEVU2002	0.0110	0.0000	0.0000	ELLWOOD NATL FORGE CO/IRVINE
PA	Warren	42123	421230002	112	1	10200602	55.00	MANEVU2002	0.0175	0.0000	0.0000	ELLWOOD NATL FORGE CO/IRVINE
PA	Warren	42123	421230003	031	3	10200404	60.00	MANEVU2002	13.4068	0.0000	0.0413	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	031	2	10200701	60.00	MANEVU2002	4.3932	0.0000	0.0106	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	032	3	10200404	60.00	MANEVU2002	16.6821	0.0000	0.0403	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	032	2	10200701	60.00	MANEVU2002	6.4179	0.0000	0.0141	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	033	3	10200404	80.00	MANEVU2002	20.7892	0.0000	0.0525	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	033	2	10200701	80.00	MANEVU2002	7.2108	0.0000	0.0151	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	034	2	10200701	140.00	MANEVU2002	50.9493	0.0000	0.0168	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	034	1	10200501	140.00	MANEVU2002	3.3507	0.0000	0.0081	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	035	1	10200701	60.00	MANEVU2002	16.1000	0.0000	0.0460	UNITED REFINING CO/WARREN PLT

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PA	Warren	42123	421230003	042	3	10200404	55.00	MANEVU2002	0.5902	0.0000	0.0002	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	049	3	10200404	105.00	MANEVU2002	7.9175	0.0000	0.0157	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	050	3	10200404	125.00	MANEVU2002	50.0144	0.0000	0.1539	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	051	4	10200701	46.00	MANEVU2002	17.3489	0.0000	0.0534	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	051	3	10200404	46.00	MANEVU2002	8.3511	0.0000	0.0257	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	052	4	10200701	112.00	MANEVU2002	10.6150	0.0000	0.0117	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	052	3	10200404	112.00	MANEVU2002	0.3850	0.0000	0.0014	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	053	4	10200701	20.00	MANEVU2002	4.7877	0.0000	0.0116	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	053	3	10200404	20.00	MANEVU2002	0.1123	0.0000	0.0003	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	054	4	10200701	40.00	MANEVU2002	6.5906	0.0000	0.0116	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	054	3	10200404	40.00	MANEVU2002	1.4094	0.0000	0.0040	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	055	4	10200701	35.70	MANEVU2002	4.7540	0.0000	0.0146	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	055	3	10200404	35.70	MANEVU2002	3.8460	0.0000	0.0114	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	056	4	10200701	36.00	MANEVU2002	6.5912	0.0000	0.0246	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	056	3	10200404	36.00	MANEVU2002	2.0088	0.0000	0.0060	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230003	057	1	10200701	15.00	MANEVU2002	2.7000	0.0000	0.0030	UNITED REFINING CO/WARREN PLT
PA	Warren	42123	421230006	120	1	10200603	5.00	SCC Descriptio	3.7900	0.0000	0.0079	BERENFIELD CONTAINER/CLARENDON PLT
PA	Warren	42123	421230006	121	1	10200603	5.00	SCC Descriptio	2.2800	0.0000	0.0043	BERENFIELD CONTAINER/CLARENDON PLT
PA	Warren	42123	421230026	031	1	10300903	30.00	MANEVU2002	1.2000	0.0000	0.0011	PA DPW/WARREN STATE HOSP
PA	Warren	42123	421230026	033	1	10300602	28.00	MANEVU2002	2.0800	0.0000	0.0000	PA DPW/WARREN STATE HOSP
PA	Warren	42123	421230026	034	1	10300602	17.00	MANEVU2002	0.9300	0.0000	0.0021	PA DPW/WARREN STATE HOSP
PA	Warren	42123	421230100	031	1	10200602	10.50	MANEVU2002	0.3000	0.0000	0.0000	OSRAM SYLVANIA PROD /WARREN PLT
PA	Warren	42123	421230100	033	1	10200602	25.00	MANEVU2002	0.7000	0.0000	0.0018	OSRAM SYLVANIA PROD /WARREN PLT
PA	Washington	42125	421250001	130	1	10200603	5.00	SCC Descriptio	11.4000	0.0000	0.0288	WORLD KITCHEN INC/CHARLEROI
PA	Washington	42125	421250002	037	1	10200602	60.50	John Hulsberg	2.3000	0.0000	0.0048	WHEELING PGH STEEL/ALLENPORT
PA	Washington	42125	421250002	038	1	10200602	60.50	John Hulsberg	2.0000	0.0000	0.0042	WHEELING PGH STEEL/ALLENPORT
PA	Washington	42125	421250004	032	1	10300602	16.30	MANEVU2002	0.4900	0.0000	0.0000	PA DPW/WESTERN STATE SCH & HOSP
PA	Washington	42125	421250004	033	1	10300602	16.30	MANEVU2002	0.8300	0.0000	0.0000	PA DPW/WESTERN STATE SCH & HOSP
PA	Washington	42125	421250008	031	2	10200602	48.10	MANEVU2002	7.9496	0.0000	0.0769	DYNO NOBEL INC/DONORA
PA	Washington	42125	421250008	031	1	10200501	48.10	MANEVU2002	0.0504	0.0000	0.0000	DYNO NOBEL INC/DONORA
PA	Washington	42125	421250008	033	1	10200602	48.30	MANEVU2002	1.7000	0.0000	0.0187	DYNO NOBEL INC/DONORA
PA	Washington	42125	421250013	031	1	10200603	10.90	MANEVU2002	0.7000	0.0000	0.0008	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	1	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	11	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	13	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	3	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	5	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	7	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	110	9	10200602	55.00	MANEVU2002	1.3106	0.0000	0.0035	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	150	1	10200602	55.00	SCC Descriptio	1.6649	0.0000	0.0024	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	160	1	10200602	55.00	SCC Descriptio	3.4048	0.0000	0.0094	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	180	1	10200602	55.00	SCC Descriptio	0.8838	0.0000	0.0024	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250013	220	2	10200603	5.00	SCC Descriptio	4.1000	0.0000	0.0050	JESSOP STEEL CO/WASHINGTON
PA	Washington	42125	421250014	035	1	10200602	27.00	MANEVU2002	1.4000	0.0000	0.0038	ALLEGHENY ENERGY SUPPLY CO/MITCHELL POWER STA
PA	Washington	42125	421250025	031	1	10200603	5.00	SCC Descriptio	1.0000	0.0000	0.0026	ALLEGHENY LUDLUM COR/HOUSTON-FITCH WORKS
PA	Washington	42125	421250025	101	1	10200603	5.00	MANEVU2002	0.1000	0.0000	0.0000	ALLEGHENY LUDLUM COR/HOUSTON-FITCH WORKS
PA	Washington	42125	421250025	109	1	10200602	55.00	SCC Descriptio	4.3000	0.0000	0.0113	ALLEGHENY LUDLUM COR/HOUSTON-FITCH WORKS
PA	Washington	42125	421250031	033	1	10300603	50.20	John Hulsberg	8.1000	0.0000	0.0214	FLEXSYS AMER LTD PAR/MONONGAHELA
PA	Washington	42125	421250031	102	1	10300603	3.10	John Hulsberg	0.1000	0.0000	0.0003	FLEXSYS AMER LTD PAR/MONONGAHELA
PA	Washington	42125	421250031	103	1	10200602	12.50	John Hulsberg	2.9000	0.0000	0.0078	FLEXSYS AMER LTD PAR/MONONGAHELA
PA	Washington	42125	421250422	103	1	10200603	5.00	SCC Descriptio	0.8000	0.0000	0.0000	COLUMBIA GAS TRANS CORP/DONEGAL COMPRESSOR STA
PA	Washington	42125	421250422	104	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0000	COLUMBIA GAS TRANS CORP/DONEGAL COMPRESSOR STA

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PA	Washington	42125	421250629	103	1	10300602	10.10	MANEVU2002	0.5800	0.0000	0.0005	FALCON PLASTICS/WASHINGTON
PA	Washington	42125	421250896	102	1	10200602	55.00	SCC Descriptio	0.4340	0.0000	0.0011	THERM O ROCK INC/NEW EAGLE PLT
PA	Washington	42125	421250896	103	1	10200602	55.00	SCC Descriptio	0.4340	0.0000	0.0011	THERM O ROCK INC/NEW EAGLE PLT
PA	Washington	42125	421250896	105	1	10200602	55.00	SCC Descriptio	0.5450	0.0000	0.0014	THERM O ROCK INC/NEW EAGLE PLT
PA	Washington	42125	421250896	106	1	10200602	55.00	SCC Descriptio	0.5450	0.0000	0.0014	THERM O ROCK INC/NEW EAGLE PLT
PA	Wayne	42127	421270773	031	1	10300102	27.20	MANEVU2002	13.5800	0.0000	0.0522	PA DEPT OF CORR/WAYMART SCI
PA	Wayne	42127	421270773	032	1	10300102	27.20	MANEVU2002	10.8400	0.0000	0.0000	PA DEPT OF CORR/WAYMART SCI
PA	Wayne	42127	421270773	033	1	10300102	27.20	MANEVU2002	11.8800	0.0000	0.0078	PA DEPT OF CORR/WAYMART SCI
PA	Westmoreland	42129	421290007	032	1	10200602	143.00	MANEVU2002	0.6206	0.0000	0.0027	KOPPERS IND/MONESSEN COKE PLT
PA	Westmoreland	42129	421290007	032	2	10200707	143.00	MANEVU2002	66.3694	0.0000	0.1677	KOPPERS IND/MONESSEN COKE PLT
PA	Westmoreland	42129	421290007	805	1	10200707	251.00	Coke Battery	445.2200	0.0000	1.2721	KOPPERS IND/MONESSEN COKE PLT
PA	Westmoreland	42129	421290007	809	1	10200799	0.00		21.4300	0.0000	0.0612	KOPPERS IND/MONESSEN COKE PLT
PA	Westmoreland	42129	421290008	031	1	10200206	16.70	MANEVU2002	5.2580	0.0000	0.0000	ST VINCENT COLL/LATROBE CAMPUS
PA	Westmoreland	42129	421290008	031	2	10200602	16.70	MANEVU2002	0.0093	0.0000	0.0000	ST VINCENT COLL/LATROBE CAMPUS
PA	Westmoreland	42129	421290008	032	1	10200206	16.70	MANEVU2002	4.4432	0.0000	0.0000	ST VINCENT COLL/LATROBE CAMPUS
PA	Westmoreland	42129	421290008	032	2	10200602	16.70	MANEVU2002	0.0365	0.0000	0.0000	ST VINCENT COLL/LATROBE CAMPUS
PA	Westmoreland	42129	421290010	111	1	10300603	5.00	SCC Descriptio	3.1950	0.0000	0.0039	DURALOY TECHNOLOGIES/SCOTTDALE
PA	Westmoreland	42129	421290015	031	1	10200602	40.00	MANEVU2002	4.0900	0.0000	0.0184	STD STEEL/LATROBE
PA	Westmoreland	42129	421290015	033	1	10200602	40.00	MANEVU2002	3.7060	0.0000	0.0020	STD STEEL/LATROBE
PA	Westmoreland	42129	421290015	105	2	10200603	5.00	SCC Descriptio	4.5135	0.0000	0.0099	STD STEEL/LATROBE
PA	Westmoreland	42129	421290015	106	3	10200603	5.00	SCC Descriptio	12.1485	0.0000	0.0227	STD STEEL/LATROBE
PA	Westmoreland	42129	421290015	107	3	10200603	5.00	SCC Descriptio	0.0024	0.0000	0.0000	STD STEEL/LATROBE
PA	Westmoreland	42129	421290015	109	2	10200603	9.50	MANEVU2002	1.1100	0.0000	0.0018	STD STEEL/LATROBE
PA	Westmoreland	42129	421290017	031	1	10200602	24.00	MANEVU2002	3.6400	0.0000	0.0076	TIMKEN LATROBE STEEL CO/LATROBE PLT
PA	Westmoreland	42129	421290017	043	1	10200603	10.00	MANEVU2002	2.2015	0.0000	0.0007	TIMKEN LATROBE STEEL CO/LATROBE PLT
PA	Westmoreland	42129	421290029	031	1	10300208	47.00	MANEVU2002	3.4628	0.0000	0.0008	PA DPW/TORRANCE STATE HOSP
PA	Westmoreland	42129	421290029	032	1	10300208	45.00	MANEVU2002	24.0582	0.0000	0.0449	PA DPW/TORRANCE STATE HOSP
PA	Westmoreland	42129	421290029	034	1	10300208	17.00	MANEVU2002	6.5807	0.0000	0.0058	PA DPW/TORRANCE STATE HOSP
PA	Westmoreland	42129	421290036	031	1	10200602	30.40	MANEVU2002	1.3115	0.0000	0.0019	OMNOVA SOLUTIONS INC/JEANETTE PLT
PA	Westmoreland	42129	421290036	032	1	10200602	30.40	MANEVU2002	1.1085	0.0000	0.0029	OMNOVA SOLUTIONS INC/JEANETTE PLT
PA	Westmoreland	42129	421290036	035	1	10200602	12.50	MANEVU2002	0.1885	0.0000	0.0000	OMNOVA SOLUTIONS INC/JEANETTE PLT
PA	Westmoreland	42129	421290036	036	1	10200602	12.50	John Hulsberg	0.2140	0.0000	0.0000	OMNOVA SOLUTIONS INC/JEANETTE PLT
PA	Westmoreland	42129	421290044	032	1	10200204	66.10	MANEVU2002	0.0275	0.0000	0.0000	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	033	1	10200602	71.40	MANEVU2002	5.0065	0.0000	0.0099	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	035	1	10200603	5.60	MANEVU2002	0.4771	0.0000	0.0005	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	036	1	10200603	24.30	MANEVU2002	0.5760	0.0000	0.0000	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	105A	1	10200602	55.00	SCC Descriptio	8.6446	0.0000	0.0218	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112C	1	10200603	5.00	SCC Descriptio	0.5170	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112D	5	10200602	55.00	SCC Descriptio	1.2515	0.0000	0.0022	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112D	1	10200602	55.00	SCC Descriptio	1.2147	0.0000	0.0021	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112D	3	10200602	55.00	SCC Descriptio	1.2147	0.0000	0.0021	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	11	10200602	55.00	SCC Descriptio	0.7380	0.0000	0.0013	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	7	10200602	55.00	SCC Descriptio	0.6970	0.0000	0.0012	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	9	10200602	55.00	SCC Descriptio	0.6970	0.0000	0.0012	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	1	10200602	55.00	SCC Descriptio	0.6560	0.0000	0.0012	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	3	10200602	55.00	SCC Descriptio	0.6560	0.0000	0.0012	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	112E	5	10200602	55.00	SCC Descriptio	0.6560	0.0000	0.0012	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113C	1	10200603	5.00	SCC Descriptio	0.8579	0.0000	0.0018	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113D	5	10200602	55.00	SCC Descriptio	1.7773	0.0000	0.0037	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113D	1	10200602	55.00	SCC Descriptio	1.7250	0.0000	0.0036	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113D	3	10200602	55.00	SCC Descriptio	1.7250	0.0000	0.0036	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	11	10200602	55.00	SCC Descriptio	0.9750	0.0000	0.0020	ALLEGHENY LUDLUM CORP/WEST LEECHBURG

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PA	Westmoreland	42129	421290044	113E	13	10200602	55.00	SCC Descriptio	0.9750	0.0000	0.0020	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	1	10200602	55.00	SCC Descriptio	0.9100	0.0000	0.0019	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	3	10200602	55.00	SCC Descriptio	0.9100	0.0000	0.0019	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	5	10200602	55.00	SCC Descriptio	0.9100	0.0000	0.0019	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	7	10200602	55.00	SCC Descriptio	0.9100	0.0000	0.0019	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	113E	9	10200602	55.00	SCC Descriptio	0.9100	0.0000	0.0019	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	114	1	10200602	55.00	SCC Descriptio	0.3500	0.0000	0.0006	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	114	3	10200602	55.00	SCC Descriptio	0.3500	0.0000	0.0006	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	115A	1	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0005	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	115A	3	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0005	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	117	1	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	117	3	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	117	5	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	117	7	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	117	9	10200602	55.00	SCC Descriptio	1.2000	0.0000	0.0009	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	9	10200602	55.00	SCC Descriptio	1.4220	0.0000	0.0038	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	5	10200602	55.00	SCC Descriptio	1.3430	0.0000	0.0035	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	7	10200602	55.00	SCC Descriptio	1.3430	0.0000	0.0035	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	1	10200602	55.00	SCC Descriptio	1.2640	0.0000	0.0033	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	11	10200602	55.00	SCC Descriptio	1.2640	0.0000	0.0033	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	118	3	10200602	55.00	SCC Descriptio	1.2640	0.0000	0.0033	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	126	1	10200603	5.00	SCC Descriptio	0.2162	0.0000	0.0005	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290044	134	1	10200603	5.00	SCC Descriptio	2.3925	0.0000	0.0045	ALLEGHENY LUDLUM CORP/WEST LEECHBURG
PA	Westmoreland	42129	421290062	031	1	10300603	4.00	MANEVU2002	0.1034	0.0000	0.0000	DOMINION TRANS INC/SOUTH OAKFORD STA
PA	Westmoreland	42129	421290062	105	1	10300603	5.00	SCC Descriptio	0.2497	0.0000	0.0001	DOMINION TRANS INC/SOUTH OAKFORD STA
PA	Westmoreland	42129	421290063	103	1	10200602	55.00	SCC Descriptio	0.4681	0.0000	0.0009	SUMMERILL TUBE CORP/SCOTTDALE PLT
PA	Westmoreland	42129	421290064	031	1	10300602	13.40	MANEVU2002	7.1000	0.0000	0.0086	DOMINION TRANS INC/OAKFORD STA
PA	Westmoreland	42129	421290064	032	1	10300602	13.40	MANEVU2002	7.1000	0.0000	0.0109	DOMINION TRANS INC/OAKFORD STA
PA	Westmoreland	42129	421290070	031	1	10300603	6.30	MANEVU2002	0.6366	0.0000	0.0017	CK COMPOSITES INC/MT PLEASANT
PA	Westmoreland	42129	421290071	032	1	10300602	10.00	MANEVU2002	0.9110	0.0000	0.0021	CHESTNUT RIDGE FOAM /LATROBE PLT
PA	Westmoreland	42129	421290073	031	1	10200601	126.00	MANEVU2002	0.6380	0.0000	0.0000	ELLIOTT TURBOMACHINERY/JEANNETTE
PA	Westmoreland	42129	421290073	033	1	10200601	128.00	MANEVU2002	0.2530	0.0000	0.0000	ELLIOTT TURBOMACHINERY/JEANNETTE
PA	Westmoreland	42129	421290073	035	1	10200602	76.10	MANEVU2002	0.3875	0.0000	0.0010	ELLIOTT TURBOMACHINERY/JEANNETTE
PA	Westmoreland	42129	421290073	036	1	10200601	206.00	MANEVU2002	5.5000	0.0000	0.0151	ELLIOTT TURBOMACHINERY/JEANNETTE
PA	Westmoreland	42129	421290074	031	1	10200603	25.00	MANEVU2002	9.5575	0.0000	0.0263	NATL ROLL CO/AVONMORE
PA	Westmoreland	42129	421290074	104	1	10200603	5.00	MANEVU2002	0.0714	0.0000	0.0002	NATL ROLL CO/AVONMORE
PA	Westmoreland	42129	421290074	105	1	10200603	5.00	MANEVU2002	0.7890	0.0000	0.0022	NATL ROLL CO/AVONMORE
PA	Westmoreland	42129	421290081	031	1	10200602	19.00	MANEVU2002	4.1173	0.0000	0.0131	POLY HI SOLIDUR INC/DELMONT PLT
PA	Westmoreland	42129	421290085	031	1	10200602	26.10	MANEVU2002	1.7543	0.0000	0.0044	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	032	1	10200602	26.10	MANEVU2002	1.7543	0.0000	0.0044	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	116	1	10200603	5.00	SCC Descriptio	12.9888	0.0000	0.0100	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	120A	1	10200602	55.00	SCC Descriptio	9.9578	0.0000	0.0285	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	120E	1	10200603	5.00	SCC Descriptio	0.2858	0.0000	0.0008	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	121A	1	10200603	5.00	SCC Descriptio	0.5000	0.0000	0.0015	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290085	121B	1	10200602	55.00	SCC Descriptio	12.1571	0.0000	0.0361	ALLEGHENY LUDLUM CORP/VANDERGRIFT
PA	Westmoreland	42129	421290110	031	1	10200602	50.00	MANEVU2002	13.2205	0.0000	0.0232	ALCOA INC/UPPER BURREL
PA	Westmoreland	42129	421290129	031	1	10300602	10.20	MANEVU2002	1.2884	0.0000	0.0040	HUNTINGTON FOAM PITT/MT PLEASANT
PA	Westmoreland	42129	421290178	031	1	10200603	3.40	MANEVU2002	0.0526	0.0000	0.0002	DOMINION TRANS INC/TONKIN STA
PA	Westmoreland	42129	421290189	031	1	10200602	35.70	MANEVU2002	4.5820	0.0000	0.0076	LATROBE AREA HOSP/LATROBE
PA	Westmoreland	42129	421290189	032	1	10200602	35.70	MANEVU2002	0.6560	0.0000	0.0032	LATROBE AREA HOSP/LATROBE
PA	Westmoreland	42129	421290233	031	1	10300602	14.00	MANEVU2002	1.5000	0.0000	0.0031	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	032	1	10300602	14.00	MANEVU2002	1.5000	0.0000	0.0043	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT

State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	2002 NOx Emissions Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
PA	Westmoreland	42129	421290233	101	1	10200602	55.00	SCC Descriptio	18.7202	0.0000	0.0514	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	102	1	10200602	55.00	SCC Descriptio	14.1680	0.0000	0.0389	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	103	1	10300602	55.00	SCC Descriptio	1.5000	0.0000	0.0043	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	104	1	10300602	55.00	SCC Descriptio	1.9000	0.0000	0.0052	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	105	1	10300602	55.00	SCC Descriptio	2.1000	0.0000	0.0058	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	106	1	10300602	55.00	SCC Descriptio	0.6000	0.0000	0.0016	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	107	1	10300602	55.00	SCC Descriptio	0.6000	0.0000	0.0016	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290233	113	1	10300602	55.00	SCC Descriptio	2.5000	0.0000	0.0071	AMERICAN VIDEO GLASS CO LLC/MT PLEASANT PLT
PA	Westmoreland	42129	421290455	031	1	10200602	25.10	MANEVU2002	2.6410	0.0000	0.0067	LATROBE BREWING CO/LATROBE
PA	Westmoreland	42129	421290956	031	1	10200602	20.90	MANEVU2002	1.4124	0.0000	0.0017	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	032	1	10200602	20.90	MANEVU2002	0.2515	0.0000	0.0006	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	033	1	10200602	31.50	MANEVU2002	2.3200	0.0000	0.0048	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	034	1	10200602	31.50	MANEVU2002	3.5513	0.0000	0.0059	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	047	1	10200602	31.40	MANEVU2002	0.9900	0.0000	0.0028	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	051	1	10300603	2.00	MANEVU2002	0.5267	0.0000	0.0014	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	052	1	10300603	1.70	MANEVU2002	0.4478	0.0000	0.0012	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	127	1	10300602	55.00	SCC Descriptio	2.4441	0.0000	0.0062	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	128	1	10300603	5.00	SCC Descriptio	1.2400	0.0000	0.0038	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	129	1	10300603	5.00	SCC Descriptio	2.2391	0.0000	0.0062	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	130	1	10300603	5.00	SCC Descriptio	0.3621	0.0000	0.0010	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	132	1	10200602	55.00	SCC Descriptio	1.9721	0.0000	0.0037	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	139	1	10300603	5.00	SCC Descriptio	0.0351	0.0000	0.0001	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	143	1	10200603	5.00	SCC Descriptio	0.1100	0.0000	0.0003	SONY ELECTRONICS INC/NEW STANTON
PA	Westmoreland	42129	421290956	145	1	10300603	5.00	SCC Descriptio	0.2043	0.0000	0.0005	SONY ELECTRONICS INC/NEW STANTON
PA	Wyoming	42131	421310009	031	2	10200601	242.00	John Hulsberg	72.4000	0.0000	0.1997	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	032A	1	10200601	233.00	John Hulsberg	51.7662	0.0000	0.1428	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	032A	2	10200401	233.00	John Hulsberg	5.9338	0.0000	0.0164	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	033A	2	10200602	156.00	John Hulsberg	25.9362	0.0000	0.0701	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	034A	2	10200601	156.00	John Hulsberg	43.5000	0.0000	0.1200	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	036	1	10300602	80.00	MANEVU2002	7.8300	0.0000	0.0207	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	501	2	10200602	55.00	SCC Descriptio	8.6580	0.0000	0.0234	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	501	1	10200602	55.00	SCC Descriptio	3.0420	0.0000	0.0082	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	502	2	10200602	55.00	SCC Descriptio	9.5250	0.0000	0.0257	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	502	1	10200602	55.00	SCC Descriptio	3.1750	0.0000	0.0086	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	503	2	10200602	55.00	SCC Descriptio	8.0660	0.0000	0.0218	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	503	1	10200602	55.00	SCC Descriptio	2.8340	0.0000	0.0077	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	504	2	10200602	55.00	SCC Descriptio	8.5100	0.0000	0.0230	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	504	1	10200602	55.00	SCC Descriptio	2.9900	0.0000	0.0081	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	505	2	10200602	55.00	SCC Descriptio	8.5840	0.0000	0.0232	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	505	1	10200602	55.00	SCC Descriptio	3.0160	0.0000	0.0082	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	506	2	10200602	55.00	SCC Descriptio	8.7320	0.0000	0.0236	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310009	506	1	10200602	55.00	SCC Descriptio	3.0680	0.0000	0.0083	PROCTER & GAMBLE PAPER PROD CO/MEHOOPANY
PA	Wyoming	42131	421310682	031	1	10200906	8.70	MANEVU2002	1.6000	0.0000	0.0044	DEER PARK LUMBER/DEER PARK MFG PLT
PA	York	42133	421330011	031	1	10200602	65.00	MANEVU2002	11.0019	0.0000	0.0290	YORKTOWN PAPER BOARD/SPRING GARDEN
PA	York	42133	421330015	112	1	10200603	5.00	SCC Descriptio	2.2000	0.0000	0.0000	GLEN GERY CORP/YORK DIVISION
PA	York	42133	421330015	113	1	10200603	5.00	SCC Descriptio	0.0798	0.0000	0.0000	GLEN GERY CORP/YORK DIVISION
PA	York	42133	421330015	114	1	10200603	5.00	SCC Descriptio	0.4000	0.0000	0.0000	GLEN GERY CORP/YORK DIVISION
PA	York	42133	421330016	034	2	10200401	363.70	MANEVU2002	2.3177	0.0000	0.0061	PH GLATFELTER CO/SPRING GROVE
PA	York	42133	421330016	034	1	10200202	363.70	MANEVU2002	709.4823	0.0000	0.3898	PH GLATFELTER CO/SPRING GROVE
PA	York	42133	421330016	037	1	10200401	692.40	MANEVU2002	6.5236	0.0000	0.0093	PH GLATFELTER CO/SPRING GROVE
PA	York	42133	421330019	031	1	10200501	50.50	MANEVU2002	6.6700	0.0000	0.0000	EXELON GENERATION CO/PEACH BOTTOM NUCLEAR STATION
PA	York	42133	421330019	032	1	10200501	50.50	MANEVU2002	1.5900	0.0000	0.0002	EXELON GENERATION CO/PEACH BOTTOM NUCLEAR STATION

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PA	York	42133	421330024	101	1	10200603	5.00	MANEVU2002	1.6000	0.0000	0.0040	NEW YORK WIRE CO/YORK WEAVING PLT
PA	York	42133	421330027	031	1	10300602	12.60	MANEVU2002	0.7500	0.0000	0.0019	ADHESIVES RESEARCH INC/GLEN ROCK
PA	York	42133	421330034	031	1	10200602	50.00	MANEVU2002	5.2660	0.0000	0.0000	UNITED DEFENSE LTD P/YORK
PA	York	42133	421330037	031	2	10200602	52.50	MANEVU2002	10.2950	0.0000	0.0068	YORK INTL CORP/GRANTLEY
PA	York	42133	421330038	031	1	10200504	60.00	MANEVU2002	13.0000	0.0000	0.0000	DEFENSE DISTR SUSQUE/NCAD
PA	York	42133	421330038	032	1	10200504	60.00	MANEVU2002	11.7000	0.0000	0.0000	DEFENSE DISTR SUSQUE/NCAD
PA	York	42133	421330038	033	1	10200504	60.00	MANEVU2002	8.6000	0.0000	0.0000	DEFENSE DISTR SUSQUE/NCAD
PA	York	42133	421330038	034	1	10200504	25.20	MANEVU2002	0.8000	0.0000	0.0000	DEFENSE DISTR SUSQUE/NCAD
PA	York	42133	421330040	031	1	10300501	50.80	MANEVU2002	0.1084	0.0000	0.0000	YORK HOSP/YORK CITY
PA	York	42133	421330040	031	2	10300602	50.80	MANEVU2002	0.2216	0.0000	0.0000	YORK HOSP/YORK CITY
PA	York	42133	421330040	032	1	10300602	38.60	MANEVU2002	2.4871	0.0000	0.0005	YORK HOSP/YORK CITY
PA	York	42133	421330040	032	2	10300501	38.60	MANEVU2002	0.1329	0.0000	0.0000	YORK HOSP/YORK CITY
PA	York	42133	421330040	033	1	10300602	30.50	MANEVU2002	4.4900	0.0000	0.0133	YORK HOSP/YORK CITY
PA	York	42133	421330049	031	1	10200603	6.30	MANEVU2002	1.1200	0.0000	0.0030	CCX IND INC/HANOVER WIRE CLOTH
PA	York	42133	421330049	032	1	10200603	6.30	MANEVU2002	0.6610	0.0000	0.0000	CCX IND INC/HANOVER WIRE CLOTH
PA	York	42133	421330049	116	1	10200603	5.00	SCC Descriptio	0.2100	0.0000	0.0006	CCX IND INC/HANOVER WIRE CLOTH
PA	York	42133	421330049	117	1	10200603	5.00	SCC Descriptio	0.0870	0.0000	0.0002	CCX IND INC/HANOVER WIRE CLOTH
PA	York	42133	421330051	032	1	10200903	12.30	MANEVU2002	0.5729	0.0000	0.0007	YORKTOWNE INC/NO 6 RED LION
PA	York	42133	421330051	032	3	10200602	12.30	MANEVU2002	0.1662	0.0000	0.0000	YORKTOWNE INC/NO 6 RED LION
PA	York	42133	421330051	032	2	10200501	12.30	MANEVU2002	0.0109	0.0000	0.0000	YORKTOWNE INC/NO 6 RED LION
PA	York	42133	421330053	040	2	10200603	1.20	MANEVU2002	0.2800	0.0000	0.0000	TRANSCONTINENTAL GAS/STATION 195
PA	York	42133	421330060	031	1	10200603	3.40	John Hulsberg	0.4100	0.0000	0.0011	LEHIGH CEMENT CO/YORK OPERATIONS
PA	York	42133	421330060	032	1	10200603	6.10	John Hulsberg	0.0700	0.0000	0.0002	LEHIGH CEMENT CO/YORK OPERATIONS
PA	York	42133	421330061	031	1	10200603	9.00	MANEVU2002	0.2000	0.0000	0.0002	YORK CITY SEWER AUTH/YORK CITY WWTP
PA	York	42133	421330061	099	1	10200799	0.00		0.1000	0.0000	0.0002	YORK CITY SEWER AUTH/YORK CITY WWTP
PA	York	42133	421330062	031	1	10200603	8.30	MANEVU2002	0.0901	0.0000	0.0001	YORK GROUP INC/BLACK BRIDGE RD
PA	York	42133	421330062	032	1	10200603	8.30	MANEVU2002	0.1417	0.0000	0.0002	YORK GROUP INC/BLACK BRIDGE RD
PA	York	42133	421330062	033	1	10300903	11.00	MANEVU2002	1.4000	0.0000	0.0034	YORK GROUP INC/BLACK BRIDGE RD
PA	York	42133	421330063	031	1	10200602	44.00	MANEVU2002	3.2202	0.0000	0.0007	HARLEY DAVIDSON MOTOR CO/YORK FACILITY
PA	York	42133	421330063	032	1	10200602	22.00	MANEVU2002	0.6467	0.0000	0.0001	HARLEY DAVIDSON MOTOR CO/YORK FACILITY
PA	York	42133	421330063	033	2	10200602	61.80	MANEVU2002	6.7602	0.0000	0.0163	HARLEY DAVIDSON MOTOR CO/YORK FACILITY
PA	York	42133	421330063	033	3	10200501	61.80	MANEVU2002	0.0198	0.0000	0.0000	HARLEY DAVIDSON MOTOR CO/YORK FACILITY
PA	York	42133	421330063	034	1	10200602	72.00	MANEVU2002	4.6869	0.0000	0.0000	HARLEY DAVIDSON MOTOR CO/YORK FACILITY
PA	York	42133	421330066	031	1	10300602	10.90	MANEVU2002	0.9900	0.0000	0.0014	OSRAM SYLVANIA PROD /YORK BASE PROD PLT
PA	York	42133	421330067	030	1	10200401	85.80	MANEVU2002	0.0337	0.0000	0.0004	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330067	030	2	10300602	85.80	MANEVU2002	1.8163	0.0000	0.0042	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330067	031	2	10300602	42.00	MANEVU2002	4.7480	0.0000	0.0000	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330067	031	1	10200401	42.00	MANEVU2002	0.3120	0.0000	0.0007	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330067	032	1	10300602	21.00	MANEVU2002	4.7000	0.0000	0.0108	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330067	033	2	10300602	42.00	MANEVU2002	4.7000	0.0000	0.0108	HANOVER FOODS CORP/HANOVER CANNERY
PA	York	42133	421330072	031	1	10200603	5.20	MANEVU2002	0.3000	0.0000	0.0000	LEISTERS FURNITURE/HANOVER BORO
PA	York	42133	421330072	032A	1	10200603	5.00	SCC Descriptio	0.1000	0.0000	0.0002	LEISTERS FURNITURE/HANOVER BORO
PA	York	42133	421330090	032	1	10200602	17.00	MANEVU2002	2.4000	0.0000	0.0066	RH SHEPPARD CO INC/HANOVER
PA	York	42133	421330090	032	2	10300603	17.00	MANEVU2002	2.4000	0.0000	0.0066	RH SHEPPARD CO INC/HANOVER
RI	Bristol	44001	AIR1507	1	1	10200502	55.00	SCC Descriptio	0.0865	0.0000	0.0002	ANCHORAGE, INC., THE
RI	Bristol	44001	AIR1651	1	1	10200602	55.00	SCC Descriptio	0.0275	0.0000	0.0001	WESTFALL MANUFACTURING
RI	Bristol	44001	AIR1822	1	1	10200502	55.00	SCC Descriptio	0.0310	0.0000	0.0001	BLOUNT BOATS, INC.
RI	Bristol	44001	AIR2213	1	1	10200602	55.00	SCC Descriptio	0.0595	0.0000	0.0002	CARROLL MARINE LIMITED
RI	Bristol	44001	AIR3273	1	1	10300602	55.00	SCC Descriptio	0.7728	0.0000	0.0019	R.I. VETERANS HOME
RI	Bristol	44001	AIR3275	1	1	10300502	55.00	SCC Descriptio	0.4350	0.0000	0.0012	ROGER WILLIAMS UNIVERSITY
RI	Bristol	44001	AIR3275	2	2	10300602	55.00	SCC Descriptio	2.0000	0.0000	0.0049	ROGER WILLIAMS UNIVERSITY
RI	Bristol	44001	AIR3275	3	3	10301002	0.00		0.0235	0.0000	0.0001	ROGER WILLIAMS UNIVERSITY

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RI	Bristol	44001	AIR3332	1	1	10200402	55.00	SCC Descriptio	5.8195	0.0000	0.0160	BLOUNT SEAFOOD
RI	Bristol	44001	AIR3332	2	2	10200602	55.00	SCC Descriptio	1.2130	0.0000	0.0033	BLOUNT SEAFOOD
RI	Bristol	44001	AIR3565	1	1	10200502	55.00	SCC Descriptio	0.1049	0.0000	0.0003	I SHALOM CO., INC.
RI	Bristol	44001	AIR3616	1	1	10200504	0.00		1.0450	0.0000	0.0029	RUSS-RUSS REALTY/ROBIN ROY
RI	Bristol	44001	AIR3739	1	1	10200502	55.00	SCC Descriptio	0.0070	0.0000	0.0000	BEACON BOATS, INC.
RI	Bristol	44001	AIR3813	1	1	10200602	55.00	SCC Descriptio	0.1155	0.0000	0.0003	BRISTOL METAL FINISHING
RI	Bristol	44001	AIR3873	1	1	10200602	55.00	SCC Descriptio	0.0445	0.0000	0.0001	OUTERLIMITS POWERBOATS
RI	Bristol	44001	AIR3935	1	1	10300602	55.00	SCC Descriptio	0.5527	0.0000	0.0014	MMF REALTY
RI	Bristol	44001	AIR686	1	1	10200602	55.00	SCC Descriptio	0.0415	0.0000	0.0001	HOLBY MARINE CO.
RI	Bristol	44001	AIR894	1	1	10200502	55.00	SCC Descriptio	0.1720	0.0000	0.0005	LLOYD MFG. CO., INC.
RI	Bristol	44001	AIR894	2	2	10200602	55.00	SCC Descriptio	0.2550	0.0000	0.0007	LLOYD MFG. CO., INC.
RI	Kent	44003	AIR1037	1	1	10200402	55.00	SCC Descriptio	1.4590	0.0000	0.0040	NATCO PRODUCTS CORPORATION (FACTORY ST.)
RI	Kent	44003	AIR1097	1	1	10200602	55.00	SCC Descriptio	0.0183	0.0000	0.0000	EMTEC
RI	Kent	44003	AIR1102	1	1	10200602	55.00	SCC Descriptio	0.0445	0.0000	0.0001	NORTHERN INDUSTRIES INC.
RI	Kent	44003	AIR1168	1	1	10200602	55.00	SCC Descriptio	0.2250	0.0000	0.0006	PEASE & CURREN, INC.
RI	Kent	44003	AIR1316	1	1	10200402	55.00	SCC Descriptio	6.3375	0.0000	0.0174	RIVERPOINT LACE WORKS INC.
RI	Kent	44003	AIR1316	2	2	10200602	55.00	SCC Descriptio	0.0400	0.0000	0.0001	RIVERPOINT LACE WORKS INC.
RI	Kent	44003	AIR1399	1	1	10200602	55.00	SCC Descriptio	0.4150	0.0000	0.0011	SOLUOL CHEMICAL CO., INC.
RI	Kent	44003	AIR1438	1	1	10200401	19.80	TITLE V PERM	12.7105	0.0000	0.0352	STANLEY-BOSTITCH, INC. (EG)
RI	Kent	44003	AIR1438	2	2	10200602	19.80	TITLE V PERM	0.8825	0.0000	0.0024	STANLEY-BOSTITCH, INC. (EG)
RI	Kent	44003	AIR1845	1	1	10200602	55.00	SCC Descriptio	0.0865	0.0000	0.0002	NEW ENGLAND UNION CO., INC.
RI	Kent	44003	AIR1845	2	2	10201002	0.00		0.0795	0.0000	0.0002	NEW ENGLAND UNION CO., INC.
RI	Kent	44003	AIR1846	1	1	10200402	21.00	TITLE V PERM	10.8000	0.0000	0.0297	ORIGINAL BRADFORD SOAP WORKS INC.
RI	Kent	44003	AIR1846	2	2	10200502	21.00	TITLE V PERM	0.0130	0.0000	0.0000	ORIGINAL BRADFORD SOAP WORKS INC.
RI	Kent	44003	AIR1846	3	3	10200602	21.00	TITLE V PERM	0.5315	0.0000	0.0014	ORIGINAL BRADFORD SOAP WORKS INC.
RI	Kent	44003	AIR1871	1	1	10200602	55.00	SCC Descriptio	0.1065	0.0000	0.0003	NATIONAL VELOUR CORPORATION
RI	Kent	44003	AIR1880	1	1	10200602	55.00	SCC Descriptio	0.1350	0.0000	0.0004	WOLVERINE TUBE, INC
RI	Kent	44003	AIR19	1	1	10200602	55.00	SCC Descriptio	0.6504	0.0000	0.0018	A.T. WALL CO.
RI	Kent	44003	AIR213	1	1	10200502	55.00	SCC Descriptio	0.0386	0.0000	0.0001	CAL CHEMICAL CORPORATION
RI	Kent	44003	AIR213	2	2	10200602	55.00	SCC Descriptio	0.0216	0.0000	0.0001	CAL CHEMICAL CORPORATION
RI	Kent	44003	AIR2705	1	1	10200502	55.00	SCC Descriptio	0.0266	0.0000	0.0001	INTERNATIONAL MACHINE & TOOL CORPORATION
RI	Kent	44003	AIR297	1	1	10200502	55.00	SCC Descriptio	0.1220	0.0000	0.0003	CONCORDIA MFG. CO., INC.
RI	Kent	44003	AIR297	2	2	10200602	55.00	SCC Descriptio	0.0730	0.0000	0.0002	CONCORDIA MFG. CO., INC.
RI	Kent	44003	AIR3094	1	1	10300504	0.00		0.4200	0.0000	0.0012	SECURITY CLEANSERS, INC.
RI	Kent	44003	AIR3247	1	1	10200602	55.00	SCC Descriptio	0.6515	0.0000	0.0018	COSMED OF RHODE ISLAND
RI	Kent	44003	AIR3250	1	1	10200602	55.00	SCC Descriptio	6.5130	0.0000	0.0176	IMMUNEX RI CORP, A SUSIDIARY OF AMGEN INC
RI	Kent	44003	AIR3663	1	1	10200402	55.00	SCC Descriptio	2.6275	0.0000	0.0072	NATCO PRODUCTS CORPORATION (B)
RI	Kent	44003	AIR3664	2	2	10200402	55.00	SCC Descriptio	0.7650	0.0000	0.0021	NATCO PRODUCTS CORPORATION
RI	Kent	44003	AIR3665	3	3	10200602	55.00	SCC Descriptio	0.2150	0.0000	0.0006	NATCO PRODUCTS CORPORATION (L)
RI	Kent	44003	AIR40	1	1	10200602	55.00	SCC Descriptio	0.3590	0.0000	0.0010	ADVANCED CHEMICAL CO.
RI	Kent	44003	AIR459	1	1	10200602	55.00	SCC Descriptio	0.2010	0.0000	0.0005	PERKINELMER INC.
RI	Kent	44003	AIR467	1	1	10200602	55.00	SCC Descriptio	0.0835	0.0000	0.0002	VISHAY ELECTRO-FILMS, INC.
RI	Kent	44003	AIR581	1	1	10200602	55.00	SCC Descriptio	0.0590	0.0000	0.0002	GARLAND INDUSTRIES, INC.
RI	Kent	44003	AIR588	1	1	10200602	55.00	SCC Descriptio	0.0152	0.0000	0.0000	GEIB REFINING
RI	Kent	44003	AIR634	1	1	10200601	150.00	SCC Descriptio	0.3555	0.0000	0.0010	GTECH CORPORATION
RI	Kent	44003	AIR684	1	1	10200402	55.00	SCC Descriptio	2.0395	0.0000	0.0056	CLARIANT CORPORATION
RI	Kent	44003	AIR684	2	2	10200602	55.00	SCC Descriptio	13.1675	0.0000	0.0356	CLARIANT CORPORATION
RI	Kent	44003	AIR696	1	1	10200504	0.00		0.7910	0.0000	0.0022	HOPE VALLEY DYEING CORPORATION
RI	Kent	44003	AIR817	1	1	10200402	55.00	SCC Descriptio	1.8500	0.0000	0.0051	KENNEY MANUFACTURING CO.
RI	Kent	44003	AIR817	2	2	10200602	55.00	SCC Descriptio	0.0435	0.0000	0.0001	KENNEY MANUFACTURING CO.
RI	Kent	44003	AIR822	1	1	10200402	55.00	SCC Descriptio	12.2890	0.0000	0.0338	KENT COUNTY MEMORIAL HOSPITAL
RI	Kent	44003	AIR822	2	2	10300602	55.00	SCC Descriptio	0.0130	0.0000	0.0000	KENT COUNTY MEMORIAL HOSPITAL

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RI	Kent	44003	AIR970	1	1	10200502	55.00	SCC Descriptio	0.0670	0.0000	0.0002	MERECO DIVISION
RI	Newport	44005	AIR1044	1	1	10300501	92.50	TITLE V PERM	8.5420	0.0000	0.0228	NAVAL STATION NEWPORT,CODE N8N
RI	Newport	44005	AIR1044	2	2	10300504	92.50	TITLE V PERM	8.3245	0.0000	0.0229	NAVAL STATION NEWPORT,CODE N8N
RI	Newport	44005	AIR1044	3	3	10300602	92.50	TITLE V PERM	24.1455	0.0000	0.0597	NAVAL STATION NEWPORT,CODE N8N
RI	Newport	44005	AIR1075	1	1	10300502	55.00	SCC Descriptio	3.7635	0.0000	0.0103	NEWPORT HOSPITAL
RI	Newport	44005	AIR1075	2	2	10300602	55.00	SCC Descriptio	1.5840	0.0000	0.0039	NEWPORT HOSPITAL
RI	Newport	44005	AIR1271	1	1	10200402	55.00	SCC Descriptio	0.4355	0.0000	0.0012	RAYTHEON COMPANY
RI	Newport	44005	AIR1271	2	2	10200502	55.00	SCC Descriptio	0.7325	0.0000	0.0020	RAYTHEON COMPANY
RI	Newport	44005	AIR1271	3	3	10200602	55.00	SCC Descriptio	0.5295	0.0000	0.0014	RAYTHEON COMPANY
RI	Newport	44005	AIR1349	1	1	10300502	55.00	SCC Descriptio	0.3353	0.0000	0.0009	SALVE REGINA UNIVERSITY
RI	Newport	44005	AIR1349	2	2	10300602	55.00	SCC Descriptio	2.7508	0.0000	0.0068	SALVE REGINA UNIVERSITY
RI	Newport	44005	AIR3135	1	1	10200502	55.00	SCC Descriptio	0.3840	0.0000	0.0011	NEW ENGLAND BOATWORKS INC.
RI	Newport	44005	AIR3274	1	1	10201002	0.00		0.0715	0.0000	0.0002	NAVAL UNDERSEA WARFARE CENTER
RI	Providence	44007	AIR100	1	1	10200602	55.00	SCC Descriptio	1.5140	0.0000	0.0041	ARKWRIGHT, INC.
RI	Providence	44007	AIR1009	1	1	10200502	55.00	SCC Descriptio	0.3320	0.0000	0.0009	MONARCH METAL FINISHING CO., INC.
RI	Providence	44007	AIR1013	1	1	10200502	55.00	SCC Descriptio	0.0500	0.0000	0.0001	MOODY MACHINE PRODUCTS
RI	Providence	44007	AIR1023	1	1	10200402	55.00	SCC Descriptio	1.5540	0.0000	0.0043	MURDOCK WEBBING COMPANY, INC.
RI	Providence	44007	AIR1023	2	2	10200602	55.00	SCC Descriptio	0.6425	0.0000	0.0017	MURDOCK WEBBING COMPANY, INC.
RI	Providence	44007	AIR1028	1	1	10300501	0.00		0.1990	0.0000	0.0005	NARRAGANSETT BAY COMMISSION FIELDS POINT
RI	Providence	44007	AIR104	1	1	10200402	55.00	SCC Descriptio	0.7690	0.0000	0.0021	ARMBRUST INTERNATIONAL
RI	Providence	44007	AIR104	2	2	10200602	55.00	SCC Descriptio	0.2350	0.0000	0.0006	ARMBRUST INTERNATIONAL
RI	Providence	44007	AIR1043	1	1	10200502	55.00	SCC Descriptio	0.3145	0.0000	0.0009	NATIONAL PLATING LLC
RI	Providence	44007	AIR1054	1	1	10200502	55.00	SCC Descriptio	0.0160	0.0000	0.0000	HONEYWELL
RI	Providence	44007	AIR1094	1	1	10200402	55.00	SCC Descriptio	1.9350	0.0000	0.0053	NORTH SAFETY PRODUCTS
RI	Providence	44007	AIR1094	2	2	10201002	0.00		0.0970	0.0000	0.0003	NORTH SAFETY PRODUCTS
RI	Providence	44007	AIR1103	1	1	10200502	55.00	SCC Descriptio	0.0440	0.0000	0.0001	NORTHERN PRODUCTS, INC.
RI	Providence	44007	AIR1109	1	1	10200504	0.00		0.1400	0.0000	0.0004	NULCO MFG. CO.
RI	Providence	44007	AIR1109	2	2	10200602	55.00	SCC Descriptio	0.1810	0.0000	0.0005	NULCO MFG. CO.
RI	Providence	44007	AIR1110	1	1	10200502	55.00	SCC Descriptio	0.0270	0.0000	0.0001	NU-LUSTRE CORPORATION
RI	Providence	44007	AIR1112	1	1	10200402	55.00	SCC Descriptio	3.5025	0.0000	0.0096	HUHTAMAKI - EAST PROVIDENCE (OOB)
RI	Providence	44007	AIR1112	2	2	10200602	55.00	SCC Descriptio	0.2500	0.0000	0.0007	HUHTAMAKI - EAST PROVIDENCE (OOB)
RI	Providence	44007	AIR1148	1	1	10200602	55.00	SCC Descriptio	0.0050	0.0000	0.0000	PARAMOUNT JEWELRY MANUFACTURING
RI	Providence	44007	AIR1151	1	1	10200502	55.00	SCC Descriptio	0.0790	0.0000	0.0002	PARKER MANUFACTURING
RI	Providence	44007	AIR1157	1	1	10200502	55.00	SCC Descriptio	0.0085	0.0000	0.0000	PATTON-MACGUYER INC.
RI	Providence	44007	AIR1177	1	1	10200402	55.00	SCC Descriptio	5.3835	0.0000	0.0148	CCL CUSTOM MFG
RI	Providence	44007	AIR1177	2	2	10200602	55.00	SCC Descriptio	2.7260	0.0000	0.0074	CCL CUSTOM MFG
RI	Providence	44007	AIR1183	1	1	10200502	55.00	SCC Descriptio	0.0790	0.0000	0.0002	PILGRIM SCREW CORPORATION
RI	Providence	44007	AIR1183	2	2	10200602	55.00	SCC Descriptio	0.0140	0.0000	0.0000	PILGRIM SCREW CORPORATION
RI	Providence	44007	AIR1195	1	1	10200602	55.00	SCC Descriptio	0.1485	0.0000	0.0004	POLYTOP CORPORATION
RI	Providence	44007	AIR12	1	1	10200502	55.00	SCC Descriptio	0.0490	0.0000	0.0001	A. HARRISON & CO., INC.
RI	Providence	44007	AIR12	2	2	10201002	0.00		0.0815	0.0000	0.0002	A. HARRISON & CO., INC.
RI	Providence	44007	AIR1201	1	1	10200602	55.00	SCC Descriptio	0.0820	0.0000	0.0002	PRECISION ART COORDINATORS INC.
RI	Providence	44007	AIR1221	1	1	10200502	55.00	SCC Descriptio	0.1090	0.0000	0.0003	PROVIDENCE CHAIN CO.
RI	Providence	44007	AIR1223	1	1	10300402	55.00	SCC Descriptio	14.7240	0.0000	0.0405	PROVIDENCE COLLEGE OFFICE OF ENVIR. HEALTH/SAFETY
RI	Providence	44007	AIR1223	2	2	10300602	55.00	SCC Descriptio	4.6900	0.0000	0.0116	PROVIDENCE COLLEGE OFFICE OF ENVIR. HEALTH/SAFETY
RI	Providence	44007	AIR1225	1	1	10200502	55.00	SCC Descriptio	0.0150	0.0000	0.0000	PROVIDENCE ELECTROPLATING WORKS, INC.
RI	Providence	44007	AIR1228	1	1	10300602	55.00	SCC Descriptio	0.0335	0.0000	0.0001	PROVIDENCE HOUSING AUTH. (HARTFORD PARK)
RI	Providence	44007	AIR1229	1	1	10200402	55.00	SCC Descriptio	0.5485	0.0000	0.0015	PROVIDENCE JOURNAL (FOUNTAIN STREET)
RI	Providence	44007	AIR1229	2	2	10200602	55.00	SCC Descriptio	0.4240	0.0000	0.0011	PROVIDENCE JOURNAL (FOUNTAIN STREET)
RI	Providence	44007	AIR1230	1	1	10200401	55.00	SCC Descriptio	9.6800	0.0250	0.0250	PROVIDENCE METALLIZING CO., INC.
RI	Providence	44007	AIR1237	1	1	10200402	55.00	SCC Descriptio	0.0180	0.0000	0.0000	QUALITY SPRAYING TECHNOLOGIES
RI	Providence	44007	AIR1242	1	1	10200602	55.00	SCC Descriptio	1.4793	0.0000	0.0040	VICTORIA & CO.LTD

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RI	Providence	44007	AIR1245	1	1	10300402	55.00	SCC Descriptio	16.5640	0.0000	0.0455	R.I. SCHOOL OF DESIGN
RI	Providence	44007	AIR1245	2	2	10300502	55.00	SCC Descriptio	0.7355	0.0000	0.0020	R.I. SCHOOL OF DESIGN
RI	Providence	44007	AIR1245	3	3	10300602	55.00	SCC Descriptio	2.0025	0.0000	0.0050	R.I. SCHOOL OF DESIGN
RI	Providence	44007	AIR1247	1	1	10200502	55.00	SCC Descriptio	0.1640	0.0000	0.0005	R.E. STURDY CO.
RI	Providence	44007	AIR1248	1	1	10300401	55.00	TITLE V PERM	11.5400	0.0000	0.0317	R.I. CENTRAL POWER PLANT/CONTIGUOUS PROP
RI	Providence	44007	AIR1248	2	2	10300501	16.20	TITLE V PERM	36.3640	0.8975	0.8975	R.I. CENTRAL POWER PLANT/CONTIGUOUS PROP
RI	Providence	44007	AIR1248	3	3	10300601	16.20	TITLE V PERM	120.0110	0.0000	0.3244	R.I. CENTRAL POWER PLANT/CONTIGUOUS PROP
RI	Providence	44007	AIR1266	1	1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	R & R POLISHING CO. INC.
RI	Providence	44007	AIR1274	1	1	10200504	55.00	SCC Descriptio	0.6135	0.0000	0.0017	REGAL PLATING CO. INC.
RI	Providence	44007	AIR1283	1	1	10300401	55.00	TITLE V PERM	230.3250	0.0000	0.6328	RHODE ISLAND HOSPITAL
RI	Providence	44007	AIR1283	2	2	10300602	80.40	TITLE V PERM	10.9390	0.0000	0.0270	RHODE ISLAND HOSPITAL
RI	Providence	44007	AIR13	1	1	10200602	55.00	SCC Descriptio	1.1210	0.0000	0.0030	A.T. CROSS COMPANY
RI	Providence	44007	AIR1305	1	1	10200602	55.00	SCC Descriptio	0.4135	0.0000	0.0011	RIBCO MFG. INC. (PROVIDENCE)
RI	Providence	44007	AIR1322	1	1	10300402	55.00	SCC Descriptio	16.5995	0.0000	0.0456	ROGER WILLIAMS HOSPITAL & MEDICAL CENTER
RI	Providence	44007	AIR1322	2	2	10300602	55.00	SCC Descriptio	0.2415	0.0000	0.0006	ROGER WILLIAMS HOSPITAL & MEDICAL CENTER
RI	Providence	44007	AIR1335	1	1	10200402	55.00	SCC Descriptio	10.1235	0.0000	0.0278	AMERICAN INSULATED WIRE CORP.- DARLINGTON
RI	Providence	44007	AIR1335	2	2	10200602	55.00	SCC Descriptio	0.2800	0.0000	0.0008	AMERICAN INSULATED WIRE CORP.- DARLINGTON
RI	Providence	44007	AIR1347	1	1	10200502	55.00	SCC Descriptio	0.0725	0.0000	0.0002	REX REALTY
RI	Providence	44007	AIR1347	2	2	10200602	55.00	SCC Descriptio	0.0180	0.0000	0.0000	REX REALTY
RI	Providence	44007	AIR1359	1	1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	SARDELLI INTERNATIONAL
RI	Providence	44007	AIR1369	1	1	10200502	55.00	SCC Descriptio	0.0550	0.0000	0.0002	SCOTT'S PLATING
RI	Providence	44007	AIR1384	1	1	10200502	55.00	SCC Descriptio	0.0500	0.0000	0.0001	BLACKHAWK MACHINE PROD.
RI	Providence	44007	AIR1395	1	1	10200402	55.00	SCC Descriptio	14.9745	0.0000	0.0411	SLATER DYE WORKS & SLATER SCREEN PRINT
RI	Providence	44007	AIR1395	2	2	10200602	55.00	SCC Descriptio	0.8470	0.0000	0.0023	SLATER DYE WORKS & SLATER SCREEN PRINT
RI	Providence	44007	AIR141	1	1	10200602	55.00	SCC Descriptio	0.6285	0.0000	0.0017	B.A. BALLOU & CO. INC.
RI	Providence	44007	AIR1410	1	1	10200502	55.00	SCC Descriptio	0.0360	0.0000	0.0001	SPECTRUM COATINGS LABORATORIES, INC.
RI	Providence	44007	AIR1416	1	1	10200502	55.00	SCC Descriptio	0.1905	0.0000	0.0005	SPENCER PLATING CO.
RI	Providence	44007	AIR1426	1	1	10300402	55.00	SCC Descriptio	11.7600	0.0000	0.0323	ST. JOSEPH HOSPITAL/FATIMA UNIT
RI	Providence	44007	AIR1426	2	2	10300602	55.00	SCC Descriptio	0.6820	0.0000	0.0017	ST. JOSEPH HOSPITAL/FATIMA UNIT
RI	Providence	44007	AIR1427	1	1	10300402	55.00	SCC Descriptio	9.7015	0.0000	0.0267	ST. JOSEPH HOSPITAL/PROVIDENCE UNIT
RI	Providence	44007	AIR1432	1	1	10200502	55.00	SCC Descriptio	0.0690	0.0000	0.0002	STACKBIN CORP.
RI	Providence	44007	AIR1478	1	1	10200602	55.00	SCC Descriptio	0.3000	0.0000	0.0008	TACO INC.
RI	Providence	44007	AIR1482	1	1	10200502	55.00	SCC Descriptio	0.1312	0.0000	0.0004	TANURY INDUSTRIES
RI	Providence	44007	AIR1483	1	1	10200602	55.00	SCC Descriptio	0.1370	0.0000	0.0004	TANYA CREATIONS, INC.
RI	Providence	44007	AIR1489	1	1	10200504	0.00		1.0095	0.0000	0.0028	PORTOLA TECH INTERNATIONAL
RI	Providence	44007	AIR1492	1	1	10200602	55.00	SCC Descriptio	0.2266	0.0000	0.0006	TECHNIC INC.
RI	Providence	44007	AIR1495	1	1	10200602	55.00	SCC Descriptio	0.4621	0.0000	0.0012	TECHNICAL MATERIALS, INC.
RI	Providence	44007	AIR1498	1	1	10200502	55.00	SCC Descriptio	0.1150	0.0000	0.0003	TECHNODIC, INC.
RI	Providence	44007	AIR1504	1	1	10200502	55.00	SCC Descriptio	0.0590	0.0000	0.0002	TERCAT TOOL & DIE CO.
RI	Providence	44007	AIR1506	1	1	10200401	0.00		0.1305	0.0000	0.0004	MOTIVA ENTERPRISES LLC.
RI	Providence	44007	AIR1514	1	1	10300402	55.00	SCC Descriptio	20.1760	0.0000	0.0554	MIRIAM HOSPITAL
RI	Providence	44007	AIR1516	1	1	10200602	55.00	SCC Descriptio	0.2100	0.0000	0.0006	OKONITE COMPANY PLANT # 6
RI	Providence	44007	AIR1518	1	1	10200402	55.00	SCC Descriptio	6.2280	0.0000	0.0171	LANDMARK MEDICAL CENTER WOONSOCKET UNIT
RI	Providence	44007	AIR1518	2	2	10200602	55.00	SCC Descriptio	0.8200	0.0000	0.0022	LANDMARK MEDICAL CENTER WOONSOCKET UNIT
RI	Providence	44007	AIR152	1	1	10200502	55.00	SCC Descriptio	0.0545	0.0000	0.0001	BEAUCRAFT, INC.
RI	Providence	44007	AIR1526	1	1	10200502	55.00	SCC Descriptio	0.0470	0.0000	0.0001	TIME PLATING CO.
RI	Providence	44007	AIR1526	2	2	10200602	55.00	SCC Descriptio	0.0490	0.0000	0.0001	TIME PLATING CO.
RI	Providence	44007	AIR1541	1	1	10200502	55.00	SCC Descriptio	0.0525	0.0000	0.0001	PROVIDENCE JOURNAL
RI	Providence	44007	AIR1541	2	2	10200602	55.00	SCC Descriptio	0.7450	0.0000	0.0020	PROVIDENCE JOURNAL
RI	Providence	44007	AIR1547	1	1	10200502	55.00	SCC Descriptio	1.0675	0.0000	0.0029	PACIFIC ANCHOR
RI	Providence	44007	AIR1547	2	2	10200602	55.00	SCC Descriptio	0.0990	0.0000	0.0003	PACIFIC ANCHOR
RI	Providence	44007	AIR1548	1	1	10200504	0.00		0.4950	0.0000	0.0014	TRUEX INC.

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RI	Providence	44007	AIR1567	1	1	10200401	0.00		0.9360	0.0000	0.0026	UNION INDUSTRIES, INC.
RI	Providence	44007	AIR1569	1	1	10200402	55.00	SCC Descriptio	12.0435	0.0000	0.0331	UNION WADDING CO.
RI	Providence	44007	AIR1570	1	1	10200502	55.00	SCC Descriptio	0.2696	0.0000	0.0007	UNIQUE PLATING COMPANY
RI	Providence	44007	AIR1605	1	1	10300502	55.00	SCC Descriptio	0.3270	0.0000	0.0009	VETERANS ADM. MEDICAL CENTER
RI	Providence	44007	AIR1605	2	2	10300602	55.00	SCC Descriptio	3.9825	0.0000	0.0098	VETERANS ADM. MEDICAL CENTER
RI	Providence	44007	AIR1612	1	1	10200504	12.60	TITLE V PERM	1.5870	0.0000	0.0044	VICTORY FINISHING TECHNOLOGIES, INC.
RI	Providence	44007	AIR1660	1	1	10200502	55.00	SCC Descriptio	0.0507	0.0000	0.0001	WHITTET-HIGGINS CO.
RI	Providence	44007	AIR1675	1	1	10200502	55.00	SCC Descriptio	0.1600	0.0000	0.0004	WOONSOCKET CALL, THE
RI	Providence	44007	AIR1680	1	1	10300401	0.00		13.0020	0.0000	0.0357	ZAMBARANO MEMORIAL HOSPITAL
RI	Providence	44007	AIR1689	1	1	10200502	55.00	SCC Descriptio	0.0495	0.0000	0.0001	ORGANIC DYESTUFFS CORPORATION
RI	Providence	44007	AIR1694	1	1	10200602	55.00	SCC Descriptio	0.1650	0.0000	0.0004	JOHN CRANE SEALOL,INC.(CRANSTON)
RI	Providence	44007	AIR1699	1	1	10200602	55.00	SCC Descriptio	0.1240	0.0000	0.0003	M.H. STALLMAN
RI	Providence	44007	AIR1742	1	1	10200502	55.00	SCC Descriptio	0.0365	0.0000	0.0001	SCOPE DISPLAY & BOX CO., INC.
RI	Providence	44007	AIR1801	1	1	10200502	55.00	SCC Descriptio	0.6930	0.0000	0.0019	PARAMOUNT CARDS, INC.
RI	Providence	44007	AIR1801	2	2	10200602	55.00	SCC Descriptio	0.5495	0.0000	0.0015	PARAMOUNT CARDS, INC.
RI	Providence	44007	AIR1815	1	1	10200602	55.00	SCC Descriptio	1.1645	0.0000	0.0031	FLOCK TEX, INC.
RI	Providence	44007	AIR1838	1	1	10200602	55.00	SCC Descriptio	0.0585	0.0000	0.0002	MEL-CO-ED INC.
RI	Providence	44007	AIR1848	1	1	10200502	55.00	SCC Descriptio	0.3575	0.0000	0.0010	METECH INTERNATIONAL INC.
RI	Providence	44007	AIR1848	2	2	10201002	0.00		0.0895	0.0000	0.0002	METECH INTERNATIONAL INC.
RI	Providence	44007	AIR1849	1	1	10200502	55.00	SCC Descriptio	0.2980	0.0000	0.0008	C.N.C. INTERNATIONAL, LP
RI	Providence	44007	AIR1850	1	1	10200502	55.00	SCC Descriptio	0.2210	0.0000	0.0006	TRI-JAY CO. INC.
RI	Providence	44007	AIR1851	1	1	10200502	55.00	SCC Descriptio	1.4680	0.0000	0.0040	INDUPLATE
RI	Providence	44007	AIR1858	1	1	10200504	0.00		0.5000	0.0000	0.0014	LANDMARK MEDICAL CENTER
RI	Providence	44007	AIR1865	1	1	10200504	0.00		0.9975	0.0000	0.0027	VITRUS, A DIVISION OF ENERGY INC.
RI	Providence	44007	AIR1865	2	2	10200602	55.00	SCC Descriptio	0.0764	0.0000	0.0002	VITRUS, A DIVISION OF ENERGY INC.
RI	Providence	44007	AIR187	1	1	10300401	111.80	TITLE V PERM	72.3600	0.0000	0.1988	BROWN UNIVERSITY
RI	Providence	44007	AIR187	2	2	10300501	111.80	TITLE V PERM	0.3095	0.0000	0.0008	BROWN UNIVERSITY
RI	Providence	44007	AIR187	3	3	10300601	111.80	TITLE V PERM	3.8320	0.0000	0.0104	BROWN UNIVERSITY
RI	Providence	44007	AIR188	1	1	10200502	55.00	SCC Descriptio	0.1995	0.0000	0.0005	BRUIN PLASTICS CO.
RI	Providence	44007	AIR197	1	1	10300402	55.00	SCC Descriptio	4.7341	0.0000	0.0130	BUTLER HOSPITAL
RI	Providence	44007	AIR1979	1	1	10300602	55.00	TITLE V PERM	1.0700	0.0000	0.0026	CRANSTON WCF
RI	Providence	44007	AIR1982	1	1	10200602	55.00	SCC Descriptio	0.7812	0.0000	0.0021	HANORA SPINNING INC.
RI	Providence	44007	AIR200	1	1	10200502	55.00	SCC Descriptio	0.1000	0.0000	0.0003	C J FOX COMPANY
RI	Providence	44007	AIR203	1	1	10300504	0.00		2.8543	0.0000	0.0078	SPRAGUE ENERGY CORP.
RI	Providence	44007	AIR214	1	1	10200502	55.00	SCC Descriptio	0.1011	0.0000	0.0003	CALCO PLATING COMPANY
RI	Providence	44007	AIR217	1	1	10200502	55.00	SCC Descriptio	0.1585	0.0000	0.0004	CANNON AND BROWN/SURFACE COATING DIV.
RI	Providence	44007	AIR22	1	1	10200502	55.00	SCC Descriptio	0.4360	0.0000	0.0012	AAFCO INC.
RI	Providence	44007	AIR22	2	2	10200602	55.00	SCC Descriptio	0.0310	0.0000	0.0001	AAFCO INC.
RI	Providence	44007	AIR2251	1	1	10200502	55.00	SCC Descriptio	0.0390	0.0000	0.0001	CONSOLIDATED CONCRETE
RI	Providence	44007	AIR2251	2	2	10200602	55.00	SCC Descriptio	0.1620	0.0000	0.0004	CONSOLIDATED CONCRETE
RI	Providence	44007	AIR228	1	1	10200402	55.00	SCC Descriptio	5.2525	0.0000	0.0144	GENERAL CABLE INDUSTRIES, LLC
RI	Providence	44007	AIR228	2	2	10200602	55.00	SCC Descriptio	2.7560	0.0000	0.0075	GENERAL CABLE INDUSTRIES, LLC
RI	Providence	44007	AIR235	1	1	10200502	55.00	SCC Descriptio	0.0570	0.0000	0.0002	CATHEDRAL ART METAL CO., INC.
RI	Providence	44007	AIR235	2	2	10200602	55.00	SCC Descriptio	0.2445	0.0000	0.0007	CATHEDRAL ART METAL CO., INC.
RI	Providence	44007	AIR2394	1	1	10300602	55.00	SCC Descriptio	0.2660	0.0000	0.0007	EMMA PENDLETON BRADLEY HOSPITAL
RI	Providence	44007	AIR245	1	1	10200502	55.00	SCC Descriptio	0.0719	0.0000	0.0002	CENTRAL TOOLS, INC.
RI	Providence	44007	AIR2470	1	1	10200602	55.00	SCC Descriptio	0.0779	0.0000	0.0002	GRIPNAIL CORPORATION
RI	Providence	44007	AIR249	1	1	10200602	55.00	SCC Descriptio	0.1812	0.0000	0.0005	CHARISMA MANUFACTURING CO.
RI	Providence	44007	AIR2511	1	1	10200502	55.00	SCC Descriptio	0.6895	0.0000	0.0019	HOMESTEAD BAKING CO.
RI	Providence	44007	AIR253	1	1	10200602	55.00	SCC Descriptio	0.2020	0.0000	0.0005	CHEMART COMPANY
RI	Providence	44007	AIR2536	1	1	10200504	55.00	SCC Descriptio	1.4600	0.0000	0.0040	INTERNATIONAL PACKAGING CORP.
RI	Providence	44007	AIR2567	1	1	10300402	55.00	SCC Descriptio	2.1938	0.0000	0.0060	LICHT PROPERTIES

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RI	Providence	44007	AIR2583	1	1	10200402	55.00	SCC Descriptio	2.3393	0.0000	0.0064	KEY CONTAINER CORP.
RI	Providence	44007	AIR26	1	1	10200602	55.00	SCC Descriptio	0.0008	0.0000	0.0000	ACCENT PLATING CO. INC.
RI	Providence	44007	AIR269	1	1	10200502	55.00	SCC Descriptio	0.0995	0.0000	0.0003	CLAYTON COMPANY
RI	Providence	44007	AIR279	1	1	10200602	55.00	SCC Descriptio	0.3023	0.0000	0.0008	CENTRAL SOYA COMPANY
RI	Providence	44007	AIR280	1	1	10200602	55.00	SCC Descriptio	0.1095	0.0000	0.0003	PARK LANE ASSOCIATES, INC.
RI	Providence	44007	AIR2858	1	1	10200502	3.40	TITLE V PERM	0.6590	0.0000	0.0018	R.I. TEXTILE CO.
RI	Providence	44007	AIR2874	1	1	10200602	55.00	SCC Descriptio	0.0430	0.0000	0.0001	E & M ENTERPRISES LTD
RI	Providence	44007	AIR2886	1	1	10200502	55.00	SCC Descriptio	0.0050	0.0000	0.0000	B & E METAL FINISHING, INC.
RI	Providence	44007	AIR2898	1	1	10200402	55.00	SCC Descriptio	2.4120	0.0000	0.0066	PROVIDENCE BRAID COMPANY
RI	Providence	44007	AIR2904	1	1	10200402	55.00	SCC Descriptio	0.5474	0.0000	0.0015	HINDLEY MANUFACTURING CO., INC.
RI	Providence	44007	AIR2904	2	2	10200504	0.00		0.7188	0.0000	0.0020	HINDLEY MANUFACTURING CO., INC.
RI	Providence	44007	AIR2905	1	1	10200502	55.00	SCC Descriptio	0.2200	0.0000	0.0006	STANDARD NUT & BOLT COMPANY
RI	Providence	44007	AIR3	1	1	10200602	55.00	SCC Descriptio	0.1400	0.0000	0.0004	A & F PLATING COMPANY
RI	Providence	44007	AIR3000	1	1	10200602	55.00	SCC Descriptio	2.9130	0.0000	0.0079	PAWTUCKET POWER ASSOCIATES
RI	Providence	44007	AIR301	1	1	10200504	55.00	SCC Descriptio	0.1275	0.0000	0.0004	CONRAD-JARVIS CORP.
RI	Providence	44007	AIR3044	1	1	10200402	55.00	SCC Descriptio	5.6266	0.0000	0.0155	JUST-A-STRETCH OF RI, INC.
RI	Providence	44007	AIR305	1	1	10200602	55.00	SCC Descriptio	0.0710	0.0000	0.0002	CONTRACT SPECIALITIES
RI	Providence	44007	AIR3058	1	1	10200602	55.00	SCC Descriptio	0.1260	0.0000	0.0003	GLENCAIRN MFG. CO
RI	Providence	44007	AIR3063	1	1	10200502	55.00	SCC Descriptio	0.6375	0.0000	0.0018	ARCH SPECIALTY CHEMICALS, INC.
RI	Providence	44007	AIR3063	2	2	10200602	55.00	SCC Descriptio	0.8460	0.0000	0.0023	ARCH SPECIALTY CHEMICALS, INC.
RI	Providence	44007	AIR3095	1	1	10300502	55.00	SCC Descriptio	0.0800	0.0000	0.0002	DEXTER CLEANSERS
RI	Providence	44007	AIR3099	1	1	10300502	55.00	SCC Descriptio	0.1011	0.0000	0.0003	RIVERSIDE CLEANSERS
RI	Providence	44007	AIR3101	1	1	10200502	55.00	SCC Descriptio	0.0585	0.0000	0.0002	B & D PLASTICS, INC.
RI	Providence	44007	AIR3140	1	1	10200602	55.00	SCC Descriptio	0.1225	0.0000	0.0003	EMBLEM & BADGE, INC.
RI	Providence	44007	AIR3141	1	1	10200602	55.00	SCC Descriptio	0.0218	0.0000	0.0001	GA-REL MFG. CO., INC.
RI	Providence	44007	AIR3151	1	1	10200502	55.00	SCC Descriptio	0.0730	0.0000	0.0002	EAGLE TOOL INC.
RI	Providence	44007	AIR3157	1	1	10200602	55.00	SCC Descriptio	0.0240	0.0000	0.0001	HAMILTON TOOL, INC.
RI	Providence	44007	AIR3168	1	1	10200502	55.00	SCC Descriptio	0.0930	0.0000	0.0003	SALVADORE TOOL & FINDINGS INC.
RI	Providence	44007	AIR321	1	1	10200502	55.00	SCC Descriptio	0.3936	0.0000	0.0011	CRANSTON PRINT WORKS CO. (BOILER)
RI	Providence	44007	AIR321	2	2	10200602	55.00	SCC Descriptio	0.8574	0.0000	0.0023	CRANSTON PRINT WORKS CO. (BOILER)
RI	Providence	44007	AIR3246	1	1	10200502	55.00	SCC Descriptio	0.6500	0.0000	0.0018	HOMESTEAD COMPANY
RI	Providence	44007	AIR3249	1	1	10300502	55.00	SCC Descriptio	1.5800	0.0000	0.0043	CENTRAL/CLASSICAL HEATING PLANT
RI	Providence	44007	AIR325	1	1	10200602	55.00	SCC Descriptio	0.0007	0.0000	0.0000	CREST MANUFACTURING CO.
RI	Providence	44007	AIR3264	1	1	10200602	55.00	SCC Descriptio	0.0410	0.0000	0.0001	SANFORD WHITE CO., INC.
RI	Providence	44007	AIR3269	1	1	10300501	55.00	SCC Descriptio	0.1800	0.0000	0.0005	WOONSOCKET WWTF
RI	Providence	44007	AIR3271	1	1	10200602	55.00	SCC Descriptio	0.1605	0.0000	0.0004	POLY-FLEX CIRCUITS
RI	Providence	44007	AIR3277	1	1	10200602	55.00	SCC Descriptio	0.0250	0.0000	0.0001	MUTUAL METALS, INC.
RI	Providence	44007	AIR3280	1	1	10200502	55.00	SCC Descriptio	0.2840	0.0000	0.0008	BRYANT COLLEGE PHYSICAL PLNT &SCIENCE DE
RI	Providence	44007	AIR3280	2	2	10200602	55.00	SCC Descriptio	2.9455	0.0000	0.0080	BRYANT COLLEGE PHYSICAL PLNT &SCIENCE DE
RI	Providence	44007	AIR3282	1	1	10200502	55.00	SCC Descriptio	0.3115	0.0000	0.0009	JOHNSON & WALES UNIVERSITY
RI	Providence	44007	AIR3282	2	2	10300602	55.00	SCC Descriptio	3.2385	0.0000	0.0080	JOHNSON & WALES UNIVERSITY
RI	Providence	44007	AIR3296	1	1	10200502	55.00	SCC Descriptio	0.2560	0.0000	0.0007	TEKNOR COLOR COMPANY
RI	Providence	44007	AIR3296	2	2	10200602	55.00	SCC Descriptio	0.0110	0.0000	0.0000	TEKNOR COLOR COMPANY
RI	Providence	44007	AIR33	1	1	10200402	55.00	SCC Descriptio	4.8265	0.0000	0.0133	ACS INDUSTRIES, INC.
RI	Providence	44007	AIR33	2	2	10200502	55.00	SCC Descriptio	0.1180	0.0000	0.0003	ACS INDUSTRIES, INC.
RI	Providence	44007	AIR3306	1	1	10300602	55.00	SCC Descriptio	0.0419	0.0000	0.0001	TURKS HEAD
RI	Providence	44007	AIR3308	1	1	10300602	55.00	SCC Descriptio	0.6123	0.0000	0.0015	DUNKIN DONUTS CENTER PROVIDENCE
RI	Providence	44007	AIR3310	1	1	10300602	55.00	SCC Descriptio	0.4746	0.0000	0.0012	CITIZENS TRUST COMPANY
RI	Providence	44007	AIR3313	1	1	10300402	55.00	SCC Descriptio	3.7500	0.0000	0.0103	JILL REALTY TRUST
RI	Providence	44007	AIR3314	1	1	10300402	55.00	SCC Descriptio	9.7400	0.0000	0.0268	FALVEY LINEN SUPPLY INC.
RI	Providence	44007	AIR3315	1	1	10200402	55.00	SCC Descriptio	2.1460	0.0000	0.0059	SLATER DYE WORKS CUMBERLAND
RI	Providence	44007	AIR3320	1	1	10200502	55.00	SCC Descriptio	0.1352	0.0000	0.0004	REFINING ONE INC.

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RI	Providence	44007	AIR3326	1	1	10300402	55.00	SCC Descriptio	5.2500	0.0000	0.0144	PROVIDENCE HOUSING AUTH. (MANTON HEIGHT)
RI	Providence	44007	AIR3328	1	1	10300602	55.00	SCC Descriptio	0.0074	0.0000	0.0000	PROVIDENCE HOUSING AUTH. (DEXTER MANOR I)
RI	Providence	44007	AIR3329	1	1	10300602	55.00	SCC Descriptio	0.0230	0.0000	0.0001	PROVIDENCE HOUSING AUTH. (CHAD BROWN)
RI	Providence	44007	AIR3330	1	1	10300602	55.00	SCC Descriptio	0.0051	0.0000	0.0000	PROVIDENCE HOUSING AUTH. (DOMINICA MANOR)
RI	Providence	44007	AIR3333	1	1	10300502	55.00	SCC Descriptio	1.2656	0.0000	0.0035	BRANCH RIVER INDUSTRIAL PARK
RI	Providence	44007	AIR3338	1	1	10300402	55.00	SCC Descriptio	1.8182	0.0000	0.0050	DIOCESE OF PROVIDENCE
RI	Providence	44007	AIR3339	1	1	10200402	55.00	SCC Descriptio	4.9545	0.0000	0.0136	ARMORY REVIVAL CO.
RI	Providence	44007	AIR3342	1	1	10300402	55.00	SCC Descriptio	7.5375	0.0000	0.0207	FLEET BANK
RI	Providence	44007	AIR3344	1	1	10300402	55.00	SCC Descriptio	6.0375	0.0000	0.0166	FOUR DEE REALTY
RI	Providence	44007	AIR3344	2	2	10300602	55.00	SCC Descriptio	0.0456	0.0000	0.0001	FOUR DEE REALTY
RI	Providence	44007	AIR3346	1	1	10300602	55.00	SCC Descriptio	0.6413	0.0000	0.0016	LASALLE ACADEMY
RI	Providence	44007	AIR3347	1	1	10300402	55.00	SCC Descriptio	0.7925	0.0000	0.0022	MOUNT SAINT CHARLES ACADEMY
RI	Providence	44007	AIR3347	2	2	10300602	55.00	SCC Descriptio	0.1706	0.0000	0.0004	MOUNT SAINT CHARLES ACADEMY
RI	Providence	44007	AIR3350	1	1	10200602	55.00	SCC Descriptio	0.4590	0.0000	0.0012	U.S. POSTAL SERVICE / MAIL FACILITY
RI	Providence	44007	AIR3352	1	1	10300504	55.00	SCC Descriptio	0.6800	0.0000	0.0019	MARTIN JUNIOR HIGH SCHOOL
RI	Providence	44007	AIR3354	1	1	10300504	55.00	SCC Descriptio	0.4442	0.0000	0.0012	TEL REALTY
RI	Providence	44007	AIR3367	1	1	10300602	55.00	SCC Descriptio	0.0265	0.0000	0.0001	RI SPCA
RI	Providence	44007	AIR34	1	1	10200402	55.00	SCC Descriptio	2.9155	0.0000	0.0080	ACS INDUSTRIES
RI	Providence	44007	AIR34	2	2	10200602	55.00	SCC Descriptio	0.1720	0.0000	0.0005	ACS INDUSTRIES
RI	Providence	44007	AIR341	1	1	10200602	55.00	SCC Descriptio	0.0724	0.0000	0.0002	CURTIS JEWELRY CO.
RI	Providence	44007	AIR3451	1	1	10200602	55.00	SCC Descriptio	0.3375	0.0000	0.0009	TECHNIC INC., EPD
RI	Providence	44007	AIR3472	1	1	10200602	55.00	SCC Descriptio	0.0893	0.0000	0.0002	UNITED PLATING INC.
RI	Providence	44007	AIR3504	1	1	10200602	55.00	SCC Descriptio	0.7345	0.0000	0.0020	RHODE ISLAND CONVENTION CENTER
RI	Providence	44007	AIR3517	1	1	10200502	55.00	SCC Descriptio	0.0705	0.0000	0.0002	PROVIDENCE CASKET COMPANY
RI	Providence	44007	AIR3538	1	1	10200602	55.00	SCC Descriptio	0.0310	0.0000	0.0001	MAG JEWELRY CO., INC.
RI	Providence	44007	AIR354	1	1	10200602	55.00	SCC Descriptio	0.1777	0.0000	0.0005	DANECRAFT, INC.
RI	Providence	44007	AIR3542	1	1	10200502	55.00	SCC Descriptio	0.2595	0.0000	0.0007	IRA GREEN
RI	Providence	44007	AIR3543	1	1	10200502	55.00	SCC Descriptio	0.0545	0.0000	0.0001	ROYAL OF AMERICA
RI	Providence	44007	AIR355	1	1	10200502	55.00	SCC Descriptio	0.1850	0.0000	0.0005	DARLENE JEWELRY MFG.
RI	Providence	44007	AIR3552	1	1	10200502	55.00	SCC Descriptio	0.0038	0.0000	0.0000	GF HEALTH PRODUCTS, INC.
RI	Providence	44007	AIR3563	1	1	10200502	55.00	SCC Descriptio	0.2565	0.0000	0.0007	BRICKLE REALTY
RI	Providence	44007	AIR3566	1	1	10200602	55.00	SCC Descriptio	0.0695	0.0000	0.0002	MODERN INDUSTRIES INC.
RI	Providence	44007	AIR3568	1	1	10200602	55.00	SCC Descriptio	0.0018	0.0000	0.0000	TRU-KAY MANUFACTURING COMPANY
RI	Providence	44007	AIR3590	1	1	10200402	55.00	SCC Descriptio	0.2855	0.0000	0.0008	TEKNOR APEX CO.
RI	Providence	44007	AIR3590	2	2	10200502	55.00	SCC Descriptio	0.0513	0.0000	0.0001	TEKNOR APEX CO.
RI	Providence	44007	AIR3597	1	1	10200602	55.00	SCC Descriptio	0.0021	0.0000	0.0000	EXCELLENT COFFEE COMPANY, INC
RI	Providence	44007	AIR3598	1	1	10200602	55.00	SCC Descriptio	0.0422	0.0000	0.0001	MILLS COFFEE COMPANY
RI	Providence	44007	AIR3600	1	1	10200602	55.00	SCC Descriptio	0.4030	0.0000	0.0011	UMICOR
RI	Providence	44007	AIR3607	1	1	10200602	55.00	SCC Descriptio	0.0360	0.0000	0.0001	U.S. POSTAL SERVICE/VEHICLE MAINTENANCE
RI	Providence	44007	AIR3643	1	1	10200502	55.00	SCC Descriptio	0.5755	0.0000	0.0016	PROVIDENCE WATER SUPPLY
RI	Providence	44007	AIR3703	1	1	10200602	55.00	SCC Descriptio	0.0085	0.0000	0.0000	INNOVATIVE COATING TECHNOLOGIES, INC.
RI	Providence	44007	AIR3719	1	1	10200502	55.00	SCC Descriptio	0.0265	0.0000	0.0001	ABC REALTY
RI	Providence	44007	AIR3719	2	2	10200504	0.00		0.2565	0.0000	0.0007	ABC REALTY
RI	Providence	44007	AIR3730	1	1	10200502	55.00	SCC Descriptio	0.0630	0.0000	0.0002	ALPHA PLATING
RI	Providence	44007	AIR3731	1	1	10200504	55.00	SCC Descriptio	0.8230	0.0000	0.0023	HOPE GLOBAL (MARTIN ST)
RI	Providence	44007	AIR379	1	1	10200502	55.00	SCC Descriptio	0.1080	0.0000	0.0003	DENISON PHARMACEUTICALS INC.
RI	Providence	44007	AIR3799	1	1	10201003	55.00	SCC Descriptio	3.1790	0.0000	0.0087	TEPPCO PROVIDENCE TERMINAL
RI	Providence	44007	AIR3801	1	1	10200502	55.00	SCC Descriptio	0.0750	0.0000	0.0002	FASHION FINISHING
RI	Providence	44007	AIR3808	1	1	10200602	55.00	SCC Descriptio	0.0848	0.0000	0.0002	TECHNIC, INC.
RI	Providence	44007	AIR3818	1	1	10200602	55.00	SCC Descriptio	0.0100	0.0000	0.0000	A S MANUFACTURING
RI	Providence	44007	AIR3848	1	1	10200502	55.00	SCC Descriptio	0.0074	0.0000	0.0000	FANDETTI FUSION
RI	Providence	44007	AIR3853	1	1	10200602	55.00	SCC Descriptio	0.0115	0.0000	0.0000	HOPE GLOBAL (INDUSTRIAL DR.)

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RI	Providence	44007	AIR3857	1	1	10200502	55.00	SCC Descriptio	0.1000	0.0000	0.0003	SUPERIOR FINISHING
RI	Providence	44007	AIR3869	1	1	10200402	55.00	SCC Descriptio	2.5910	0.0000	0.0071	HUDSON TERMINAL CORP.
RI	Providence	44007	AIR3869	2	2	10200602	55.00	SCC Descriptio	3.4185	0.0000	0.0092	HUDSON TERMINAL CORP.
RI	Providence	44007	AIR3879	1	1	10200504	55.00	SCC Descriptio	0.9263	0.0000	0.0025	INTERNATIONAL ACCESSORIES
RI	Providence	44007	AIR3919	1	1	10300602	55.00	SCC Descriptio	1.8365	0.0000	0.0045	RIPTA
RI	Providence	44007	AIR432	1	1	10200502	55.00	SCC Descriptio	0.0400	0.0000	0.0001	E.E. WELLER CO./ MCS FINISHING
RI	Providence	44007	AIR449	1	1	10200504	0.00		0.2370	0.0000	0.0007	EASTERN COLOR AND CHEMICAL CO.
RI	Providence	44007	AIR469	1	1	10200602	55.00	SCC Descriptio	0.2305	0.0000	0.0006	ELECTROLIZING, INC.
RI	Providence	44007	AIR501	1	1	10200502	55.00	SCC Descriptio	0.3460	0.0000	0.0010	EVANS PLATING CORP.
RI	Providence	44007	AIR503	1	1	10200502	55.00	SCC Descriptio	0.1420	0.0000	0.0004	FO\FERNANDO ORIGINALS, LTD.
RI	Providence	44007	AIR504	1	1	10200502	55.00	SCC Descriptio	0.1960	0.0000	0.0005	EVANS PLATING CORP. (PLANT #2)
RI	Providence	44007	AIR525	1	1	10200502	55.00	SCC Descriptio	0.0250	0.0000	0.0001	MAHR FEDERAL INC.
RI	Providence	44007	AIR525	2	2	10200602	55.00	SCC Descriptio	0.3280	0.0000	0.0009	MAHR FEDERAL INC.
RI	Providence	44007	AIR529	1	1	10200602	55.00	SCC Descriptio	0.0390	0.0000	0.0001	FERGUSON PERFORATING & WIRE CO. INC.
RI	Providence	44007	AIR560	1	1	10200502	55.00	SCC Descriptio	0.0799	0.0000	0.0002	FULLER FINDINGS
RI	Providence	44007	AIR570	1	1	10200502	55.00	SCC Descriptio	0.9422	0.0000	0.0026	G. TANURY PLATING COMPANY
RI	Providence	44007	AIR570	2	2	10200602	55.00	SCC Descriptio	0.0108	0.0000	0.0000	G. TANURY PLATING COMPANY
RI	Providence	44007	AIR572	1	1	10200401	10.50	TITLE V PERM	11.7040	0.0000	0.0324	OSRAM SYLVANIA PRODUCTS INC.
RI	Providence	44007	AIR572	2	2	10200602	10.50	TITLE V PERM	1.0290	0.0000	0.0028	OSRAM SYLVANIA PRODUCTS INC.
RI	Providence	44007	AIR578	1	1	10200602	55.00	SCC Descriptio	0.0513	0.0000	0.0001	GANNON & SCOTT INC.
RI	Providence	44007	AIR599	1	1	10200602	55.00	SCC Descriptio	0.0995	0.0000	0.0003	GENERAL POLYMER, INC.
RI	Providence	44007	AIR624	1	1	10200402	55.00	SCC Descriptio	2.4465	0.0000	0.0067	LENOX , INCORPORATED (OOB)
RI	Providence	44007	AIR624	2	2	10200602	55.00	SCC Descriptio	0.3500	0.0000	0.0009	LENOX , INCORPORATED (OOB)
RI	Providence	44007	AIR655	1	1	10200602	55.00	SCC Descriptio	0.9783	0.0000	0.0026	HANDY & HARMAN (EP)
RI	Providence	44007	AIR664	1	1	10200502	55.00	SCC Descriptio	0.8800	0.0000	0.0024	HASBRO, INC. (NEWPORT AVE. PAWT)
RI	Providence	44007	AIR667	1	1	10200602	55.00	SCC Descriptio	0.2430	0.0000	0.0007	C.I. HAYES,INC.
RI	Providence	44007	AIR673	1	1	10200602	55.00	SCC Descriptio	0.2685	0.0000	0.0007	HERFF JONES INC.
RI	Providence	44007	AIR678	1	1	10200502	55.00	SCC Descriptio	0.0413	0.0000	0.0001	HI-TECH INCORPORATED
RI	Providence	44007	AIR700	1	1	10200502	55.00	SCC Descriptio	0.0262	0.0000	0.0001	HORD CRYSTAL CORPORATION
RI	Providence	44007	AIR715	1	1	10200502	55.00	SCC Descriptio	0.1174	0.0000	0.0003	IDEAL PLATING AND POLISHING INC.
RI	Providence	44007	AIR717	1	1	10200602	55.00	SCC Descriptio	0.0310	0.0000	0.0001	IMPCO, INC.
RI	Providence	44007	AIR73	1	1	10200602	55.00	SCC Descriptio	0.2703	0.0000	0.0007	AMERICAN PLATING
RI	Providence	44007	AIR733	1	1	10200502	55.00	SCC Descriptio	0.2115	0.0000	0.0006	INTERNATIONAL CHROMIUM PLATING
RI	Providence	44007	AIR738	1	1	10200602	55.00	SCC Descriptio	0.0500	0.0000	0.0001	INTERNATIONAL ETCHING INC.
RI	Providence	44007	AIR74	1	1	10200602	55.00	SCC Descriptio	0.0635	0.0000	0.0002	AMERICAN RING CO.
RI	Providence	44007	AIR740	1	1	10200502	55.00	SCC Descriptio	0.0250	0.0000	0.0001	INTERNATIONAL INSIGNIA CORP.
RI	Providence	44007	AIR745	1	1	10200502	55.00	SCC Descriptio	0.4200	0.0000	0.0012	NORTH EAST KNITTING
RI	Providence	44007	AIR768	1	1	10200602	55.00	SCC Descriptio	0.8775	0.0000	0.0024	FIBER MARK
RI	Providence	44007	AIR79	1	1	10200502	55.00	SCC Descriptio	0.0405	0.0000	0.0001	NARRAGANSETT IMAGING
RI	Providence	44007	AIR79	2	2	10200602	55.00	SCC Descriptio	0.3635	0.0000	0.0010	NARRAGANSETT IMAGING
RI	Providence	44007	AIR8	1	1	10200602	55.00	SCC Descriptio	0.0545	0.0000	0.0001	A G & G INC.
RI	Providence	44007	AIR802	1	1	10200502	55.00	SCC Descriptio	0.0140	0.0000	0.0000	JONETTE JEWELRY CO., INC.
RI	Providence	44007	AIR803	1	1	10200602	55.00	SCC Descriptio	0.0174	0.0000	0.0000	JOSEF CREATIONS INC.
RI	Providence	44007	AIR813	1	1	10200602	55.00	SCC Descriptio	0.0450	0.0000	0.0001	KELLEY METALS CORP.
RI	Providence	44007	AIR839	1	1	10200602	55.00	SCC Descriptio	1.1478	0.0000	0.0031	KLITZNER INDUSTRIES, INC.
RI	Providence	44007	AIR874	1	1	10200602	55.00	SCC Descriptio	0.3265	0.0000	0.0009	LEVIN PLATING CO.
RI	Providence	44007	AIR879	1	1	10200502	55.00	SCC Descriptio	0.1705	0.0000	0.0005	LIBERTY PLATING CO., INC.
RI	Providence	44007	AIR88	1	1	10200602	55.00	SCC Descriptio	0.0715	0.0000	0.0002	C & J MFG.
RI	Providence	44007	AIR903	1	1	10200502	55.00	SCC Descriptio	0.2005	0.0000	0.0006	LUTONE PLATING CO.
RI	Providence	44007	AIR91	1	1	10200502	55.00	SCC Descriptio	0.0225	0.0000	0.0001	ANTON ENTERPRISES, INC.
RI	Providence	44007	AIR93	1	1	10200502	55.00	SCC Descriptio	0.5400	0.0000	0.0015	ANTONELLI PLATING CO.
RI	Providence	44007	AIR945	1	1	10200502	55.00	SCC Descriptio	0.6520	0.0000	0.0018	ECOLOGICAL FIBERS INC.

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RI	Providence	44007	AIR959	1	1	10200602	55.00	SCC Descriptio	0.1785	0.0000	0.0005	MEARTHANE PRODUCTS CORPORATION
RI	Providence	44007	AIR964	1	1	10300402	55.00	SCC Descriptio	15.1465	0.0310	0.0310	MEMORIAL HOSPITAL OF RHODE ISLAND
RI	Providence	44007	AIR964	2	2	10300602	55.00	SCC Descriptio	0.8820	0.0000	0.0022	MEMORIAL HOSPITAL OF RHODE ISLAND
RI	Providence	44007	AIR986	1	1	10200402	55.00	SCC Descriptio	11.4220	0.0000	0.0314	MICROFIBRES
RI	Providence	44007	AIR986	2	2	10200602	55.00	SCC Descriptio	1.5875	0.0000	0.0043	MICROFIBRES
RI	Providence	44007	AIR987	1	1	10200502	55.00	SCC Descriptio	0.4295	0.0000	0.0012	MICROFIN CORP.
RI	Providence	44007	AIR987	2	2	10200602	55.00	SCC Descriptio	0.0225	0.0000	0.0001	MICROFIN CORP.
RI	Providence	44007	AIR99	1	1	10200602	55.00	SCC Descriptio	0.0660	0.0000	0.0002	ARDEN JEWELRY MFG. CO INC.
RI	Providence	44007	AIR9999	1	1	10200502	55.00	SCC Descriptio	1.0675	0.0000	0.0029	PACIFIC ANCHOR
RI	Providence	44007	AIR9999	2	2	10200602	55.00	SCC Descriptio	0.0990	0.0000	0.0003	PACIFIC ANCHOR
RI	Washington	44009	AIR1143	1	1	10200502	55.00	SCC Descriptio	0.0900	0.0000	0.0002	PALISADES LTD.
RI	Washington	44009	AIR1143	2	2	10200602	55.00	SCC Descriptio	0.5520	0.0000	0.0015	PALISADES LTD.
RI	Washington	44009	AIR1302	1	1	10300401	0.00		11.1290	0.0000	0.0306	R.I. PORT AUTHORITY STEAM PLANT(CLOSED)
RI	Washington	44009	AIR1400	1	1	10300502	55.00	SCC Descriptio	0.2290	0.0000	0.0006	SOUTH COUNTY HOSPITAL
RI	Washington	44009	AIR1400	2	2	10300504	0.00		0.5370	0.0000	0.0015	SOUTH COUNTY HOSPITAL
RI	Washington	44009	AIR1400	3	3	10300602	55.00	SCC Descriptio	0.7430	0.0000	0.0018	SOUTH COUNTY HOSPITAL
RI	Washington	44009	AIR1439	1	1	10200602	55.00	SCC Descriptio	0.0935	0.0000	0.0003	STANLEY-BOSTITCH, INC. (NK)
RI	Washington	44009	AIR1451	1	1	10300502	55.00	SCC Descriptio	0.0984	0.0000	0.0003	SUBURBAN CLEANERS INC.
RI	Washington	44009	AIR1584	1	1	10300402	55.00	SCC Descriptio	6.3580	0.0000	0.0175	UNIVERSITY OF RHODE ISLAND/CONTIGUOUS
RI	Washington	44009	AIR1584	2	2	10300501	0.00		1.2440	0.0000	0.0033	UNIVERSITY OF RHODE ISLAND/CONTIGUOUS
RI	Washington	44009	AIR1649	1	1	10300504	0.00		2.4270	0.0000	0.0067	WESTERLY HOSPITAL
RI	Washington	44009	AIR1735	1	1	10200502	55.00	SCC Descriptio	0.0285	0.0000	0.0001	COASTAL PLASTICS, INC.
RI	Washington	44009	AIR174	1	1	10200401	115.00	TITLE V PERM	89.0730	0.0000	0.2467	BRADFORD DYEING ASSOCIATION INC.
RI	Washington	44009	AIR1813	1	1	10200504	0.00		0.4955	0.0000	0.0014	GRISWOLD TEXTILE PRINT, INC.
RI	Washington	44009	AIR1813	2	2	10200602	55.00	SCC Descriptio	0.2820	0.0000	0.0008	GRISWOLD TEXTILE PRINT, INC.
RI	Washington	44009	AIR248	1	1	10200502	55.00	SCC Descriptio	6.9330	0.0280	0.0280	CHARBERT INC. DIV. OF NFA
RI	Washington	44009	AIR3052	1	1	10200602	38.60	TITLE V PERM	8.9865	0.0000	0.0243	TORAY PLASTICS AMERICA
RI	Washington	44009	AIR3066	1	1	10200402	55.00	SCC Descriptio	6.6623	0.0000	0.0183	DARLINGTON FABRICS CORP. (BEACH ST.)
RI	Washington	44009	AIR356	1	1	10200402	55.00	SCC Descriptio	27.4960	0.0740	0.0740	DARLINGTON FABRICS CORP. (CANAL ST.)
RI	Washington	44009	AIR356	2	2	10200502	55.00	SCC Descriptio	2.6010	0.0000	0.0071	DARLINGTON FABRICS CORP. (CANAL ST.)
RI	Washington	44009	AIR356	3	3	10200602	55.00	SCC Descriptio	0.6190	0.0000	0.0017	DARLINGTON FABRICS CORP. (CANAL ST.)
RI	Washington	44009	AIR3627	1	1	10200502	55.00	SCC Descriptio	0.1440	0.0000	0.0004	NEW ANNEX PLATING INC.
RI	Washington	44009	AIR3661	1	1	10200602	55.00	SCC Descriptio	0.0680	0.0000	0.0002	CUSTOM DESIGN INCORPORATED
RI	Washington	44009	AIR3809	1	1	10200602	55.00	SCC Descriptio	1.5025	0.0000	0.0041	ARCH SPECIALTY CHEMICALS, INC.
RI	Washington	44009	AIR630	1	1	10200502	55.00	SCC Descriptio	0.0847	0.0000	0.0002	GREENE PLASTICS CORP.
RI	Washington	44009	AIR630	2	2	10200504	0.00		0.1425	0.0000	0.0004	GREENE PLASTICS CORP.
RI	Washington	44009	AIR824	1	1	10200401	33.50	TITLE V PERM	44.6860	0.0000	0.1237	KENYON INDUSTRIES, INC.
VT	Addison	50001	641	1	1	10200402	27.00	TITLE V PERM	24.9700	0.0651	0.0651	AGRIMARK INC.
VT	Addison	50001	641	2	1	10200402	27.00	TITLE V PERM	24.9700	0.0651	0.0651	AGRIMARK INC.
VT	Addison	50001	687	1	1	10201002	0.00		0.3700	0.0010	0.0010	QUESTECH
VT	Addison	50001	687	2	1	10200501	0.00		0.0100	0.0000	0.0000	QUESTECH
VT	Bennington	50003	339	1	1	10201002	0.00		0.4400	0.0005	0.0005	HBH PRESTAIN
VT	Bennington	50003	632	1	1	10201002	0.00		0.0500	0.0001	0.0001	HBH PRESTAIN (FORMER PUTNAM LUMBER YARD), RTE. 7A
VT	Caledonia	50005	688	1	1	10200501	0.00		0.1300	0.0000	0.0000	LYNDON WOODWORKING (LYNDON SOUTH)
VT	Caledonia	50005	688	1	2	10200908	0.00		0.1200	0.0000	0.0000	LYNDON WOODWORKING (LYNDON SOUTH)
VT	Caledonia	50005	9	1	2	10200402	29.30	TITLE V PERM	10.5800	0.0288	0.0288	EHV WEIDMANN INDUSTRIES
VT	Caledonia	50005	9	7	1	10200402	19.40	TITLE V PERM	6.0400	0.0118	0.0118	EHV WEIDMANN INDUSTRIES
VT	Caledonia	50005	9	8	1	10200502	2.70	TITLE V PERM	0.5800	0.0016	0.0016	EHV WEIDMANN INDUSTRIES
VT	Essex	50009	1	1	1	10200504	13.00	EU Net Design	0.2500	0.0000	0.0000	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Essex	50009	1	2	2	10200903	36.00	EU Net Design	26.8700	0.0117	0.0117	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Essex	50009	1	2	1	10300504	36.00	EU Net Design	0.1600	0.0000	0.0001	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Essex	50009	1	3	1	10200903	54.00	EU Net Design	48.1900	0.1152	0.1152	ETHAN ALLEN INC. (BEECHER FALLS DIV.)

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
VT	Essex	50009	1	4	1	10300502	2.50	EU Net Design	0.1800	0.0000	0.0000	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Essex	50009	1	5	1	10300504	20.80	EU Net Design	0.1800	0.0000	0.0000	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Essex	50009	1	6	1	10200903	3.00	EU Net Design	0.0700	0.0000	0.0000	ETHAN ALLEN INC. (BEECHER FALLS DIV.)
VT	Franklin	50011	134	3	1	10200402	89.00	EU Net Design	3.8200	0.0000	0.0000	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	134	3	2	10200602	89.00	EU Net Design	27.2000	0.0769	0.0769	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	134	5	1	10200402	33.00	EU Net Design	4.7800	0.0000	0.0000	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	134	5	2	10200602	33.00	EU Net Design	3.9500	0.0086	0.0086	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	134	6	1	10200402	31.00	EU Net Design	3.5700	0.0000	0.0000	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	134	6	2	10200602	31.00	EU Net Design	3.2000	0.0101	0.0101	ROCK-TENN COMPANY (SHELDON SPRINGS)
VT	Franklin	50011	689	8	1	10300603	8.40	EU Net Design	0.2500	0.0007	0.0007	BROWN FOUNDRY
VT	Lamoille	50015	89	1	1	10200902	5.00	EU Net Design	0.3000	0.0008	0.0008	VERMONT PRECISION WOODWORKS
VT	Lamoille	50015	89	2	1	10200902	5.00	EU Net Design	1.6900	0.0042	0.0042	VERMONT PRECISION WOODWORKS
VT	Orange	50017	378	4	1	10300501	2.20	EU Net Design	0.3000	0.0008	0.0008	COPELAND FURNITURE
VT	Orange	50017	614	1	1	10300908	3.90	EU Net Design	0.2500	0.0003	0.0003	POMPANOOSUC MILLS CORP.
VT	Orange	50017	8	1	1	10200504	12.50	EU Net Design	1.9000	0.0000	0.0000	ETHAN ALLEN INC. (RANDOLPH DIV.)
VT	Orange	50017	8	2	1	10200504	25.20	EU Net Design	0.4700	0.0000	0.0000	ETHAN ALLEN INC. (RANDOLPH DIV.)
VT	Orleans	50019	354	1	1	10200501	0.00		0.1200	0.0000	0.0000	NEWPORT FURNITURE PARTS, INC.
VT	Orleans	50019	4	1	1	10200902	27.80	EU Net Design	10.3000	0.0022	0.0022	ETHAN ALLEN INC. (ORLEANS DIV.)
VT	Orleans	50019	4	2	1	10200908	34.00	EU Net Design	10.2200	0.0200	0.0200	ETHAN ALLEN INC. (ORLEANS DIV.)
VT	Orleans	50019	4	3	1	10200908	34.00	EU Net Design	5.1700	0.0129	0.0129	ETHAN ALLEN INC. (ORLEANS DIV.)
VT	Orleans	50019	4	3	2	10300504	34.00	EU Net Design	1.3300	0.0036	0.0036	ETHAN ALLEN INC. (ORLEANS DIV.)
VT	Orleans	50019	615	1	1	10201002	0.00		0.2000	0.0000	0.0000	GREEN MOUNTAIN CUSTOM FINISHING
VT	Rutland	50021	644	1	1	10200908	130.00	EU Net Design	10.1400	0.0220	0.0220	VERMONT TUBBS (BRANDON)
VT	Rutland	50021	644	5	1	10201002	59.00	EU Net Design	1.3600	0.0037	0.0037	VERMONT TUBBS (BRANDON)
VT	Rutland	50021	87	1	1	10200903	10.00	EU Net Design	5.6000	0.0091	0.0091	STANLEY TOOLS, PITTSFIELD PLANT
VT	Windham	50025	11	1	1	10200402	20.80	EU Net Design	20.3200	0.0464	0.0464	PUTNEY PAPER CO., INC.
VT	Windham	50025	11	2	1	10200402	25.00	EU Net Design	20.3200	0.0464	0.0464	PUTNEY PAPER CO., INC.
VT	Windham	50025	56	1	2	10200501	0.00		0.0400	0.0001	0.0001	BRADLEY LABORATORIES
VT	Windham	50025	56	1	1	10200501	0.00		0.1600	0.0000	0.0004	BRADLEY LABORATORIES
VT	Windham	50025	56	5	1	10200502	1.50	EU Net Design	0.0400	0.0000	0.0000	BRADLEY LABORATORIES
VT	Windham	50025	626	1	1	10301002	0.20	EU Net Design	0.1100	0.0000	0.0000	G.S. PRECISION, INC
VT	Windham	50025	7	1	1	10200402	38.00	TITLE V PERM	33.4600	0.0727	0.0727	FIBERMARK
VT	Windham	50025	7	2	1	10200402	38.00	TITLE V PERM	33.4600	0.0727	0.0727	FIBERMARK
VT	Windham	50025	7	4	1	10200501	14.80	TITLE V PERM	1.6400	0.0000	0.0000	FIBERMARK
VA	Arlington	51013	00009	11	1	10300501	0.00		1.4200	0.0000	0.0016	US ARMY - FORT MYER
VA	Arlington	51013	00009	12	1	10300602	0.00		10.4900	0.0000	0.0115	US ARMY - FORT MYER
VA	Arlington	51013	00010	11	1	10200501	48.00		0.0840	0.0000	0.0000	PENTAGON RESERVATION
VA	Arlington	51013	00010	11	2	10200602	48.00		2.8600	0.0000	0.0000	PENTAGON RESERVATION
VA	Arlington	51013	00010	12	1	10200501	48.00		0.0780	0.0000	0.0001	PENTAGON RESERVATION
VA	Arlington	51013	00010	12	2	10200602	48.00		3.5400	0.0000	0.0043	PENTAGON RESERVATION
VA	Arlington	51013	00010	13	1	10200501	48.00		0.0620	0.0000	0.0000	PENTAGON RESERVATION
VA	Arlington	51013	00010	13	2	10200602	48.00		2.7000	0.0000	0.0018	PENTAGON RESERVATION
VA	Arlington	51013	00010	14	1	10200501	48.00		0.0840	0.0000	0.0001	PENTAGON RESERVATION
VA	Arlington	51013	00010	14	2	10200602	48.00		1.4100	0.0000	0.0019	PENTAGON RESERVATION
VA	Arlington	51013	00010	15	1	10200501	48.00		0.0450	0.0000	0.0000	PENTAGON RESERVATION
VA	Arlington	51013	00010	15	2	10200602	48.00		0.3290	0.0000	0.0000	PENTAGON RESERVATION
VA	Arlington	51013	00010	16	1	10200501	48.00		0.1400	0.0000	0.0004	PENTAGON RESERVATION
VA	Arlington	51013	00010	16	2	10200602	48.00		3.0000	0.0000	0.0076	PENTAGON RESERVATION
VA	Arlington	51013	00212	2	1	10300501	12.00		0.0600	0.0000	0.0001	BERGMANNS INC
VA	Arlington	51013	00212	2	2	10300603	12.00		1.9600	0.0000	0.0043	BERGMANNS INC
VA	Fairfax	51059	00018	10	1	10300602	89.00		3.2900	0.0000	0.0081	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	10	2	10300502	89.00		0.8020	0.0000	0.0022	US ARMY - FORT BELVOIR

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
VA	Fairfax	51059	00018	4	1	10300602	32.20		1.9500	0.0000	0.0000	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	4	2	10300501	32.20		0.1270	0.0000	0.0000	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	5	1	10300602	32.20		1.0100	0.0000	0.0000	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	5	2	10300501	32.20		0.0420	0.0000	0.0000	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	6	1	10300602	16.80		0.8350	0.0000	0.0055	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	6	2	10300501	16.80		0.3270	0.0000	0.0022	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	7	1	10300603	252.00		5.3800	0.0000	0.0012	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00018	7	2	10300501	252.00		3.6900	0.0000	0.0008	US ARMY - FORT BELVOIR
VA	Fairfax	51059	00022	1	1	10300602	49.00		5.3500	0.0000	0.0147	INOVA FAIRFAX HOSPITAL
VA	Fairfax	51059	00022	2	1	10300602	49.00		5.3500	0.0000	0.0147	INOVA FAIRFAX HOSPITAL
VA	Fairfax	51059	00022	3	1	10300602	29.00		5.3500	0.0000	0.0147	INOVA FAIRFAX HOSPITAL
VA	Fairfax	51059	00056	10	1	10300603	9.20		0.2230	0.0000	0.0023	WASHINGTON GAS LIGHT COMPANY
VA	Fairfax	51059	00056	3	1	10300602	10.50		0.0190	0.0000	0.0001	WASHINGTON GAS LIGHT COMPANY
VA	Fairfax	51059	00056	6	1	10300602	10.50		0.0200	0.0000	0.0001	WASHINGTON GAS LIGHT COMPANY
VA	Fairfax	51059	00056	9	1	10300602	10.50		0.0190	0.0000	0.0001	WASHINGTON GAS LIGHT COMPANY
VA	Fairfax	51059	00421	2	1	10300602	63.00		1.2300	0.0000	0.0026	BUSH CENTER FOR INTELLIGENCE (CIA)
VA	Fairfax	51059	00421	3	1	10300602	63.00		0.2000	0.0000	0.0002	BUSH CENTER FOR INTELLIGENCE (CIA)
VA	Fairfax	51059	00421	4	1	10300602	18.00		1.2400	0.0000	0.0010	BUSH CENTER FOR INTELLIGENCE (CIA)
VA	Fairfax	51059	00421	5	1	10200602	63.00		5.1400	0.0000	0.0028	BUSH CENTER FOR INTELLIGENCE (CIA)
VA	Fairfax	51059	00733	2	1	10300603	4.70		0.3030	0.0000	0.0003	AMERICA ONLINE INCORPORATED
VA	Loudoun	51107	00073	1	1	10200501	10.50		0.0170	0.0000	0.0000	TUSCARORA INCORPORATED
VA	Loudoun	51107	00073	1	2	10200602	10.50		1.0500	0.0000	0.0030	TUSCARORA INCORPORATED
VA	Loudoun	51107	00073	2	1	10200501	14.70		0.0350	0.0000	0.0001	TUSCARORA INCORPORATED
VA	Loudoun	51107	00073	2	2	10200602	14.70		1.0800	0.0000	0.0031	TUSCARORA INCORPORATED
VA	Loudoun	51107	00101	4	1	10300603	2.80		2.1700	0.0000	0.0029	DOMINION TRANSMISSION INC - CNG LEESBURG
VA	Loudoun	51107	00134	3	1	10300603	58.00		0.7570	0.0000	0.0002	AMERICA ONLINE INCORPORATED
VA	Prince William	51153	00010	11	1	10300501	3.00		0.1860	0.0000	0.0001	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	14	1	10200401	44.00		5.0100	0.0000	0.0182	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	14	2	10200401	44.00		6.3700	0.0000	0.0231	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	17	1	10300501	2.20		0.1320	0.0000	0.0000	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	18	1	10300501	2.00		0.1160	0.0000	0.0001	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	19	1	10300501	2.90		0.0700	0.0000	0.0000	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	2	1	10300501	62.00		1.2100	0.0000	0.0000	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	3	1	10300602	84.00		5.9000	0.0000	0.0006	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	4	2	10300602	114.00		0.1300	0.0000	0.0000	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	5	1	10300501	114.00		0.5100	0.0000	0.0012	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	5	2	10300602	114.00		5.0300	0.0000	0.0122	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00010	8	1	10300501	9.50		0.2640	0.0000	0.0001	US MARINE CORPS - QUANTICO
VA	Prince William	51153	00021	1	1	10200602	72.00		0.6900	0.0000	0.0000	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00021	2	1	10200602	72.00		0.6850	0.0000	0.0075	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00021	3	1	10200603	5.00		0.1400	0.0000	0.0000	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00021	4	1	10200603	5.00		0.1400	0.0000	0.0000	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00021	7	1	10200603	10.00		0.4400	0.0000	0.0001	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00021	8	2	10200602	78.20		6.0700	0.0000	0.0047	LOCKHEED MARTIN MANASSAS
VA	Prince William	51153	00086	14	1	10200603	3.00		1.3000	0.0000	0.0000	TRANSCONTINENTAL GAS PIPELINE-STATION 18
VA	Prince William	51153	00086	15	1	10200603	5.00		0.8000	0.0000	0.0000	TRANSCONTINENTAL GAS PIPELINE-STATION 18
VA	Prince William	51153	00131	1	1	10200501	195.00		0.1920	0.0000	0.0000	MICRON TECHNOLOGY INCORPORATED
VA	Prince William	51153	00131	1	2	10200602	195.00		4.5600	0.0000	0.0005	MICRON TECHNOLOGY INCORPORATED
VA	Prince William	51153	00143	2	1	10300603	3.00		0.0730	0.0000	0.0001	AMERICA ONLINE INC
VA	Stafford	51179	00020	1	1	10300602	0.00		1.9700	0.0000	0.0000	FBI ACADEMY
VA	Stafford	51179	00020	1	2	10300502	0.00		0.4810	0.0000	0.0000	FBI ACADEMY
VA	Stafford	51179	00020	2	1	10300603	0.00		0.0960	0.0000	0.0003	FBI ACADEMY

									2002 NOx Emissions			
State	County	FIPS	Site ID	EU ID	Proc ID	SCC	Size mmBtu/hr	Source of Boiler Size Data	Annual (tpy)	Summer Day from Inventory (tpd)	Summer Day Calculated (tpd)	Plant Name
VA	Stafford	51179	00020	2	2	10300503	0.00		0.8770	0.0000	0.0024	FBI ACADEMY
VA	Stafford	51179	00020	3	1	10300502	0.00		3.5800	0.0000	0.0063	FBI ACADEMY
VA	Stafford	51179	00020	4	1	10300603	0.00		0.0270	0.0000	0.0001	FBI ACADEMY
VA	Stafford	51179	00020	5	1	10301002	0.00		0.1830	0.0000	0.0004	FBI ACADEMY
VA	Stafford	51179	00020	6	1	10300503	0.00		1.7500	0.0000	0.0031	FBI ACADEMY
VA	Stafford	51179	00029	1	1	10200603	3.00		0.3500	0.0000	0.0010	CELLOFOAM NORTH AMERICA INC
						MANEVU			54732.2		139.1	
						NOVA			124.6		0.2	
						OTR			54856.8		139.3	

Boiler capacity by size: Table ES-1, *Characterization of the U.S. Industrial/Commercial Boiler Population*, May 2005. Oak Ridge National Laboratory

Area Sources are not subject to NOx regulation in all OTR states except for New Jersey. Thus, we are using the % reduction numbers from uncontrolled for area sources.

Unit Size (MMBtu/hr)	Total Capacity (MMBtu/hr)	Unit Size (MMBtu/hr)	Total Capacity (MMBtu/hr)	Capacity Percent in Range		Area Source Capacity Percent in Range		From OTC September 28 Control Strategy Proposal NOx Percent Reduction Coal	Distillate (#2	Residual Oil #4 or #6	Natural Ga	LPG	Wood/Kerosene
		NOx All Fuels Industrial											
>250	616,209	>250	616,209	39.33	Accounted for in								0
100 to 250	327,327	100 to 250	327,327	20.89	Point Inventory								0
50 to 100	243,128	50 to 100	243,128	15.52		39.01		50	50	50	50	50	10
10 to 50	277,810	25 to 50	138,905	8.87		22.29		50	50	50	50	50	10
<10	102,306	10 to 25	138,905	8.87		22.29		10	10	10	10	10	10
		<10	102,306	6.53		16.42		10	10	10	10	10	10
	1,566,780		1,566,780	100.00		100.00	Weighted Average % Reduction	34.5	34.5	34.5	34.5	34.5	10.0
		NOx All Fuels Commercial/Institutional											
>250	33,639	>250	33,639	2.93	Accounted for in								0
100 to 250	140,110	100 to 250	140,110	12.21	Point Inventory								0
50 to 100	208,980	50 to 100	208,980	18.21		21.46		50	50	50	50	50	10
10 to 50	463,685	25 to 50	231,843	20.20		23.81		50	50	50	50	50	10
<10	301,202	10 to 25	231,843	20.20		23.81		10	10	10	10	10	10
		<10	301,202	26.25		30.93		10	10	10	10	10	10
	1,147,616		1,147,616	100.00		100.00	Weighted Average % Reduction	28.1	28.1	28.1	28.1	28.1	10.0

% Reductio	SCC	SCC_L4	SCC_L3	SCC_L2
34.5	2102001000	Total: All Boiler Ty	Anthracite Coal	Industrial
34.5	2102002000	Total: All Boiler Ty	Bituminous/Subbitu	Industrial
34.5	2102004000	Total: Boilers and	Distillate Oil	Industrial
34.5	2102005000	Total: All Boiler Ty	Residual Oil	Industrial
34.5	2102006000	Total: Boilers and	Natural Gas	Industrial
34.5	2102007000	Total: All Boiler Ty	Liquified Petroleum	Industrial
10.0	2102008000	Total: All Boiler Ty	Wood	Industrial
10.0	2102011000	Total: All Boiler Ty	Kerosene	Industrial
28.1	2103001000	Total: All Boiler Ty	Anthracite Coal	Commercial/Institutional
28.1	2103002000	Total: All Boiler Ty	Bituminous/Subbitu	Commercial/Institutional
28.1	2103004000	Total: Boilers and	Distillate Oil	Commercial/Institutional
28.1	2103004001		Distillate Oil	Commercial/Institutional
28.1	2103004002		Distillate Oil	Commercial/Institutional
28.1	2103005000	Total: All Boiler Ty	Residual Oil	Commercial/Institutional
28.1	2103006000	Total: Boilers and	Natural Gas	Commercial/Institutional
28.1	2103007000	Total: All Combus	Liquified Petroleum	Commercial/Institutional
10.0	2103008000	Total: All Boiler Ty	Wood	Commercial/Institutional
10.0	2103011000	Total: All Combus	Kerosene	Commercial/Institutional

CF0_25

CF100_250

From state specific reductions tab
NOx Percent Reduction

	Size (mmBtu/hr):		> 250*	100 to 250	50 to 100	25 to 50	<25				
State	**FIPSST**	**SCC**	**CF250**	**CF100_250**	**CF50_100**	**CF25_50**	**CF0_25**	**Type**	**SCC_L4**	**SCC_L3**	**SCC_L2**
CT	09	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
CT	09	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
CT	09	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
CT	09	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
CT	09	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
CT	09	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
CT	09	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
CT	09	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
CT	09	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
CT	09	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
CT	09	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10200104	72	49	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
DC	11	10200204	72	49	50	50	10	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
DC	11	10200205	72	49	50	50	10	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
DC	11	10200206	72	49	50	50	10	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
DC	11	10300102	72	49	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
DC	11	10300207	72	49	50	50	10	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10300208	72	49	50	50	10	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10300209	72	49	50	50	10	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10300225	72	49	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10200203	72	72	50	50	10	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
DC	11	10200212	72	72	50	50	10	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
DC	11	10300203	72	72	50	50	10	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10300226	72	72	50	50	10	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
DC	11	10200202	72	67	50	50	10	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
DC	11	10200222	72	67	50	50	10	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
DC	11	10300101	72	67	50	50	10	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
DC	11	10300206	72	67	50	50	10	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
DE	10	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
DE	10	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
DE	10	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
DE	10	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
DE	10	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional

DE	10	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
DE	10	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
DE	10	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
DE	10	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
DE	10	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
DE	10	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
DE	10	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
MA	25	10200204	64	33	50	50	10	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
MA	25	10200205	64	33	50	50	10	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
MA	25	10200206	64	33	50	50	10	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
MA	25	10300102	64	33	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
MA	25	10300207	64	33	50	50	10	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10300208	64	33	50	50	10	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10300209	64	33	50	50	10	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10300225	64	33	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10200203	68	68	50	50	10	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
MA	25	10200212	68	68	50	50	10	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
MA	25	10300203	68	68	50	50	10	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10300226	68	68	50	50	10	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
MA	25	10200202	73	69	50	50	10	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
MA	25	10200222	73	69	50	50	10	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
MA	25	10300101	73	69	50	50	10	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
MA	25	10300206	73	69	50	50	10	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10200104	68	66	21	21	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
MD	24	10200204	68	66	21	21	10	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
MD	24	10200205	68	66	21	21	10	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
MD	24	10200206	68	66	21	21	10	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
MD	24	10300102	68	66	21	21	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
MD	24	10300207	68	66	21	21	10	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10300208	68	66	21	21	10	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10300209	68	66	21	21	10	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10300225	68	66	21	21	10	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10200203	68	82	21	21	10	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
MD	24	10200212	68	82	21	21	10	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
MD	24	10300203	68	82	21	21	10	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10300226	68	82	21	21	10	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
MD	24	10200202	68	79	21	21	10	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
MD	24	10200222	68	79	21	21	10	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
MD	24	10300101	68	79	21	21	10	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
MD	24	10300206	68	79	21	21	10	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
ME	23	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
ME	23	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
ME	23	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
ME	23	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
ME	23	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional

ME	23	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
ME	23	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
ME	23	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
ME	23	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
ME	23	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
ME	23	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
ME	23	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
NH	33	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
NH	33	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NH	33	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NH	33	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
NH	33	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
NH	33	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
NH	33	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
NH	33	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
NH	33	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
NH	33	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
NH	33	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
NJ	34	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
NJ	34	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NJ	34	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NJ	34	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
NJ	34	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
NJ	34	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
NJ	34	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
NJ	34	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
NJ	34	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
NJ	34	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
NJ	34	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10200104	60	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
NY	36	10200204	60	27	50	50	10	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
NY	36	10200205	60	27	50	50	10	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NY	36	10200206	60	27	50	50	10	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
NY	36	10300102	60	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
NY	36	10300207	60	27	50	50	10	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10300208	60	27	50	50	10	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10300209	60	27	50	50	10	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional

NY	36	10300225	60	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10200203	71	76	50	50	10	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
NY	36	10200212	71	76	50	50	10	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
NY	36	10300203	71	76	50	50	10	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10300226	71	76	50	50	10	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
NY	36	10200202	73	72	50	50	10	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
NY	36	10200222	73	72	50	50	10	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
NY	36	10300101	73	72	50	50	10	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
NY	36	10300206	73	72	50	50	10	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10200104	29	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
PA	42	10200204	29	27	50	50	10	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
PA	42	10200205	29	27	50	50	10	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
PA	42	10200206	29	27	50	50	10	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
PA	42	10300102	29	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
PA	42	10300207	29	27	50	50	10	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10300208	29	27	50	50	10	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10300209	29	27	50	50	10	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10300225	29	27	50	50	10	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10200203	29	76	50	50	10	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
PA	42	10200212	29	76	50	50	10	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
PA	42	10300203	29	76	50	50	10	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10300226	29	76	50	50	10	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
PA	42	10200202	29	72	50	50	10	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
PA	42	10200222	29	72	50	50	10	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
PA	42	10300101	29	72	50	50	10	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
PA	42	10300206	29	72	50	50	10	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
RI	44	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
RI	44	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
RI	44	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
RI	44	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
RI	44	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
RI	44	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
RI	44	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
RI	44	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
RI	44	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
RI	44	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
RI	44	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
VA	51	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
VA	51	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
VA	51	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
VA	51	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
VA	51	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional

VA	51	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
VA	51	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
VA	51	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
VA	51	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
VA	51	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
VA	51	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
VA	51	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10200104	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Industrial
VT	50	10200204	0	0	0	0	0	Stoker	Spreader Stoker	Bituminous/Subbituminous Coal	Industrial
VT	50	10200205	0	0	0	0	0	Stoker	Overfeed Stoker	Bituminous/Subbituminous Coal	Industrial
VT	50	10200206	0	0	0	0	0	Stoker	Underfeed Stoker	Bituminous/Subbituminous Coal	Industrial
VT	50	10300102	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker	Anthracite Coal	Commercial/Institutional
VT	50	10300207	0	0	0	0	0	Stoker	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10300208	0	0	0	0	0	Stoker	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10300209	0	0	0	0	0	Stoker	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10300225	0	0	0	0	0	Stoker	Traveling Grate (Overfeed) Stoker (Subbitumino	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10200203	0	0	0	0	0	Tangential	Cyclone Furnace	Bituminous/Subbituminous Coal	Industrial
VT	50	10200212	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal	Industrial
VT	50	10300203	0	0	0	0	0	Tangential	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10300226	0	0	0	0	0	Tangential	Pulverized Coal: Dry Bottom Tangential (Subbitu	Bituminous/Subbituminous Coal	Commercial/Institutional
VT	50	10200202	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal	Industrial
VT	50	10200222	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Subbituminous Co	Bituminous/Subbituminous Coal	Industrial
VT	50	10300101	0	0	0	0	0	Wall	Pulverized Coal	Anthracite Coal	Commercial/Institutional
VT	50	10300206	0	0	0	0	0	Wall	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal	Commercial/Institutional
CT	09	10200501	40	0	60	60	10		Grades 1 and 2 Oil	Distillate Oil	Industrial
CT	09	10200502	40	0	60	60	10		10-100 Million Btu/hr **	Distillate Oil	Industrial
CT	09	10200503	40	0	60	60	10		< 10 Million Btu/hr **	Distillate Oil	Industrial
CT	09	10200504	40	0	60	60	10		Grade 4 Oil	Distillate Oil	Industrial
CT	09	10200505	40	0	60	60	10		Cogeneration	Distillate Oil	Industrial
CT	09	10300501	40	0	60	60	10		Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
CT	09	10300502	40	0	60	60	10		10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
CT	09	10300503	40	0	60	60	10		< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
CT	09	10300504	40	0	60	60	10		Grade 4 Oil	Distillate Oil	Commercial/Institutional
DE	10	10200501	0	0	0	50	10		Grades 1 and 2 Oil	Distillate Oil	Industrial
DE	10	10200502	0	0	0	50	10		10-100 Million Btu/hr **	Distillate Oil	Industrial
DE	10	10200503	0	0	0	50	10		< 10 Million Btu/hr **	Distillate Oil	Industrial
DE	10	10200504	0	0	0	50	10		Grade 4 Oil	Distillate Oil	Industrial
DE	10	10200505	0	0	0	50	10		Cogeneration	Distillate Oil	Industrial
DE	10	10300501	0	0	0	50	10		Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
DE	10	10300502	0	0	0	50	10		10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
DE	10	10300503	0	0	0	50	10		< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
DE	10	10300504	0	0	0	50	10		Grade 4 Oil	Distillate Oil	Commercial/Institutional
DC	11	10200501	60	33	73	50	10		Grades 1 and 2 Oil	Distillate Oil	Industrial
DC	11	10200502	60	33	73	50	10		10-100 Million Btu/hr **	Distillate Oil	Industrial
DC	11	10200503	60	33	73	50	10		< 10 Million Btu/hr **	Distillate Oil	Industrial
DC	11	10200504	60	33	73	50	10		Grade 4 Oil	Distillate Oil	Industrial
DC	11	10200505	60	33	73	50	10		Cogeneration	Distillate Oil	Industrial
DC	11	10300501	60	33	73	50	10		Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
DC	11	10300502	60	33	73	50	10		10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
DC	11	10300503	60	33	73	50	10		< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
DC	11	10300504	60	33	73	50	10		Grade 4 Oil	Distillate Oil	Commercial/Institutional

ME	23	10200501	40	33	73	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
ME	23	10200502	40	33	73	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
ME	23	10200503	40	33	73	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
ME	23	10200504	40	33	73	50	10	Grade 4 Oil	Distillate Oil	Industrial
ME	23	10200505	40	33	73	50	10	Cogeneration	Distillate Oil	Industrial
ME	23	10300501	40	33	73	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
ME	23	10300502	40	33	73	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
ME	23	10300503	40	33	73	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
ME	23	10300504	40	33	73	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
MD	24	10200501	52	20	68	68	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
MD	24	10200502	52	20	68	68	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
MD	24	10200503	52	20	68	68	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
MD	24	10200504	52	20	68	68	10	Grade 4 Oil	Distillate Oil	Industrial
MD	24	10200505	52	20	68	68	10	Cogeneration	Distillate Oil	Industrial
MD	24	10300501	52	20	68	68	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
MD	24	10300502	52	20	68	68	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
MD	24	10300503	52	20	68	68	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
MD	24	10300504	52	20	68	68	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
MA	25	10200501	52	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
MA	25	10200502	52	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
MA	25	10200503	52	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
MA	25	10200504	52	33	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
MA	25	10200505	52	33	33	50	10	Cogeneration	Distillate Oil	Industrial
MA	25	10300501	52	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
MA	25	10300502	52	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
MA	25	10300503	52	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
MA	25	10300504	52	33	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
NH	33	10200501	60	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
NH	33	10200502	60	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
NH	33	10200503	60	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
NH	33	10200504	60	33	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
NH	33	10200505	60	33	33	50	10	Cogeneration	Distillate Oil	Industrial
NH	33	10300501	60	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
NH	33	10300502	60	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
NH	33	10300503	60	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
NH	33	10300504	60	33	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
NJ	34	10200501	40	0	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
NJ	34	10200502	40	0	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
NJ	34	10200503	40	0	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
NJ	34	10200504	40	0	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
NJ	34	10200505	40	0	33	50	10	Cogeneration	Distillate Oil	Industrial
NJ	34	10300501	40	0	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
NJ	34	10300502	40	0	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
NJ	34	10300503	40	0	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
NJ	34	10300504	40	0	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
NY	36	10200501	52	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
NY	36	10200502	52	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
NY	36	10200503	52	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
NY	36	10200504	52	33	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
NY	36	10200505	52	33	33	50	10	Cogeneration	Distillate Oil	Industrial
NY	36	10300501	52	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
NY	36	10300502	52	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional

NY	36	10300503	52	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
NY	36	10300504	52	33	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
PA	42	10200501	29	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
PA	42	10200502	29	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
PA	42	10200503	29	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
PA	42	10200504	29	33	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
PA	42	10200505	29	33	33	50	10	Cogeneration	Distillate Oil	Industrial
PA	42	10300501	29	33	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
PA	42	10300502	29	33	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
PA	42	10300503	29	33	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
PA	42	10300504	29	33	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
RI	44	10200501	0	0	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
RI	44	10200502	0	0	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
RI	44	10200503	0	0	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
RI	44	10200504	0	0	33	50	10	Grade 4 Oil	Distillate Oil	Industrial
RI	44	10200505	0	0	33	50	10	Cogeneration	Distillate Oil	Industrial
RI	44	10300501	0	0	33	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
RI	44	10300502	0	0	33	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
RI	44	10300503	0	0	33	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
RI	44	10300504	0	0	33	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
VT	50	10200501	60	60	50	50	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
VT	50	10200502	60	60	50	50	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
VT	50	10200503	60	60	50	50	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
VT	50	10200504	60	60	50	50	10	Grade 4 Oil	Distillate Oil	Industrial
VT	50	10200505	60	60	50	50	10	Cogeneration	Distillate Oil	Industrial
VT	50	10300501	60	60	50	50	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
VT	50	10300502	60	60	50	50	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
VT	50	10300503	60	60	50	50	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
VT	50	10300504	60	60	50	50	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
VA	51	10200501	52	20	68	68	10	Grades 1 and 2 Oil	Distillate Oil	Industrial
VA	51	10200502	52	20	68	68	10	10-100 Million Btu/hr **	Distillate Oil	Industrial
VA	51	10200503	52	20	68	68	10	< 10 Million Btu/hr **	Distillate Oil	Industrial
VA	51	10200504	52	20	68	68	10	Grade 4 Oil	Distillate Oil	Industrial
VA	51	10200505	52	20	68	68	10	Cogeneration	Distillate Oil	Industrial
VA	51	10300501	52	20	68	68	10	Grades 1 and 2 Oil	Distillate Oil	Commercial/Institutional
VA	51	10300502	52	20	68	68	10	10-100 Million Btu/hr **	Distillate Oil	Commercial/Institutional
VA	51	10300503	52	20	68	68	10	< 10 Million Btu/hr **	Distillate Oil	Commercial/Institutional
VA	51	10300504	52	20	68	68	10	Grade 4 Oil	Distillate Oil	Commercial/Institutional
CT	09	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
CT	09	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
CT	09	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
CT	09	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
CT	09	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
DE	10	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
DE	10	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
DE	10	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
DE	10	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
DE	10	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
DC	11	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
DC	11	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
DC	11	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
DC	11	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional

DC	11	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
ME	23	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
ME	23	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
ME	23	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
ME	23	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
ME	23	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
MD	24	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
MD	24	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
MD	24	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
MD	24	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
MD	24	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
MA	25	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
MA	25	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
MA	25	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
MA	25	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
MA	25	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NH	33	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
NH	33	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
NH	33	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
NH	33	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NH	33	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NJ	34	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
NJ	34	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
NJ	34	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
NJ	34	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NJ	34	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NY	36	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
NY	36	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
NY	36	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
NY	36	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
NY	36	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
PA	42	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
PA	42	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
PA	42	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
PA	42	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
PA	42	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
RI	44	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
RI	44	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
RI	44	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
RI	44	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
RI	44	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
VT	50	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
VT	50	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
VT	50	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
VT	50	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
VT	50	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
VA	51	10201001	0	0	0	0	0	Butane	Liquified Petroleum Gas (LPG)	Industrial
VA	51	10201002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Industrial
VA	51	10201003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Industrial
VA	51	10301002	0	0	0	0	0	Propane	Liquified Petroleum Gas (LPG)	Commercial/Institutional
VA	51	10301003	0	0	0	0	0	Butane/Propane Mixture: Specify Percent Butan	Liquified Petroleum Gas (LPG)	Commercial/Institutional
CT	09	10200601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Industrial

CT	09	10200602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Industrial
CT	09	10200603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Industrial
CT	09	10200604	40	50	75	75	10	Cogeneration	Natural Gas	Industrial
CT	09	10300601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
CT	09	10300602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
CT	09	10300603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
DE	10	10200601	0	0	0	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
DE	10	10200602	0	0	0	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
DE	10	10200603	0	0	0	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
DE	10	10200604	0	0	0	50	10	Cogeneration	Natural Gas	Industrial
DE	10	10300601	0	0	0	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
DE	10	10300602	0	0	0	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
DE	10	10300603	0	0	0	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
DC	11	10200601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
DC	11	10200602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
DC	11	10200603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
DC	11	10200604	40	50	50	50	10	Cogeneration	Natural Gas	Industrial
DC	11	10300601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
DC	11	10300602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
DC	11	10300603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
ME	23	10200601	40	60	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
ME	23	10200602	40	60	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
ME	23	10200603	40	60	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
ME	23	10200604	40	60	50	50	10	Cogeneration	Natural Gas	Industrial
ME	23	10300601	40	60	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
ME	23	10300602	40	60	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
ME	23	10300603	40	60	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
MD	24	10200601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Industrial
MD	24	10200602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Industrial
MD	24	10200603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Industrial
MD	24	10200604	40	50	75	75	10	Cogeneration	Natural Gas	Industrial
MD	24	10300601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
MD	24	10300602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
MD	24	10300603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
MA	25	10200601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
MA	25	10200602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
MA	25	10200603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
MA	25	10200604	40	50	50	50	10	Cogeneration	Natural Gas	Industrial
MA	25	10300601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
MA	25	10300602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
MA	25	10300603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
NH	33	10200601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
NH	33	10200602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
NH	33	10200603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
NH	33	10200604	0	0	50	50	10	Cogeneration	Natural Gas	Industrial
NH	33	10300601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
NH	33	10300602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
NH	33	10300603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
NJ	34	10200601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
NJ	34	10200602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
NJ	34	10200603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
NJ	34	10200604	0	0	50	50	10	Cogeneration	Natural Gas	Industrial

NJ	34	10300601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
NJ	34	10300602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
NJ	34	10300603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
NY	36	10200601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
NY	36	10200602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
NY	36	10200603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
NY	36	10200604	40	50	50	50	10	Cogeneration	Natural Gas	Industrial
NY	36	10300601	40	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
NY	36	10300602	40	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
NY	36	10300603	40	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
PA	42	10200601	29	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
PA	42	10200602	29	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
PA	42	10200603	29	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
PA	42	10200604	29	50	50	50	10	Cogeneration	Natural Gas	Industrial
PA	42	10300601	29	50	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
PA	42	10300602	29	50	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
PA	42	10300603	29	50	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
RI	44	10200601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
RI	44	10200602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
RI	44	10200603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
RI	44	10200604	0	0	50	50	10	Cogeneration	Natural Gas	Industrial
RI	44	10300601	0	0	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
RI	44	10300602	0	0	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
RI	44	10300603	0	0	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
VT	50	10200601	40	60	50	50	10	> 100 Million Btu/hr	Natural Gas	Industrial
VT	50	10200602	40	60	50	50	10	10-100 Million Btu/hr	Natural Gas	Industrial
VT	50	10200603	40	60	50	50	10	< 10 Million Btu/hr	Natural Gas	Industrial
VT	50	10200604	40	60	50	50	10	Cogeneration	Natural Gas	Industrial
VT	50	10300601	40	60	50	50	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
VT	50	10300602	40	60	50	50	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
VT	50	10300603	40	60	50	50	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
VA	51	10200601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Industrial
VA	51	10200602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Industrial
VA	51	10200603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Industrial
VA	51	10200604	40	50	75	75	10	Cogeneration	Natural Gas	Industrial
VA	51	10300601	40	50	75	75	10	> 100 Million Btu/hr	Natural Gas	Commercial/Institutional
VA	51	10300602	40	50	75	75	10	10-100 Million Btu/hr	Natural Gas	Commercial/Institutional
VA	51	10300603	40	50	75	75	10	< 10 Million Btu/hr	Natural Gas	Commercial/Institutional
CT	09	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
DE	10	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
DC	11	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
ME	23	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
MD	24	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
MA	25	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
NH	33	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
NJ	34	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
NY	36	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
PA	42	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
RI	44	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
VT	50	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
VA	51	10200802	0	0	0	0	0	All Boiler Sizes	Petroleum Coke	Industrial
CT	09	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial

CT	09	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
CT	09	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
CT	09	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
CT	09	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
CT	09	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
CT	09	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
DE	10	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
DE	10	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
DE	10	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
DE	10	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
DE	10	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
DE	10	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
DE	10	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
DC	11	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
DC	11	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
DC	11	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
DC	11	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
DC	11	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
DC	11	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
DC	11	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
ME	23	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
ME	23	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
ME	23	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
ME	23	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
ME	23	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
ME	23	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
ME	23	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
MD	24	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
MD	24	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
MD	24	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
MD	24	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
MD	24	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
MD	24	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
MD	24	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
MA	25	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
MA	25	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
MA	25	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
MA	25	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
MA	25	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
MA	25	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
MA	25	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
NH	33	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
NH	33	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
NH	33	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
NH	33	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
NH	33	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
NH	33	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
NH	33	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
NJ	34	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
NJ	34	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
NJ	34	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
NJ	34	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial

NJ	34	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
NJ	34	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
NJ	34	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
NY	36	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
NY	36	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
NY	36	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
NY	36	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
NY	36	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
NY	36	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
NY	36	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
PA	42	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
PA	42	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
PA	42	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
PA	42	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
PA	42	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
PA	42	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
PA	42	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
RI	44	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
RI	44	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
RI	44	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
RI	44	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
RI	44	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
RI	44	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
RI	44	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
VT	50	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
VT	50	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
VT	50	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
VT	50	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
VT	50	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
VT	50	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
VT	50	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
VA	51	10200701	0	0	0	0	0	Petroleum Refinery Gas	Process Gas	Industrial
VA	51	10200704	0	0	0	0	0	Blast Furnace Gas	Process Gas	Industrial
VA	51	10200707	0	0	0	0	0	Coke Oven Gas	Process Gas	Industrial
VA	51	10200710	0	0	0	0	0	Cogeneration	Process Gas	Industrial
VA	51	10200799	0	0	0	0	0	Other: Specify in Comments	Process Gas	Industrial
VA	51	10300701	0	0	0	0	0	POTW Digester Gas-fired Boiler	Process Gas	Commercial/Institutional
VA	51	10300799	0	0	0	0	0	Other Not Classified	Process Gas	Commercial/Institutional
CT	09	10200401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Industrial
CT	09	10200402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Industrial
CT	09	10200403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Industrial
CT	09	10200404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Industrial
CT	09	10200405	52	20	20	20	10	Cogeneration	Residual Oil	Industrial
CT	09	10300401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
CT	09	10300402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
CT	09	10300403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
CT	09	10300404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
DE	10	10200401	0	0	0	50	10	Grade 6 Oil	Residual Oil	Industrial
DE	10	10200402	0	0	0	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
DE	10	10200403	0	0	0	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
DE	10	10200404	0	0	0	50	10	Grade 5 Oil	Residual Oil	Industrial
DE	10	10200405	0	0	0	50	10	Cogeneration	Residual Oil	Industrial

DE	10	10300401	0	0	0	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
DE	10	10300402	0	0	0	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
DE	10	10300403	0	0	0	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
DE	10	10300404	0	0	0	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
DC	11	10200401	60	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
DC	11	10200402	60	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
DC	11	10200403	60	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
DC	11	10200404	60	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
DC	11	10200405	60	33	33	50	10	Cogeneration	Residual Oil	Industrial
DC	11	10300401	60	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
DC	11	10300402	60	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
DC	11	10300403	60	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
DC	11	10300404	60	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
ME	23	10200401	40	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
ME	23	10200402	40	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
ME	23	10200403	40	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
ME	23	10200404	40	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
ME	23	10200405	40	33	33	50	10	Cogeneration	Residual Oil	Industrial
ME	23	10300401	40	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
ME	23	10300402	40	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
ME	23	10300403	40	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
ME	23	10300404	40	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
MD	24	10200401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Industrial
MD	24	10200402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Industrial
MD	24	10200403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Industrial
MD	24	10200404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Industrial
MD	24	10200405	52	20	20	20	10	Cogeneration	Residual Oil	Industrial
MD	24	10300401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
MD	24	10300402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
MD	24	10300403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
MD	24	10300404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
MA	25	10200401	52	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
MA	25	10200402	52	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
MA	25	10200403	52	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
MA	25	10200404	52	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
MA	25	10200405	52	33	33	50	10	Cogeneration	Residual Oil	Industrial
MA	25	10300401	52	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
MA	25	10300402	52	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
MA	25	10300403	52	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
MA	25	10300404	52	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
NH	33	10200401	60	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
NH	33	10200402	60	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
NH	33	10200403	60	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
NH	33	10200404	60	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
NH	33	10200405	60	33	33	50	10	Cogeneration	Residual Oil	Industrial
NH	33	10300401	60	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
NH	33	10300402	60	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
NH	33	10300403	60	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
NH	33	10300404	60	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
NJ	34	10200401	40	0	33	50	10	Grade 6 Oil	Residual Oil	Industrial
NJ	34	10200402	40	0	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
NJ	34	10200403	40	0	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial

NJ	34	10200404	40	0	33	50	10	Grade 5 Oil	Residual Oil	Industrial
NJ	34	10200405	40	0	33	50	10	Cogeneration	Residual Oil	Industrial
NJ	34	10300401	40	0	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
NJ	34	10300402	40	0	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
NJ	34	10300403	40	0	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
NJ	34	10300404	40	0	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
NY	36	10200401	52	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
NY	36	10200402	52	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
NY	36	10200403	52	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
NY	36	10200404	52	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
NY	36	10200405	52	33	33	50	10	Cogeneration	Residual Oil	Industrial
NY	36	10300401	52	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
NY	36	10300402	52	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
NY	36	10300403	52	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
NY	36	10300404	52	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
PA	42	10200401	29	33	33	50	10	Grade 6 Oil	Residual Oil	Industrial
PA	42	10200402	29	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
PA	42	10200403	29	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
PA	42	10200404	29	33	33	50	10	Grade 5 Oil	Residual Oil	Industrial
PA	42	10200405	29	33	33	50	10	Cogeneration	Residual Oil	Industrial
PA	42	10300401	29	33	33	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
PA	42	10300402	29	33	33	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
PA	42	10300403	29	33	33	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
PA	42	10300404	29	33	33	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
RI	44	10200401	0	0	0	50	10	Grade 6 Oil	Residual Oil	Industrial
RI	44	10200402	0	0	0	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
RI	44	10200403	0	0	0	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
RI	44	10200404	0	0	0	50	10	Grade 5 Oil	Residual Oil	Industrial
RI	44	10200405	0	0	0	50	10	Cogeneration	Residual Oil	Industrial
RI	44	10300401	0	0	0	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
RI	44	10300402	0	0	0	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
RI	44	10300403	0	0	0	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
RI	44	10300404	0	0	0	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
VT	50	10200401	60	60	50	50	10	Grade 6 Oil	Residual Oil	Industrial
VT	50	10200402	60	60	50	50	10	10-100 Million Btu/hr **	Residual Oil	Industrial
VT	50	10200403	60	60	50	50	10	< 10 Million Btu/hr **	Residual Oil	Industrial
VT	50	10200404	60	60	50	50	10	Grade 5 Oil	Residual Oil	Industrial
VT	50	10200405	60	60	50	50	10	Cogeneration	Residual Oil	Industrial
VT	50	10300401	60	60	50	50	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
VT	50	10300402	60	60	50	50	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
VT	50	10300403	60	60	50	50	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
VT	50	10300404	60	60	50	50	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
VA	51	10200401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Industrial
VA	51	10200402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Industrial
VA	51	10200403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Industrial
VA	51	10200404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Industrial
VA	51	10200405	52	20	20	20	10	Cogeneration	Residual Oil	Industrial
VA	51	10300401	52	20	20	20	10	Grade 6 Oil	Residual Oil	Commercial/Institutional
VA	51	10300402	52	20	20	20	10	10-100 Million Btu/hr **	Residual Oil	Commercial/Institutional
VA	51	10300403	52	20	20	20	10	< 10 Million Btu/hr **	Residual Oil	Commercial/Institutional
VA	51	10300404	52	20	20	20	10	Grade 5 Oil	Residual Oil	Commercial/Institutional
CT	09	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial

CT	09	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
CT	09	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
CT	09	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
CT	09	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
CT	09	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
CT	09	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
CT	09	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
CT	09	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
CT	09	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
CT	09	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
CT	09	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
DE	10	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
DE	10	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
DE	10	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
DE	10	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DE	10	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DE	10	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DE	10	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
DE	10	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
DE	10	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
DE	10	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
DE	10	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
DE	10	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
DC	11	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
DC	11	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
DC	11	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
DC	11	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DC	11	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DC	11	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
DC	11	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
DC	11	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
DC	11	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
DC	11	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
DC	11	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
DC	11	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
ME	23	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
ME	23	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
ME	23	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
ME	23	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
ME	23	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
ME	23	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
ME	23	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
ME	23	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
ME	23	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
ME	23	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
ME	23	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
ME	23	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
MD	24	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
MD	24	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
MD	24	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
MD	24	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
MD	24	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial

MD	24	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
MD	24	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
MD	24	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
MD	24	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
MD	24	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
MD	24	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
MD	24	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
MA	25	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
MA	25	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
MA	25	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
MA	25	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
MA	25	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
MA	25	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
MA	25	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
MA	25	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
MA	25	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
MA	25	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
MA	25	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
MA	25	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
NH	33	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
NH	33	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
NH	33	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
NH	33	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NH	33	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NH	33	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NH	33	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
NH	33	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
NH	33	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
NH	33	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
NH	33	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
NH	33	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
NJ	34	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
NJ	34	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
NJ	34	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
NJ	34	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NJ	34	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NJ	34	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NJ	34	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
NJ	34	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
NJ	34	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
NJ	34	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
NJ	34	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
NJ	34	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
NY	36	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
NY	36	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
NY	36	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
NY	36	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NY	36	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NY	36	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
NY	36	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
NY	36	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
NY	36	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional

NY	36	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
NY	36	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
NY	36	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
PA	42	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
PA	42	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
PA	42	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
PA	42	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
PA	42	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
PA	42	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
PA	42	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
PA	42	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
PA	42	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
PA	42	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
PA	42	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
PA	42	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
RI	44	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
RI	44	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
RI	44	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
RI	44	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
RI	44	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
RI	44	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
RI	44	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
RI	44	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
RI	44	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
RI	44	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
RI	44	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
RI	44	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
VT	50	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
VT	50	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
VT	50	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
VT	50	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VT	50	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VT	50	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VT	50	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
VT	50	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
VT	50	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
VT	50	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
VT	50	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
VT	50	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional
VA	51	10200901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Industrial
VA	51	10200902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Industrial
VA	51	10200903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Industrial
VA	51	10200904	0	0	0	0	0	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VA	51	10200905	0	0	0	0	0	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VA	51	10200906	0	0	0	0	0	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste	Industrial
VA	51	10200907	0	0	0	0	0	Wood Cogeneration	Wood/Bark Waste	Industrial
VA	51	10200908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Industrial
VA	51	10300901	0	0	0	0	0	Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
VA	51	10300902	0	0	0	0	0	Wood/Bark-fired Boiler	Wood/Bark Waste	Commercial/Institutional
VA	51	10300903	0	0	0	0	0	Wood-fired Boiler - Wet Wood (>=20% moisture	Wood/Bark Waste	Commercial/Institutional
VA	51	10300908	0	0	0	0	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste	Commercial/Institutional

State	Current 2006 NOx RACT Limit (lbs/mmBtu) (from State regulations) Applicability Threshold mmBtu/hour Heat Input > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold mmBtu/hour Heat Input > 250*	100 to 250	50 to 100	25 to 50	<25
NATURAL GAS						OTC Limits (lbs/mmBtu):	0.12	0.10	0.05	0.05	NL
CT	0.20	0.20	0.20	0.20	0.20		40.0	50.0	75.0	75.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	50.0	10.0
DC	0.20	0.20	NL	NL	NL		40.0	50.0	50.0	50.0	10.0
ME	0.20	NL	NL	NL	NL		40.0	60.0	50.0	50.0	10.0
MD	0.20	0.20	0.20	0.20	0.20		40.0	50.0	75.0	75.0	10.0
MA	0.20	0.20	0.10	NL	NL		40.0	50.0	50.0	50.0	10.0
NH	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
NJ	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
NY	0.20	0.20	0.10	NL	NL		40.0	50.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	50.0	50.0	50.0	10.0
SE PA	0.17	0.10	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	0.10	0.10	0.10	NL	NL		0.0	0.0	50.0	50.0	10.0
VT	0.20	NL	NL	NL	NL		40.0	60.0	50.0	50.0	10.0
NOVA	0.2	0.2	0.2	0.2	0.2		40.0	50.0	75.0	75.0	10.0

State	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	<25
DISTILLATE OIL						**OTC Limits (lbs/mmBtu):**	**0.12**	**0.20**	**0.08**	**0.08**	**NL**
CT	0.20	0.20	0.20	0.20	0.20		40.0	0.0	60.0	60.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	50.0	10.0
DC	0.30	0.30	0.30	NL	NL		60.0	33.3	73.3	50.0	10.0
ME	0.20	0.30	0.30	NL	NL		40.0	33.3	73.3	50.0	10.0
MD	0.25	0.25	0.25	0.25	0.25		52.0	20.0	68.0	68.0	10.0
MA	0.25	0.30	0.12	NL	NL		52.0	33.3	33.3	50.0	10.0
NH	0.30	0.30	0.12	NL	NL		60.0	33.3	33.3	50.0	10.0
NJ	0.20	0.20	0.12	NL	NL		40.0	0.0	33.3	50.0	10.0
NY	0.25	0.30	0.12	NL	NL		52.0	33.3	33.3	50.0	10.0
PA	Source Specific NOx RACT						29.4	33.3	33.3	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	33.3	50.0	10.0
RI	0.12	0.12	0.12	NL	NL		0.0	0.0	33.3	50.0	10.0
VT	0.30	NL	NL	NL	NL		60.0	60.0	50.0	50.0	10.0
NOVA	0.25	0.25	0.25	0.25	0.25		52.0	20.0	68.0	68.0	10.0

State	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	<25
RESIDUAL OIL						**OTC Limits (lbs/mmBtu):**	**0.12**	**0.20**	**0.20**	**0.20**	**NL**
CT	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0
DE	0.10	0.10	LNB	NL	NL		0.0	0.0	0.0	50.0	10.0
DC	0.30	0.30	0.30	NL	NL		60.0	33.3	33.3	50.0	10.0
ME	0.20	0.30	0.30	NL	NL		40.0	33.3	33.3	50.0	10.0
MD	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0
MA	0.25	0.30	0.30	NL	NL		52.0	33.3	33.3	50.0	10.0
NH	0.30	0.30	0.30	NL	NL		60.0	33.3	33.3	50.0	10.0
NJ	0.20	0.20	0.30	NL	NL		40.0	0.0	33.3	50.0	10.0
NY	0.25	0.30	0.30	NL	NL		52.0	33.3	33.3	50.0	10.0
PA	Source Specific NOx RACT						29.4	33.3	33.3	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	LNB/FGR	LNB/FGR	LNB/FGR	NL	NL		0.0	0.0	0.0	50.0	10.0
VT	0.30	NL	NL	NL	NL		60.0	60.0	50.0	50.0	10.0
NOVA	0.25	0.25	0.25	0.25	0.25		52.0	20.0	20.0	20.0	10.0

State	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	<25
COAL Wall-fired						OTC Limits (lbs/mmBtu):	0.12	0.14	0.30	0.30	NL
CT	0.38	0.38	0.38	0.38	0.38		68.4	63.2	21.1	21.1	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	67.4	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	78.5	21.1	21.1	10.0
MA	0.45	0.45	NL	NL	NL		73.3	68.9	50.0	50.0	10.0
NH	0.50	0.50	0.50	NL	NL		76.0	56.0	40.0	50.0	10.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.45	0.5	NL	NL	NL		73.3	72.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	72.0	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	30.0	######	0.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.38	0.38	0.38	0.38	0.38		68.4	63.2	21.1	21.1	10.0

State	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	5 to 25		OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold > 250*	100 to 250	50 to 100	25 to 50	<25
COAL - Tangential						OTC Limits (lbs/mmBtu):	0.12	0.12	0.30	0.30	NL
CT	0.20	0.20	0.20	0.20	0.20		40.0	40.0	0.0	0.0	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	72.1	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	81.5	21.1	21.1	10.0
MA	0.38	0.38	NL	NL	NL		68.4	68.4	50.0	50.0	10.0
NH	0.38	0.38	0.38	NL	NL		68.4	42.1	21.1	50.0	10.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.42	0.5	NL	NL	NL		71.4	76.0	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	76.0	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	40.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.38	0.38	0.38	0.38	0.38		68.4	68.4	21.1	21.1	10.0

State	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold						OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold				
	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
COAL Stoker						**OTC Limits (lbs/mmBtu):**	**0.12**	**0.22**	**0.30**	**0.30**	**NL**
CT	0.20	0.20	0.20	0.20	0.20		40.0	0.0	0.0	0.0	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	0.43	0.43	NL	NL	NL		72.1	48.8	50.0	50.0	10.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	66.2	21.1	21.1	10.0
MA	0.33	0.33	NL	NL	NL		63.6	33.3	50.0	50.0	10.0
NH	0.30	0.30	0.30	NL	NL		60.0	26.7	0.0	50.0	10.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	0.3	0.3	NL	NL	NL		60.0	26.7	50.0	50.0	10.0
PA	Source Specific NOx RACT						29.4	26.7	50.0	50.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	0.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	0.4	0.4	0.4	0.4	0.4		70.0	45.0	25.0	25.0	10.0

State	Current 2006 NOx RACT Limit (from State regulations) Applicability Threshold						OTB Percent Reduction (Current State reg compared to OTC Limit) Applicability Threshold				
	> 250*	100 to 250	50 to 100	25 to 50	5 to 25		> 250*	100 to 250	50 to 100	25 to 50	<25
COAL - FBC						**OTC Limits (lbs/mmBtu):**	**0.12**	**0.08**	**0.30**	**0.30**	**NL**
CT	0.20	0.20	0.20	0.20	0.20		40.0	60.0	0.0	0.0	10.0
DE	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
DC	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
ME	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
MD	0.38	0.65	0.38	0.38	0.38		68.4	87.7	21.1	21.1	10.0
MA	0.33	0.33	NL	NL	NL		63.6	75.8	50.0	50.0	10.0
NH	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NJ	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NY	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
PA	Source Specific NOx RACT						0.0	0.0	0.0	0.0	10.0
SE PA	0.17	0.20	Source Specific RACT				29.4	60.0	50.0	50.0	10.0
RI	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
VT	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0
NOVA	n/a	n/a	n/a	n/a	n/a		0.0	0.0	0.0	0.0	0.0

Appendix F – State ICI Boiler Regulations

Due to their large size, these tables are being transmitted electronically in the spreadsheet named Appendix F State ICI Regs.xls. There are separate tabs for each state. In the final report, these tables will be provided in electronic format

State	Type of Emissions Unit	Pollutant	Unit Size		Fuel	Emission Limit		Regulatory Citation	Notes 1	Notes 2	Notes 3	Notes 4	Notes 5
CT	Fuel Burning Equipment	PM	All		NG	0.10	lb/MMBtu	22a-174-18(e)(2)					
	Fuel Burning Equipment	PM	All		DO	0.12	lb/MMBtu	22a-174-18(e)(2)					
	Fuel Burning Equipment	PM	All		RO	0.14	lb/MMBtu	22a-174-18(e)(2)					
	Fuel Burning Equipment	PM	All		Other	0.20	lb/MMBtu	22a-174-18(e)(2)					
	Fuel Burning Equipment, Eff 1/1/02	SO2	All		NG/DO/RO	0.55	lb/MMBtu	22a-174-19a(c)(2)	Effective 1/1/02	Alternate: 0.5 lb/MMBtu avg for multiple units	Alternate: sulfur content < 0.5 wt%		
	Fuel Burning Equipment, Eff 1/1/03	SO2	All		NG/DO/RO	0.33	lb/MMBtu	22a-174-19a(e)(2)	Effective 1/1/03	Alternate: 0.3 lb/MMBtu avg for multiple units	Alternate: sulfur content < 0.5 wt%		
	Fuel Burning Equipment	SO2	All		Other	1.10	lb/MMBtu	22a-174-19(a)(3)(ii)			Alternate: sulfur content < 1.0 wt%		
	Boiler - Cyclone	NOx	All		NG/DO/RO/Coal	0.43	lb/MMBtu	22a-174-22(e)(1)					
	Boiler - Fluidized Bed	NOx	All		Coal	0.29	lb/MMBtu	22a-174-22(e)(1)					
	Boiler - Other	NOx	All		NG/DO	0.20	lb/MMBtu	22a-174-22(e)(1)					
	Boiler - Other	NOx	All		RO	0.25	lb/MMBtu	22a-174-22(e)(1)					
	Boiler - Other	NOx	All		Coal	0.38	lb/MMBtu	22a-174-22(e)(1)					
	Turbine	NOx	≥ 100	MMBtu/hr	NG	55	ppmvd	22a-174-22(e)(1)			Corrected to 15% O2		
	Turbine	NOx	≥ 100	MMBtu/hr	DO	75	ppmvd	22a-174-22(e)(1)			Corrected to 15% O2		
	Turbine	NOx	< 100	MMBtu/hr	NG/DO	0.90	lb/MMBtu	22a-174-22(e)(1)					
	Fuel Burning Equipment	NOx	All		Other	0.30	lb/MMBtu	22a-174-22(e)(2)					
DE	Fuel Burning Equipment	PM	All		Any	0.30	lb/MMBtu	Reg. 4, Section 2.1					
	Fuel Burning Equipment	SO2	All		DO	0.30	wt% sulfur	Reg. 8, Section 2.2	Statewide				
	Fuel Burning Equipment	SO2	All		Any	1.00	wt% sulfur	Reg. 8, Section 2.1	New Castle County only				
	Boiler - Face/Tangential	NOx	All		NG	0.20	lb/MMBtu	Reg. 12, Section 3.2.a					
	Boiler - Face/Tangential	NOx	All		Oil or Oil/NG	0.25	lb/MMBtu	Reg. 12, Section 3.2.a					
	Boiler - Face/Tangential	NOx	All		Coal	0.38	lb/MMBtu	Reg. 12, Section 3.2.a					
	Boiler - Cyclone	NOx	All		Oil	0.43	lb/MMBtu	Reg. 12, Section 3.2.a					
	Boiler - Stoker	NOx	All		Coal	0.40	lb/MMBtu	Reg. 12, Section 3.2.a					
DC	Fuel Burning Equipment	PM	< 3.5		Any	0.13	lb/MMBtu	Title 20, Section 600.1					
	Fuel Burning Equipment	PM	3.5 - 9,999		Any	Formula	lb/MMBtu	Title 20, Section 600.1	Based on a formula: E (lb/MMBtu) = 0.17455 $H^{0.23522}$, where H = MMBtu/hr input rating of the unit				
	Fuel Burning Equipment	PM	≥ 10,000		Any	0.02	lb/MMBtu	Title 20, Section 600.1					
	Fuel Burning Equipment	SO2	All		Any	0.05	vol %	Title 20, Section 803.1	0.05 vol% = 500 ppmv	Dry or wet not specified, O2 correction not specified			
	Fuel Burning Equipment	SO2	All		Oil/Coal	1.00	wt% sulfur	Title 20, Section 801.1 / 802.1					
	Boiler	NOx	> 100	MMBtu/hr	NG	0.20	lb/MMBtu	Title 20, Section 804.1					
	Boiler	NOx	> 100	MMBtu/hr	Oil	0.30	lb/MMBtu	Title 20, Section 804.1					
	Boiler	NOx	> 100	MMBtu/hr	Solid	0.70	lb/MMBtu	Title 20, Section 804.1	Solid fuel includes coal, except lignite				
	Boiler - Face/Tangential	NOx	50 - 99	MMBtu/hr	Oil	0.30	lb/MMBtu	Title 20, Section 805.5(b)	RACT - Major sources only				
	Boiler - Face/Tangential	NOx	≥ 100	MMBtu/hr	NG	0.20	lb/MMBtu	Title 20, Section 805.5(c)(2)	RACT - Major sources only				
	Boiler - Face/Tangential	NOx	≥ 100	MMBtu/hr	Oil	0.25	lb/MMBtu	Title 20, Section 805.5(c)(2)	RACT - Major sources only				
	Boiler - Face/Tangential/Stoker	NOx	≥ 100	MMBtu/hr	Coal	0.43	lb/MMBtu	Title 20, Section 805.5(c)(1)	RACT - Major sources only				
	Turbine	NOx	≥ 100	MMBtu/hr	Oil	75	ppmvd	Title 20, Section 805.4(a)(1)	RACT - Major sources only		Corrected to 15% O2		
ME	Fuel Burning Equipment, Pre-12/2/82	PM	All		NG/DO/RO	0.20	lb/MMBtu	6-96-103.2(A)(1)					
	Fuel Burning Equipment, Pre-12/2/82	PM	< 50	MMBtu/hr	Coal	0.30	lb/MMBtu	6-96-103.2(A)(2)(a)					
	Fuel Burning Equipment, Pre-12/2/82	PM	≥ 50	MMBtu/hr	Coal	0.08	lb/MMBtu	6-96-103.2(A)(2)(b)					
	Fuel Burning Equipment, Pre-12/2/82	PM	< 150	MMBtu/hr	Wood	Formula	lb/MMBtu	6-96-103.2(A)(3)(a)	Based on a formula: log(y) = 0.034 - 0.256 log(x), where y = lb/MMBtu emission factor, x = MMBtu input rating of the unit				
	Fuel Burning Equipment, Pre-12/2/82	PM	≥ 150	MMBtu/hr	Wood	0.30	lb/MMBtu	6-96-103.2(A)(3)(b)					
	Fuel Burning Equipment, Post-12/2/82	PM	< 50	MMBtu/hr	NG/DO/RO	0.12	lb/MMBtu	6-96-103.2(B)(1)(a)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 50	MMBtu/hr	NG/DO/RO	0.08	lb/MMBtu	6-96-103.2(B)(1)(b)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 250	MMBtu/hr	NG/DO/RO	0.06	lb/MMBtu	6-96-103.2(B)(1)(c)					
	Fuel Burning Equipment, Post-12/2/82	PM	< 50	MMBtu/hr	Solid Waste	0.30	lb/MMBtu	6-96-103.2(B)(2)(a)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 50	MMBtu/hr	Solid Waste	0.20	lb/MMBtu	6-96-103.2(B)(2)(b)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 250	MMBtu/hr	Solid Waste	0.10	lb/MMBtu	6-96-103.2(B)(2)(c)					
	Fuel Burning Equipment, Post-12/2/82	PM	< 50	MMBtu/hr	Coal	0.30	lb/MMBtu	6-96-103.2(B)(3)(a)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 50	MMBtu/hr	Coal	0.08	lb/MMBtu	6-96-103.2(B)(3)(b)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 250	MMBtu/hr	Coal	0.05	lb/MMBtu	6-96-103.2(B)(3)(c)					
	Fuel Burning Equipment, Post-12/2/82	PM	< 50	MMBtu/hr	Wood/Coal/Biomass	0.30	lb/MMBtu	6-96-103.2(B)(4)(a)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 50	MMBtu/hr	Wood/Coal/Biomass	0.08	lb/MMBtu	6-96-103.2(B)(4)(b)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 250	MMBtu/hr	Wood/Coal/Biomass	0.06	lb/MMBtu	6-96-103.2(B)(4)(c)					
	Fuel Burning Equipment, Post-12/2/82	PM	≥ 50	MMBtu/hr	Wood/Coal/Biomass	0.10	lb/MMBtu	6-96-103.2(B)(4)(d)	Applies when using venturi scrubber, i.e., exempt from 6-96-103.2.B(4)(b) and (c)				
	Fuel Burning Equipment	SO2	All		DO/RO	2.00	wt% sulfur	6-96-106.2(A)(2)	Statewide	Fuel blending allowed per 6-96-106.5			
	Fuel Burning Equipment	SO2	All		DO/RO	1.50	wt% sulfur	6-96-106.2(A)(3)	Portland Peninsula AQR only	Fuel blending allowed per 6-96-106.5			
	Fuel Burning Equipment	SO2	All		Coal	0.96	lb S/MMBtu	6-96-106.2(B)(2)	Statewide	Fuel blending allowed per 6-96-106.5			
	Fuel Burning Equipment	SO2	All		Coal	0.72	lb S/MMBtu	6-96-106.2(B)(3)	Portland Peninsula AQR only	Fuel blending allowed per 6-96-106.5			
	Fuel Burning Equipment	SO2	All		Any	1.92	lb/MMBtu	6-96-106.4(B)	Statewide	When using FGD or other sulfur removal device, i.e., exempt from 6-96-106.2 fuel sulfur content			
	Fuel Burning Equipment	SO2	All		Any	1.57	lb/MMBtu	6-96-106.4(C)	Portland Peninsula AQR only	When using FGD or other sulfur removal device, i.e., exempt from 6-96-106.2 fuel sulfur content			
	Boiler	NOx	≥ 1,500	MMBtu/hr	Any	0.30	lb/MMBtu	6-96-138.3(A)	Statewide	RACT - Major sources only	Alternate: 0.2 (O3 season), 0.3 (rest)	Alternate: 0.15 (O3 season), 0.35 (rest)	Emissions averaging across units allowed
	Boiler	NOx	50 - 1,499	MMBtu/hr	Oil/Biomass/NG	0.30	lb/MMBtu	6-96-138.3(B)	Moderate non-attainment areas only	RACT - Major sources only	Alternate: 0.2 (O3 season), 0.4 (rest)	Alternate: 0.15 (O3 season), 0.45 (rest)	Emissions averaging across units allowed
	Boiler	NOx	50 - 1,499	MMBtu/hr	Biomass & Coal	0.38	lb/MMBtu	6-96-138.3(B)	Moderate non-attainment areas only	RACT - Major sources only	Alternate: 0.2 (O3 season), 0.4 (rest)	Alternate: 0.15 (O3 season), 0.45 (rest)	Emissions averaging across units allowed
	Boiler	NOx	50 - 1,499	MMBtu/hr	Biomass/NG	0.30	lb/MMBtu	6-96-138.4	Attainment areas only	RACT - Major sources only			Emissions averaging across units allowed
	Boiler	NOx	50 - 1,499	MMBtu/hr	Oil	0.40	lb/MMBtu	6-96-138.4	Attainment areas only	RACT - Major sources only			Emissions averaging across units allowed
	Boiler	NOx	50 - 1,499	MMBtu/hr	Biomass & Coal	0.45	lb/MMBtu	6-96-138.4	Attainment areas only	RACT - Major sources only			Emissions averaging across units allowed
	Boiler - Kraft Recovery	NOx	All		Any	120	ppmvw	6-96-138.3(C)	Statewide	RACT - Major sources only	Corrected to 8% O2 or 12% CO2		Emissions averaging across units allowed
	EGU ≥ 25 MW	NOx	< 750	MMBtu/hr	Fossil	0.22	lb/MMBtu	6-96-145.3(B)(2)(a)	Counties not waived under section 182(f) of the 1990 CAAA (York, Cumberland, Sagadahoc, Androscoggin, Kennebec, Lincoln and Knox)				Emissions averaging across units allowed
	EGU ≥ 25 MW	NOx	≥ 750	MMBtu/hr	Fossil	0.15	lb/MMBtu	6-96-145.3(B)(2)(b)	Counties not waived under section 182(f) of the 1990 CAAA (York, Cumberland, Sagadahoc, Androscoggin, Kennebec, Lincoln and Knox)				Emissions averaging across units allowed
	Boiler - non-EGU	NOx	≥ 250	MMBtu/hr	Fossil	0.20	lb/MMBtu	6-96-145.3(B)(2)(c)	Counties not waived under section 182(f) of the 1990 CAAA (York, Cumberland, Sagadahoc, Androscoggin, Kennebec, Lincoln and Knox)				
MD	Fuel Burning Equipment, Pre-01/17/72	PM	< 10	MMBtu/hr	RO/Solid	0.60	lb/MMBtu	26.11.09.06(A)(1)	Areas I, II, V & VI only				
	Fuel Burning Equipment, Pre-01/17/72	PM	≥ 10	MMBtu/hr	RO/Solid	Formula	lb/MMBtu	26.11.09.06(A)(1)	Areas I, II, V & VI only	Based on a formula: E (lb/MMBtu) = 1.025985 $H^{0.23299}$, where H = MMBtu input rating of the unit			
	Fuel Burning Equipment, Post-01/17/72	PM	< 25	MMBtu/hr	RO/Solid	0.40	lb/MMBtu	26.11.09.06(A)(2)	Areas I, II, V & VI only				
	Fuel Burning Equipment, Post-01/17/72	PM	25 - 249	MMBtu/hr	RO/Solid	Formula	lb/MMBtu	26.11.09.06(A)(2)	Areas I, II, V & VI only	Based on a formula: E = $\log_{10}[6.597538\ (H)^{-0.3}]$, where E = lb/MMBtu emission factor, H = MMBtu input rating of the unit			
	Fuel Burning Equipment, Post-01/17/72	PM	≥ 250	MMBtu/hr	RO/Solid	0.10	lb/MMBtu	26.11.09.06(A)(2)	Areas I, II, V & VI only				
	Fuel Burning Equipment	PM	13 - 50	MMBtu/hr	RO	0.03	gr/dscf	26.11.09.06(B)(2)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment	PM	50 - 250	MMBtu/hr	RO	0.02	gr/dscf	26.11.09.06(B)(2)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment, Pre-07/01/75	PM	> 250	MMBtu/hr	RO	0.02	gr/dscf	26.11.09.06(B)(2)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment, Post-07/01/75	PM	> 250	MMBtu/hr	RO	0.01	gr/dscf	26.11.09.06(B)(2)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment, Pre-07/01/75	PM	< 250	MMBtu/hr	Solid	0.05	gr/dscf	26.11.09.06(B)(3)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment, Post-07/01/75	PM	< 250	MMBtu/hr	Solid	0.03	gr/dscf	26.11.09.06(B)(3)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment	PM	≥ 250	MMBtu/hr	Solid	0.03	gr/dscf	26.11.09.06(B)(3)	Areas III & IV only (Baltimore & Washington metropolitan areas)				
	Fuel Burning Equipment	SO2	All		Process Gas	0.30	wt% sulfur	26.11.09.07(A)(1)	Areas I, II, V & VI only				
	Fuel Burning Equipment	SO2	All		DO	0.30	wt% sulfur	26.11.09.07(A)(1)	Areas I, II, V & VI only				
	Fuel Burning Equipment	SO2	All		RO	2.00	wt% sulfur	26.11.09.07(A)(1)	Areas I, II, V & VI only			Area I exception: 1.0 wt% sulfur limit, if NAAQS/PSD increment violation	
	Fuel Burning Equipment	SO2	All		Solid	3.50	lb/MMBtu	26.11.09.07(A)(1)	Areas I, II, V & VI only	Only applies if all fuel burning equipment at the facility combined ≥ 100 MMBtu/hr		Area I exception: 1.8 lb SO2/MMBtu limit, if NAAQS/PSD increment violation	
	Fuel Burning Equipment	SO2	All		DO	0.30	wt% sulfur	26.11.09.07(A)(2)	Areas III & IV only				
	Fuel Burning Equipment	SO2	All		RO	1.00	wt% sulfur	26.11.09.07(A)(2)	Areas III & IV only				
	Fuel Burning Equipment	SO2	All		Solid	1.00	wt% sulfur	26.11.09.07(A)(2)	Areas III & IV only				
	Fuel Burning Equipment	SO2	> 1,000	MMBtu/hr	Solid	3.50	lb/MMBtu	26.11.09.07(B)(4)	Areas III & IV only	Only applies to existing units. It is unclear what "existing" means - no date specified.			
	Fuel Burning Equipment	NOx	All		NG	0.20	lb/MMBtu	26.11.09.08(B)(1)(c)	Major sources only	Emissions averaging across units and across facilities allowed			

	Fuel Burning Equipment	NOx	All		Oil/NG	0.25	lb/MMBtu	26.11.09.08(B)(1)(c)	Major sources only	Emissions averaging across units and across facilities allowed			
	Fuel Burning Equipment - dry bottom	NOx	All		Coal	0.38	lb/MMBtu	26.11.09.08(B)(1)(c)	Major sources only	Emissions averaging across units and across facilities allowed			
	Fuel Burning Equipment - wet bottom	NOx	All		Coal	1.00	lb/MMBtu	26.11.09.08(B)(1)(c)	Major sources only	Emissions averaging across units and across facilities allowed			
	EGU	NOx	≥ 250	MMBtu/hr	Oil or Oil/NG	0.30	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Tangential	NOx	≥ 250	MMBtu/hr	Coal	0.45	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Wall	NOx	≥ 250	MMBtu/hr	Coal	0.50	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Tangential (High Heat Release)	NOx	≥ 250	MMBtu/hr	Coal	0.70	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Wall (High Heat Release)	NOx	≥ 250	MMBtu/hr	Coal	0.80	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Cell Burners	NOx	≥ 250	MMBtu/hr	Coal	0.60	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Cyclone (Ozone Season)	NOx	≥ 250	MMBtu/hr	Coal	0.70	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	EGU - Cyclone (non-Ozone Season)	NOx	≥ 250	MMBtu/hr	Coal	1.50	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	Non-EGU (Ozone Season)	NOx	≥ 250	MMBtu/hr	Any	0.70	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	Non-EGU (non-Ozone Season)	NOx	≥ 250	MMBtu/hr	Any	0.99	lb/MMBtu	26.11.09.08(C)(2)	Major sources only				
	Fuel Burning Equipment	NOx	100 - 249	MMBtu/hr	Any	0.65	lb/MMBtu	26.11.09.08(D)(1)(a)	Major sources only	Only applies to units > 15% capacity factor	Space heaters exempted		
	Turbine	NOx	All	MMBtu/hr	NG	42	ppmvd	26.11.09.08(G)(2)	Major sources only	Only applies to units > 15% capacity factor	Corrected to 15% O2		
	Turbine	NOx	All	MMBtu/hr	Oil	65	ppmvd	26.11.09.08(G)(2)	Major sources only	Only applies to units > 15% capacity factor	Corrected to 15% O2		
MA	Fuel Burning Equipment - Pre-06/01/72	PM	≥ 3	MMBtu/hr	Any	0.12	lb/MMBtu	310 CMR 7.02(8)(d)	Communities listed in Table 3 of this regulation (except Worcester)				
	Fuel Burning Equipment - Pre-06/01/72	PM	≥ 3	MMBtu/hr	NG or DO	0.10	lb/MMBtu	310 CMR 7.02(8)(d)	City of Worcester only				
	Fuel Burning Equipment - Pre-06/01/72	PM	≥ 3	MMBtu/hr	RO or Coal	0.12	lb/MMBtu	310 CMR 7.02(8)(d)	City of Worcester only				
	Fuel Burning Equipment - Pre-06/01/72	PM	≥ 3	MMBtu/hr	Any	0.15	lb/MMBtu	310 CMR 7.02(8)(e)	Rest of the State				
	Fuel Burning Equipment - Post-06/01/72	PM	≥ 3	MMBtu/hr	Wood	0.10	lb/MMBtu	310 CMR 7.02(8)(h)	Communities listed in Table 3 of this regulation (including Worcester)				
	Fuel Burning Equipment - Post-06/01/72	PM	3 - 25	MMBtu/hr	Wood	0.20	lb/MMBtu	310 CMR 7.02(8)(h)	Rest of the State				
	Fuel Burning Equipment - Post-06/01/72	PM	≥ 25	MMBtu/hr	Wood	0.10	lb/MMBtu	310 CMR 7.02(8)(h)	Rest of the State				
	Fuel Burning Equipment - Post-06/01/72	PM	3 - 250	MMBtu/hr	Fossil	0.10	lb/MMBtu	310 CMR 7.02(8)(h)	Statewide				
	Fuel Burning Equipment - Post-06/01/72	PM	≥ 250	MMBtu/hr	Fossil	0.05	lb/MMBtu	310 CMR 7.02(8)(h)	Statewide				
	Fuel Burning Equipment	SO2	All		Fossil	0.28 - 1.21	lb S/MMBtu	310 CMR 7.05(1)(a)(1)	Districts listed in Table 1 of this regulation (varies by district and portions of district)				
	Fuel Burning Equipment	SO2	All		DO	0.17	lb S/MMBtu	310 CMR 7.05(1)(a)(2)	Statewide				
	Fuel Burning Equipment	SO2	≥ 100	MMBtu/hr	Oil or Coal	1.21	lb S/MMBtu	310 CMR 7.05(1)(b)(1)	Districts listed in Table 1 of this regulation				
	EGU	SO2	≥ 2,500	MMBtu/hr	Oil or Coal	0.55	lb S/MMBtu	310 CMR 7.05(1)(b)(2)	Certain towns within Metro Boston APCD listed in Table 1 of this regulation				
	Entire State (All Sources of SO2)	SO2	All		Any	417,000	tons/yr	310 CMR 7.21(2)	Statewide Emissions Cap				
	Fuel Burning Equipment	SO2	≥ 100	MMBtu/hr	Any	1.20	lb/MMBtu	310 CMR 7.22(1)	Annual average, eff. 12/31/94	Emissions averaging across units and across facilities within the State allowed		Emissions trading allowed within the State	
	Entire Power Plant	SO2	All		Any	6.0	lb/MWH	310 CMR 7.29(5)(a)(2)(a)	Annual average, eff. 10/01/04	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant, with any repowered unit	SO2	All		Any	6.0	lb/MWH	310 CMR 7.29(5)(a)(2)(a)	Annual average, eff. 10/01/06	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant	SO2	All		Any	3.0	lb/MWH	310 CMR 7.29(5)(a)(2)(b)	Annual average, eff. 10/01/06	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant, with any repowered unit	SO2	All		Any	3.0	lb/MWH	310 CMR 7.29(5)(a)(2)(b)	Annual average, eff. 10/01/08	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant	SO2	All		Any	6.0	lb/MWH	310 CMR 7.29(5)(a)(2)(b)	Monthly average, eff. 10/01/06	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant, with any repowered unit	SO2	All		Any	6.0	lb/MWH	310 CMR 7.29(5)(a)(2)(b)	Monthly average, eff. 10/01/08	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Boiler	NOx	All	MMBtu/hr	NG	0.20	lb/MMBtu	310 CMR 7.19(4)(a)(5)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler (Heat Release ≤ 70,000 Btu/hours-ft^3)	NOx	100 - 249	MMBtu/hr	Oil or Oil/NG	0.30	lb/MMBtu	310 CMR 7.19(4)(a)(4)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler (Heat Release > 70,000 Btu/hours-ft^3)	NOx	100 - 249	MMBtu/hr	Oil or Oil/NG	0.40	lb/MMBtu	310 CMR 7.19(4)(a)(4)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Tangential	NOx	≥ 250	MMBtu/hr	NG	0.20	lb/MMBtu	310 CMR 7.19(4)(a)(3)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Tangential	NOx	≥ 250	MMBtu/hr	Oil or Oil/NG	0.25	lb/MMBtu	310 CMR 7.19(4)(a)(3)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiiler - Face Fired	NOx	≥ 250	MMBtu/hr	Oil/NG	0.28	lb/MMBtu	310 CMR 7.19(4)(a)(3)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Stoker	NOx	≥ 100	MMBtu/hr	Solid (Not Coal)	0.33	lb/MMBtu	310 CMR 7.19(4)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Dry Bottom, Tangential	NOx	≥ 100	MMBtu/hr	Coal	0.38	lb/MMBtu	310 CMR 7.19(4)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Dry Bottom, Face Fired	NOx	≥ 100	MMBtu/hr	Coal	0.45	lb/MMBtu	310 CMR 7.19(4)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Repowered	NOx	All	MMBtu/hr	Oil/NG	0.10	lb/MMBtu	310 CMR 7.19(4)(b)(3)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Dry Bottom, Face/Tangential, Repowered	NOx	All	MMBtu/hr	Solid	0.20	lb/MMBtu	310 CMR 7.19(4)(b)(3)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Face/Tangential	NOx	50 - 99	MMBtu/hr	NG	0.10	lb/MMBtu	310 CMR 7.19(5)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Face/Tangential	NOx	50 - 99	MMBtu/hr	DO or DO/NG	0.12	lb/MMBtu	310 CMR 7.19(5)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Face/Tangential	NOx	50 - 99	MMBtu/hr	RO or RO/NG	0.30	lb/MMBtu	310 CMR 7.19(5)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed	Required: 15% FGR, O2=3% at boiler exit	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Boiler - Face/Tangential/Stoker	NOx	50 - 99	MMBtu/hr	Solid	0.43	lb/MMBtu	310 CMR 7.19(5)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed		Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Combined Cycle	NOx	≥ 25	MMBtu/hr	NG	42	ppmvd	310 CMR 7.19(7)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Combined Cycle	NOx	≥ 25	MMBtu/hr	Oil	65	ppmvd	310 CMR 7.19(7)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Combined Cycle	NOx	≥ 25	MMBtu/hr	Oil/NG	50	ppmvd	310 CMR 7.19(7)(a)(1)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Simple Cycle	NOx	≥ 25	MMBtu/hr	NG	65	ppmvd	310 CMR 7.19(7)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Simple Cycle	NOx	≥ 25	MMBtu/hr	Oil	100	ppmvd	310 CMR 7.19(7)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Simple Cycle	NOx	≥ 25	MMBtu/hr	Oil/NG	100	ppmvd	310 CMR 7.19(7)(a)(2)	RACT - Major sources only	Emissions averaging across units allowed	Corrected to 15% O2	Alternate: If cannot meet limit, then Apply RACT (LNB, SOFA, SCR/SNCR/NSCR, fuel change, burr	
	Turbine - Post-03/23/06	NOx	< 1	MW	NG	0.47	lb/MWH	310 CMR 7.26(43)(b)					
	Turbine - Post-03/23/06	NOx	1 - 10	MW	NG	0.14	lb/MWH	310 CMR 7.26(43)(b)					
	Turbine - Post-03/23/06	NOx	1 - 10	MW	Oil	0.34	lb/MWH	310 CMR 7.26(43)(b)					
	Entire Power Plant	NOx	All		Any	1.5	lb/MWH	310 CMR 7.29(5)(a)(1)(a)	Annual average, eff. 10/01/04	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant, with any repowered unit	NOx	All		Any	1.5	lb/MWH	310 CMR 7.29(5)(a)(1)(a)	Annual average, eff. 10/01/06	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant	NOx	All		Any	3.0	lb/MWH	310 CMR 7.29(5)(a)(1)(b)	Monthly average, eff. 10/01/06	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
	Entire Power Plant, with any repowered unit	NOx	All		Any	3.0	lb/MWH	310 CMR 7.29(5)(a)(1)(b)	Monthly average, eff. 10/01/08	Applies only to plants with SO2>500tpy (during 1997, 98 or 99) AND NOx>500tpy (during 1997, 98 or 99) AND have a boiler that (a) is subject to 40CFR72 (acid rain), (b) is >100MW, (c) is pre-08/07/7			
NH	Fuel Burning Equipment - Pre-05/13/70	PM	< 10	MMBtu/hr	Any	0.60	lb/MMBtu	Env-A 2002.06(c)(1)					
	Fuel Burning Equipment - Pre-05/13/70	PM	10 - 9,999	MMBtu/hr	Any	Formula	lb/MMBtu	Env-A 2002.06(c)(2)	Based on a formula: E (lb/MMBtu) = 0.880 $H^{0.166}$, where H = MMBtu/hr input rating of the unit				
	Fuel Burning Equipment - Pre-05/13/70	PM	≥ 10,000	MMBtu/hr	Any	0.19	lb/MMBtu	Env-A 2002.06(c)(3)					
	Fuel Burning Equipment - 05/14/70 - 12/31/84	PM	< 10	MMBtu/hr	Any	0.60	lb/MMBtu	Env-A 2002.07(c)(1)					
	Fuel Burning Equipment - 05/14/70 - 12/31/84	PM	10 - 249	MMBtu/hr	Any	Formula	lb/MMBtu	Env-A 2002.07(c)(2)	Based on a formula: E (lb/MMBtu) = 1.028 $H^{0.234}$, where H = MMBtu/hr input rating of the unit				
	Fuel Burning Equipment - 05/14/70 - 12/31/84	PM	≥ 250	MMBtu/hr	Any	0.10	lb/MMBtu	Env-A 2002.07(c)(3)					
	Fuel Burning Equipment - Post-01/01/85	PM	< 100	MMBtu/hr	Any	0.30	lb/MMBtu	Env-A 2002.08(c)(1)					
	Fuel Burning Equipment - Post-01/01/85	PM	100 - 249	MMBtu/hr	Any	0.15	lb/MMBtu	Env-A 2002.08(c)(2)					
	Fuel Burning Equipment - Post-01/01/85	PM	≥ 250	MMBtu/hr	Any	0.10	lb/MMBtu	Env-A 2002.08(c)(3)					
	Fuel Burning Equipment	SO2	< 1,000	MMBtu/hr	Any	1.60	lb/MMBtu	Env-A 403.01					
	Fuel Burning Equipment	SO2	All		Oil No. 2	0.40	wt% sulfur	Env-A 1604.01(a)					
	Fuel Burning Equipment	SO2	All		Oil No. 4	1.00	wt% sulfur	Env-A 1604.01(b)					
	Fuel Burning Equipment	SO2	All		Oil No. 5 & 6	2.20	wt% sulfur	Env-A 1604.01(a)	Coos County				
	Fuel Burning Equipment	SO2	All		Oil No. 5 & 6	2.00	wt% sulfur	Env-A 1604.01(a)	Rest of the State				
	Fuel Burning Equipment - Pre-04/15/70	SO2	All		Coal	2.80	lb S/MMBtu	Env-A 1601.01(a)(1)					
	Fuel Burning Equipment - Pre-04/15/70	SO2	All		Coal	2.00	lb S/MMBtu	Env-A 1601.01(a)(2)					
	Fuel Burning Equipment - Post-04/15/70	SO2	All		Coal	1.50	lb S/MMBtu	Env-A 1601.01(b)(1)					
	Fuel Burning Equipment - Post-04/15/70	SO2	All		Coal	1.00	lb S/MMBtu	Env-A 1601.01(b)(2)					
	Utility Boiler - Wet Bottom - Tangential/Face	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	1.00	lb/MMBtu	Env-A 1211.03(c)(1)(a)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Wet Bottom - Cyclone < 320 MW	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	0.92	lb/MMBtu	Env-A 1211.03(c)(1)(b)(1)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Wet Bottom - Cyclone > 320 MW	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	1.40	lb/MMBtu	Env-A 1211.03(c)(1)(b)(2)	RACT - Daily Avg	Emissions averaging across units allowed	In addition to tons/day limit below	Alternate: Apply RACT (SNCR or better)	Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Dry Bottom - Tangential	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	0.38	lb/MMBtu	Env-A 1211.03(c)(2)(a)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Dry Bottom - Face	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	0.50	lb/MMBtu	Env-A 1211.03(c)(2)(b)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Dry Bottom - Stoker	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	0.30	lb/MMBtu	Env-A 1211.03(c)(2)(c)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Tangential/Face	NOx	≥ 50	MMBtu/hr	Oil	0.35	lb/MMBtu	Env-A 1211.03(c)(3)(a)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Face	NOx	≥ 50	MMBtu/hr	Oil/NG	0.25	lb/MMBtu	Env-A 1211.03(c)(3)(b)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Tangential	NOx	≥ 50	MMBtu/hr	Oil/NG	0.25	lb/MMBtu	Env-A 1211.03(c)(3)(c)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Tangential/Face	NOx	≥ 50	MMBtu/hr	NG	0.20	lb/MMBtu	Env-A 1211.03(c)(4)	RACT - Hourly Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Moving Grate	NOx	≥ 50	MMBtu/hr	Wood or Wood/Oil	0.33	lb/MMBtu	Env-A 1211.03(c)(5)(a)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power

	Utility Boiler - Stationary Grate	NOx	≥ 50	MMBtu/hr	Wood or Wood/Oil	0.25	lb/MMBtu	Env-A 1211.03(c)(5)(b)	RACT - Daily Avg	Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Wet Bottom - Cyclone	NOx	≥ 50	MMBtu/hr	Coal or Coal/Other	15.4	tons/day	Env-A 1211.03(d)(1)		Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Utility Boiler - Wet Bottom - Cyclone	NOx	≥ 50	MMBtu/hr	Other than Coal	3.8	tons/day	Env-A 1211.03(d)(2)		Emissions averaging across units allowed			Boilers at Cogen. plants or small (<30 MW) power
	Industrial Boiler - Dry Bottom - Tangential	NOx	50 - 99	MMBtu/hr	Coal or Coal/Oil	0.38	lb/MMBtu	Env-A 1211.05(c)(1)(a)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Dry Bottom - Face	NOx	50 - 99	MMBtu/hr	Coal or Coal/Oil	0.50	lb/MMBtu	Env-A 1211.05(c)(1)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Dry Bottom - Stoker	NOx	50 - 99	MMBtu/hr	Coal or Coal/Oil	0.30	lb/MMBtu	Env-A 1211.05(c)(1)(c)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential/Face	NOx	50 - 99	MMBtu/hr	DO	0.12	lb/MMBtu	Env-A 1211.05(c)(2)(a)	RACT - Hourly Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential/Face	NOx	50 - 99	MMBtu/hr	RO	0.30	lb/MMBtu	Env-A 1211.05(c)(2)(b)	RACT - Daily Avg	Emissions averaging across units allowed		Alternate: Apply RACT (LNB or better)	
	Industrial Boiler - Tangential/Face	NOx	50 - 99	MMBtu/hr	DO/NG	0.12	lb/MMBtu	Env-A 1211.05(c)(3)(c)(1)	RACT - Hourly Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential/Face	NOx	50 - 99	MMBtu/hr	RO/NG	0.30	lb/MMBtu	Env-A 1211.05(c)(3)(c)(2)	RACT - Daily Avg	Emissions averaging across units allowed		Alternate: Apply RACT (LNB or better)	
	Industrial Boiler	NOx	50 - 99	MMBtu/hr	NG	0.10	lb/MMBtu	Env-A 1211.05(c)(4)	RACT - Hourly Avg	Emissions averaging across units allowed		Alternate: Apply RACT (LNB or better)	
	Industrial Boiler - Moving Grate	NOx	50 - 99	MMBtu/hr	Wood or Wood/Oil	0.33	lb/MMBtu	Env-A 1211.05(c)(5)(a)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Stationary Grate	NOx	50 - 99	MMBtu/hr	Wood or Wood/Oil	0.25	lb/MMBtu	Env-A 1211.05(c)(5)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Wet Bottom - Tangential/Face	NOx	≥ 100	MMBtu/hr	Coal or Coal/Other	1.00	lb/MMBtu	Env-A 1211.05(d)(1)(a)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Wet Bottom - Cyclone	NOx	≥ 100	MMBtu/hr	Coal or Coal/Other	0.92	lb/MMBtu	Env-A 1211.05(d)(1)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Dry Bottom - Tangential	NOx	≥ 100	MMBtu/hr	Coal or Coal/Oil	0.38	lb/MMBtu	Env-A 1211.05(d)(2)(a)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Dry Bottom - Face	NOx	≥ 100	MMBtu/hr	Coal or Coal/Oil	0.50	lb/MMBtu	Env-A 1211.05(d)(2)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Dry Bottom - Stoker	NOx	≥ 100	MMBtu/hr	Coal or Coal/Oil	0.30	lb/MMBtu	Env-A 1211.05(d)(2)(c)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential/Face	NOx	≥ 100	MMBtu/hr	Oil	0.30	lb/MMBtu	Env-A 1211.05(d)(3)(a)	RACT - Daily Avg	Emissions averaging across units allowed		Alternate: Apply RACT (LNB or better)	
	Industrial Boiler - Face	NOx	≥ 100	MMBtu/hr	Oil/NG	0.25	lb/MMBtu	Env-A 1211.05(d)(3)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential	NOx	≥ 100	MMBtu/hr	Oil/NG	0.25	lb/MMBtu	Env-A 1211.05(d)(3)(c)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Tangential/Face	NOx	≥ 100	MMBtu/hr	NG	0.10	lb/MMBtu	Env-A 1211.05(d)(4)	RACT - Hourly Avg	Emissions averaging across units allowed		Alternate: Apply RACT (LNB or better)	
	Industrial Boiler - Moving Grate	NOx	≥ 100	MMBtu/hr	Wood or Wood/Oil	0.33	lb/MMBtu	Env-A 1211.05(d)(5)(a)	RACT - Daily Avg	Emissions averaging across units allowed			
	Industrial Boiler - Stationary Grate	NOx	≥ 100	MMBtu/hr	Wood or Wood/Oil	0.25	lb/MMBtu	Env-A 1211.05(d)(5)(b)	RACT - Daily Avg	Emissions averaging across units allowed			
	Auxiliary Boiler	NOx	≥ 50	MMBtu/hr	Any	0.20	lb/MMBtu	Env-A 1211.12(c)	RACT - Daily Avg - Major Sources	Emissions averaging across units allowed			
	Turbine - Combined or Regenerative Cycle	NOx	≥ 25	MMBtu/hr	NG	42.00	ppmvd	Env-A 1211.06(c)(1)(a)	RACT - Hourly Avg	Emissions averaging across units allowed	Corrected to 15% O2	Equiv: 0.155 lb/MMBtu	
	Turbine - Combined or Regenerative Cycle	NOx	≥ 25	MMBtu/hr	Oil	65.00	ppmvd	Env-A 1211.06(c)(1)(c)	RACT - Hourly Avg	Emissions averaging across units allowed	Corrected to 15% O2	Equiv: 0.253 lb/MMBtu	
	Turbine - Simple Cycle	NOx	≥ 25	MMBtu/hr	NG	55.00	ppmvd	Env-A 1211.06(c)(2)(a)	RACT - Hourly Avg	Emissions averaging across units allowed	Corrected to 15% O2	Equiv: 0.203 lb/MMBtu	
	Turbine - Simple Cycle	NOx	≥ 25	MMBtu/hr	Oil	75.00	ppmvd	Env-A 1211.06(c)(2)(b)	RACT - Hourly Avg	Emissions averaging across units allowed	Corrected to 15% O2	Equiv: 0.292 lb/MMBtu	
	Turbine - All - Post 05/27/1999	NOx	≥ 25	MMBtu/hr	NG	25.00	ppmvd	Env-A 1211.06(d)	RACT - Hourly Avg	Emissions averaging across units allowed	Corrected to 15% O2	Equiv: 0.092 lb/MMBtu	
	Turbine - Peak Shaving	NOx	All		Any	0.90	lb/MMBtu	Env-A 1211.13(b)	RACT - Hourly Avg - Major Sources	Emissions averaging across units allowed			
NJ	Fuel Burning Equipment	PM	All		Any	Table	lb/hr	7:27-4.2(a)	Table lists maximum allowable emission rates (lb/hr) according to heat input (MMBtu/hr)				
	Fuel Burning Equipment	PM	≥ 200	MMBtu/hr	Any	0.10	lb/MMBtu	7:27-4.2(a)	Calculated from Table presented with regulation				
	Fuel Burning Equipment	SO2	All		Oil No. 2 & lighter	0.20	wt% sulfur	7:27-9.2(a) & (b)	Zones 3, 4 & 6	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 2 & lighter	0.30	wt% sulfur	7:27-9.2(a) & (b)	Zones 1, 2 & 5	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No.4	0.30	wt% sulfur	7:27-9.2(a) & (b)	Zones 3, 4 & 6	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 4	0.70	wt% sulfur	7:27-9.2(a) & (b)	Zones 2 & 5	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 4	2.00	wt% sulfur	7:27-9.2(a) & (b)	Zone 1	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	0.30	wt% sulfur	7:27-9.2(a) & (b)	Zones 4 & 6	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	0.50	wt% sulfur	7:27-9.2(a) & (b)	Zone 3	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	1.00	wt% sulfur	7:27-9.2(a) & (b)	Zones 2 & 5	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	2.00	wt% sulfur	7:27-9.2(a) & (b)	Zone 1	Does not apply when limits of rule 7:27-9.2(c) are met			
	Fuel Burning Equipment	SO2	All		Oil No. 2 & lighter	0.21	lb/MMBtu	7:27-9.2(c)	Zones 3, 4 & 6				
	Fuel Burning Equipment	SO2	All		Oil No. 2 & lighter	0.32	lb/MMBtu	7:27-9.2(c)	Zones 1, 2 & 5				
	Fuel Burning Equipment	SO2	All		Oil No.4	0.32	lb/MMBtu	7:27-9.2(c)	Zones 3, 4 & 6				
	Fuel Burning Equipment	SO2	All		Oil No. 4	0.74	lb/MMBtu	7:27-9.2(c)	Zones 2 & 5				
	Fuel Burning Equipment	SO2	All		Oil No. 4	2.10	lb/MMBtu	7:27-9.2(c)	Zone 1				
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	0.32	lb/MMBtu	7:27-9.2(c)	Zones 4 & 6				
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	0.53	lb/MMBtu	7:27-9.2(c)	Zone 3				
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	1.05	lb/MMBtu	7:27-9.2(c)	Zones 2 & 5				
	Fuel Burning Equipment	SO2	All		Oil No. 5, 6, & higher	2.10	lb/MMBtu	7:27-9.2(c)	Zone 1				
	Utility Boiler - Wet Bottom - Tangential/Face	NOx	All		Coal	1.00	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Wet Bottom - Cyclone	NOx	All		Coal	0.60	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Dry Bottom - Tangential	NOx	All		Coal	0.38	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Dry Bottom - Face	NOx	All		Coal	0.45	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Dry Bottom - Cyclone	NOx	All		Coal	0.55	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Tangential	NOx	All		Oil and/or Gas	0.20	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Face	NOx	All		Oil and/or Gas	0.28	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Cyclone	NOx	All		Oil and/or Gas	0.43	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Tangential/Face	NOx	All		Gas Only	0.20	lb/MMBtu	7:27-19.4(a)					
	Utility Boiler - Cyclone	NOx	All		Gas Only	0.43	lb/MMBtu	7:27-19.4(a)					
	Stationary Simple Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Oil	0.40	lb/MMBtu	7:27-19.5(a)	Emissions averaging across units allowed				
	Stationary Simple Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Gas	0.20	lb/MMBtu	7:27-19.5(a)	Emissions averaging across units allowed				
	Stationary Combined Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Oil	0.35	lb/MMBtu	7:27-19.5(b)	Emissions averaging across units allowed				
	Stationary Combined Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Gas	0.15	lb/MMBtu	7:27-19.5(b)	Emissions averaging across units allowed				
	Stationary Regenerative Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Oil	0.35	lb/MMBtu	7:27-19.5(b)	Emissions averaging across units allowed				
	Stationary Regenerative Cycle Gas Turbine	NOx	≥ 30	MMBtu/hr	Gas	0.15	lb/MMBtu	7:27-19.5(b)	Emissions averaging across units allowed				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	>5	MMBtu/hr	All	Tune-up		7:27-19.7(g)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	50-100	MMBtu/hr	Natural Gas	0.10	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	50-100	MMBtu/hr	#2 Fuel Oil	0.12	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	50-100	MMBtu/hr	Refinery Fuel Gas	0.20	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	50-100	MMBtu/hr	Other Liquid Fuels	0.30	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Tangential	NOx	50-100	MMBtu/hr	Coal	1.00	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Face	NOx	50-100	MMBtu/hr	Coal	1.00	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Cyclone	NOx	50-100	MMBtu/hr	Coal	0.55	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Tangential	NOx	50-100	MMBtu/hr	Coal	0.38	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Face	NOx	50-100	MMBtu/hr	Coal	0.43	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Cyclone	NOx	50-100	MMBtu/hr	Coal	0.55	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	100+	MMBtu/hr	Natural Gas Only	0.10	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler or Other Indirect Heat Exchanger	NOx	100+	MMBtu/hr	Refinery Fuel Gas	0.20	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Tangential	NOx	100+	MMBtu/hr	Fuel oil and/or natural gas	0.20	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Face	NOx	100+	MMBtu/hr	Fuel oil and/or natural gas	0.28	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Cyclone	NOx	100+	MMBtu/hr	Fuel oil and/or natural gas	0.43	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Tangential	NOx	100+	MMBtu/hr	Coal	1.00	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Face	NOx	100+	MMBtu/hr	Coal	1.00	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Wet Bottom Cyclone	NOx	100+	MMBtu/hr	Coal	0.60	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Tangential	NOx	100+	MMBtu/hr	Coal	0.38	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Face	NOx	100+	MMBtu/hr	Coal	0.45	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
	ICI Boiler Dry Bottom Cyclone	NOx	100+	MMBtu/hr	Coal	0.55	lb/MMBtu	7:72-19.7(h)	Effective 3/7/2007				
NY	Fuel Burning Equipment	PM	> 250	MMBtu/hr	Liquid fuel from coal	0.10	lb/MMBtu	227-1.2(a)(1)					
	Fuel Burning Equipment	PM	50 - 250	MMBtu/hr	Liquid fuel from coal	0.20	lb/MMBtu	227-1.2(a)(2)					
	Fuel Burning Equipment	PM	> 250	MMBtu/hr	Coal, wood, coke, etc.	0.10	lb/MMBtu	227-1.2(a)(3)	Units with permits to construct submitted after August 11, 1972.				
	Fuel Burning Equipment	PM	All	MMBtu/hr	Coal, wood, coke, etc.	Formula	lb/MMBtu	227-1.2(b)	Based on a formula: E (lb/MMBtu) = $1.0/p^{0.22}$, where p = max heat input capacity (MMBtu/hr)		Applies to units not subject to 227-1.2(a)(3)		
	Fuel Burning Equipment - Spreader Stokers	PM	≤ 300	MMBtu/hr	Coal, wood, coke, etc.	0.60	lb/MMBtu	227-1.2(c)(1)	Units in operation prior to June 1, 1972				

	Fuel Burning Equipment - All others	PM	≤ 300	MMBtu/hr	Coal, wood, coke, etc.	Table	lb/MMBtu	227-1.2(c)(2)	Table lists maximum allowable emission rates (lb/hr) according to heat input (MMBtu/hr): 1-100 MMBtu/hr = 0.6 lb/MMBtu; 200 MMBtu/hr = 0.45 lb/MMBtu; 300 MMBtu/hr = 0.30 lb/MMBtu (interpolate for units with heat input capacities not shown)		
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Oil	0.75	wt% sulfur	225-1.2(a)(1)	Applies when the permit to construct was received after March 15, 1973, and the installation is not located in New York City, Nassau, Rockland, or Westchester Counties.		
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Coal	0.60	lb S/MMBtu	225-1.2(a)(1)	Applies when the permit to construct was received after March 15, 1973, and the installation is not located in New York City, Nassau, Rockland, or Westchester Counties.		
	Fuel Burning Equipment	SO2	All		Residual Oil	0.30	wt% sulfur	225-1.2(d)	New York City	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Distillate Oil	0.20	wt% sulfur	225-1.2(d)	New York City	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	0.20	lb S/MMBtu	225-1.2(d)	New York City	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Oil	0.37	wt% sulfur	225-1.2(d)	Nassau, Rockland, and Westchester Coun	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	0.20	lb S/MMBtu	225-1.2(d)	Nassau, Rockland, and Westchester Coun	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Oil	1.00	wt% sulfur	225-1.2(d)	Suffold County: Towns of Babylon, Brookh	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	0.60	lb S/MMBtu	225-1.2(d)	Suffold County: Towns of Babylon, Brookh	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Oil	1.10	wt% sulfur	225-1.2(d)	Erie County: City of Lackawana and South	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	1.70	lb S/MMBtu	225-1.2(d)	Erie County: City of Lackawana and South	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Oil	1.50	wt% sulfur	225-1.2(d)	Niagara County and remainder of Erie Cou	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	1.70	lb S/MMBtu	225-1.2(d)	Niagara County and remainder of Erie Cou	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Oil	1.50	wt% sulfur	225-1.2(d)	Remainder of State	Effective January 1, 1988	
	Fuel Burning Equipment	SO2	All		Coal	2.50	lb S/MMBtu	225-1.2(d)	Remainder of State	Effective January 1, 1988	
	Very Large Boilers - Tangential/Wall	NOx	> 250	MMBtu/hr	Gas Only	0.20	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Tangential/Wall	NOx	> 250	MMBtu/hr	Gas/Oil	0.25	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Cyclone	NOx	> 250	MMBtu/hr	Gas/Oil	0.43	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Wet Bottom - Tangential/Wall	NOx	> 250	MMBtu/hr	Coal	1.00	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Wet Bottom - Cyclone	NOx	> 250	MMBtu/hr	Coal	0.60	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Dry Bottom - Tangential	NOx	> 250	MMBtu/hr	Coal	0.42	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Dry Bottom - Wall	NOx	> 250	MMBtu/hr	Coal	0.45	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg allowed	
	Very Large Boilers - Dry Bottom - Stoker	NOx	> 250	MMBtu/hr	Coal	0.30	lb/MMBtu	227-2.4(a)(1)	RACT - 24hr average	From October 1 to April 30th, 30-day rolling avg a	Emission limit is 0.33 lb/MMBtu when at least 25% of other solid fuels are burned on a Btu basis
	Large Boilers	NOx	100 - 250	MMBtu/hr	Gas Only	0.20	lb/MMBtu	227-2.4(b)(1)	RACT - 1hr avg, or 24hr avg if a CEMS is used		
	Large Boilers	NOx	100 - 250	MMBtu/hr	Gas/Oil	0.30	lb/MMBtu	227-2.4(b)(1)	RACT - 1hr avg, or 24hr avg if a CEMS is used		
	Large Boilers	NOx	100 - 250	MMBtu/hr	Pulverized Coal	0.50	lb/MMBtu	227-2.4(b)(1)	RACT - 1hr avg, or 24hr avg if a CEMS is used		
	Large Boilers	NOx	100 - 250	MMBtu/hr	Coal (Overfeed Stoker)	0.30	lb/MMBtu	227-2.4(b)(1)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Emission limit is 0.33 lb/MMBtu when at least 25% of other solid fuels are burned on a Btu basis	
	Mid-size Boilers	NOx	50 - 100	MMBtu/hr	Natural Gas	0.10	lb/MMBtu	227-2.4(c)(2)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Must utilize low NOx burners	
	Mid-size Boilers	NOx	50 - 100	MMBtu/hr	Distillate Oil	0.12	lb/MMBtu	227-2.4(c)(2)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Must utilize low NOx burners	
	Mid-size Boilers	NOx	50 - 100	MMBtu/hr	Residual Oil	0.30	lb/MMBtu	227-2.4(c)(2)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Must utilize low NOx burners with flue gas recirculation	
	Combustion Turbine - Simple Cycle/Regenerative	NOx	> 10	MMBtu/hr	Gas Only	50.00	ppmvd	227-2.4(e)(1)(i)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Turbine operates < 500 hrs between October 1st and April 30th	
	Combustion Turbine - Simple Cycle/Regenerative	NOx	> 10	MMBtu/hr	Multiple Fuels	100.00	ppmvd	227-2.4(e)(1)(ii)	RACT - 1hr avg, or 24hr avg if a CEMS is u	Turbine operates < 500 hrs between October 1st and April 30th	
	Combustion Turbine - Combined Cycle	NOx	> 10	MMBtu/hr	Gas	42.00	ppmvd	227-2.4(e)(2)(i)	RACT - 1hr avg, or 24hr avg if a CEMS is used		
	Combustion Turbine - Combined Cycle	NOx	> 10	MMBtu/hr	Oil	65.00	ppmvd	227-2.4(e)(2)(ii)	RACT - 1hr avg, or 24hr avg if a CEMS is used		
PA	Fuel Burning Equipment	PM	2.5 - 50	MMBtu/hr	All	0.40	lb/MMBtu	123.11(a)(1)			
	Fuel Burning Equipment	PM	50 - 600	MMBtu/hr	All	Formula	lb/MMBtu	123.11(a)(2)	Based on a formula: A (lb/MMBtu) = 3.6 $E^{0.56}$, where E = MMBtu/hr input rating of the unit		
	Fuel Burning Equipment	PM	> 600	MMBtu/hr	All	0.10	lb/MMBtu	123.11(a)(3)			
	Fuel Burning Equipment	SO2	All		All	4.00	lb/MMBtu	123.22(a)(1)	Nonair basin areas	As measured over a 1-hr period	
	Fuel Burning Equipment	SO2	All		No. 2 Oil & lighter	0.50	wt% sulfur	123.22(a)(2)	Nonair basin areas		
	Fuel Burning Equipment	SO2	All		No. 4, 5, 6, & heavier	2.80	wt% sulfur	123.22(a)(2)	Nonair basin areas		
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	3.70	lb/MMBtu	123.22(a)(4)(iii)	Nonair basin areas	30-day running average	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	4.00	lb/MMBtu	123.22(a)(4)(iii)	Nonair basin areas	Daily average, not to be exceeded more than 2 days in any 30-day running period	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	4.80	lb/MMBtu	123.22(a)(4)(iii)	Nonair basin areas	Daily maximum average	
	Fuel Burning Equipment	SO2	All		All	4.00	lb/MMBtu	123.22(b)(1)	As measured over a 1-hr period	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins	
	Fuel Burning Equipment	SO2	All		No. 2 Oil & lighter	0.30	wt% sulfur	123.22(b)(2)	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins		
	Fuel Burning Equipment	SO2	All		No. 4, 5, 6, & heavier	2.80	wt% sulfur	123.22(b)(2)	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins		
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	3.70	lb/MMBtu	123.22(b)(4)(iii)	30-day running average	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	4.00	lb/MMBtu	123.22(b)(4)(iii)	Daily average, not to be exceeded more th	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	4.80	lb/MMBtu	123.22(b)(4)(iii)	Daily maximum average	Erie, Harrisburg, York, Lancaster, Scranton, Wilkes-Barre air basins	
	Fuel Burning Equipment	SO2	All		All	3	lb/MMBtu	123.22(c)(1)	As measured over a 1-hr period	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins	
	Fuel Burning Equipment	SO2	All		No. 2 Oil & lighter	0.30	wt% sulfur	123.22(c)(2)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins		
	Fuel Burning Equipment	SO2	All		No. 4, 5, 6, & heavier	2.00	wt% sulfur	123.22(c)(2)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins		
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	2.80	lb/MMBtu	123.22(c)(4)(iii)	30-day running average	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	3.00	lb/MMBtu	123.22(c)(4)(iii)	Daily average, not to be exceeded more th	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins	
	Fuel Burning Equipment	SO2	> 250	MMBtu/hr	Solid fossil fuel	3.60	lb/MMBtu	123.22(c)(4)(iii)	Daily maximum average	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstwon air basins	
	Fuel Burning Equipment	SO2	2.5 - 50	MMBtu/hr	All	1	lb/MMBtu	123.22(d)(1)	Allegheny County, Lower Beaver Valley, and Monongahela Valley air basins		
	Fuel Burning Equipment	SO2	50 - 2,000	MMBtu/hr	All	Formula	lb/MMBtu	123.22(d)(2)	Allegheny County, Lower Beaver Valley, and Monongahela Valley air basins		Based on a formula: A (lb/MMBtu) = 1.7 $E^{0.14}$, where E = MMBtu/hr input rating of the unit
	Fuel Burning Equipment	SO2	> 2,000	MMBtu/hr	All	0.60	lb/MMBtu	123.22(d)(3)	Allegheny County, Lower Beaver Valley, and Monongahela Valley air basins		
	Fuel Burning Equipment	SO2	< 250	MMBtu/hr	All	1.00 / 1.20	lb/MMBtu	123.22(e)(1)	Inner Zone / Outer Zone	Southeast Pennsylvania air basin	
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	All	0.60 / 1.20	lb/MMBtu	123.22(e)(1)	Inner Zone / Outer Zone	Southeast Pennsylvania air basin	
	Fuel Burning Equipment	SO2	All		No. 2 Oil & lighter	0.20 / 0.30	wt% sulfur	123.22(e)(2)	Inner Zone / Outer Zone	Southeast Pennsylvania air basin	
	Fuel Burning Equipment	SO2	All		No. 4, 5, 6, & heavier	0.50 / 1.00	wt% sulfur	123.22(e)(2)	Inner Zone / Outer Zone	Southeast Pennsylvania air basin	
	Fuel Burning Equipment	SO2	All		Noncommercial fuel	0.60 / 1.20	lb/MMBtu	123.22(e)(3)	Inner Zone / Outer Zone	Southeast Pennsylvania air basin	
	Fuel Burning Equipment	SO2	< 250	MMBtu/hr	Solid fossil fuel	0.75 / 0.90	lb/MMBtu	123.22(e)(5)(iii)	30-day running average	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Solid fossil fuel	0.45 / 0.90	lb/MMBtu	123.22(e)(5)(iii)	30-day running average	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	SO2	< 250	MMBtu/hr	Solid fossil fuel	1.00 / 1.20	lb/MMBtu	123.22(e)(5)(iii)	Daily average, not to be exceeded more th	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Solid fossil fuel	0.60 / 1.20	lb/MMBtu	123.22(e)(5)(iii)	Daily average, not to be exceeded more th	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	SO2	< 250	MMBtu/hr	Solid fossil fuel	1.20 / 1.44	lb/MMBtu	123.22(e)(5)(iii)	Daily maximum average	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Solid fossil fuel	0.72 / 1.44	lb/MMBtu	123.22(e)(5)(iii)	Daily maximum average	Inner Zone / Outer Zone	Southeast Pennsylvania air basin
	Fuel Burning Equipment	NOx	100 - 250	MMBtu/hr	G or noncommercial ga	0.10	lb/MMBtu	129.201(c)(1)(i)			
	Fuel Burning Equipment	NOx	100 - 250	MMBtu/hr	Solid or liquid fuel	0.20	lb/MMBtu	129.201(c)(1)(ii)			
RI	Steam or Hot Water Generating Units	PM	> 1	MMBtu/hr	fossil fuel	0.10	lb/MMBtu	13.2.1			
	Fuel Burning Equipment	SO2	All		All	1.1	lb/MMBtu	8.3.1			
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Coal	1.21	lb/MMBtu	8.3.4.1(a) & (b)	Provided source does not exceed limit within any 30-day period		
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Coal	2.31	lb/MMBtu	8.3.4.1(a) & (b)	Provided source does not exceed limit within any 24-hr period		
	Utility Boilers	NOx	All		NG or LPG	0.20	lb/MMBtu	27.4.1(a)			
	Utility Boilers	NOx	All		fuel oil	0.25	lb/MMBtu	27.4.1(b)			
	Industrial, Commercial, Institutional Boilers	NOx	> 50	MMBtu/hr	Natural Gas	0.10	lb/MMBtu	27.4.2(a)(1)			
	Industrial, Commercial, Institutional Boilers	NOx	> 50	MMBtu/hr	Distillate oil or LPG	0.12	lb/MMBtu	27.4.2(a)(2)			
VT	Fuel Burning Equipment	PM	≤ 10	MMBtu/hr	fossil fuel	0.50	lb/MMBtu	5-231(3)(a)(i)			
	Fuel Burning Equipment	PM	10 - 250	MMBtu/hr	fossil fuel	Formula	lb/MMBtu	5-231(3)(a)(ii)	Based on formula: $E=10^{(-0.47039x(\log HI)+0.16936)}$, where E is the emission limit in lb/MMBtu, and HI is the heat input in MMBtu/hr		
	Fuel Burning Equipment	PM	250 - 1,000	MMBtu/hr	fossil fuel	0.10	lb/MMBtu	5-231(3)(a)(iii)			
	Fuel Burning Equipment	PM	> 1,000	MMBtu/hr	fossil fuel	0.06	lb/MMBtu	5-231(3)(a)(iv)			
	Fuel Burning Equipment	PM	> 90	HP	wood fuel	0.45	gr/dscf	5-231(3)(b)(i)	Corrected to 12% CO_2	Installed & commenced operation before December 5, 1977.	
	Fuel Burning Equipment	PM	90 - 1,300	HP	wood fuel	0.20	gr/dscf	5-231(3)(b)(ii)	Corrected to 12% CO_2	Installed & commenced operation after December 5, 1977.	
	Fuel Burning Equipment	PM	≥ 1,300	HP	wood fuel	0.10	gr/dscf	5-231(3)(b)(iii)	Corrected to 12% CO_2	Installed & commenced operation after December 5, 1977.	
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	liquid fossil fuel	0.80	lb/MMBtu	5-252(1)(a)			
	Fuel Burning Equipment	SO2	≥ 250	MMBtu/hr	Solid fossil fuel	1.20	lb/MMBtu	5-252(1)(b)			
	Fuel Burning Equipment	NOx	≥ 250	MMBtu/hr	gaseous fossil fuel	0.20	lb/MMBtu	5-251(1)(a)			
	Fuel Burning Equipment	NOx	≥ 250	MMBtu/hr	liquid fossil fuel	0.30	lb/MMBtu	5-251(1)(b)			
	Fuel Burning Equipment	NOx	≥ 250	MMBtu/hr	Solid fossil fuel	0.70	lb/MMBtu	5-251(1)(c)			
BAAQMD	Fuel Burning Equipment	PM	All		All	0.15	gr/dscf	6-310	Corrected to 12% CO2 for incineration devices		
	Fuel Burning Equipment	SO2	All		Liquid or solid fuel	0.50	wt% sulfur	9-1-304			

	Fuel Burning Equipment	SO2	All		Liquid or solid fuel	300	ppmvd	9-1-304					
	EGU Boilers	NOx	≥ 1,750	MMBtu/hr	Gaseous fuel	10	ppmvd	9-11-301.1	Corrected to 3% O2				
	EGU Boilers	NOx	≥ 1,750	MMBtu/hr	Non-gaseous fuel	25	ppmvd	9-11-301.2	Corrected to 3% O2				
	EGU Boilers	NOx	1,500 - 1,750	MMBtu/hr	Gaseous fuel	25	ppmvd	9-11-303.1	Corrected to 3% O2				
	EGU Boilers	NOx	1,500 - 1,750	MMBtu/hr	Non-gaseous fuel	110	ppmvd	9-11-303.2	Corrected to 3% O2				
	EGU Boilers	NOx	< 1,500	MMBtu/hr	Gaseous fuel	30	ppmvd	9-11-305.1	Corrected to 3% O2				
	EGU Boilers	NOx	< 1,500	MMBtu/hr	Non-gaseous fuel	110	ppmvd	9-11-305.2	Corrected to 3% O2				
	EGU System	NOx	All		All	0.28	lb/MMBtu	9-11-308	Calculated each operating day as the average of all hourly data for the preceeding 30 operating days				
	EGU System - plant wide	NOx	All		Gaseous fuel	0.018	lb/MMBtu	9-11-309.1	Advanced Technology Alternative Emission Control Plan				
	Boilers, Steam Generators, or process heaters	NOx	≥ 10	MMBtu/hr	Gaseous fuel	30	ppmvd	9-7-301.1	Corrected to 3% O2				
	Boilers, Steam Generators, or process heaters	NOx	≥ 10	MMBtu/hr	Non-gaseous fuel	40	ppmvd	9-7-302.1	Corrected to 3% O2				
	Boilers, Steam Generators, or process heaters	NOx	≥ 10	MMBtu/hr	Non-gaseous fuel	150	ppmvd	9-7-305.1	Corrected to 3% O2	Limit applies during natural gas curtailment periods, when gaseous fuels are unavailable.			
SCAQMD	Fuel Burning Equipment	PM	All		All	0.1	gr/scf	Rule 409	Corrected to 12% CO2, averaged over a minimum of 15 consecutive minutes.				
	Fuel Burning Equipment	SO2	All		Natural Gas	16	ppmv	431.1(c)(1)	Sulfur content of natural gas calculated as H2S				
	Fuel Burning Equipment	SO2	All		Other Gaseous fuel	40	ppmv	431.1(c)(2)	Sulfur content of natural gas calculated as H2S, and averaged over a 4-hr period				
	Fuel Burning Equipment	SO2	All		Liquid Fuel	500	ppmw	431.2(d)(1)	Sulfur content of liquid fuel is measured by weight				
	Fuel Burning Equipment	SO2	All		Low Sulfur Diesel	15	ppmw	431.2(d)(2)	Sulfur content of low sulfur diesel is measured by weight				
	Fuel Burning Equipment	SO2	All		Solid fossil fuel	0.56	lb/MMBtu	431.3(a)					
	Non-mobile fuel burning equipment	NOx	555 - 1,786	MMBtu/hr	Gas fuel	300	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Non-mobile fuel burning equipment	NOx	555 - 1,786	MMBtu/hr	Liquid or solid fuel	400	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Non-mobile fuel burning equipment	NOx	1,786 - 2,143	MMBtu/hr	Gas fuel	225	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Non-mobile fuel burning equipment	NOx	1,786 - 2,143	MMBtu/hr	Liquid or solid fuel	325	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Non-mobile fuel burning equipment	NOx	> 2,143	MMBtu/hr	Gas fuel	125	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Non-mobile fuel burning equipment	NOx	> 2,173	MMBtu/hr	Liquid or solid fuel	225	ppmvd	474(a)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Steam Generating Equipment	NOx	> 555	MMBtu/hr	Gas fuel	125	ppmvd	474(b)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Steam Generating Equipment	NOx	> 555	MMBtu/hr	Liquid or solid fuel	225	ppmvd	474(b)	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes				
	Supercritical Steam Generating Unit	NOx	> 2,143	MMBtu/hr	All	400	ppmvd	474(d)	During pressure ramp periods of boiler sta	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes			
	Steam Generating Equipment	NOx	> 50	MMBtu/hr	Gas fuel	125	ppmvd	476(a)(1)	Applies to units installed after May 7, 1976	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes			
	Steam Generating Equipment	NOx	> 50	MMBtu/hr	Liquid or solid fuel	225	ppmvd	476(a)(1)	Applies to units installed after May 7, 1976	Corrected to 3% O2, averaged over a minimum of 15 consecutive minutes			
	Existing Stationary Gas Turbines	NOx	≥ 0.3	MW	All	Formula		1134(c)(1)	Applies to units installed as of August 4, 19	Based on a formula: Compliance Limit = Reference Limit x (EFF/25%), where Reference Limits are the NOx limit, based on unit capacity, and EFF is the unit's demonstrated efficiency			
	Electric Power Generating Systems	NOx	All		All	0.15	lb/MWH	1135(c)(1)	Applies to Souther California Edison power plant				
	Electric Power Generating Systems	NOx	All		All	0.15	lb/MWH	1135(c)(2)	Applies to Los Angeles Department of Water & Power				
	Electric Power Generating Systems	NOx	All		All	0.2	lb/MWH	1135(c)(3)	Applies to the Cities of Burbank, Glendale, and Pasedena				
	Boilers, Steam Generators, and process heaters	NOx	2 - 5	MMBtu/hr	All	0.037	lb/MMBtu	1146.1(c)(1)	Alternate limit is 30 ppm NOx.				
	Small Industrial Boilers	NOx	0.75 - 2	MMBtu/hr	Natural Gas	0.037	lb/MMBtu	1146.2(c)(1)	Alternate limit is 30 ppmvd NOx, corrected to 3% O2				
	ICI Boilers, Steam Generators, Process Heaters	NOx	> 40	MMBtu/hr	All	0.036	lb/MMBtu	1146(c)(1)	Alternate limit is 30 ppm NOx.				
	ICI Boilers, Steam Generators, Process Heaters	NOx	≥ 5	MMBtu/hr	Non-gaseous fuel	0.052	lb/MMBtu	1146(c)(2)(A)	Alternate limit is 40 ppm NOx.				
	ICI Boilers, Steam Generators, Process Heaters	NOx	5 - 40	MMBtu/hr	All	0.052	lb/MMBtu	1146(c)(2)(B)	Alternate limit is 40 ppm NOx.				
	ICI Boilers, Steam Generators, Process Heaters	NOx	≥ 10	MMBtu/hr	Gaseous fuel	0.036	lb/MMBtu	1146(c)(3)(A)	Alternate limit is 30 ppm NOx.				
	ICI Boilers, Steam Generators, Process Heaters	NOx	5 - 40	MMBtu/hr	All	0.036	lb/MMBtu	1146(c)(3)(B)	Alternate limit is 30 ppm NOx.	Weighted average calculated when burning a combination of gaseous and non-gaseous fuels.			
SJVAPCD	Fuel Burning Equipment	PM	All		All	0.1	gr/dscf	Rule 4301, 5.1	Corrected to 12% CO_2				
	Fuel Burning Equipment	PM	All		All	Formula		Rule 4202, 4	Based on formula: $E = 3.59P^{0.62}$, where P is ≤ 30 tons/hr, or $E = 17.31P^{0.16}$, where P > 30 tons/hr. E is the allowable emission rate in lb/hr, while P is the process weight rate in tons/hr.				
	Fuel Burning Equipment	SO2	All		All	200	lb/hr	Rule 4301, 5.2.1					
	Existing Steam Generator	SO2	≥ 15	MMBtu/hr	All	0.11	lb/MMBtu	Rule 4406, 4.2	Applies to units in Kern County				
	Fuel Burning Equipment	NOx	All		All	140	lb/hr	Rule 4301, 5.2.2					
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Gaseous fuel	0.10	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 95 ppmvd at 3% O2	Applies to all units except those with natural or induced drafts		Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.	
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Distillate Oil	0.15	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 115 ppmvd at 3% O2	Applies to all units except those with natural or induced drafts		Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.	
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Residual or Crude Oil	0.22	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 165 ppmvd at 3% O2	Applies to all units except those with natural or induced drafts		Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.	
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Gaseous fuel	0.18	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 147 ppmvd at 3% O2	Applies to units with natural and induced drafts	Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.		
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Distillate Oil	0.20	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 155 ppmvd at 3% O2	Applies to units with natural and induced drafts	Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.		
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Residual or Crude Oil	0.25	lb/MMBtu	Rule 4351, 5.1	Alternate limit is 194 ppmvd at 3% O2	Applies to units with natural and induced drafts	Does not apply to units located west of Interstate 5 located in Fresno, Kern, or Kings county.		
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Gaseous Fuel	0.036	lb/MMBtu	Rule 4351, 5.2.2.1	Alternate limit is 30 ppmvd at 3% O2	Alternate limit to section 5.1, for units not subject to sections 5.2.3 or 5.2.4, requiring compliance by May 31, 1997.			
	Boilers, Steam Generators, and Process Heaters	NOx	> 9	MMBtu/hr	Liquid Fuel	0.052	lb/MMBtu	Rule 4351, 5.2.2.2	Alternate limit is 40 ppmvd at 3% O2	Alternate limit to section 5.1, for units not subject to sections 5.2.3 or 5.2.4, requiring compliance by May 31, 1997.			
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 40	MMBtu/hr	Gaseous fuel	0.085	lb/MMBtu	Rule 4351, 5.2.3.1	Alternate limit is 74 ppmvd at 3% O2	Applies to units with natural and induced drafts	Alternate limit to section 5.1, requiring compliance by May 31, 1999.		
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 40	MMBtu/hr	Distillate Oil	0.102	lb/MMBtu	Rule 4351, 5.2.3.2	Alternate limit is 78 ppmvd at 3% O2	Applies to units with natural and induced drafts	Alternate limit to section 5.1, requiring compliance by May 31, 1999.		
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 40	MMBtu/hr	Residual or Crude Oil	0.127	lb/MMBtu	Rule 4351, 5.2.3.3	Alternate limit is 97 ppmvd at 3% O2	Applies to units with natural and induced drafts	Alternate limit to section 5.1, requiring compliance by May 31, 1999.		
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 40	MMBtu/hr	Gaseous Fuel	0.061	lb/MMBtu	Rule 4351, 5.2.4.1	Alternate limit is 52 ppmvd at 3% O2	Alternate limit to section 5.1, requiring compliance by May 31, 1999.			
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 40	MMBtu/hr	Liquid Fuel	0.077	lb/MMBtu	Rule 4351, 5.2.4.2	Alternate limit is 59 ppmvd at 3% O2	Alternate limit to section 5.1, requiring compliance by May 31, 1999.			
	Boilers, Steam Generators, and Process Heaters	NOx	All		Solid Fuel	200	ppmv	Rule 4352, 5.1	Applies to burning Municipal Solid Waste	Corrected to 12% CO2			
	Boilers, Steam Generators, and Process Heaters	NOx	All		Solid Fuel	0.35	lb/MMBtu	Rule 4352, 5.1	Applies to burning biomass using multiple hearth furnaces				
	Boilers, Steam Generators, and Process Heaters	NOx	All		Solid Fuel	0.20	lb/MMBtu	Rule 4352, 5.1					
	Existing Steam Generator	NOx	≥ 35	MMBtu/hr	Oil	0.35	lb/MMBtu	Rule 4405, 4.1.1	Applies to generators operated by small pr	Applies to units in Central and Western Kern County			
	Existing Steam Generator	NOx	≥ 35	MMBtu/hr	Oil	0.20	lb/MMBtu	Rule 4405, 4.1.2	Applies to units in Central and Western Kern County				
	Existing Steam Generator	NOx	15 - 35	MMBtu/hr	Oil	0.38	lb/MMBtu	Rule 4405, 4.1.3	Applies to units in Central and Western Kern County				
	Existing Steam Generator	NOx	≥ 35	MMBtu/hr	Natural Gas	0.14	lb/MMBtu	Rule 4405, 4.2.1 & 4.2.2	Applies to units in Central and Western Kern County				
	Existing Steam Generator	NOx	15 - 35	MMBtu/hr	Natural Gas	0.18	lb/MMBtu	Rule 4405, 4.2.3	Applies to units in Central and Western Kern County				
	Existing Steam Generator	NOx	All		Natural Gas	0.02	lb/MMBtu	Rule 4405, 5.1	Alternate emission limit, for existing steam generators equipped with a "Coen" Low NOx Burr		Applies to units in Central and Western Kern County		
	Boilers, Steam Generators, and Process Heaters	NOx	> 5	MMBtu/hr	Gaseous fuel	0.18	lb/MMBtu	Rule 4305, 5.1.1	Alternate limit is 147 ppmvd at 3% O2	Applies to box or cabin type units, and vertical cylindrical process heaters			
	Boilers, Steam Generators, and Process Heaters	NOx	> 5	MMBtu/hr	Liquid fuel	0.20	lb/MMBtu	Rule 4305, 5.1.1	Alternate limit is 155 ppmvd at 3% O2	Applies to box or cabin type units, and vertical cylindrical process heaters			
	Boilers, Steam Generators, and Process Heaters	NOx	> 5	MMBtu/hr	Gaseous fuel	0.036	lb/MMBtu	Rule 4305, 5.1.1	Alternate limit is 30 ppmvd at 3% O2	Applies units except box or cabin type units, and vertical cylindrical process heaters			
	Boilers, Steam Generators, and Process Heaters	NOx	> 5	MMBtu/hr	Liquid fuel	0.052	lb/MMBtu	Rule 4305, 5.1.1	Alternate limit is 40 ppmvd at 3% O2	Applies units except box or cabin type units, and vertical cylindrical process heaters			
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 20	MMBtu/hr	Gaseous fuel	0.018	lb/MMBtu	Rule 4306, 5.1.A.	Alternate limit is 15 ppmvd at 3% O2	Standard Option	Applies to all units except those in Categories C, D, E, F, G, H, and I.		
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 20	MMBtu/hr	Gaseous fuel	0.011	lb/MMBtu	Rule 4306, 5.1.A.	Alternate limit is 9 ppmvd at 3% O2	Enhanced Option	Applies to all units except those in Categories C, D, E, F, G, H, and I.		
	Boilers, Steam Generators, and Process Heaters	NOx	≤ 20	MMBtu/hr	Liquid Fuel	0.052	lb/MMBtu	Rule 4306, 5.1.A.	Alternate limit is 40 ppmvd at 3% O2	Applies to all units except those in Categories C, D, E, F, G, H, and I.			
	Boilers, Steam Generators, and Process Heaters	NOx	> 20	MMBtu/hr	Gaseous fuel	0.011	lb/MMBtu	Rule 4306, 5.1.B.	Alternate limit is 9 ppmvd at 3% O2	Standard Option	Applies to all units except those in Categories C, D, E, F, G, H, and I.		
	Boilers, Steam Generators, and Process Heaters	NOx	> 20	MMBtu/hr	Gaseous fuel	0.007	lb/MMBtu	Rule 4306, 5.1.B.	Alternate limit is 6 ppmvd at 3% O2	Enhanced Option	Applies to all units except those in Categories C, D, E, F, G, H, and I.		
	Boilers, Steam Generators, and Process Heaters	NOx	> 20	MMBtu/hr	Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.B.	Alternate limit is 40 ppmvd at 3% O2	Applies to all units except those in Categories C, D, E, F, G, H, and I.			
	Oilfield Steam Generators	NOx	All		Gaseous fuel	0.018	lb/MMBtu	Rule 4306, 5.1.C.	Alternate limit is 15 ppmvd at 3% O2	Standard Option			
	Oilfield Steam Generators	NOx	All		Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.C.	Alternate limit is 40 ppmvd at 3% O2				
	Refinery Units	NOx	5 - 65	MMBtu/hr	Gaseous fuel	0.036	lb/MMBtu	Rule 4306, 5.1.D.	Alternate limit is 30 ppmvd at 3% O2	Standard Option			
	Refinery Units	NOx	5 - 65	MMBtu/hr	Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.D.	Alternate limit is 40 ppmvd at 3% O2				
	Refinery Units	NOx	65 - 110	MMBtu/hr	Gaseous fuel	0.031	lb/MMBtu	Rule 4306, 5.1.E.	Alternate limit is 25 ppmvd at 3% O2	Standard Option			
	Refinery Units	NOx	65 - 110	MMBtu/hr	Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.E.	Alternate limit is 40 ppmvd at 3% O2				
	Refinery Units	NOx	> 110	MMBtu/hr	Gaseous fuel	0.018	lb/MMBtu	Rule 4306, 5.1.F.	Alternate limit is 15 ppmvd at 3% O2	Standard Option			
	Refinery Units	NOx	> 110	MMBtu/hr	Gaseous fuel	0.011	lb/MMBtu	Rule 4306, 5.1.F.	Alternate limit is 9 ppmvd at 3% O2	Enhanced Option			
	Refinery Units	NOx	> 110	MMBtu/hr	Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.F.	Alternate limit is 40 ppmvd at 3% O2				
	Load-following Units	NOx	All		Gaseous fuel	0.018	lb/MMBtu	Rule 4306, 5.1.G.	Alternate limit is 15 ppmvd at 3% O2	Standard Option			
	Load-following Units	NOx	All		Gaseous fuel	0.011	lb/MMBtu	Rule 4306, 5.1.G.	Alternate limit is 9 ppmvd at 3% O2	Enhanced Option			
	Load-following Units	NOx	All		Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.G.	Alternate limit is 40 ppmvd at 3% O2				
	Boilers, Steam Generators, and Process Heaters	NOx	9,000 - 30,000	MMBtu/yr	Gaseous fuel	0.036	lb/MMBtu	Rule 4306, 5.1.H.	Alternate limit is 30 ppmvd at 3% O2	Standard Option			
	Boilers, Steam Generators, and Process Heaters	NOx	9,000 - 30,000	MMBtu/yr	Liquid fuel	0.052	lb/MMBtu	Rule 4306, 5.1.H.	Alternate limit is 40 ppmvd at 3% O2				
	Small boilers, steam generators and process heaters	NOx	2 - 5	MMBtu/yr	Gaseous fuel	0.036	lb/MMBtu	Rule 4307, 5.1	Alternate limit is 30 ppmvd at 3% O2				
	Small boilers, steam generators and process heaters	NOx	2 - 5	MMBtu/yr	Liquid fuel	0.052	lb/MMBtu	Rule 4307, 5.1	Alternate limit is 40 ppmvd at 3% O2				
	Small boilers, steam generators and process heaters	NOx	0.075 - 0.4	MMBtu/yr	All	0.093	lb/MMBtu	Rule 4308, 5.1	Corrected to 3% O2				

	Small boilers, steam generators and process heaters	NOx	0.4 - 2	MMBtu/yr	All	0.036	lb/MMBtu	Rule 4307, 5.1	Corrected to 3% O2				

Notes 6
Alternate: Apply RACT (LNB, OFA, SCR/SNCR, fuel change, alt. oper. scenario, etc.)
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Includes indirect heat exchangers, primary boilers and resource recovery units

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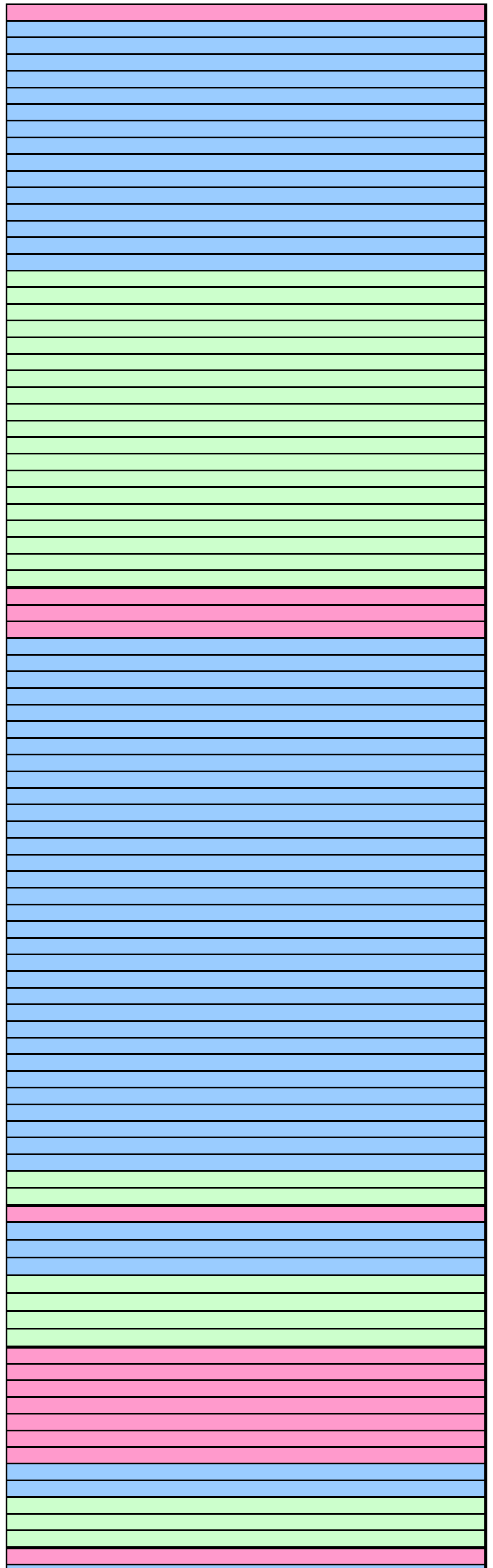

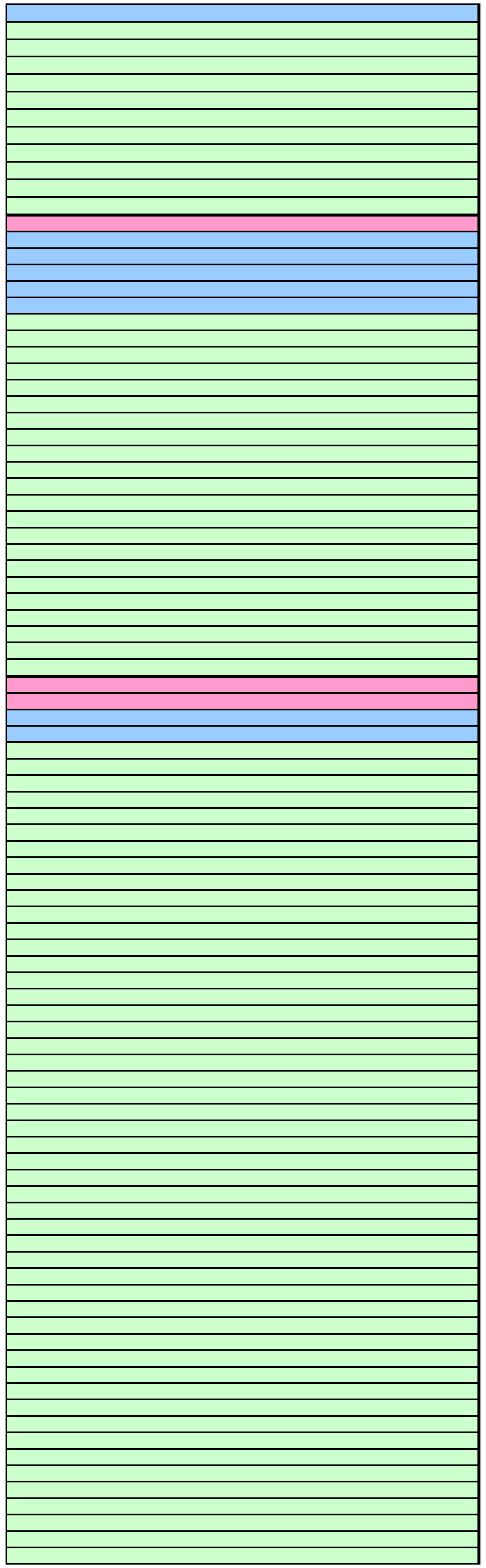

Connecticut Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Date
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Units at Major Sources [1]	60%	60%	60%	60%	% of 1990	22a-174-22(d)(1)	31-May-95
Turbine - Gas Fired	NL	NL	55	NL	ppmvd	22a-174-22(e)(1)	31-May-95
Turbine - Other-Oil fired	NL	NL	75	NL	ppmvd	22a-174-22(e)(1)	31-May-95
Turbine - Gas or Other-Oil Fired	NL	NL	0.9	0.9	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Cyclone Furnace - Gas, Oil, or Coal Fired	0.43	0.43	0.43	0.43	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Fast-Response Double-Furnace Naval Boiler - Gas Fired	0.20	0.20	0.20	0.20	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Fast-Response Double-Furnace Naval Boiler - Oil or Coal Fired	0.30	0.30	0.30	0.30	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Fluidized Bed Combustor - Coal Fired	0.29	0.29	0.29	0.29	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Other Boiler - Gas or Other-Oil Fired	0.20	0.20	0.20	0.20	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Other Boiler - Residual-Oil Fired	0.25	0.25	0.25	0.25	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Other Boiler - Coal Fired	0.38	0.38	0.38	0.38	lb/MMBtu	22a-174-22(e)(1)	31-May-95
Other Fuels (i.e., other than NG, RO, DO, coal)	0.30	0.30	0.30	0.30	lb/MMBtu	22a-174-22(e)(2)(A)	31-May-95
NOx Budget Sources - Non O-Season Emissions: 10/1 to 4/30	0.15	NA	NA	NA	lb/MMBtu	22a-174-22(e)(3)	31-May-95

[1] Sources provided option of meeting 40% reduction in NOx emissions by use of allowances or emisison reduction credits [22a-174-22(a)]

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Date
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - Fuel with sulfur content < 1.0%, other than solid fuel	1.0	1.0	1.0	1.0	Wt. % Sulfur	22a-174-19a(2)(i)	1-Apr-04
Equivalent: distillate oil (140,000 BTU/gal, 7.05 lb/gal)	1.01	1.01	1.01	1.01	lbSO2/MMBtu		
Equivalent: residual oil (150,000 BTU/gal; 7.88 lb/gal)	1.05	1.05	1.05	1.05	lbSO2/MMBtu		
Fuel Burning Equipment - Fuel with sulfur content < 1.0%, solid fuel	1.1	1.1	1.1	1.1	lbSO2/MMBtu		
Premise with Fuel Burning Equipment - Fuel with sulfur content > 1.0%, with consent of the Commissioner	0.55	0.55	0.55	0.55	lbSO2/MMBtu	22a-174-19a(3)(i)(A)	1-Apr-04
Fuel Burning Equipment - Fuel with sulfur content > 1.0%, with consent of the Commissioner	1.1	1.1	1.1	1.1	lbSO2/MMBtu	22a-174-19a(3)(ii)	1-Apr-04

Delaware Regulations Summary

Unit	NOx Emission Limits by Size [1]				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Boiler - Gas only-Face & Tangential	0.20	0.20	NL	NL	lb/MMBtu	Reg. 12, Section 3.2a	May 31, 1995 - existing units
Boiler - Oil or Gas or Both-Face & Tangential	0.25	0.25	NL	NL	lb/MMBtu	Reg. 12, Section 3.2a	May 31, 1995 - existing units
Boiler - Coal/Face & Tangential -dry botom	0.38	0.38	NL	NL	lb/MMBtu	Reg. 12, Section 3.2a	May 31, 1995 - existing units
Boiler - Oil or Gas or Both-Cyclone	0.43	0.43	NL	NL	lb/MMBtu	Reg. 12, Section 3.2a	May 31, 1995 - existing units
Boiler - Coal/Stoker-dry bottom	0.40	0.40	NL	NL	lb/MMBtu	Reg. 12, Section 3.2a	May 31, 1995 - existing units
All Burners >50 and <100 MMBtu/hour: LNB or EGR							
Equivalent Distillate Oil (assume 30% control from AP-42)	NL	NL	0.10	NL	lb/MMBtu		
Equivalent Natural Gas (assume 30% control from AP-42)	NL	NL	0.07	NL	lb/MMBtu		
All Burners >15 and <50 MMBtu/hour: Annual Tuneup							
Equivalent Distillate Oil (assume 10% control from AP-42)	NL	NL	NL	0.13	lb/MMBtu		
Equivalent Natural Gas (Assume 10% control from AP-42)	NL	NL	NL	0.09	lb/MMBtu		
All Combustion Units Not Exempt [2]			NL	NL		Reg. 42, Section 1	1-May-04
May 1- September 30	0.10	0.10	NL	NL	lb/MMBtu	Reg. 42, Section 1.c.1.A	
Gas-Firing	0.10	0.10	NL	NL	lb/MMBtu	Reg. 42, Section 1.c.1.B	
All Other not cover in A and B above	0.24	0.24	NL	NL	lb/MMBtu	Reg. 42, Section 1.c.1.C	
Gas Turbine - Gas fuel	42	42	42	42	ppm @ 15% O_2, 1-hr avg.	Reg. 12, Section 3.5	31-May-95
Gas Turbine - Liquid fuel	88	88	88	88	ppm @ 15% O_2, 1-hr avg.	Reg. 12, Section 3.5	31-May-95

[1] RACT can be set at actual emission levels higher than limits for > 100 MMBtu/hour units if LNB or EGR installed.

[2] Units as of 12/12/2001 not either: in compliance with Rule 12 (Table I) Limits; equipped with LNB, FGR, SCR, or SNCR; subject to Rule 39 NOx Budget.

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment, - All Fuels, New Castle County	1.0	1.0	1.0	1.0	wt % sulfur	Reg. 8, Section 2.1	8-Dec-83
Equivalent Coal (assume 14,000 Btu/lb)	1.4	1.4	1.4	1.4	lb SO2/MMBtu		
Equivalent Distillate Oil (assume 7.05 lb/gal and 140,000 Btu/gal)	1.0	1.0	1.0	1.0	lb SO2/MMBtu		
Fuel Burning Equipment - Distillate Oil, Statewide	0.3	0.3	0.3	0.3	wt % sulfur	Reg. 8, Section 2.2	8-Dec-83
Equivalent Distillate Oil (assume 7.05 lb/gal and 140,000 Btu/gal)	0.3	0.3	0.3	0.3	lb SO2/MMBtu		

District of Columbia Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fossil Fuel Fired Steam Generators, 2-hour limit						Title 20, Section 804, App. 8-1	> 100 MMBtu/hour
Gas	0.20	0.20	NL	NL	lb/MMBtu		
Liquid	0.30	0.30	NL	NL	lb/MMBtu		
Solid	0.70	0.70	NL	NL	lb/MMBtu		
Fossil Fuel Fired Steam Generators -annual tuning						Title 20, Section 805.5(a)	< 20 MMBtu/hour
Equivalent Distillate Oil (assume 10% control from AP-42)	NL	NL	NL	0.13	lb/MMBtu		
Equivalent Natural Gas (Assume 10% control from AP-42)	NL	NL	NL	0.09	lb/MMBtu		
Fossil Fuel Fired Steam Generators, 24 hour limits							
Oil, tangential or face -fired	NL	NL	0.30	NL	lb/MMBtu	Title 20, Section 805.5(b)	> 50 MMBtu/hr & < 100 MMBtu/hr
Dry Bottom Coal: tangential, face-fired, or stoker -fired	0.43	0.43	NL	NL	lb/MMBtu	Title 20, Section 805.5(c)(1)	> 100 MMBtu/hour
Natural Gas: tangential or face-fired	0.2	0.2	NL	NL	lb/MMBtu	Title 20, Section 805.5(c)(2)	> 100 MMBtu/hour
Oil or Oil & Gas: tangential or face- fired	0.25	0.25	NL	NL	lb/MMBtu	Title 20, Section 805.5(c)	> 100 MMBtu/hour

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Oil and Coal	1.0	1.0	1.0	1.0	wt % sulfur	Title 20, Section 801.1 & 802.1	-
Equivalent Coal (assume 14,000 BTU/lb)	1.4	1.4	1.4	1.4	lb SO2/MMBtu		
Equivalent Oil (assume 7.05 lb/gal, 140,000 btu/gal)	1.0	1.0	1.0	1.0	lb SO2/MMBtu		
Sulfur process emissions	0.05	0.05	0.05	0.05	vol %	Title 20, Section 803.1	-

Maine Regulations Summary

Unit	NOx Emission Limits by Size [1]				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Boiler >1,500 MMBtu/hr All Fuels Statewide	0.30	NL	NL	NL	lb/MMBtu	6-96-138.3(A)	
Boiler > 20 & < 50 MMBtu/hr All Fuels Statewide - annual tune up						6-96-138.3(I)	
Equivalent Distillate Oil (assume 10% control & AP-42 Emissions)	NL	NL	NL	0.13	lb/MMBtu		
Equivalent Natural Gas (Assume 10% control & AP-42 Emissions)	NL	NL	NL	0.09	lb/MMBtu		
Equivalent Biomass (assume 10% control & AP-42 Emissions for dry wood)	NL	NL	NL	0.44	lb/MMBtu		
Boilers > 50 & < 1,500 MMBtu/hour in Moderate Non-Attainment Areas							Effective 31-May-95
biomass; biomass and other than coal and oil.	0.3	0.3	0.3	NL	lb/MMBtu	6-96-138.3(B)	
oil; biomass & oil	0.4	0.4	0.4	NL	lb/MMBtu	6-96-138.3(B)	
biomass & coal	0.45	0.45	0.45	NL	lb/MMBtu	6-96-138.3(B)	
Boilers > 50 & < 1,500 MMBtu/hour in Attainment Areas							
oil; biomass; biomas & oil; biomass & other than coal & oil	0.3	0.3	0.3	NL	lb/MMBtu	6-96-138.4	
biomass & coal	0.45	0.45	0.45	NL	lb/MMBtu	6-96-138.4	
EGU - Fossil Fuel (≥ 25 MW, heat input <750 MMBtu/hr)	0.22	NL	NL	NL	lb/MMBtu	6-96-145.3(B)(2)(a)	Effective January 1, 2005 in Counties not waived under section 182(f) of the 1990 CAAA (Applies in York, Cumberland, Sagadahoc, Androscoggin, Kennebec, Lincoln and Knox)
EGU - Fossil Fuel (≥ 25 MW, heat inputs ≥ 750 MMBtu/hr))	0.15	NL	NL	NL	lb/MMBtu	6-96-145.3(B)(2)(b)	
Non-EGU Fossil Fuel-Fired Indirect heat Exchangers > 250 MMBtu/hour	0.20	NL	NL	NL	lb/MMBtu	6-96-145.3(B)(2)(c)	

[1] Sources can petition for less stringent, alternative limit [6-96-145.3(D)]

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Liquid Fossil Fuels	2.00	2.00	2.00	2.00	wt % sulfur	6-96-106.2(A)(2)	Effective 1-Nov-91, statewide
Equivalent Distillate Oil (7.05 lb/gal, 140,000 Btu/gal)	2.01	2.01	2.01	2.01	lb SO2/MMBtu		
Liquid Fossil Fuels	1.50	1.50	1.50	1.50	wt % sulfur	6-96-106.2(A)(3)	Applies to the Portland Peninsula AQR only
Equivalent Distillate Oil (7.05 lb/gal, 140,000 Btu/gal)	1.51	1.51	1.51	1.51	lb SO2/MMBtu		
Solid Fossil Fuels	0.96	0.96	0.96	0.96	lb S/MMBtu	6-96-106.2(B)(2)	Effective 1-Nov-91, statewide
Equivalent Coal (14,000 Btu/lb)	1.92	1.92	1.92	1.92	lb SO2/MMBtu		
Solid Fossil Fuels	0.72	0.72	0.72	0.72	lb S/MMBtu	6-96-106.2(B)(3)	Applies to the Portland Peninsula AQR only
Equivalent Coal (14,000 Btu/lb)	1.44	1.44	1.44	1.44	lb SO2/MMBtu		
Fuel Burning Equipment - All Fuels	1.92	1.92	1.92	1.92	lb SO2/MMBtu	6-96-106.4(B)	Effective 1-Nov-91, statewide; When using FGD or other sulfur removal device, i.e., exempt from 6-96-106.2 fuel sulfur content
Fuel Burning Equipment - All Fuels	1.57	1.57	1.57	1.57	lb SO2/MMBtu	6-96-106.4(C)	Applies to the Portland Peninsula AQR only; When using FGD or other sulfur removal device, i.e., exempt from 6-96-106.2 fuel sulfur content

Maryland Regulations Summary

Unit	NOx Emission Limits by Size[1] Size [1]	Size 2	Size 3	Size 4	Units	Regulatory Citation	Applicability
Fuel Burning Equipment - Natural Gas	0.2	0.2	0.2	0.2	lb/MMBtu	26.11.09.08(B)(1)(c)	Units located at premises that have total potential to emit: (a) 25 tons or more per year of NOx and is located in Baltimore City, or Anne Arundel, Baltimore, Calvert, Carroll, Cecil, Charles, Frederick, Harford, Howard, Montgomery, or Prince George's counties; or (b) 100 tons or more per year of NOx and is located in Allegany, Caroline, Dorchester, Garrett, Kent, Queen Anne's, St. Mary's, Somerset, Talbot, Washington, Wicomico, or Worcester counties.
Fuel Burning Equipment - Oil/Natural Gas	0.25	0.25	0.25	0.25	lb/MMBtu	26.11.09.08(B)(1)(c)	
Fuel Burning Equipment - Coal, dry bottom	0.38	0.38	0.38	0.38	lb/MMBtu	26.11.09.08(B)(1)(c)	
Fuel Burning Equipment - Coal, wet bottom	1	1	1	1	lb/MMBtu	26.11.09.08(B)(1)(c)	
EGU - Oil or Oil/Natural Gas	0.30	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, tangential	0.45	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, wall	0.50	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, tangential (high heat release)	0.70	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, wall (high heat release)	0.80	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, cell burners	0.60	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, cyclone (during ozone season)	0.70	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
EGU - Coal, cyclone (non-ozone season)	1.50	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
Non-EGU - All Fuels (during ozone season)	0.70	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
Non-EGU - All Fuels (non-onzone season)	0.99	NL	NL	NL	lb/MMBtu	26.11.09.08(C)(2)	
Fuel Burning Equipment - Coal <250 & >100 MMBtu/hr	NL	0.65	NL	NL	lb/MMBtu	26.11.09.08(D)(1)(a)	
Fuel Burning Equipment - Gas <250 & >100 MMBtu/hr	NL	0.2	NL	NL	lb/MMBtu	26.11.09.08(D)(1)(b)	
Fuel Burning Equipment - Oil/Gas <250 & >100 MMBtu/hr	NL	0.25	NL	NL	lb/MMBtu	26.11.09.08(D)(1)(b)	
Fuel Burning Equipment - Annual Tuning < 100 MMBtu/hr						26.11.09.08(E)(2)	
Equivalent Distillate Oil (assume 10% control from AP-42)	NL	NL	0.13	0.13	lb/MMBtu		
Equivalent Natural Gas (assume 10% control from AP-42)	NL	NL	0.09	0.09	lb/MMBtu		
Turbine - Natural Gas	42.00	42.00	42.00	42.00	ppmvd at 15% O_2	26.11.09.08(G)(2)	
Turbine - Oil	65.00	65.00	65.00	65.00	ppmvd at 15% O2	26.11.09.08(G)(2)	

[1] Provides for approval of less stringent alternative limits [26.11.09.08(B)(3)]

Unit	SO_2 Emission Limits by Size Size 1	Size 2	Size 3	Size 4	Units	Regulatory Citation	Applicability
Process Gas - Areas I, II, V, & VI	0.30	0.30	0.30	0.30	wt % sulfur	26.11.09.07(A)(1)	
Distillate Oil - All Areas	0.30	0.30	0.30	0.30	wt % sulfur	26.11.09.07(A)(1) & (2)	
Equivalent Distillate Oil (7.05 lb/gal, 140,000 Btu/gal)	0.30	0.30	0.30	0.30	lb SO2/MMBtu		
Residual Oil - Areas I, II, V, & VI	2.00	2.00	2.00	2.00	wt % sulfur	26.11.09.07(A)(1)	
Equivalent Residual Oil (7.88 lb/gal, 150,000 Btu/gal)	2.01	2.01	2.01	2.01	lb SO2/MMBtu		
Solid Fuels - Areas I, II, V, & VI	3.50	3.50	NL	NL	lb/MMBtu	26.11.09.07(A)(1)	Only applies if all fuel burning equipment at the facility combined ≥ 100 MMBtu/hr
Residual Oil - Areas III & IV	1.00	1.00	1.00	1.00	wt % sulfur	26.11.09.07(A)(2)	
Equivalent Residual Oil (7.88 lb/gal, 150,000 Btu/gal)	1.01	1.01	1.01	1.01	lb SO2/MMBtu		
Solid Fuels - Areas III & IV	1.00	1.00	1.00	1.00	wt % sulfur	26.11.09.07(A)(2)	
Equivalent Coal (14,000 BTU/lb)	1.4	1.4	1.4	1.4	lb SO2/MMBtu		
Solid Fuels - Areas III & IV	3.50	NL	NL	NL	lb SO2/MMBtu	26.11.09.07(B)(4)	Applies to existing cyclone type fuel burning equipment with heat inputs > 1,000 MMBtu/hr

Area I: The western area of the State comprising the counties of Allegany, Garrett, and Washington.
Area II: The central area of the State composed of Frederick County.
Area III: The Baltimore metropolitan area of the State comprising Baltimore City and the counties of Anne Arundel, Baltimore, Carroll, Harford, and Howard.
Area IV: The Washington metropolitan area of the State comprising the counties of Montgomery and Prince George's.
Area V: The southern area of the State comprising the counties of Calvert, Charles, and St. Mary's.
Area VI: The eastern shore area of the State comprising the counties of Caroline, Cecil, Dorchester, Kent, Queen Anne's, Somerset, Talbot, Wicomico, and Worcester.

Massachusetts Regulations Summary

Unit	NOx Emission Limits by Size[1] Size 1	Size 2	Size 3	Size 4	Units	Regulatory Citation	Applicability
Boiler - Natural Gas	0.20	0.20	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Oil or Oil/Natural Gas (Heat Release ≤ 70,000 BTU/hrs-ft^3)	NL	0.30	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Oil or Oil/Natural Gas (Heat Release > 70,000 BTU/hrs-ft^3)	NL	0.40	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Natural Gas, tangential	0.20	NL	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Oil or Oil/Natural Gas, tangential	0.25	NL	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Oil/Natural Gas, face	0.28	NL	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Solid fuel other than coal, stoker	0.33	0.33	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Coal, dry bottom - tangential	0.38	0.38	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Coal, dry bottom - face	0.45	0.45	NL	NL	lb/MMBtu	310 CMR 7.19(4)(a)	Effective 31-May-95
Boiler - Oil/Natural Gas, repowered	0.10	0.10	0.10	0.10	lb/MMBtu	310 CMR 7.19(4)(b)	Effective 31-May-95
Boiler - Solid fuel, dry bottom - face/tangential, repowered	0.20	0.20	0.20	0.20	lb/MMBtu	310 CMR 7.19(4)(b)	Effective 31-May-95
Boiler - Natural Gas, face/tangential	NL	NL	0.10	NL	lb/MMBtu	310 CMR 7.19(5)(a)	Effective 31-May-95
Boiler - Distillate Oil or Distillate Oil/Natural Gas, face/tangential	NL	NL	0.12	NL	lb/MMBtu	310 CMR 7.19(5)(a)	Effective 31-May-95
Boiler - Residual Oil or Residual Oil/Natural Gas, face/tangential [2]	NL	NL	0.30	NL	lb/MMBtu	310 CMR 7.19(5)(a)	Effective 31-May-95
Boiler - Solid Fuel, face/tangential/stoker	NL	NL	0.43	NL	lb/MMBtu	310 CMR 7.19(5)(a)	Effective 31-May-95
Fuel Burning Equipment - Annual Tuning < 50 & > 20 MMBtu/hr						310 CMR 7.19(6)(a)	Effective 31-May-95
Estimate Equivalent Distillate Oil (assume 10% control from AP-42)	NL	NL	NL	0.13	lb/MMBtu		
Estimate Equivalent Natural Gas (assume 10% control from AP-42)	NL	NL	NL	0.09	lb/MMBtu		
Boiler - new units after 9/14/2001 at Non-Title V Permitted Facilities < 40 & > 10 MMBtu/hr						310 CMR 7.26(30)	
Natural Gas	NL	NL	NL	0.035	lb/MMBtu		
Distillate Oil (max on oil: 90 Days/yr)	NL	NL	NL	0.150	lb/MMBtu		
Turbine - Natural Gas, combined cycle	42	42	42	42	ppmvd at 15% O_2	310 CMR 7.19(7)(a)	Effective 31-May-95
Turbine - Oil, combined cycle	65	65	65	65	ppmvd at 15% O_2	310 CMR 7.19(7)(a)	Effective 31-May-95
Turbine - Oil/Natural Gas, combined cycle	50	50	50	50	ppmvd at 15% O_2	310 CMR 7.19(7)(a)	Effective 31-May-95
Turbine - Natural Gas, simple cycle	65	65	65	65	ppmvd at 15% O_2	310 CMR 7.19(7)(a)	Effective 31-May-95
Turbine - Oil or Oil/Natural Gas, simple cycle	100	100	100	100	ppmvd at 15% O_2	310 CMR 7.19(7)(a)	Effective 31-May-95

[1] Provides for approval of less stringent alternative limits [310 CMR 7.19(4)(c)]

[2] Allows exhaust gas recirculation and oxygen control as compliance alternative to limit [310 CMR 7.19(5)(a)(2)(c)(ii)]

Unit	SO_2 Emission Limits by Size Size 1	Size 2	Size 3	Size 4	Units	Regulatory Citation	Applicability
Fossil Fuel - Berkshire APCD and remainder of Merrimack Valley APCD (1.21 lbs S /MMBtu)	2.42	2.42	2.42	2.42	lb SO2 /MMBtu	310 CMR 7.05(1)(a)	-
Fossil Fuel - City of Worcester, remainder of Central MAPCD, City of Lawrence, Towns of Andover, North Andover, and Methuen, remainder of Metropolitan Boston APCD, Pioneer Valley APCD, and Southeastern MAPCD (0.55 lb S /MMBtu)	1.1	1.1	1.1	1.1	lb SO2 /MMBtu	310 CMR 7.05(1)(a)	-
Fossil Fuel - Cities and Towns of Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Newton, Somerville, Waltham, and Watertown (0.28 lb S /MMBtu)	0.56	0.56	0.56	0.56	lb SO2 /MMBtu	310 CMR 7.05(1)(a)	-
Distillate Fuel Oil (0.17 lb S /MMBtu)	0.34	0.34	0.34	0.34	lb SO2 /MMBtu	310 CMR 7.05(1)(a)	-
Fossil Fuel (1.21 lb S /MMBtu)	2.42	2.42	NL	NL	lb SO2 /MMBtu	310 CMR 7.05(1)(b)	-
EGU located in the cities and towns of Arlington, Belmont, Boston, Brookline, Cambridge, Chelsea, Everett, Malden, Medford, Newton, Somerville, Waltham, and Watertown - Fossil Fuel (0.55 lb S /MMBtu)	1.1	NL	NL	NL	lb SO2 /MMBtu (for units > 2,500 MMBtu/hr)	310 CMR 7.05(1)(b)	-
Fuel Burning Equipment - Fossil Fuel (1.21 lbs S/MMBtu)	2.4	2.4	NL	NL	lb SO2 /MMBtu	310 CMR 7.22(1)	Effective 31-Dec-94
Boiler - new units after 9/14/2001 at Non-Title V Permitted Facilities < 40 & > 10 MMBtu/hr						310 CMR 7.26(30)	
Natural Gas	NL	NL	NL	0.0006	lb SO2 /MMBtu		
Distillate Oil (max on oil: 90 Days./yr, 0.05 wt. % sulfur)	NL	NL	NL	0.05	lb SO2 /MMBtu		

New Hampshire Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Utility Boiler - Coal, wet bottom - tangential/fac	1.00	1.00	1.00	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Coal, wet bottom - cyclone (< 320 MW	0.92	0.92	0.92	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Coal, wet bottom - cyclone (> 320 MW)[1]	1.40	1.40	1.40	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Coal, dry bottom - tangentia	0.38	0.38	0.38	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Coal, dry bottom - fac	0.50	0.50	0.50	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Coal, dry bottom - stoke	0.30	0.30	0.30	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Oil, tangential/fac	0.35	0.35	0.35	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Oil/Natural Gas, tangential/fac	0.25	0.25	0.25	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Natural Gas	0.20	0.20	0.20	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Wood or Wood/Oil, moving grat	0.33	0.33	0.33	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Boiler - Wood or Wood/Oil, stationary grat	0.25	0.25	0.25	NL	lb/MMBtu	Env-A 1211.03(c)	Effective 31-Dec-89
Utility Steam Electric, Auxiliary, & Industrial Boilers - > 50 & < 5 MMBtu/hr Annual Tuning	NL	NL	NL			Env-A 1211.03(b), 04(b), 05(c), & 12(b)	Effective 31-May-95
Equivalent Distillate Oil (assume 10% control from AP-42	NL	NL	NL	0.13	lb/MMBtu		
Equivalent Natural Gas (assume 10% control from AP-42	NL	NL	NL	0.09	lb/MMBtu		
Industrial/Steam Electric Boiler - Coal or Coal/Other, wet bottom - tangential/face	1.00	1.00	NL	NL	lb/MMBtu	Env-A 1211.04(d) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Coal or Coal/Other, wet bottom - cyclone	0.92	0.92	NL	NL	lb/MMBtu	Env-A 1211.04(d) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Coal or Coal/Oil, dry bottom - tangential	0.38	0.38	0.38	NL	lb/MMBtu	Env-A 1211.04(c), 4(d), 5(c) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Coal or Coal/Oil, dry bottom - face	0.50	0.50	0.50	NL	lb/MMBtu	Env-A 1211.04(c), 4(d), 5(c) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Coal or Coal/Oil, dry bottom - stoker	0.30	0.30	0.30	NL	lb/MMBtu	Env-A 1211.04(c), 4(d), 5(c) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Distillate Oil or Oil/Natural Gas on No. 2 Oil or Combination of Gas/Oil, tangential/face[2]	NL	NL	0.12	NL	lb/MMBtu	Env-A 1211.04(c) & 5(c)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Residual Oil or Oil/Natural Gas on Residual Oil or Combination Gas/Oil, tangential/face[2]	NL	NL	0.30	NL	lb/MMBtu	Env-A 1211.04(c) & 5(c)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Natural Gas or Oil/Natural Gas on Natural Gas, tangential/face[2]	NL	NL	0.10	NL	lb/MMBtu	Env-A 1211.04(c) & 5(c)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Oil, tangential/face[2]	0.30	0.30	NL	NL	lb/MMBtu	Env-A 1211.04(d) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Gas or any Combination Gas/Oil, tangential/face[2]	0.25	0.25	NL	NL	lb/MMBtu	Env-A 1211.04(d) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler- Natural Gas[2]	0.10	0.10	NL	NL	lb/MMBtu	Env-A 1211.04(d) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Wood or Wood/Oil, moving grate	0.33	0.33	0.33	NL	lb/MMBtu	Env-A 1211.04(c), 4(d), 5(c) & 5(d)	Effective 31-Dec-89
Industrial/Steam Electric Boiler - Wood or Wood/Oil, stationary grate	0.25	0.25	0.25	NL	lb/MMBtu	Env-A 1211.04(c), 4(d), 5(c) & 5(d)	Effective 31-Dec-89
Auxillary Boiler - All Fuels	0.20	0.20	0.20	NL	lb/MMBtu	Env-A 1211.12(c)	Effective 31-Dec-89
Turbine - Natural Gas, combined or regenerative cycle	42 / 0.155	42 / 0.155	42 / 0.155	42 / 0.155	ppmvd at 15% O_2 / lb/MMBtu	Env-A 1211.06(c)	Effective 31-Dec-89
Turbine - Oil, combined or regenerative cycle	65 / 0.253	65 / 0.253	65 / 0.253	65 / 0.253	ppmvd at 15% O_2 / lb/MMBtu	Env-A 1211.06(c)	Effective 31-Dec-89
Turbine - Natural Gas, simple cycle	55 / 0.203	55 / 0.203	55 / 0.203	55 / 0.203	ppmvd at 15% O_2 / lb/MMBtu	Env-A 1211.06(c)	Effective 31-Dec-89
Turbine - Oil, simple cycle	75 / 0.292	75 / 0.292	75 / 0.292	75 / 0.292	ppmvd at 15% O_2 / lb/MMBtu	Env-A 1211.06(c)	Effective 31-Dec-89
Turbine - Natural Gas	25 / 0.092	25 / 0.092	25 / 0.092	25 / 0.092	ppmvd at 15% O_2 / lb/MMBtu	Env-A 1211.06(c)	Post 27-May-99

[1] Or alternatively, install SNCR or equivalent [Env-A 1211.03(c)(1)(b)(2)]

[2] Or alternatively, install LNB or equivalent [Env-A 1211.053(c)(2), (c)(3), (c)(4), (d)(3) & (d)(4)]

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
No. 2 Oil and JP-4 aviation fuel (Limit: 0.4 wt. % Sulfur)	0.40	0.40	0.40	0.40	lb SO2 /MMBtu	Env-A 1604.01(a)	Effective 23-Apr-05
No. 4 Oil (Limit 1.0 wt. % Sulfur)	1.03	1.03	1.03	1.03	lb SO2 /MMBtu	Env-A 1604.01(b)	Effective 23-Apr-05
No. 5, 6, and crude Oils - Coos County (Limit: 2.2 wt. % sulfur)	2.31	2.31	2.31	2.31	lb SO2 /MMBtu	Env-A 1604.01(c)	Effective 23-Apr-05
No. 5, 6, and crude Oils - Remainder of State (Limit: 2.0 wt. % sulfur	2.10	2.10	2.10	2.10	lb SO2 /MMBtu	Env-A 1604.01(c)	Effective 23-Apr-05
Jet A, A-1, B, and JP-8 aviation fuels (Limit: 0.3 wt. % Sulfur)	0.30	0.30	0.30	0.30	lb SO2 /MMBtu	Env-A 1604.01(f)	Effective 23-Apr-05
Gaseous Fuels (Limit: 15 grains/100 scf)	0.04	0.04	0.04	0.04	lb SO2 /MMBtu	Env-A 1605.01	Effective 23-Apr-05
Coal (Max 2.8 lbs S/MMBtu; 3-mon ave 2.0 lbs S/MMBtu)	4.0	4.0	4.0	4.0	lb SO2 /MMBtu, (3-month)	Env-A 1606.01(a)	Device in Operation before 15-Apr-70
Coal (Max 1.5 lbs S/MMBtu; 3-mon ave 1.0 lbs S/MMBtu)	2.0	2.0	2.0	2.0	lb SO2 /MMBtu (3-month)	Env-A 1606.01(b)	Device in Operation after 15-Apr-70

New Jersey Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Utility Boiler - Coal, wet bottom - tangential/face[1]	1.00	1.00	1.00	1.00	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Coal, wet bottom - cyclone[1]	0.60	0.60	0.60	0.60	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Coal, dry bottom - tangential[1]	0.38	0.38	0.38	0.38	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Coal, dry bottom - face[1]	0.45	0.45	0.45	0.45	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Coal, dry bottom - cyclone[1]	0.55	0.55	0.55	0.55	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Oil and/or Gas, tangential[1]	0.20	0.20	0.20	0.20	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Oil and/or Gas, face[1]	0.28	0.28	0.28	0.28	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Oil and/or Gas, cyclone[1]	0.43	0.43	0.43	0.43	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Gas only, tangential/face[1]	0.20	0.20	0.20	0.20	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Utility Boiler - Gas only, cyclone[1]	0.43	0.43	0.43	0.43	lb/MMBtu	7:27-19.4(a)	6-Jun-00
Gas Turbine - Oil, stationary simple cycle[2]	0.40	0.40	0.40	0.40	lb/MMBtu	7:27-19.5(a)	6-Jun-00
Gas Turbine - Gas, stationary simple cycle[2]	0.20	0.20	0.20	0.20	lb/MMBtu	7:27-19.5(a)	6-Jun-00
Gas Turbine - Oil, stationary combined or regenerative cycle[2]	0.35	0.35	0.35	0.35	lb/MMBtu	7:27-19.5(b)	6-Jun-00
Gas Turbine - Gas, stationary combined or regenerative cycle[2]	0.15	0.15	0.15	0.15	lb/MMBtu	7:27-19.5(b)	6-Jun-00
Non-Utility Boiler - Coal, wet bottom - tangential/face[3]	1.00	1.00	1.00	1.00	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Coal, wet bottom - cyclone[3]	0.60	0.60	0.55	0.55	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Coal, dry bottom - tangential[3]	0.38	0.38	0.38	0.38	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Coal, dry bottom - face[3]	0.45	0.45	0.43	0.43	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Coal, dry bottom - cyclone[3]	0.55	0.55	0.55	0.55	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - No. 2 Oil, tangential/face/cyclone[3]	NL	NL	0.12	0.12	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Other Liquid Fuels, tangential/face/cyclone[3]	NL	NL	0.30	0.30	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Refinery Fuel Gas, tangential/face/cyclone[3]	0.20	0.20	0.20	0.20	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Natural Gas, tangential/face[3]	0.10	0.10	0.10	0.10	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Natural Gas, cyclone[3]	0.10	0.10	0.10	0.10	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Oil and/or Gas, tangential[3]	0.20	0.20	NL	NL	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Oil and/or Gas, face[3]	0.28	0.28	NL	NL	lb/MMBtu	7:27-19.7(h)	7-Mar-07
Non-Utility Boiler - Oil and/or Gas, cyclone[3]	0.43	0.43	NL	NL	lb/MMBtu	7:27-19.7(h)	7-Mar-07

[1] Alternative limits can be authorized including provisions for emission averaging and fuel switching [7:27-19.4(a)]

[2] Alternative limits can be authorized including provisions for emission averaging and fuel switching [7:27-19.5(a) & 5(b)]

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - No. 2 Oil, Zones 1, 2, & 5	0.32	0.32	0.32	0.32	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 2 Oil, Zones 3, 4, & 6	0.21	0.21	0.21	0.21	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 4 Oil, Zone 1	2.10	2.10	2.10	2.10	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 4 Oil, Zones 2 & 5	0.74	0.74	0.74	0.74	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 4 Oil, Zones 3, 4, & 6	0.32	0.32	0.32	0.32	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 5, 6, & heavier oils, Zone 1	2.10	2.10	2.10	2.10	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 5, 6, & heavier oils, Zones 2 & 5	1.05	1.05	1.05	1.05	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 5, 6, & heavier oils, Zone 3	0.53	0.53	0.53	0.53	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78
Fuel Burning Equipment - No. 5, 6, & heavier oils, Zones 4 & 6	0.32	0.32	0.32	0.32	lb SO2/MMBtu	7:27-9.2(c)	12-Oct-78

Zone 1: Atlantic, Cape May, Cumberland, and Ocean Counties.
Zone 2: Hunterdon, Sussex, and Warren Counties.
Zone 3: Burlington, Camden, Gloucester, and Mercer Counties except those municipalities included in Zone 6.
Zone 4: Bergen, Essex, Hudson, Middlesex, Monmouth, Morris, Passaic, Somerset, and Union Counties.
Zone 5: Salem County.
Zone 6: Burlington County, the municipalities of Bass River Township, Shamong Township, Southampton Township, Tabernacle Township, Washington Township, Woodland Township, and in Camden County, Waterford Township.

New York Regulations Summary

Unit	NOx Emission Limits by Size[1]				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Boilers - Gas only	0.20	0.20	0.10	NL	lb/MMBtu	227-2.4(a)(1), (b)(1), & (c)(2)	11-Feb-04
Boilers - Gas/Oil - Tangential/Wall Fired	0.25	0.30	NL	NL	lb/MMBtu	227-2.4(a)(1) & (b)(1)	11-Feb-04
Boilers - Gas/Oil - Cyclone	0.43	0.30	NL	NL	lb/MMBtu	227-2.4(a)(1) & (b)(1)	11-Feb-04
Boilers - Distillate Oil	NL	NL	0.12	NL	lb/MMBtu	227-2.4(c)(2)	11-Feb-04
Boilers - Residual Oil	NL	NL	0.3	NL	lb/MMBtu	227-2.4(c)(2)	11-Feb-04
Boilers - Coal - Tangential/Wall Fired, wet bottom	1.00	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Coal - Cyclone, wet bottom	0.60	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Coal - Tangential Fired, dry bottom	0.42	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Coal - Wall Fired, dry bottom	0.45	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Coal - Stoker, dry bottom	0.30	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Coal - Stoker, dry bottom w/ 25% or more other fuels	0.33	NL	NL	NL	lb/MMBtu	227-2.4(a)(1)	11-Feb-04
Boilers - Pulverized Coal	NL	0.50	NL	NL	lb/MMBtu	227-2.4(b)(1)	11-Feb-04
Boilers - Coal - Overfeed Stoker	NL	0.30	NL	NL	lb/MMBtu	227-2.4(b)(1)	11-Feb-04
Boilers - Coal - Overfeed Stoker w/ 25% or more other fuels	NL	0.33	NL	NL	lb/MMBtu	227-2.4(b)(1)	11-Feb-04
Boilers - Annual Tuning > 10 & < 50 MMBtu/hr						227-2.4(d)	11-Feb-04
Equivalent Distillate Oil (assume 10% control from AP-42)	NL	NL	NL	0.13	lb/MMBtu		
Equivalent Natural Gas (assume 10% control from AP-42)	NL	NL	NL	0.09	lb/MMBtu		
Combustion Turbine - Gas Only, simple cycle/regenerative	50	50	50	50	ppmvd	227-2.4(e)(1)(i)	11-Feb-04
Combustion Turbine - Multiple Fuels, simple cycle/regenerative	100	100	100	100	ppmvd	227-2.4(e)(1)(ii)	11-Feb-04
Combustion Turbine - Gas, combined cycle	42	42	42	42	ppmvd	227-2.4(e)(2)(i)	11-Feb-04
Combustion Turbine - Oil, combined cycle	65	65	65	65	ppmvd	227-2.4(e)(2)(ii)	11-Feb-04

[1] Alternative limits can be set thru case-by-case RACT determinations [227-2.4]

Unit	SO_2 Emission Limits by Size[1]				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - Oil (Limit: 0.75 wt. % S)	0.76	NL	NL	NL	lb SO2/MMBtu	225-1.2(a)(1)	Units constructed after 3-Mar-73, not located in New York City, or Nassau, Rockland, or Westchester Counties
Fuel Burning Equipment - Coal (Limit: 0.6 lb S/MMBtu)	1.20	NL	NL	NL	lb SO2/MMBtu	225-1.2(a)(1)	Units constructed after 3-Mar-73, not located in New York City, or Nassau, Rockland, or Westchester Counties
Residual Oil - New York City (Limit: 0.3 wt. % S)	0.32	0.32	0.32	0.32	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Distillate Oil - New York City (Limit: 0.2 wt. % S)	0.20	0.20	0.20	0.20	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Coal - New York City, Nassau, Rockland, & Westchester Counties (Limit: 0.2 lbs S/MMBtu)	0.40	0.40	0.40	0.40	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Oil - Nassau, Rockland, & Westchester Counties (Limit 0.37 wt. % S)	0.37	0.37	0.37	0.37	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Oil - Suffolk County: Town of Babylon, Brookhaven, Huntington, Islip, & Smith Town (Limit: 1 wt. % S)	1.0	1.0	1.0	1.0	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Coal - Suffolk County: Town of Babylon, Brookhaven, Huntington, Islip, & Smith Town (Limit: 0.6 lbs S/MMBtu)	1.2	1.2	1.2	1.2	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Oil - Erie County: City of Lackawana & South Buffalo (Limit: 1.1 wt. % S)	1.1	1.1	1.1	1.1	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Coal - Niagara County & Erie County (Limit: 3-month average 1.4 lbs S/MMBtu)	2.8	2.8	2.8	2.8	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Oil - Niagara County, Remainder of Erie County, and Remainder of State (Limit: 1.5 wt. % S)	1.5	1.5	1.5	1.5	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88
Coal - Remainder of State Limit: annual ave. 1.7 lbs S/MMBtu)	3.4	3.4	3.4	3.4	lb SO2/MMBtu	225-1.2(d)	Effective after 1-Jan-88

1 Allows alternative limits based on "impact offset plans" (bubble) for two or more units at same facility with > 100 tons/yr emissions or 50 MW or capacity [225-1.3]

Pennsylvania Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Boiler - NG or non-commercial gas	NL	0.10	NL	NL	lb/MMBtu	129.201(c)(1)(i)	1-May-05, for boilers located in Bucks, Chester, Delaware, Montgomery or Philadelphia County
Boiler - Solid or Liquid Fuel	NL	0.20	NL	NL	lb/MMBtu	129.201(c)(1)(ii)	1-May-05, for boilers located in Bucks, Chester, Delaware, Montgomery or Philadelphia County
Boiler - All fuels	0.17	NL	NL	NL	lb/MMBtu	129.201(c)(2)	1-May-05, for boilers located in Bucks, Chester, Delaware, Montgomery or Philadelphia County and not subject to NOx Budget Rules

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Combustion Units - All Fuels	4.0	4.0	4.0	4.0	lb SO2/MMBtu, 1-hr period	123.22(a)(1), 123.22(b)(1)	Nonair basin areas, Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins
Combustion Units - No. 2 Oil & lighter fuel oils (Limit: 0. wt. % S)	0.50	0.50	0.50	0.50	lb SO2/MMBtu	123.22(a)(2)	Nonair basin areas
Combustion Units - No. 4, 5, 6, & heavier fuel oils (Limit 2.8 wt. % S)	2.9	2.9	2.9	2.9	lb SO2/MMBtu	123.22(a)(2), 123.22(b)(2)*	Nonair basin areas, Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins
Combustion Units - Solid Fuels	3.7	NL	NL	NL	lb SO2/MMBtu, 30-day running avg.	123.22(a)(4)(iii), 123.22(b)(4)(iii)	Nonair basin areas, Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins
Combustion Units - Solid Fuels	4.0	NL	NL	NL	lb SO2/MMBtu, daily avg not exceeding 2-days in any 30-day period	123.22(a)(4)(iii), 123.22(b)(4)(iii)	Nonair basin areas, Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins
Combustion Units - Solid Fuels	4.8	NL	NL	NL	lb SO2/MMBtu, maximum daily avg.	123.22(a)(4)(iii), 123.22(b)(4)(iii)	Nonair basin areas, Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins
Combustion Units - No. 2 Oil & lighter fuel oils (Limit: 0. wt. % S)	0.30	0.30	0.30	0.30	lb SO2/MMBtu	123.22(b)(2)*, 123.22(c)(2)*	Erie, Harrisburg, York, Lancaster, Scranton, and Wilkes-Barre air basins + Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - All Fuels	3.0	3.0	3.0	3.0	lb SO2/MMBtu, 1-hr period	123.22(c)(1)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - No. 4, 5, 6, & heavier fuel oils (Limit: 2 wt. % S)	2.1	2.1	2.1	2.1	lb SO2/MMBtu	123.22(c)(2)*	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - Solid Fuels	2.8	NL	NL	NL	lb SO2/MMBtu, 30-day running avg.	123.22(c)(4)(iii)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - Solid Fuels	3.0	NL	NL	NL	lb SO2/MMBtu, daily avg not exceeding 2-days in any 30-day period	123.22(c)(4)(iii)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - Solid Fuels	3.6	NL	NL	NL	lb SO2/MMBtu, maximum daily avg.	123.22(c)(4)(iii)	Allentown, Bethlehem, Easton, Reading, Upper Beaver Valley, and Johnstown air basins
Combustion Units - All Fuels	0.6 (Boilers ≥ 2000 MMBtu/hr) or Formula:A=1.7xE-0.14 E=heat input (MMBtu/hr)	Formula:A=1.7x$E^{0.14}$ E=heat input (MMBtu/hr)	Formula:A=1.7x$E^{0.14}$ E=heat input (MMBtu/hr)	1.0	lb SO2/MMBtu	123.22(d)(1), (2), & (3)	Allegheny County, Lower Beaver Valley, and Monongahela Valley air basins
Combustion Units - All Fuels	0.60 / 1.20	1.00 / 1.20	1.00 / 1.20	1.00 / 1.20	lb SO2/MMBtu (Inner Zone / Outer Zone)	123.22(e)(1)	Southeast Pennsylvania air basin
Combustion Units - No. 2 Oil & lighter fuel oils (Limits 0.2/0.3 wt. % S)	0.20 / 0.30	0.20 / 0.30	0.20 / 0.30	0.20 / 0.30	lb SO2/MMBtu (Inner Zone / Outer Zone)	123.22(e)(2)	Southeast Pennsylvania air basin
Combustion Units - No. 4, 5, 6, & heavier fuel oils (Limits 0.5/1.0 wt. % S)	0.53 / 1.1	0.53 / 1.1	0.53 / 1.1	0.53 / 1.1	lb SO2/MMBtu (Inner Zone / Outer Zone)	123.22(e)(2)	Southeast Pennsylvania air basin
Combustion Units - Noncommercial fuel	0.60 / 1.2	0.60 / 1.2	0.60 / 1.2	0.60 / 1.2	lb SO2/MMBtu (Inner Zone / Outer Zone)	123.22(e)(3)	Southeast Pennsylvania air basin
Combustion Units - Solid Fuels	0.45 / 0.90	0.75 / 0.90	0.75 / 0.90	0.75 / 0.90	lb SO2/MMBtu, 30-day running avg. (Inner Zone / Outer Zone)	123.22(e)(5)(iii)	Southeast Pennsylvania air basin
Combustion Units - Solid Fuels	0.60 / 1.2	1.0 / 1.2	1.0 / 1.2	1.0 / 1.2	lb SO2/MMBtu, daily avg not exceeding 2-days in any 30-day period (Inner Zone / Outer Zone)	123.22(e)(5)(iii)	Southeast Pennsylvania air basin
Combustion Units - Solid Fuels	0.72 / 1.44	1.2 / 1.44	1.2 / 1.44	1.2 / 1.44	lb SO2/MMBtu, maximum daily avg. (Inner Zone / Outer Zone)	123.22(e)(5)(iii)	Southeast Pennsylvania air basin

* Effective Date: August 1, 1979

Rhode Island Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
ICI Boilers - Natural Gas	0.10	0.10	0.10	NL	lb/MMBtu	27.4.2(a)(1)	1-Jan-1990, with potential to emit 50 tpy NOx
ICI Boilers - Distillate Oil or LPG	0.12	0.12	0.12	NL	lb/MMBtu	27.4.2(a)(2)	1-Jan-1990, with potential to emit 50 tpy NOx
ICI Boilers - Residual Oil > 50 MMBtu/hr - FGR and LNB						27.4.2(b)	
Equivalent Residual Oil (assum 30% control, emissions from AP-42)	0.26	0.26	0.26	NL	lb/MMBtu		
Boiler - Annual Tuning < 50 MMBtu/hr						27.4.2(c)	
Distillate Oil (assume 10% control from AP-42)	NL	NL	NL	0.13	lb/MMBtu		
Natural Gas (Assume 10% control from AP-42)	NL	NL	NL	0.09	lb/MMBtu		
Utility Boilers - Natural Gas or LPG	0.20	0.2	0.2	0.2	lb/MMBtu	27.4.1(a)	1-Jan-1990, with potential to emit 50 tpy NOx
Utility Boilers - Fuel Oil	0.25	0.25	0.25	0.25	lb/MMBtu	27.4.1(b)	1-Jan-1990, with potential to emit 50 tpy NOx

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - All fuels	1.10	1.1	1.1	1.1	lb SO2/MMBtu	8.3.1	1-Oct-71
Fuel Burning Equipment - Coal (Limit: 1.21 lb S/MMBtu)	2.42	NL	NL	NL	lb SO2/MMBtu, 30-day period	8.3.4.1(a) & (b)	1-Oct-71
Fuel Burning Equipment - Coal (lLimit: 2.31 lb S/MMBtu)	4.62	NL	NL	NL	lb SO2/MMBtu, 24-hr period	8.3.4.1(a) & (b)	1-Oct-71

Vermont Regulations Summary

Unit	NOx Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - Gaseous fossil fuel	0.20	NL	NL	NL	lb/MMBtu	5-251(1)(a)	-
Fuel Burning Equipment - Liquid fossil fuel	0.30	NL	NL	NL	lb/MMBtu	5-251(1)(b)	-
Fuel Burning Equipment - Solid fossil fuel	0.70	NL	NL	NL	lb/MMBtu	5-251(1)(c)	-

Unit	SO_2 Emission Limits by Size				Units	Regulatory Citation	Applicability
	Size 1	Size 2	Size 3	Size 4			
Fuel Burning Equipment - Liquid fossil fuel	0.80	NL	NL	NL	lb SO2/MMBtu	5-252(1)(a)	-
Fuel Burning Equipment - Solid fossil fuel	1.20	NL	NL	NL	lb SO2/MMBtu	5-252(1)(b)	-

Region	FACode	Proj#	TempP#	AQCd	Rte/Sys	Town	Description	Phase	Year	Tot$(000)	Fed$(000)	Sta$(000)	Loc$(000)
02	STPT	0018-H017		X2	STILL RIVER	BROOKFIELD	STILL RIVER MULTI-USE TRAIL.	PE	2007	60	48	12	0
02	STPT	0018-H017		X2	STILL RIVER	BROOKFIELD	STILL RIVER MULTI-USE TRAIL.	ROW	2007	15	12	3	0
05	STPT	0025-0135		X2	CORNWALL AVE	CHESHIRE	EXTENTION OF THE FARMINGTON CANAL LINEAR TRAIL.	CON	2007	397	318	0	79
01	STPT	0035-0179		X2	HOLLY POND	DARIEN	TIDAL WETLAND RESTORATION OF HOLLY POND BY REMOVING SED & INSTALLING SED TRAP.	PE	2007	400	200	200	0
06	STPT	0036-HXX2	0036-HXXX	X2	DERBY GREENWAY	DERBY	CONSTTRUCT PHASE III OF GREENWAY TRAIL.	CON	2007	1,840	1,472	0	368
10	STPT	0048-0184		X2	CT 190	ENFIELD	TRANSPORTATION ENHANCEMENT PROJ, CT 190 MULTI-USE TRAIL ENFIELD/SUFFIELD.	CON	2007	1,050	840	210	0
13	STPT	0058-H041		X2	THOMAS RD	GROTON	CONSTN OF PEDESTRIAN/BICYCLE FACILITY ALONG THOMAS RD.	ROW	2007	35	28	7	0
08	STPT	0059-H031		X2	GREEN	GUILFORD	GUILFORD GREEN PEDESTRIAN CROSSWALK IMPROVEMENTS.	CON	2007	220	176	44	0
10	STPT	0063-0632		X2	PARK STREET	HARTFORD	STREETSCAPE IMPROVEMENTS ALONG PARK ST.	CON	2007	3,000	1,200	0	1,800
15	STPT	0068-0194		X2	QUINEBAUG RIV	KILLINGLY	QUINEBAUG RIVER TRAIL, PHASE III.	CON	2007	1,650	1,320	0	330
10	STPT	0076-H050		X2		MANCHESTER	CHARTER OAK GREENWAY EXTENSION.	ROW	2007	71	57	0	14
14	STPT	0077-H052		X2	STORRS RD	MANSFIELD	DOWNTOWN STREETSCAPE IMPROVEMENTS.	ROW	2007	50	40	0	10
05	STPT	0087-H016		X2		NAUGATUCK	NAUGATUCK RIVER PEDESTRIAN & BICYCLE GREENWAY.	PE	2007	120	96	0	24
02	STPT	0116-H013		X2	CT 57	REDDING	STREETSCAPE ENHANCEMT & PEDESTRIAN ACCESS IN GEORGETOWN VILLAGE CTR.	PE	2007	243	0	0	243
01	STPT	0135-H074		X2	VARIOUS	STAMFORD	URBAN TRANSITWAY PHASE I PEDESTRIAN AND BICYCLE ELEMENTS.	CON	2007	2,100	1,680	0	420
07	STPT	0144-0169		X2	PEQUONNOCK TRAIL	TRUMBULL-BRIDGEPORT	CONSTRUCT TRAIL TO EXTEND THE PEQUONNOCK VALLEY RAIL TRAIL THRU TRUMBULL & INTO BRIDGEPORT TO CROWN ST.	CON	2007	189	151	0	38
08	STPT	0156-0159		X2	OLD FIELD CREEK	WEST HAVEN	RESTORE WETLANDS & FLOODING UNDER BEACH ST VIA TIDE GATE ADJMT, INITIATED BY DEP.	CON	2007	710	568	0	142
04	STPT	0162-H027		X2	MAIN ST	WINCHESTER	MAIN ST STREETSCAPE ENHANCEMENTS, PHASE II.	PE	2007	164	131	0	33
70	STPT	0170-E127		X2	VARIOUS	STATEWIDE	STP ENHANCEMENT PROGRAM DESIGN ACTIVITIES - AC CONV.	PE	2007	600	480	120	0
									2007 Total	13,226	9,067	614	3,545
05	STPT	0006-H009		X2		BEACON FALLS	MULTI-USE BICYCLE/PEDESTRIAN FACILITY ALONG NAUGATUCK RIVER.	CON	2008	573	538	35	0
08	STPT	0014-0152		X2	SYBIL CREEK	BRANFORD	REPLACE CONVENTIONAL TIDE GATES AT CT 146 WHICH DEGRADE ADJ WETLANDS, INITIATED BY DEP.	CON	2008	476	381	0	95
01	STPT	0035-0179		X2	HOLLY POND	DARIEN	TIDAL WETLAND RESTORATION OF HOLLY POND BY REMOVING SED & INSTALLING SED TRAP.	CON	2008	400	200	200	0
13	STPT	0058-H041		X2	THOMAS RD	GROTON	CONSTN OF PEDESTRIAN/BICYCLE FACILITY ALONG THOMAS RD.	CON	2008	465	372	93	0
10	STPT	0076-H050		X2		MANCHESTER	CHARTER OAK GREENWAY EXTENSION.	CON	2008	1,029	823	0	206
14	STPT	0077-H052		X2	STORRS RD	MANSFIELD	DOWNTOWN STREETSCAPE IMPROVEMENTS.	CON	2008	1,417	1,133	0	283
05	STPT	0087-H016		X2		NAUGATUCK	NAUGATUCK RIVER PEDESTRIAN & BICYCLE GREENWAY.	CON	2008	1,130	904	0	226
10	STPT	0128-0147	0128-H030	X2	RAILBED	SIMSBURY	DESIGN AND CONSTRUCTION OF APPROX. 1650 FT. OF BICYCLE/PEDESTRIAN FACILITY.	CON	2008	1,088	870	0	218
07	STPT	0144-H025		X2	PEQUONNOCK TRAIL	TRUMBULL-BRIDGEPORT	PEQUONNOCK VALLEY TO THE SOUND RAILS TO TRAILS.	CON	2008	1,873	1,499	0	375
04	STPT	0162-H027		X2	MAIN ST	WINCHESTER	MAIN ST STREETSCAPE ENHANCEMENTS, PHASE II.	ROW	2008	25	20	0	5
									2008 Total	8,475	6,740	328	1,408
09	STPT	0007-H022		X2	RR STATION	BERLIN	BERLIN RR STATION ENHANCEMENT OF SITE AND FACILITY.	CON	2009	1,625	1,300	0	325
02	STPT	0018-H017		X2	STILL RIVER	BROOKFIELD	STILL RIVER MULTI-USE TRAIL.	CON	2009	613	490	123	0
02	STPT	0116-H013		X2	CT 57	REDDING	STREETSCAPE ENHANCEMT & PEDESTRIAN ACCESS IN GEORGETOWN VILLAGE CTR.	CON	2009	778	622	0	156
04	STPT	0162-H027		X2	MAIN ST	WINCHESTER	MAIN ST STREETSCAPE ENHANCEMENTS, PHASE II.	CON	2009	1,269	1,015	0	254
									2009 Total	4,285	3,427	123	735
13	TCSP	0058-0294		X2	US 1	GROTON	PHASE 2 OF GROTON/MYSTIC STREETSCAPE PROJECT.	CON	2007	873	873	0	0
08	TCSP	0092-0589	0092-H126	X2	FARMINTON CANAL GREENWAY	NEW HAVEN	DESIGN & CONSTRUCT 2300 FT MULTI PURPOSE TRAIL SEGMENT.	PE	2007	248	248	0	0
									2007 Total	1,121	1,121	0	0
08	TI	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2007	26,233	23,610	2,623	0
									2007 Total	26,233	23,610	2,623	0
08	TI	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2008	12,213	10,625	1,588	0
									2008 Total	12,213	10,625	1,588	0
08	TI	0092-0532		M	I-95	NEW HAVEN	I-95 - "Q" BRIDGE REPLACEMENT & DEMOLITION - AC CONV.	CON	2009	9,770	8,500	1,270	0
									2009 Total	9,770	8,500	1,270	0
									Grand Totals:	4,417,829	3,330,066	1,043,103	44,659
									Less FYI Totals:	-814,420	-692,301	-117,334	-4,784
									2007 STIP Totals:	3,603,409	2,637,765	925,769	39,875

Appendix 8A

A Modeling Protocol for the OTC SIP Quality Modeling System for Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region

A Modeling Protocol for the OTC SIP Quality Modeling System for Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region

December 31, 2006

The Modeling Committee of the
Ozone Transport Commission

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APPENDIX A: Workgroups for the Development and Application of the OTC SIP Quality Modeling System For Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region

APPENDIX B: Work Plan for the Development and Application of the OTC SIP Quality Modeling System For Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region

1 STUDY DESIGN

1.1 Background

Moderate non-attainment areas in the Ozone Transport Region (OTR) are required to attain the 8-hour ozone NAAQS by 2010. Modeled or monitored attainment is based on the summer ozone season preceding 2010, so the target year for attainment modeling is 2009 for moderate non-attainment areas. The Ozone Transport Commission (OTC) has embarked on the task of preparing a State Implementation Plan (SIP) ozone modeling system for exercising photochemical grid model(s) to assess the impact of candidate ozone control strategies in moderate and serious non-attainment areas in the OTR. The OTC Directors endorsed the Modeling Protocol for the OTC SIP Quality Modeling System For Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region at the November 12-13, 2003 Fall meeting of the OTC. The subject protocol has been modified since then to incorporate CMAQ model modifications and emission inventory improvements.

This modeling protocol outlines procedures to prepare and use the OTC SIP ozone modeling system to help design an ozone attainment strategy to attain the ozone 8-hour NAAQS in the OTR. Emission inventories for point, area, on–road and off-road sources of NO_x, VOC and CO will be developed for a base year of 2002. BEIS3 will be used to estimate biogenic emissions. MM5 will be used at a 12 km grid resolution and, in the photochemical grid model, 4 km grid cells will be nested in urban areas where appropriate. A model performance evaluation will be prepared for 2002. If model performance is satisfactory, emission input files reflecting candidate control strategy scenarios for 2009 will be prepared, and 2009 ozone levels will be simulated with the modeling system. OTC States with moderate and serious non-attainment areas will then use these modeling results to help support required ozone attainment demonstrations. However, it has become apparent that modeling at a higher resolution than 12 km is not possible without improvements in the modeling system in terms of the physical and chemical formulation as well as the need for development of emissions estimates at spatial resolutions higher than county-level estimates.

1.2 Objective

The New York Department of Environmental Conservation has agreed to be the lead agency for developing a SIP quality ozone modeling system for assessing the future year attainment of the ozone 8-hour NAAQS in the OTR. The CMAQ model will be used to evaluate the effectiveness of control strategies in the OTR Modeling Domain. The regulatory objective will be to design an ozone control strategy that will result in attainment of the 8-hour ozone NAAQS in moderate non-attainment areas by 2009.

1.3 Photochemical Modeling System

The OTC Modeling Committee in its prior work exercised both CMAQ and CAMx and noticed that even though these models had performed similarly in estimating ozone on an over-all basis, the level of agreement between the simulated and measured concentrations varied from good to bad depending on the model and depending upon the simulation day. So, as part of this protocol, both models (which continue to be updated by their developers) will be applied for an episode that occurred in 2002. However, it was soon recognized that there was a need for application of a *one-atmosphere* modeling system that would provide estimates of both ozone and particulate matter and that the same base year emissions and meteorological data would be utilized in the development of appropriate SIPs. This together with USEPA's launching of the CMAS center that provides a venue for sharing information from other modelers led the OTC modeling committee to select the CMAQ model for application in its SIP Quality Ozone Modeling System for testing the effectiveness of proposed control strategies in the OTR.

The OTC Modeling Committee also examined the performances of two emissions processors (EMS2001 and SMOKE, both using CB4 chemistry) from prior work and concluded that there are differences between them that could be minimized by forcing the models to use a common speciation and surrogate database. Since CMAQ was the air quality model of choice, given that it handled inputs from SMOKE more readily than it did from the EMS2001 processor, the SMOKE emission processor was selected for constructing emission files for the SIP Quality Ozone Modeling System for the OTR Domain.

1.4 Deliverables

The key deliverables for the SIP quality ozone modeling system for the OTR are listed below.

- Select Ozone Episodes
- Prepare Meteorological Fields
- Prepare 2002 Emission Inventories for each OTC State
- Acquire 2002 Emission Inventories for non-OTC States in the OTR Domain
- Prepare 2002 Emission Input Files for the OTR Domain
- Complete 2002 Model Performance Evaluation for the OTR Domain
- Prepare 2009 CAA Emission Inventories for each OTC State
- Acquire 2009 CAA Emission Inventories for non-OTC States in the OTR Domain
- Prepare 2009 CAA Emission Input Files for the OTR Domain
- Complete Modeling Runs for 2009 CAA Scenarios
- Design Control Strategy for the OTR Modeling Domain.
- Prepare 2009 Emission Input Files for OTR Control Strategy
- Complete Modeling Runs for the OTR Control Strategy for 2009
- Complete Evaluation Report for 2009 Control Strategy

1.5 Schedule

The schedule for developing the SIP quality modeling system and the assessment of the ozone NAAQS in the Ozone Transport Region is provided in Appendix A. Because of delays encountered in developing, integrating and processing state-of-the-art emission inventories from Regional Planning Organizations in the MANE-VU modeling domain, schedule target dates have been moved back approximately 9 months (complete Modeling TSD report in March of 2007 instead of June of 2006).

2 MANAGEMENT STRUCTURE

2.1 OTR Oversight Committee (Appendix B)

OTC Air Directors will serve as the OTR Oversight Committee. The Air Directors will ensure that 2002 and 2009 CAA emission inventories are prepared for each OTC state in the OTR Modeling Domain, and will also be responsible for obtaining emission inventories for the non OTR States that are part of the OTR Modeling Domain. The Air Directors will oversee the design of ozone control strategies for the OTR, and will make the final decision on any funding needed to develop the OTC SIP Quality Modeling System. The Air Directors will review all OTC SIP Quality Modeling System documentation before it is released to interested parties. The state members of the OTC Modeling Committee will keep Air Directors informed of the development of the OTC SIP Quality Modeling System.

2.2 OTR Photochemical Modeling Workgroup (Appendix B)

OTR Photochemical Modeling Workgroup will be responsible for preparing the modeling assessment of the ozone NAAQS in the OTR. The Workgroup will be responsible for collecting and processing model input data, setting up all model input files, performing model runs, and interpreting and documenting the results of the modeling analyses for the OTR domain.
The Workgroup will prepare and submit all OTC SIP quality modeling system documentation to the OTC Air Directors.

2.3 OTR Meteorological Modeling Workgroup (Appendix B)

The OTR Meteorological Modeling Workgroup will be responsible for preparing and assessing MM5 meteorological fields for the OTR Modeling Domain. This Workgroup will also work with the OTR Photochemical Modeling Workgroup to prepare all meteorological input files for the OTC SIP quality modeling system.

2.4 OTR Emission Inventory Development Workgroup (Appendix B)

The OTR Emission Inventory Development Workgroup will be responsible for obtaining and developing guidance for preparing 2002 and 2009 state emission inventories for all states in the OTR. The OTC Air Directors will be responsible for obtaining emission inventories for non-OTR states in the OTR Modeling Domain. The Mid-Atlantic Regional Air Management Association (MARAMA) and the Mid-Atlantic /Northeast Visibility Union (MANE-VU) organizations will provide funding for contractors and work with OTR states to help prepare state-of-the-art 2002 emission files, 2009 CAA emission files and 2009 Control Strategy emission files for the OTR Modeling Domain.

2.5 OTR Control Strategy Development Workgroup (Appendix B)

The OTR Control Strategy Development Workgroup will be responsible for designing an ozone control strategy for the OTR Domain that will attain the ozone NAAQS by 2009 in moderate non-attainment areas and 2012 in serious non-attainment areas. The Workgroup will work with the

OTC stationary /area source committee and the OTC mobile source committee to design an effective ozone control strategy for the OTR domain.

3 OTR MODELING DOMAIN

3.1 Description

The OTR modeling domain (see Figure 1) follows the national grid adopted by the Regional Haze Regional Planning Organizations (RPOs), but with focus on the eastern U.S. The areal extent of the domain was selected such that the northeastern areas of Maine are inside the domain. Based upon the existing computer resources, the southern and western boundaries were limited to the region shown in Figure 1. At a horizontal grid resolution of 12 km, there are 172 grids in the east-west and 172 grids in north-south direction. Details of the modeling system setup can be found at ftp://ftp.dec.state.ny.us/dar/air_research/gsistla/otc-mm5-cmaq-grid-def.doc

3.2 Horizontal Grid Size

Following EPA and as noted above, a 12 km grid resolution will be used for the domain. A coarser mesh may not be appropriate for urban area applications. Modeling at a higher resolution than 12 km will not be performed at this time; to do would require improvements in the modeling system in terms of the physical and chemical formulation as well as the need for development of emissions at a higher spatial resolution than that for the currently available county-level estimates.

3.3 Number of Vertical Layers

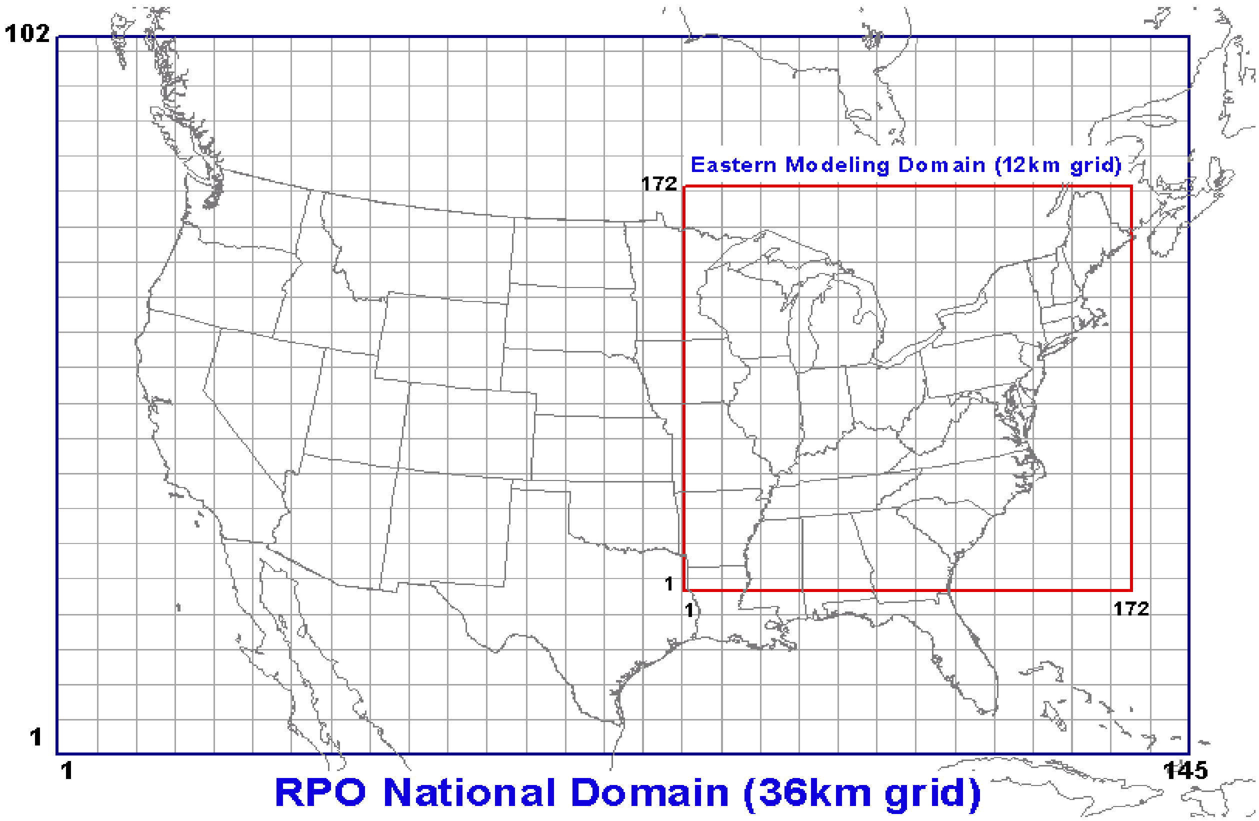
Similar to the horizontal grid spacing which is fixed by the default set forth in the design of the meteorological model, in this case 12 km, the definition of the vertical structure could also be adopted one-to-one based upon the meteorological model which has 29 layers. However, given the computational resources and runtime needs the number of vertical layers in the photochemical model was limited to 22, of which the lower 16 layers (approximately 3km) were set one-to-one with those of the meteorological model.

4 OZONE EPISODES

4.1 Episode Selection Criteria

Since it would be impractical to model every violation day, EPA has recommended targeting a select group of episode days for ozone attainment demonstrations. Such episode days should be (1) meteorologically representative of typical high ozone exceedance days in the domain, and (2) so severe that any control strategies predicted to attain the ozone NAAQS for that episode day would also result in attainment for all other exceedance days.

Figure 1: OTC Modeling Domain with areal extent of 12km and 36km grids



4.2 Proposed Episode Selection Procedure

While the above-suggested approach is perhaps feasible for isolated urban areas, such an approach may not be meaningful given the areal extent of concern and the modeling domain. Also, selection of episodes from different years would require the generation of the meteorological fields and emissions database, which would be an extremely difficult proposition given the modeling domain. The 2002 ozone season had a significant number of exceedance days (the spatial distribution of the daily 1-hr and 8-hr maxima over the eastern U. S. can be examined at the site ftp://ftp.state.ny.us/dar/air_research/htdocs/index.html). It was decided that the 5-month ozone season of 2002 would be simulated with the OTC SIP Quality Modeling System which will involve investigating numerous ozone episodes and would provide for better assessment of the simulated pollutant fields. The Environ report “Determination of Representativeness of 2002 Ozone Season for Ozone Transport Region SIP Modeling” demonstrated that 2002 episode days are (1) meteorologically representative of typical high ozone exceedance days in the domain, and (2) are probably so severe that control strategies predicted to attain the ozone NAAQS for those episode day would also result in attainment for all other exceedance days.

5 METEOROLOGICAL FIELDS

5.1 MM5 Meteorological Fields

The MM5 setup has been described by Zhang (2000) for generating meteorological fields based on a modified Blackadar scheme for the boundary layer. Since there are a variety of options that can be exercised in the application of MM5, initial testing was performed for a high ozone event of 2002 with the most commonly used default options as well as with modified boundary layer schemes (Zhang and Zheng 2004). A set of options was selected and used by Prof. Zhang of UMD in consultation with NYDEC Staff for running MM5 for the 2002 5-month ozone season.

5.2 Quality Assurance of Meteorological Fields

As a part of this effort, the simulated meteorological fields will be compared to data collected under CASTNET as well as with observations from the National Weather Service (NWS). Prior experience has shown that these approaches provide for an independent assessment of the simulated meteorological conditions. Also, data from any other special measurements will be sought and compared with the simulated fields. This analysis should provide a degree of confidence in the simulated meteorological fields and their use in photochemical grid modeling. This work will be coordinated through the meteorological model work group.

6 BASE CASE EMISSION INVENTORIES FOR 2002

6.1 2002 Base Case Emission Inventories for OTC states

Each state in the OTR Domain will prepare a 2002 base year emission Inventory that include VOC, NO_x, and CO for a typical ozone summer day. States are to follow EPA guidance documents for this base year inventory, which is due to EPA by June 1, 2004. Note this inventory may also qualify as the consolidated emissions regulatory report (CERR).

Emissions for all categories will be estimated for each county and state and the seasonal factors will facilitate spatial and temporal adjustments for modeling. Point and area source data will be submitted by individual states to EPA for uploading to EPA's National Emission Inventory (NEI) database using the required EPA format. MOBILE6.2 input files and VMT data will be submitted to NEI so that EPA can generate on-road mobile emissions for each state by county in a format that can be easily gridded and speciated. Similarly, off-road input files will be sent to EPA for running the latest NONROAD model.

It is anticipated that these state inventories will follow the EPA prescribed approach and should be formatted in a consistent manner. While this protocol deals with 8-hr ozone issues, the inventory would also contain the necessary information for exercising the particulate option of the photochemical model. This would be of help in those cases where the one-atmosphere option is to be exercised in the assessment. Biogenic emissions will be estimated with EPA's BEIS-3 emissions model.

6.2 2002 Base Case Emission Inventories for All Other States in the OTR Domain

A 2002 base year emission inventory that includes VOC, NO_x, and CO for a typical ozone summer day will be obtained for all non-OTC states in the OTR domain. It is anticipated that these inventories will be developed following EPA guidance, and will be formatted in a consistent manner.

7 BASE CASE EMISSION INPUT FILES FOR 2002

7.1 Preparation of 2002 Emission Input Files for the OTR Domain

Emissions data will be processed using SMOKE. The surrogate data files for the OTR grid have been previously developed by NY DEC and will be used in this study. For those pollutants that depend upon ambient temperature, MM5 layer-1 gridded temperature fields will be used.

7.2 Quality Assurance of 2002 Emission Input Files for the OTR Domain

The processing of the emissions data will include several quality checks before the data are exercised in the simulations. Prior experience has shown that considerable time and resources are often invested in developing the gridded emissions data. While there are many avenues to improve or correct the data, based upon consensus of the OTC Photochemical Modeling Workgroup, a definite closure of the emissions processing will be adhered to and any further changes or corrections will be archived and incorporated at a later date. In performing this work, close attention will be paid to the emissions within the OTR and, if necessary, corrections will be incorporated on the advice of the OTC Photochemical Modeling Workgroup.

Biogenic emissions will be prepared for each episode day using BEIS-3. The temperature data from MM5 layer-1 will be used along with cloud cover information obtained from MM5.

8 AIR QUALITY DATA

8.1 Initial Conditions

Prior experience has shown that a 3-day ramp-up period is sufficient to establish pollutant levels that are encountered in the beginning of the ozone episode. In this application clean conditions will be assumed for the 1st hour of the simulation along with the emissions and boundary conditions as described below. Since the application was to be in one-atmosphere mode using a common platform, it was determined that a longer ramp-up period of 15 days was needed because experiments indicated that some of the $PM_{2.5}$ species from the initial conditions (IC) were retained for ramp-up periods of 10 days or less. Thus the CMAQ model run will start on May 1, 2002; the first 15 days are assumed to be ramp-up days and will not used for performance evaluation purposes.

8.2 Boundary Conditions

In prior studies attempts were made to include any available information from ozonesondes and monitors that are near the western and northern boundaries of the modeling domain. For this study, similar attempts will be made to obtain pollutant data at the boundaries.

For boundary conditions, NY DEC will run CMAQ with the continental 36 km grid using GEOS-CHEM simulation data for 2002. The GEOS-CHEM information will be obtained by NESCAUM from Prof. Daniel Jacob's group of Harvard University. Hour by hour boundary conditions will then be extracted from the continental 36 km CMAQ run results and used for the OTR 12 km modeling domain.

8.3 Ambient Air Quality Data

Ambient air quality data will be extracted from the EPA AQS archive for ozone, CO, NO_x, and total and speciated hydrocarbons reported as part of the PAMS network. Also, data from CASTNET will be obtained. Since the OTR modeling domain extends over two time zones, while the model simulations are reflective of a single time zone, EST, there will be a need to ”correct” the clock and assemble the ambient air quality database. Any special measurements that are relevant to this study during the summer of 2002 will also be acquired, including upper air measurements.

9 DIAGNOSTIC ANALYSES

9.1 Quality Assurance Tests of Input Components

Before proceeding with modeling, all air quality, emissions, and meteorological data will be reviewed to ensure completeness, accuracy, and consistency. Any errors, missing data or inconsistencies will be addressed using appropriate methods that are consistent with standard practices.

9.2 Diagnostic Tests

Attempts will be made to perform diagnostic tests to ensure that the simulated ozone patterns are in agreement with observed patterns over the entire simulation period. While it is unrealistic to expect day-to-day agreement between the measured and predicted data, close attention will be paid to the changes in pattern of the measured ozone levels and the ability of the model to capture such changes.

10 MODEL PERFORMANCE EVALUATION

10.1 Performance Criteria

This is an area that will likely require dialog among member states. While there are many statistical tests that can be applied to predicted ozone concentrations, it is important to define a priori some of the conditions of the analysis and the targets of evaluation. Also, it is important to define the areal extent for which the assessment needs to be done to address the performance of the model. Statistical tests are to be applied to the precursor data as well, recognizing that all tests applied to the ozone data may or may not be valid.

As part of the model assessment, qualitative analysis will also be performed by comparing predicted and measured pollutant fields to establish if the spatial patterns are captured by the modeling system. This is a critical step, since the measured concentrations may fall into a neighboring grid cell (but not at the measured location itself) and may be found to be in good agreement.

Another area that is quite important is the predictive ability of the model with respect to height. Recognizing that the pollutants trapped above the mixed layer during the overnight hours would mix down during the daytime, comparison will be made between measurements and model predictions. Special attention will be paid to elevated monitoring stations, such as the television tower near Durham, North Carolina; the Sears Tower in Chicago, Illinois, and monitors located at elevated rural stations at Whiteface Mountain, NY.

10.2 Statistical Performance Measures

The recommended EPA procedures will be used to calculate the recommended performance measures. At a minimum, the following three statistical performance measures will be used to assess CAMx model performance for each episode.

- Unpaired highest-prediction accuracy

  This measure quantifies the difference between the highest observed eight-hour value in the domain and the highest predicted value in the domain. The acceptable performance range is plus or minus 15-20 percent.

- Normalized bias

  This measure indicates the degree to which simulated eight-hour values are over or under-predicted. The acceptable performance range is plus or minus 5-15 percent.

- Gross error of all pairs above 40 ppb

  This measure indicates the average discrepancy between predicted and observed values and provides an overall assessment of model performance. The acceptable performance range is 30-35 percent.

11 CAA EMISSION INVENTORIES FOR 2009

11.1 CAA Emission Inventories for OTR States for 2009

Each OTC state in the OTR Domain will prepare a 2009 CAA emission **i**nventory that is consistent with the regulations and rules adopted or expected to be in-place. The inventory will be developed consistent with EPA guidance. The states will develop the information on growth factors and controls used in the development of the inventory. Each state will submit a report on the development of these future year inventories.

Since the electric energy generation and use are highly inter-connected, coupled with the existing rules on trading and banking of pollutants, it is expected that an inventory consistent with this information would be developed for all electric energy generation units using models such as IPM**.**

Recognizing that any prediction of future emissions are subject to changes, the OTC Modeling Committee would develop a decision framework on obtaining these emissions to be consistent with the OTC SIP quality modeling system schedule (Appendix A).

11.2 CAA Emission Inventories for all non-OTR States for 2009

A 2009 CAA emission inventory that includes VOC, NO_x, and CO for a typical ozone summer day will be obtained for all non-OTC states in the OTR. It is anticipated that these inventories will be developed following EPA guidance, and will be formatted in a consistent manner.

12 CAA EMISSION INPUT FILES FOR 2009 FOR THE OTR DOMAIN

12.1 CAA Emission Input Files for OTR Domain for 2009

2009 CAA emissions data will be processed using SMOKE. For pollutants that depend on ambient temperature, MM5 layer-1 gridded temperature fields will be used to estimate hourly emission rates. The biogenic emission input files prepared for the base 2002 will be used as a surrogate for 2009 biogenic emissions. These emissions data will be processed using the quality assurance checks described in section 7.2.

It should be noted that the CAA means all on the books and on the way control measures (OTB/OTW) scheduled to be in effect by 2009.

13 OTR DOMAIN OZONE CONTROL STRATEGY

13.1 OTC CALGRID System Screening Runs

A series of CALGRID screening runs will be performed to investigate the level of emissions reductions needed both within and outside of the OTR. This will help identify potential emission reductions scenarios that can be used for CMAX future year SIP modeling runs.

13.2 OTC SIP Modeling Platform Runs

OTC SIP modeling platform CAA runs for 2009 will be reviewed to help determine the level of emissions reductions needed to attain the ozone NAAQS. VOC and NOX sensitivity runs will also be performed to help identify potential emission reductions scenarios that can be used to lower ozone levels in the OTR.

13.3 Analysis of Available Air Quality and Emission Databases

A review of air quality and emission databases (for example, EPA Clear Skies and Transport Rule emission files) will be performed to help identify potential source sectors of ozone precursors. Analysis of available EPA modeling results will also be performed to help identify potential source sectors of ozone precursors in, and upwind, of the OTR domain.

13.4 Ozone Control Strategy for the OTR Domain

The OTR Control Strategy Development Team will review CALGRID results, other available databases, and EPA databases, to help identify potential control programs. The Team will work with OTR states and the OTC stationary, area and mobile source committees to design ozone control strategies for the OTR Domain with the goal of meeting regulatory target dates.

14 OZONE CONTROL STRATEGY EMISSION INPUT FILES

14.1 Ozone Control Strategy Emission Input Files for the OTR Domain for 2009

Emissions files for the selected ozone control strategy for the OTR Domain for 2009 will be prepared in a consistent manner as per schedule. If necessary, additional IPM simulations may be performed to obtain EGU emission estimates.

15 OZONE PREDICTIONS FOR 2009

15.1 Initial Conditions

The initial conditions at the startup will be “clean”. The OTR Modeling Team will use the 2002 initial condition files as a surrogate for initial conditions for 2009 modeling runs.

15.2 Boundary conditions

EPA will be consulted for guidance in estimating boundary conditions for 2009 or, under default, would utilize those adapted for the Base 2002 base year simulation. It should be noted that the default option was used for the 2009 CMAQ simulation.

15.3 CAA Ozone Predictions for 2009

The model will be run with the CAA emission files developed for 2009. Tile plots, difference plots, and model statistics will be prepared to help characterize the extent of any remaining non-attainment areas predicted in the OTR in 2009.

15.4 Ozone Control Strategy Predictions for 2009.

The model will be run with OTR control strategy emission files prepared for 2009. Tile plots, difference plots and model statistics will be prepared to help characterize the extent of any remaining non-attainment areas predicted in the OTR for the year 2009.

16 DOCUMENTATION

A report titled “Assessment of the Ozone National Ambient Air Quality Standards in the Ozone Transport Region will be prepared by the OTR Modeling Team”. The report would cover model performance evaluation, and an evaluation of the OTR control strategy runs for 2009. This technical document will be made available to all interested parties and will be used by the member States in their SIP submission documentation as needed.

17 REFERENCES

Environ (2006): Determination of Representativeness of 2002 Ozone Season for Ozone Transport Region SIP Modeling

Dalin Zhang (2000): Development of meteorological database for summer 1997 using MM5 at 12 km resolution in Photochemical Model Simulations

Dalin Zhang and William Zheng (2004): Diurnal cycles of surface winds and temperatures as simulated by five boundary-layer parameterizations, Journal of Appl. Meteorology 43, 157-169

Gopal Sistla (1999): Development of a surrogate database for use in Regional/Urban-scale Modeling at 4 km spatial resolution (see http://envpro.ncsc.org/emcenter/)

Wick Havens (2000): Development of an Emissions Inventory for Regional/Urban-scale Modeling, MARAMA-RTC (see http://www.marama.org/)

APPENDIX A

Workgroups for the Development and Application of the OTC SIP Quality Modeling System for Assessment of the Ozone National Ambient Air Quality Standard in the Ozone Transport Region

OTC Photochemical Modeling Workgroup

State Lead	Gopal Sistla
OTC contact	Tom Frankiewicz
Chair OTC Modeling Committee	Barbara Kwetz

Delaware	Mohammed Majeed
DC	Rama Tangirala
Maine	Tom Downs
Maryland	Mike Woodman
Massachusetts	Steve Dennis
New Hampshire	Jeff Underhill
New York	Gopal Sistla
Pennsylvania	Tim Leon Gurrero
NESCAUM	Gary Kleiman
EPA	Invited for selected discussions

OTC Meteorological Modeling Workgroup

State Lead	Mike Woodman
OTC contact	Tom Frankiewicz
Connecticut	Dave Wackter
Delaware	Mohammed Majeed
DC	Rama Tangirala
Maine	Tom Downs
Maryland	Tad Aburn Matt Seybold Mike Woodman Jeff Stehr
Massachusetts	Rich Fields
New Hampshire	Jeff Underhill
New Jersey	Alan Dresser
New York	Gopal Sistla
Pennsylvania	Tim Leon Gurrero
Vermont	Paul Wishinski
Virginia	Kirit Chaudhar
MARAMA	Serpil Kayin
NESCAUM	Gary Kleiman
EPA	Invited for selected discussions

OTC Emission Inventory Development Workgroup

State Lead	Ray Malenfant
OTC contact	Tom Frankiewicz
Connecticut	Bill Simpson
Delaware	Dave Fees
DC	Rama Tangirala
Maine	Dave Wright
Maryland	Roger Thgunell
Massachusetts	Ken Santlal
New Hampshire	Mike Fitzgerald Andy Bodnarik
New Jersey	Joan Held
New York	Jim Ralston
Pennsylvania	Dean Van Orden
Rhode Island	Karen Slattery
Vermont	Jeff Merrell
Virginia	Tom Ballou
MARAMA	Serpil Kayin
EPA	Invited for selected discussions

OTC/MANE-VU Control Strategies Workgroup

State Lead	Jeff Underhill
OTC contact	Tom Frankiewicz
Connecticut	Dave Wackter Kurt Kebschull
Delaware	Ray Malenfant Mohammed Majeed
Maine	Jeff Crawford Tom Downs
Maryland	Tad Aburn Matt Seybold Mike Woodman Jeff Stehr
Massachusetts	Eileen Hiney Steve Dennis
New Hampshire	Jeff Underhill Andy Bodnarik
New Jersey	Bob Stern Ray Papalski Alan Dresser Robert Huizer
New York	Gopal Sistla
Pennsylvania	Wick Havens Tim Leon Gurrero
Rhode Island	Barbara Morin
Vermont	Paul Wishinski
Virginia	Kirit Chaudhar
MARAMA	Serpil Kayin Megan Schuster
NESCAUM	Leah Weiss Gary Kleiman
EPA	Invited for selected discussions

APPENDIX B

Work Plan for the Development and Application of the OTC SIP Quality Modeling System.

Work plan for the Development and Application of the OTC SIP Quality Modeling System†

Task No.	Activity or Task	Initial Target Date	Organization(s) Performing Task	Remarks & Status Notes & Revisions
	Initial Planning			
1	Prepare a Work plan and a Modeling Protocol for the development of the OTC SIP quality modeling system to address ozone non-attainment problems in the OTR.	Nov 03	NY, MA	Completed
	Meteorology			
2 3 4	Complete MM5 modeling for 2002 (May thru Sep) Episode evaluation and assessment Evaluate MM5 data and process for photochemical models.	Dec 04 Dec 04 Mar 05	MD (UMCP), NY Contract Support MD (UMCP), NY	In progress In progress Inn progress
	Emissions Inventories			
5	Prepare 2002 emission inventories for MANEVU states in the OTR Domain.	Jan 05	MARAMA	
6	Obtain 2002 emission inventories for non-MANEVU states in the OTR Domain.	Jan 05	MARAMA	
7	Prepare 2009 CAA emission inventories for MANEVU states in the OTR Domain.	Aug 05	MARAMA	
8	Obtain 2009 CAA emission inventories for non-MANEVU states in the OTR Domain.	Aug 05	MARAMA	
	Emission Input files			
9	Prepare 2002 emission files for the OTR domain with SMOKE and /or EMS2001, and QA emissions data.	Nov 04	NY	Delayed until Jan 05
10	Prepare 2009 CAA emission files for the OTR domain with SMOKE and /or EMS2001, and QA emissions data.	Nov 05	NY	
11	Prepare 2009 emission files for OTR control strategy with SMOKE and /or EMS2001, and QA emissions data.	Nov 05	NY	

Task No.	Activity or Task	Initial Target Date	Organization(s) Performing Task	Remarks & Status Notes & Revisions
	Modeling			
12	Complete 2002 model performance evaluation for OTR Domain.	May 05	NY	
13	Test model sensitivity to NOx, VOC reductions and potential control measure options.	Sep 05	NY	
14	Complete modeling runs for 2009 CAA scenarios.	Jan 06	NY	
15	Complete modeling runs for 2009 OTR control strategy	Jan 06	NY	
	OTR Control Strategy Development			
16	Perform screening runs with OTC CALGRID modeling system	Mar 05	OTR Control Strategy Development Workgroup	
17	Review air quality and emission databases to help identify potential sources of ozone in the OTR.	Jul 05	OTR Control Strategy Development Workgroup	
18	Design Control Strategy for the OTR Domain	Sep 05	OTR Control Strategy Development Workgroup	
	Reports			
19	Complete technical support documents presenting regional OTR modeling and air quality/emission database analyses. (These two documents will provide technical support for state ozone SIPs.	Jun 06	NY, other OTC states	This will allow states nine months to prepare SIP revisions due in April 2007.
	Management			
20	Day-to-day management and coordination.	on-going	OTC Modeling Committee	
21	Provide direction, oversight, and obtain any necessary funding.	on-going	OTC Air Directors	

† To be used as needed for Ozone SIPs in the OTR. Based on EPA draft guidance, Ozone SIPs expected submission by April 2007.

Appendix 8B

Determination of Representativeness

of 2002 Ozone Season for

Ozone Transport Region SIP Modeling

FINAL REPORT

DETERMINATION OF REPRESENTATIVENESS OF 2002 OZONE SEASON FOR OZONE TRANSPORT REGION SIP MODELING

Prepared for

Tom Frankiewicz
Ozone Transport Commission
444 North Capitol St., NW, Suite 638
Washington, DC 20001

Prepared by

Till Stoeckenius
Sue Kemball-Cook
ENVIRON International Corporation
101 Rowland Way, Suite 220
Novato, CA 94945

June 3, 2005

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1. INTRODUCTION

The Ozone Transport Commission is coordinating a photochemical modeling study of the Ozone Transport Region (OTR) in support of State Implementation Plan development for certain areas recently designated by the United States Environmental Protection Agency (U.S. EPA) as being in nonattainment of the 8-hour ozone National Ambient Air Quality Standard (NAAQS). The OTR is comprised of 12 states (DC, CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT) and that portion of Virginia contained within the Washington DC Consolidated Metropolitan Statistical Area (see Figure 1-1). Areas within the OTR designated nonattainment for the 8-hour ozone NAAQS are shown in Figure 1-2; detailed attainment demonstrations are required for the nonattainment areas within the OTR classified as "moderate".

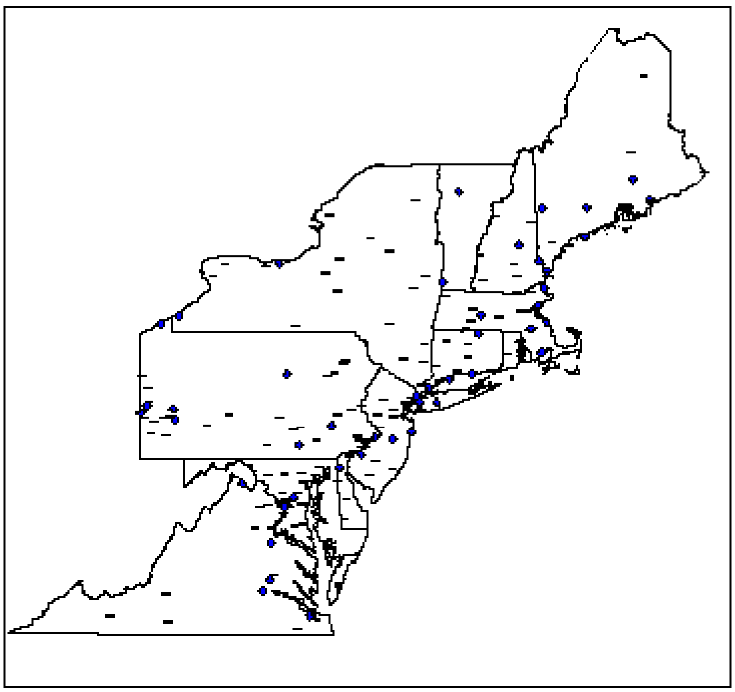

Figure 1-1. Ozone monitoring sites in the Ozone Transport Region which is comprised of DC, CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, and that portion of Virginia contained within the DC Consolidated Metropolitan Statistical Area.

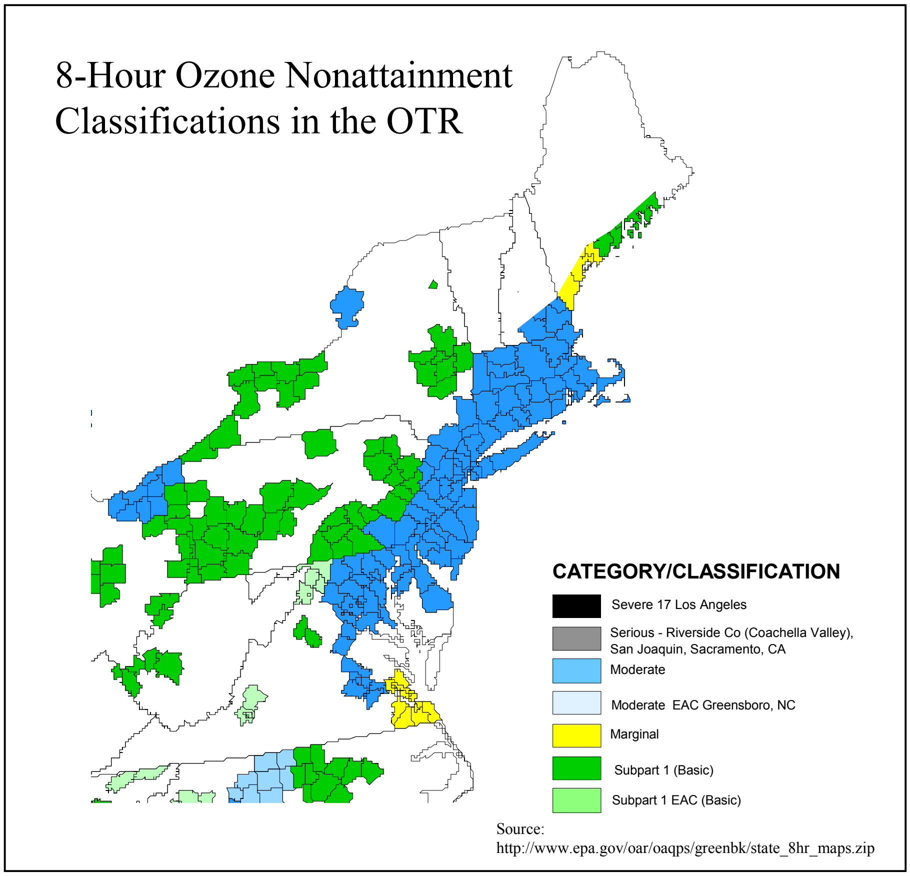

Figure 1-2. 8-hour ozone nonattainment classifications in the OTR and adjacent areas.

Development of effective 8-hour ozone attainment strategies requires application of photochemical models to a set of episodes that adequately represent the range of meteorological conditions associated with violations of the ambient standard. EPA's 8-hour ozone NAAQS modeling guidance (EPA, 1999) lists four criteria for episode selection:

1. Select episodes that both represent a variety of meteorological conditions and frequently correspond to exceedances of the 8-hour ozone standard.
2. Select episodes during which the daily maximum 8-hour ozone averages are close to the 8-hour ozone design value, i.e., the average annual 4th highest daily maximum 8-hour ozone average.
3. Select episodes for which extensive meteorological and air quality data sets are available.
4. Select a sufficient number of episode days for modeling so that the modeled attainment test specified in EPA's guidance is based on several days.

In practice, it is difficult, if not impossible, to meet all of these criteria simultaneously. In general, it is important to include episodes that represent as completely as possible the full range of meteorological conditions associated with exceedances of the ozone standard. Differences among episode types are important in so far as they influence the predicted effectiveness of alternative emission control strategies.

Because the OTR is a large region that experiences a wide variety of weather patterns associated with 8-hour ozone NAAQS exceedances, the OTC has decided to perform ozone SIP modeling of the full 2002 ozone season, May 15 - September 15, to incorporate a fairly large number of episode days in different portions of the OTR. Thus, there should be a good chance that all of the important episode types are covered within this period. However, the 2002 season includes some of the most prolonged and severe ozone episodes in recent years, raising the possibility that one or more episode types of interest are not adequately represented within the 2002 season. The goal of this study, therefore, is to assess the representativeness of conditions during the 2002 season with respect to exceedance events that have occurred in other years and determine if there are any types of episodes that are not adequately represented within the 2002 season.

EPA's 1999 draft guidance recommends joint use of subjective and statistical methods for characterizing and classifying 8-hr ozone episodes. Subjective methods include "typing" of episode meteorological conditions in which episodes are classified via inspection on the basis of similarities in meso- and synoptic-scale weather patterns. In contrast, statistical methods can produce objective classifications either by use of tree models[1] or and various forms of cluster analysis (often in conjunction with a principal components analysis). A predictive classification procedure such as a classification tree model (which can be viewed as a non-parametric form of least-squares regression) does not actually classify episodes, although it can be used to identify potential episodes with common meteorological features. This information can then be used to inform the episode selection process. A cluster analysis, on the other hand, is designed to identify natural groupings of conditions within the set of candidate episodes. In either case, considerable expert judgment is required in variable selection, selection of different modeling methods, and interpretation of results so even the statistical methods are not wholly objective. Nevertheless, these approaches are well suited to the development of valid, defensible episode classification schemes that are sufficiently robust to explain the major characteristics of ozone episode types.

In this study, we apply a combination of exploratory statistical techniques, cluster analyses, and classification tree building algorithms to ozone and meteorological data from the OTR to assess the representativeness of 8-hour ozone episodes occurring during the 2002 season. Data sources and preliminary analyses are described in Section 2. Procedures and results used to identify the major Northeastern U.S. ozone episode types and their key characteristics are presented in Section 3 along with a comparison of the frequency of occurrence and features of each episode type in 2002 versus those in other recent years. Our conclusions regarding the representativeness of the 2002 season are detailed in Section 4.

[1] A commonly used tree modeling approach is based on the CART methodology (Breiman et al., 1984).

2. DATA GATHERING AND INITIAL ANALYSIS

DATA

Daily ozone and meteorological data required for the episode representativeness analysis were obtained from a variety of sources. To capture the full range of OTR episode characteristics and insure statistical significance, a seven year period (1997 – 2003) was chosen for analysis. Data prior to 1997 were not used to avoid any confounding influences of long-term air quality trends. For purposes of this study, data from the warm season months (May – September) were used to capture most if not all high ozone events during the year.

Ozone and meteorological data were separated into two groups: data from 1997 – 2001 and 2003 were treated as the "historical" period and were used to define the types of ozone episode conditions occurring in the OTR. Data from 2002 were treated as an independent data set with data in this year to be compared against the types of conditions found in the historical period.

Hourly ozone concentrations at monitoring sites throughout the OTR for the period 1997-2003 were provided by the New York State Department of Environmental Conservation. Stations missing more than one year of data were excluded from the study, leaving a total of 158 stations with nearly complete data. Daily maximum 8-hour averages were calculated from the hourly data using the data handling conventions specified in 40 CFR 50, Appendix I. Because the spatial pattern analysis procedure requires a complete data set, missing daily maxima were set to the station mean daily maximum (this conforms to the procedure used by Cox, 1997).

Hourly surface meteorological data (winds, temperature, etc.) from airports and other locations in the OTR were obtained from the National Center for Atmospheric Research (NCAR) as dataset ds472. Upper air data were extracted from the ETA Data Assimilation System (EDAS) files available from the National Climatic Data Center. EDAS contains 3-hourly objective analysis initialization and forecast fields from the National Center for Environmental Prediction's (NCEP) ETA model at 40 km resolution. By using the EDAS data, we were able to obtain a consistent set of surface and upper air variables covering the entire eastern half of the U.S. at high temporal resolution.

IDENTIFICATION OF OZONE MONITORING SUB-REGIONS

Monitoring sub-regions were defined within the OTR to emphasize the spatial ozone patterns associated with different types of ozone episodes and to reduce the number of variables required to describe the spatial ozone distribution under different episode patterns. Sub-regions were defined by combining results of a station clustering analysis with information on typical ozone concentration patterns provided by air quality analysts from several OTR states. A variable clustering procedure (VARCLUS) based on principal components analysis was used to group the OTR ozone monitoring sites into disjoint geographic clusters (Sarle, 1990, Harrell 1999). This procedure essentially divides the monitoring stations into groups of highly correlated sites. Station clusters are selected to explain most of the day-to-day variation in ozone levels over the OTR using a small number of station groups. VARCLUS works by performing a principal components analysis on the ozone values in each candidate cluster and seeks to find the set of clusters that maximize the total (across clusters) of the variance explained by the first principal components.

Required input for the VARCLUS procedure is the number of clusters to be formed. As with any clustering procedure, this introduces an element of subjectivity that can be minimized by repeating the analysis several times, each time varying the number of clusters to be formed and examining the robustness of the cluster memberships as the number of requested clusters (k) changes.

Application of the clustering algorithm for various values of k showed that, for a given value of k, the VARCLUS procedure produced several spatially coherent clusters as well as other clusters which were not spatially coherent. Clusters which were not spatially coherent were always made up of just 5 or fewer member stations. For example, setting k=5 produced 2 coherent clusters (clusters 1 and 2) and 3 smaller clusters (clusters 3-5) whose members tended to be widely separated in space (see Figure 2-1). The version of VARCLUS used for our analysis assigns the lowest cluster identification numbers to the "tightest" (i.e., most easily identifiable and robust) clusters. As the results in Figure 2-1 show, these lowest numbered clusters (in this case Clusters 1 and 2) turned out to also be the most spatially coherent (note that the clustering is based on ozone correlations only – the locations of each monitoring site are not an input to the clustering algorithm). This is consistent with our expectation that sites located close to one another will be highly correlated. Clusters 1 and 2 are similar to the two northeast clusters found by Cox (1997), who used a similar analysis technique applied over the entire eastern U.S.. Successive increases in k over the range 6-10 produced additional coherent clusters which subdivided the two large clusters seen in Figure 2-1. The smaller, non-contiguous clusters remained largely unchanged for all values of k.

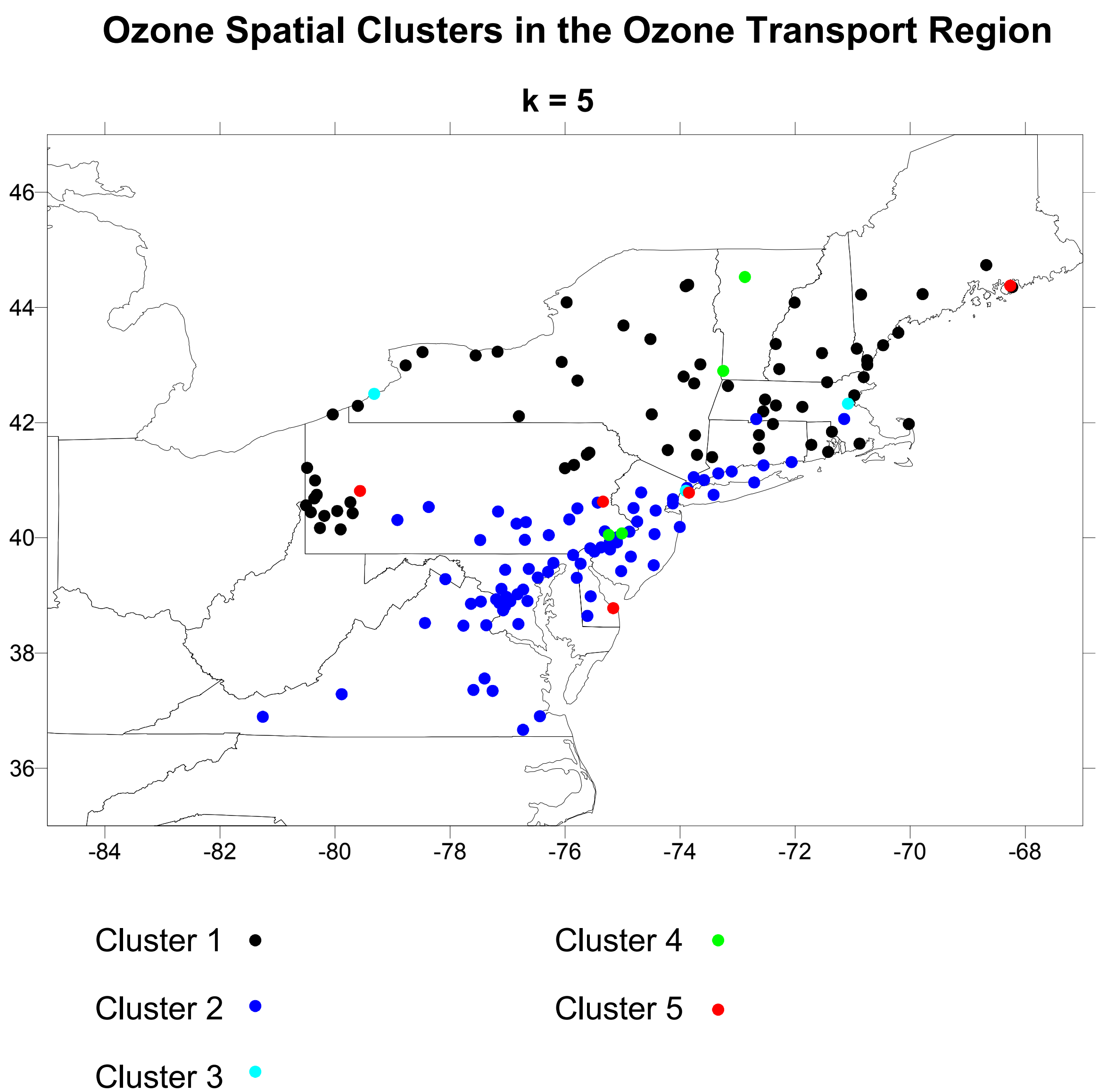

Figure 2-1. Ozone monitoring station cluster assignments for k = 5 clusters.

With k = 10, VARCLUS produced 6 spatially coherent clusters, and 4 smaller, non-coherent clusters (Figure 2-2)[2]. As in the k=5 case, the spatially coherent clusters are the lowest numbered clusters, 1-5, and the non-contiguous clusters are 6-8, and 10. The k=10 case is unusual because cluster 9 (located on the Rhode Island/Massachusetts coast) turned out to be spatially coherent, even though the lower numbered clusters 6-8 were not. We investigated the possibility that cluster 9 should be treated as a separate sub-region. After examining the way exceedances in cluster 9 vary with those in surrounding clusters, however, we concluded that this area could be adequately treated by including it in with cluster 4 (along the Washington – New York City corridor). In order to use only the clusters which seemed robust under variations in k, we therefore based the final ozone monitoring sub-regions largely on the first five clusters obtained under the k=9 scenario (which were slightly more coherent than those under the k=10 case).

[2] Ask was increased beyond 10, the coherent clusters produced were judged to be too small in spatial dimension to be useful in classifying ozone exceedance regimes.

However, the RI – MA coastal sites were associated with the New York City metropolitan area sites rather than the other MA sites based both on the k=10 result described above and input from several state air quality analysts. In addition, all stations on the ME coast were assigned to the southern New England group (Cluster 1) based on input from state air quality analysts. Stations from the other higher numbered, non-contiguous clusters were integrated into the surrounding clusters; there were no such stations for which the appropriate cluster assignment was ambiguous.

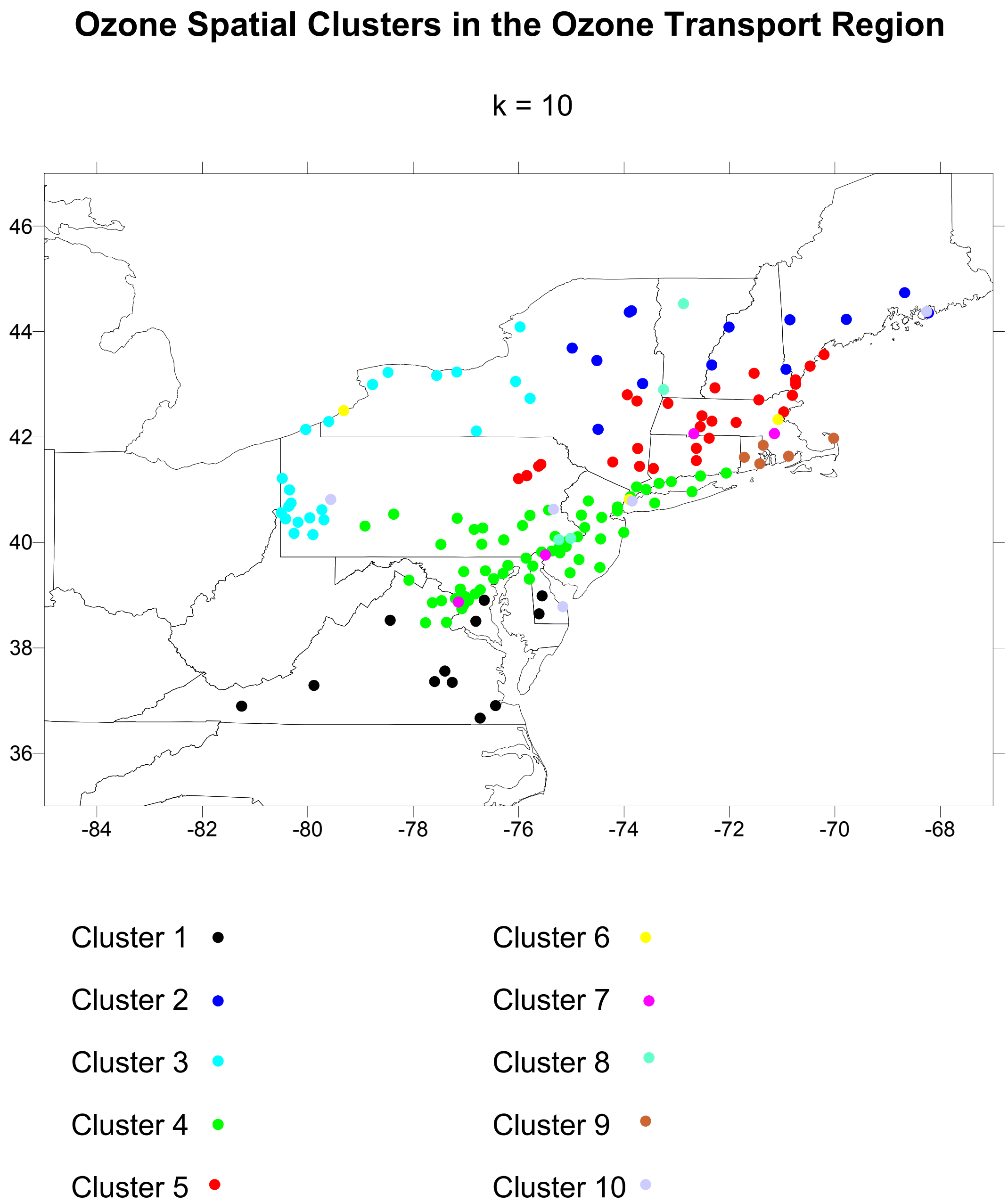

Figure 2-2. Ozone monitoring station cluster assignments for k = 10 clusters.

Another adjustment to the VARCLUS results was made along the Philadelphia – New York corridor. Figure 2-3 shows the number of 8-hour exceedances at each monitoring site during the period analyzed. Exceedance events in the Washington – Philadelphia corridor are more frequent than within and downwind (northeast) of the New York City metropolitan area. Furthermore, based on our discussions with state ozone forecasters in the OTR, we expect transport of ozone and ozone precursors along the I-95 corridor to play an important role in exceedance events. This suggests that leaving the entire Washington to New York City cluster intact might cause our final episode classification scheme to overlook events in which transport northeast from Washington-Baltimore-Philadelphia to New York is an important feature. We therefore decided to split this cluster into two parts as shown in the final ozone monitoring sub-region assignments presented in Figure 2-4. Cluster 5 extends from the Washington area through Trenton and a new cluster 6 covers the New York City-Long Island-Southern Connecticut region. A list of the monitoring sites assigned to each cluster is provided in Appendix D.

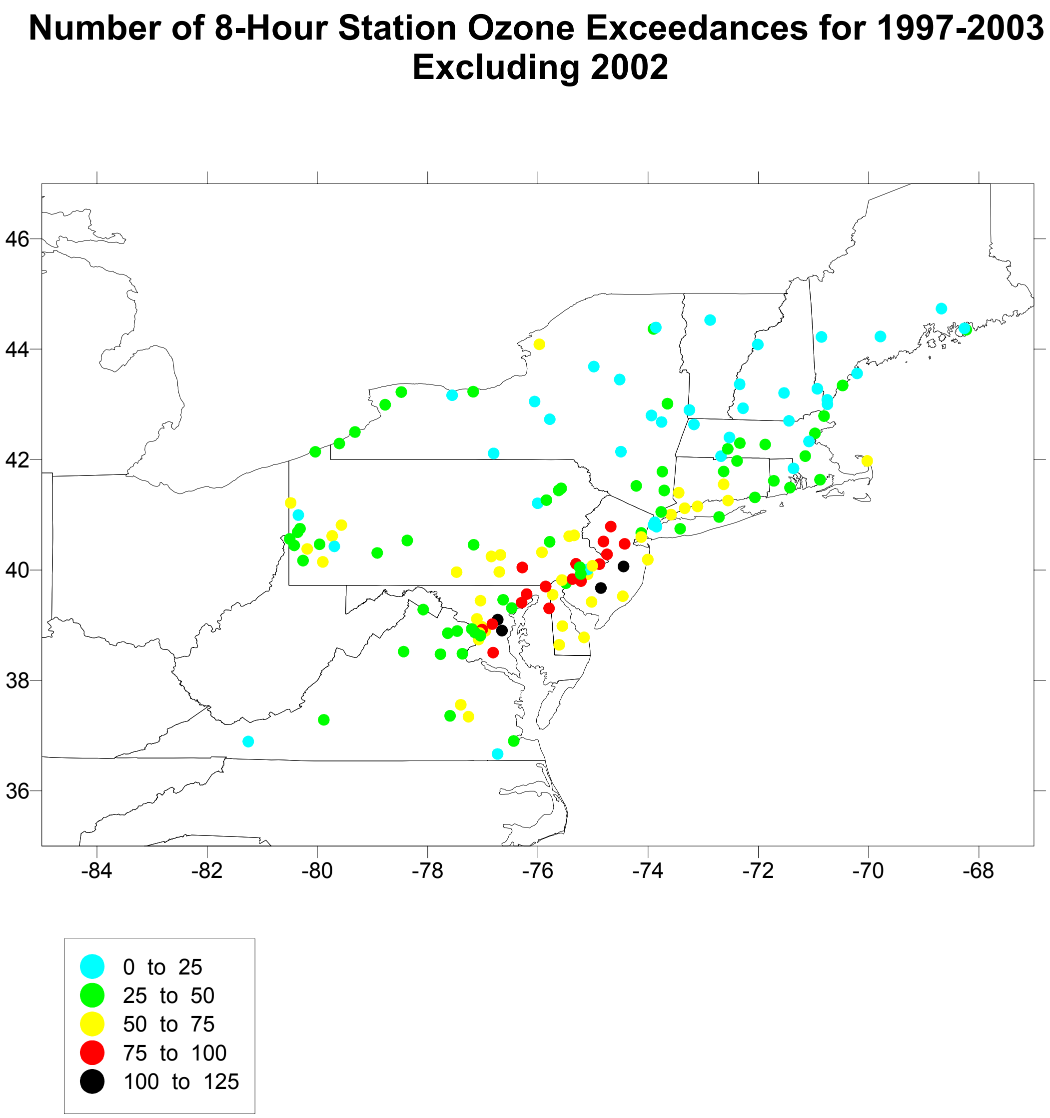

Figure 2-3. Number of 8-hour ozone NAAQS exceedance days at each monitoring site during the study period (1997 – 2001 and 2003).

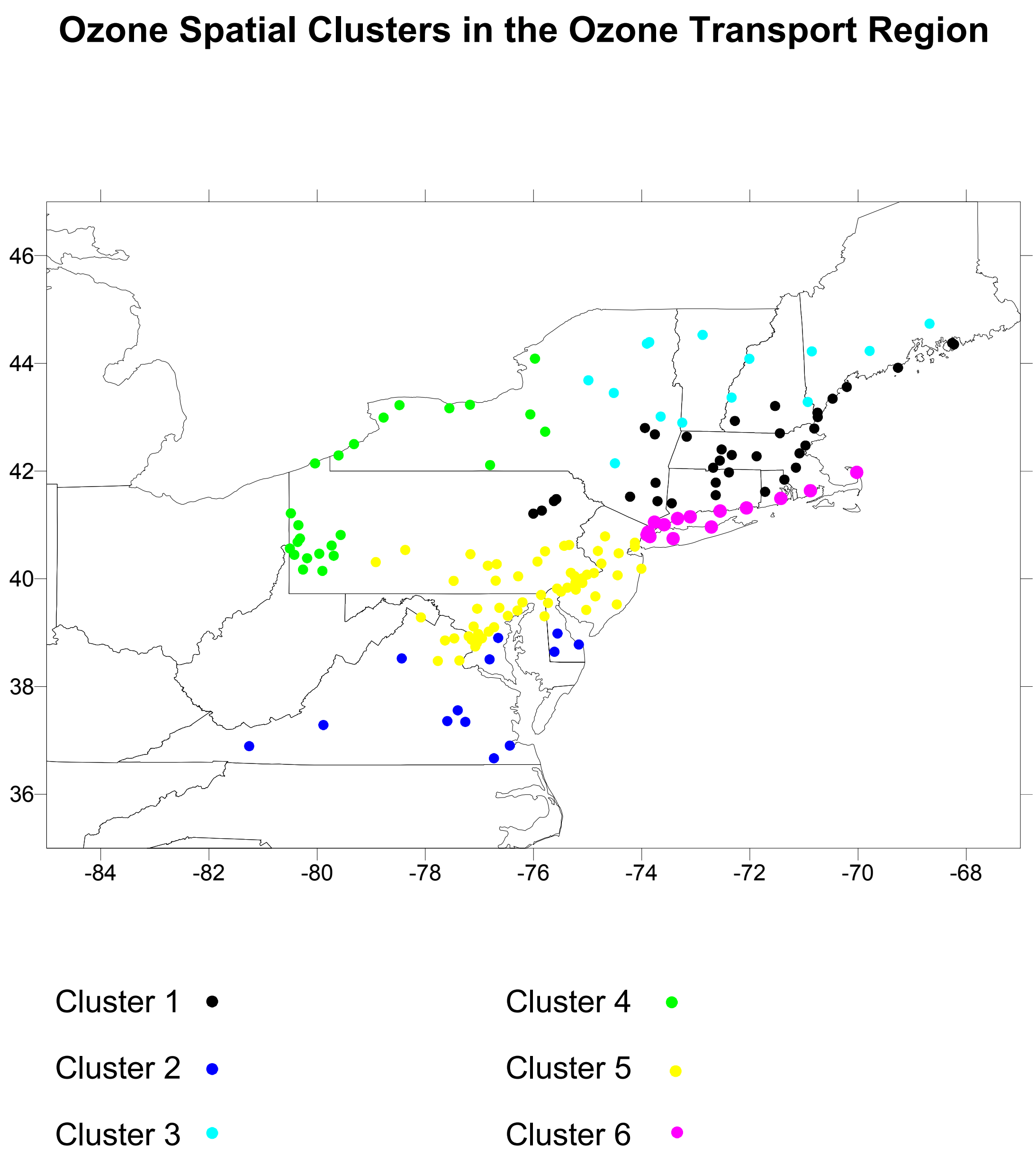

Figure 2-4. Ozone monitoring sub-regions in the OTR.

SPATIAL OZONE PATTERN ANALYSIS

An initial analysis of episode patterns was performed based on 8-hour ozone concentrations within the sub-regions (spatial clusters) described above. For each day, a cluster was determined to be in exceedance if any one monitoring site in the cluster recorded an exceedance. We then counted the number of joint exceedance events between each pair of clusters and examined exceedance patterns across all six clusters. Detailed results from this analysis were provided in a technical memorandum to the OTC (Stoeckenius and Kemball-Cook, 2004) but are not repeated here because this approach was eventually discarded in favor of an integrated analysis approach in which the daily ozone levels in each sub-region were combined with daily meteorological data to determine the key characteristics of the major types of ozone episodes occurring in the OTR.

METEOROLOGICAL VARIABLE SELECTION

The extensive amount of meteorological data collected for this study was reduced to allow processing of days into groups with similar conditions as described in Section 3. Selection of key meteorological variables that best represent conditions across the OTR on exceedance days was based on a review of previous studies (Deuel and Douglas, 1996; McHenry et al., 2004) and on discussions with state and local agency air quality personnel involved in ozone forecast programs within the OTR. Key variables focused on both surface conditions (maximum temperature, morning and afternoon average wind direction and speed, pressure) and conditions aloft (500 and 850 mb heights, temperatures, and winds). The final selected set of key daily meteorological parameters are:

> Surface resultant wind speed and direction computed for both morning (05:00 – 10:00 EST) and afternoon (12:00 – 17:00 EST) hours at New York City (LaGuardia), NY; Philadelphia, PA; Boston, MA; Buffalo, NY; Albany, NY; Washington, DC; Portland, ME, Atlantic City, NJ; Islip (Long Island), NY; Hyannis (Cape Cod), MA; Worcester, MA; and Hartford, CT.[3]
>
> Surface daily maximum temperatures at New York City (LaGuardia), NY; Philadelphia, PA; Boston, MA; Buffalo, NY; Albany, NY; Washington, DC; Portland, ME, Atlantic City, NJ; Islip (Long Island), NY; Hyannis (Cape Cod), MA; Worcester, MA; and Hartford, CT.[3]
>
> Temperatures, heights, and winds at 850 mb pressure surface at Washington, DC; New York, NY; Boston, MA; Pittsburgh, PA; Buffalo, NY; and Portland, ME.
>
> Surface pressure gradients across the OTR computed as pressure differences between:
>
> Washington, DC and New York City, NY;
> Washington, DC and Boston, MA;
> Washington, DC and Pittsburgh, PA;
> Pittsburgh, PA and Buffalo, NY;
> Buffalo, NY and Boston, MA.

[3]Surface wind and temperature data from Concord, NH and New Haven, CT were also examined but these sites had a high frequency of missing data which prevented their use in this analysis.

3. EPISODE CLASSIFICATION ANALYSIS

In this section we describe a series of clustering and exploratory analyses performed on the ozone and meteorological data discussed in Section 2. Clustering was performed with data from the historical (1997 – 2001 and 2003) period to identify the major types of ozone episodes in the OTR and their key characteristics. Once the key episode types were identified, we developed a decision rule for classifying any given day into one of the identified episode types based on ozone levels and meteorological conditions. This decision rule was then used to classify days during the 2002 ozone season by episode type. The resulting distribution of episode types and the ozone and meteorological conditions occurring within each type in 2002 were subsequently compared with results from the historical period to determine the representativeness of the 2002 with respect to conditions during the historical period.

CLUSTERING ANALYSIS

Clustering was performed with data for the 329 days in the 1997-2001/2003 historical period on which an 8-hour ozone exceedance was recorded at one or more of the monitoring sites shown in Figure 2-4. As the clustering algorithms require numerical variables, wind directions were decomposed into u (east-west) and v (north-south) components. Meteorological data were prepared for clustering by first filling in missing values with exceedance day means. This step was necessary as the clustering procedures cannot process any days that have missing values for one or more variables. While the fraction of data that are missing for any individual variable is fairly small, roughly two-thirds of the 329 8-hour ozone exceedance days in our historical dataset had at least one missing value, so it was important to impute the missing values in some fashion even though the clustering results are not likely to be too sensitive to the exact method of imputation. All of the data were then standardized by computing z-scores (i.e., subtracting the mean and dividing by the standard deviation) prior to clustering so that variables with different scales of measure are given equal weight.

Ozone data were also prepared for use in the clustering analysis. Two daily ozone summary statistics, AvgEx08 and AvgEx00 were computed for each monitoring sub-region shown in Figure 2-4. AvgEx08 was defined as the average, over all sites in a given sub-region, of the amount by which the daily maximum 8-hour average exceeded 0.08 ppm (with values for sites below 0.08 ppm set equal to zero). AvgEx00 is identical to AvgEx08 but with the exceedance threshold set to 0 ppm. As with the meteorological data, z-scores were computed for the daily AvgEx08 in each sub-region for use in the clustering analysis. Preliminary clustering analyses were performed using the methods described below with first the AvgEx08 measure and then the AvgEx00 measure. Of the two, cluster results based on the AvgEx00 measure were chosen, as they were more robust and physically meaningful then results based on the AvgEx08 measure.

Initially, clustering was applied to the meteorological variables only. Both agglomerative and divisive hierarchical clustering techniques were used. Classifications of days under the resulting meteorological clusters were compared with the classification of days by ozone exceedance pattern, which had previously been reported (Stoeckenius and Kemball-Cook, 2004). These comparisons showed that, while some pairs of exceedance and meteorological patterns showed a dominant one-to-one relationship, others did not. In other words, some of the exceedance patterns were typically associated with more than one meteorological pattern and some meteorological patterns were typically associated with more than one exceedance pattern. This result was found to be robust in the sense that it occurred under a variety of clustering approaches. We interpreted this to mean that at least some of the ozone exceedance patterns described by Stoeckenius and Kemball-Cook were not sufficiently unique from a meteorological perspective to serve as adequate archetypes of different types of ozone episodes. Given this result, we decided to examine clustering approaches based on using both the meteorological and ozone (AvgEx00) data simultaneously.

Before proceeding further, we performed a principal components analysis (PCA) on the combined ozone and meteorological data set prior to clustering to determine if it would be possible to reduce the number of variables required for the analysis. Preliminary results showed, however, that the first four components only explained 14% of the total variance. As a result, we did not pursue the PCA any further but simply retained all of the key variables in the clustering analysis.

Several different clustering procedures were applied to the data. Application of single and complete linkage hierarchical agglomerative clustering methods (Venables and Ripley, 1994) to the combined ozone and meteorological data resulted in the formation of one large cluster containing most of the days in the dataset and a large number of additional clusters containing at most a few days each. Use of Ward's method (Ward, 1963) produced a more even distribution of cluster membership at each stage of the agglomeration but with fairly evenly spaced reductions in deviance (see resulting dendrogram in Figure 3-1). In other words, these results did not provide much guidance as to what would constitute a reasonable number of clusters to use in describing the data.

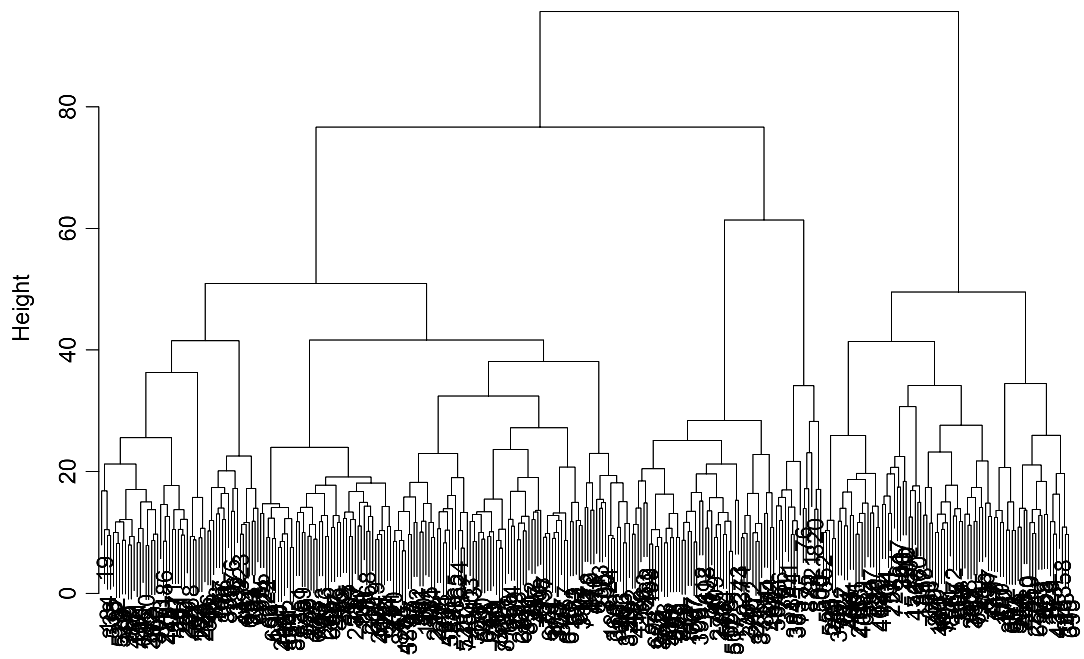

Figure 3-1. Dendrogram from application of Ward's hierarchical agglomerative clustering to the combined daily ozone and meteorological data. Each leaf at the bottom of the figure represents one day; the vertical height at which pairs of leaves (or pairs of clusters of leaves) are joined represents a measure of the distance between the leaves (or cluster centroids) in the multivariate data space.

Based on the agglomerative clustering results, we decided to apply Hartigan's k-means clustering algorithm (Hartigan, 1979) several times, specifying a different value for the number of clusters to form in each application. Under the k-means algorithm, data are arranged into a pre-specified number of clusters so as to minimize the total within-cluster sum of squares. Initial cluster centroids are determined via agglomerative hierarchical clustering. After this initial step, each day is assigned to the nearest cluster centroid where "nearest" is in this case defined as the minimum least squares distance computed over all of the standardized variables. After this initial assignment phase, the algorithm iteratively reassigns days to different clusters until the sum of the within-cluster sums of squares is minimized.[4]

Due to the large number of variables used in the clustering procedure, it is difficult to obtain a complete picture of the meteorological and air quality conditions associated with days falling in each cluster, especially when looking at several alternative cluster configurations. As one of the most important features of each cluster is the spatial ozone distribution, we tabulated the mean

[4] As finding the global minimum of this objective function is not computationally feasible, Hartigan's algorithm actually finds a local minimum such that switching any single observation from one cluster to another does not reduce the objective. As a result, the final cluster assignments may be sensitive to the selection of initial cluster centroids.

values of the ozone measure described above (AvgExc00) for each sub-region within each cluster identified by the k-means algorithm when the data are divided into between 4 and 7 clusters (see Table 3-1). We also examined similar sets of results for each key meteorological variable. Inspection of these results revealed the presence of five distinct sets of ozone and meteorological conditions that are robust in the sense that they show up consistently whether the data are divided into 4, 5, 6 or 7 clusters.

Table 3-1. Mean z-scores for the AvgEx00 ozone summary statistic within each monitoring sub-region under four different candidate sets of cluster designations. The episode pattern ID in the far right-hand column is keyed to the episode patterns described in the text.

a) 4 clusters							**Episode Pattern**
Cluster #	**Sub-Region 1**	**Sub-Region 2**	**Sub-Region 3**	**Sub-Region 4**	**Sub-Region 5**	**Sub-Region 5a**	**ID**
1	0.51	0.08	0.40	-0.08	0.26	0.56	C
2	-0.86	0.49	-0.86	-0.40	-0.15	-0.37	B
3	0.27	0.05	0.22	0.30	0.30	0.20	A
4	-0.72	-0.57	-0.45	-0.31	-0.93	-0.96	E
b) 5 clusters							
Cluster #	**Sub-Region 1**	**Sub-Region 2**	**Sub-Region 3**	**Sub-Region 4**	**Sub-Region 5**	**Sub-Region 5a**	
1	-0.74	0.07	-0.40	-0.58	-0.34	-0.78	E
2	-0.70	0.45	-0.73	-0.37	-0.06	-0.17	B
3	0.45	0.16	0.32	0.35	0.45	0.46	A
4	-0.49	-0.97	-0.35	0.22	-1.07	-0.91	D
5	0.54	-0.04	0.47	-0.10	0.17	0.42	C
c) 6 clusters							
Cluster #	**Sub-Region 1**	**Sub-Region 2**	**Sub-Region 3**	**Sub-Region 4**	**Sub-Region 5**	**Sub-Region 5a**	
1	-0.83	0.47	-0.88	-0.47	-0.17	-0.27	B
2	0.38	0.21	0.23	0.44	0.49	0.46	A
3	0.05	-1.62	0.17	0.58	-1.32	-0.86	D
4	-1.13	-0.17	-0.91	-0.52	-0.89	-1.10	E1
5	0.49	0.03	0.43	-0.10	0.21	0.48	C
6	-0.19	-0.14	0.11	-0.39	-0.17	-0.48	E2
d) 7 clusters							
Cluster #	**Sub-Region 1**	**Sub-Region 2**	**Sub-Region 3**	**Sub-Region 4**	**Sub-Region 5**	**Sub-Region 5a**	
1	0.59	-0.30	0.56	-0.39	-0.02	-0.01	C
2	0.08	0.02	0.02	0.32	0.32	0.10	D1
3	0.08	-1.77	0.21	0.65	-1.52	-1.00	D2
4	-1.17	-0.15	-0.97	-0.54	-0.88	-1.11	E1
5	0.60	0.44	0.39	0.45	0.60	1.03	A
6	-0.38	-0.12	-0.03	-0.45	-0.27	-0.58	E2
7	-0.89	0.47	-0.89	-0.47	-0.19	-0.39	B

We prepared summaries of the meteorological characteristics of each of these five episode types as follows:

1) Composite maps of surface and upper air (850 mb) meteorological variables for each cluster,

2) Side-by-side box plots comparing the distributions of selected key meteorological variables within each cluster, and

3) Tables of morning and afternoon resultant wind direction frequencies within each cluster.

Full results of items 1 – 3 above are presented in Appendix A, B, and C, respectively. By way of example, we show the 850 mb height and wind fields, 850 mb temperature, surface pressure, and surface daily maximum temperature and 10 m wind fields composited for each episode type in Figures 3-2 to 3-5, respectively. Comparing these composite fields for different episode types reveals that each episode type is characterized by a distinct meteorological pattern and these patterns are consistent with the ozone patterns noted in Table 3-1. Key characteristics of the five episode types are presented in Table 3-2. In the description of each episode type, "average" refers to averages over all OTR exceedance days used in the cluster analysis.

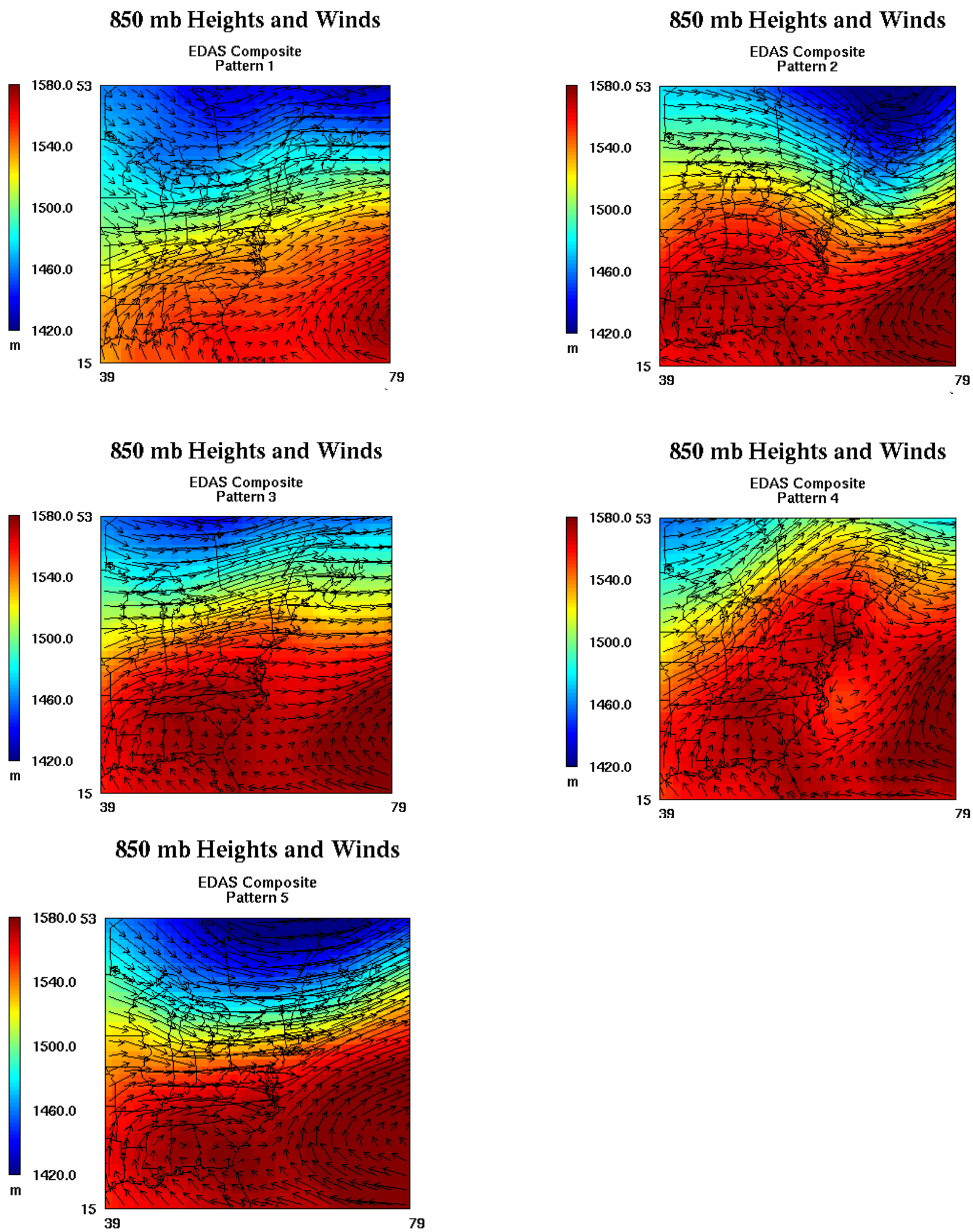

Figure 3-2. Average 850 mb height and wind fields for each episode (pattern) type (pattern numbers refer to the episode types listed in Table 3-2): Pattern 1 = Episode Type E, 2 = B, 3 = A, 4 = D, 5 = C).

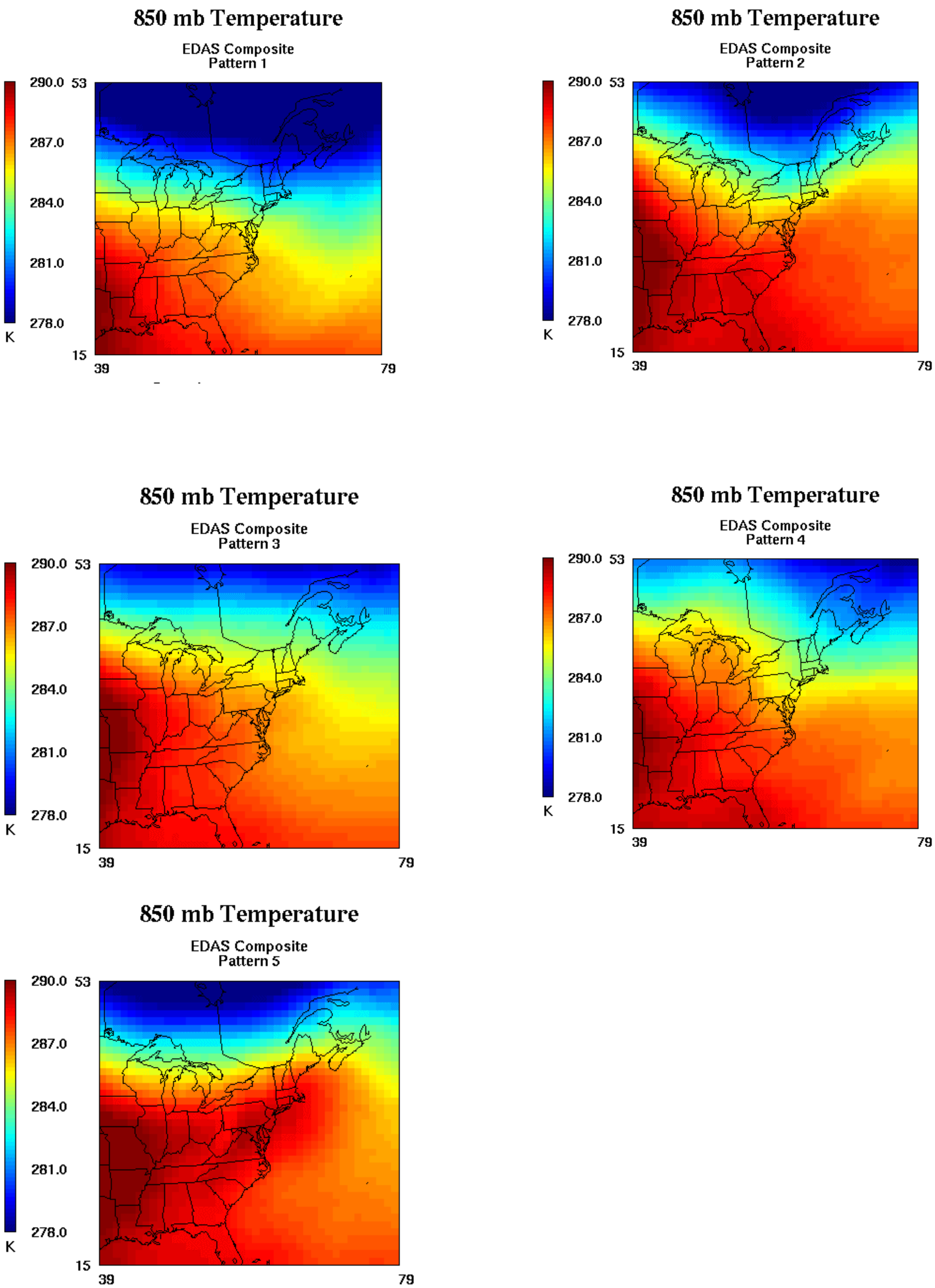

Figure 3-3. Average 850 mb temperature fields for each episode (pattern) type (pattern numbers refer to the episode types listed in Table 3-2): Pattern 1 = Episode Type E, 2 = B, 3 = A, 4 = D, 5 = C).

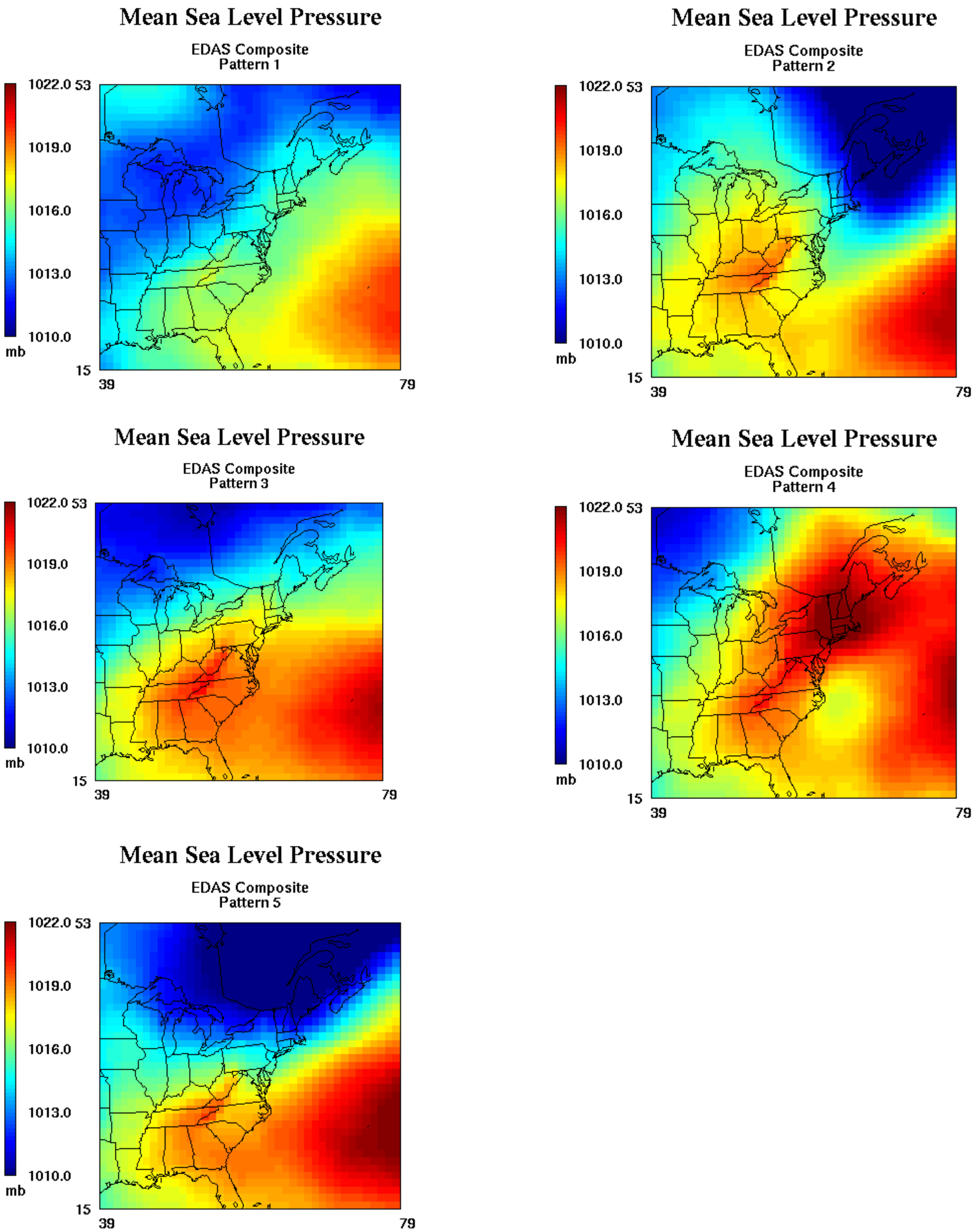

Figure 3-4. Average surface sea level pressure for each episode (pattern) type (pattern numbers refer to the episode types listed in Table 3-2). Pattern 1 = Episode Type E, 2 = B, 3 = A, 4 = D, 5 = C).

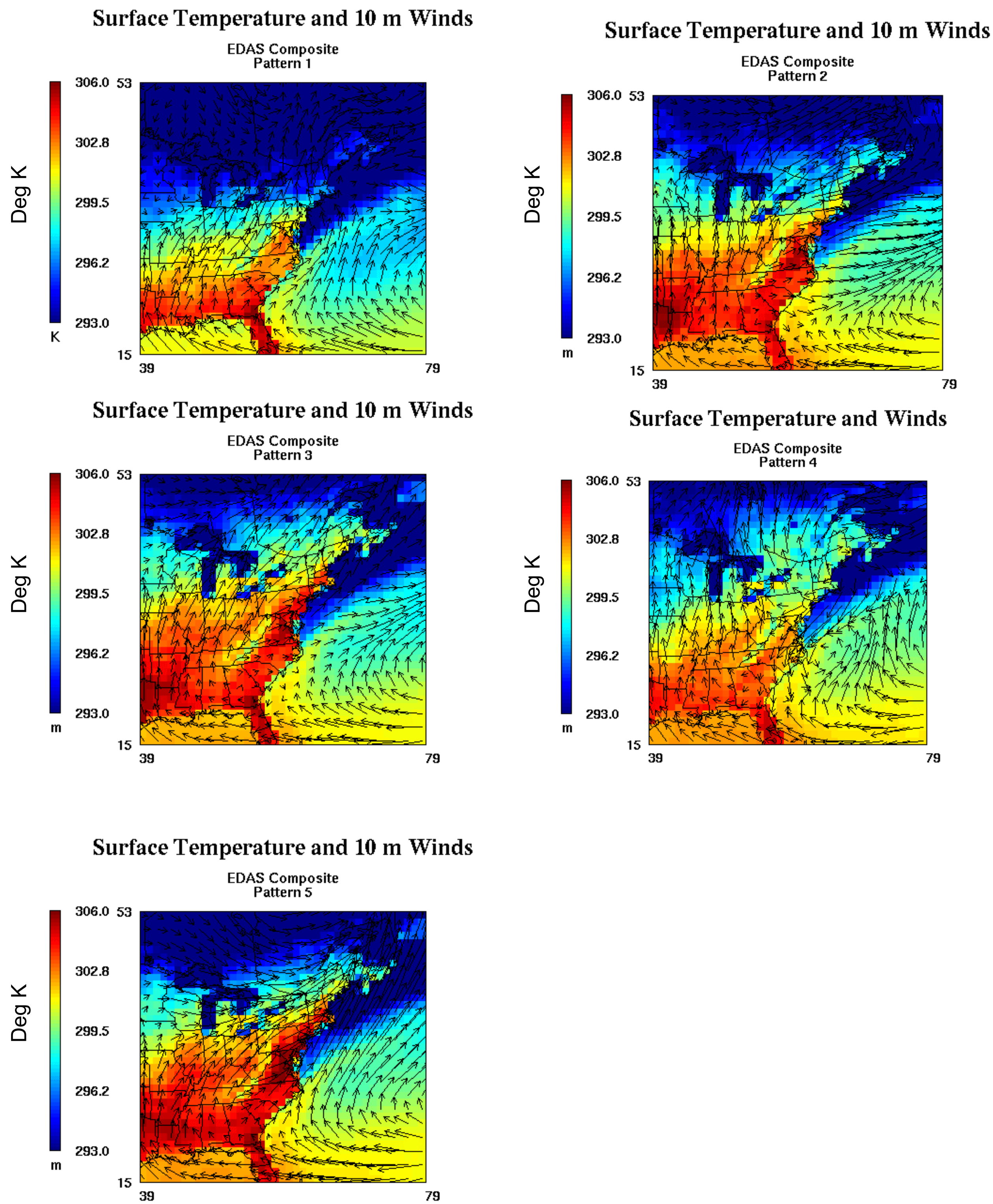

Figure 3-5. Average surface temperature and 10 m wind fields for each episode (pattern) type (pattern numbers refer to the episode types listed in Table 3-2). Pattern 1 = Episode Type E, 2 = B, 3 = A, 4 = D, 5 = C).

Table 3-2. Key characteristics of each OTR episode type.

Episode Type	Pattern No.	Description
A	3	*High ozone throughout the OTR.* This pattern is characterized by strong high pressure over the southeastern states extending from the surface to 500 mb with high temperatures extending into New England and southwest surface winds throughout the OTR. 850 mb temperatures and heights, and surface temperatures are above average at all locations except Washington DC; winds are SW to W throughout the OTR except more variable at LaGuardia and magnitudes of resultant wind vectors are higher than average (indicative of a fairly steady, well defined flow regime), E-W surface pressure gradients are near neutral but SW-NE gradients both along the I-95 corridor and in the west (Pittsburgh to Buffalo) are positive which is consistent with the SW flow. Ozone formation under these conditions is promoted throughout the OTR by the stable air mass and high temperatures.
B	2	*High ozone confined to the extreme southeastern OTR.* This pattern is characterized by an upper-level trough offshore of the OTR and a surface high centered over Kentucky. This results in cooler air advection over nearly all of the OTR with northwest flow aloft and a more westerly flow at the surface. 850 mb heights are lower than average (especially in New England) and surface winds are more frequently from NW along the I-95 corridor than under Type A. Temperatures at 850 mb along the I-95 corridor are only slightly cooler than under Type A but inland temperatures, especially in the north, are much cooler (e.g., at Buffalo); similarly, surface temperatures along the I-95 corridor are about the same as under Type A but temperatures are cooler in Buffalo and Albany. Type B events have the strongest positive W – E surface pressure gradients of any category, consistent with the NW winds but gradients from Washington to New York and Boston are positive. The cooler air over the western OTR and westerly to northwesterly flow result in the higher ozone levels being confined to just the extreme southern portion of the OTR under this pattern.
C	5	*High ozone along I-95 corridor and northern New England.* This pattern is characterized by an extension of the semi-permanent Bermuda high into the southeastern U.S. and an area of high surface and 850 mb temperatures extending from Maryland to Maine; the 500 mb pattern is nearly zonal (east – west flow) while flow at the surface is generally from the SW. 850 mb heights intermediate between Type A and Type B but 850 mb temperatures are very high along the I-95 corridor and slightly cooler further inland. Winds are more consistently S - SW at all sites than under other episode types and almost no NW-N-NE winds are seen at LaGuardia in contrast to other types. Resultant wind vector magnitudes are much higher than average, consistent with the steady SW flow. SW – NE pressure gradients along I-95 corridor and from Pittsburgh to Buffalo are positive, consistent with the SW flow. Average E-W pressure gradients are near zero. These conditions result in above average ozone levels all along the I-95 corridor with advection north into coastal and interior New England. Ozone levels are slightly below average in the extreme southeastern and western OTR (subregions 2 and 4).

Episode Type	Pattern No.	Description
D	4	*High ozone in the western OTR*. This pattern is characterized by an area of mean upper level divergence with associated cut-off low at 850 mb off the Outer Banks of North Carolina. A relatively vigorous mean low pressure center can be seen at the surface. An east-west temperature gradient across the OTR is evident at 850 mb. Surface temperatures along the I-95 corridor and in Albany are below average but surface temperature is above average at Buffalo. 850 mb heights are the highest of any episode type due to a strong ridge over New England. Surface winds are mostly E - NE along I-95 corridor from DC to NY but more variable further north. In contrast to episode types A, B, or C, SW – NE pressure gradients along the I-95 corridor are negative, consistent with the NE surface winds. W – E pressure gradients are flat. These conditions result in below average ozone in the eastern OTR (sub-regions 1, 2, 3, 5, and 6) due to the on-shore flow in the north and cyclonic conditions in the south but above average ozone levels in the western OTR (sub-region 4) due to stable, warm conditions with light winds.
E	1	*Generally low ozone throughout OTR*. This category includes days with moderately low to lowest average ozone readings of all OTR exceedance days included in the cluster analysis. The Bermuda high is shifted east relative to the other types and flow over the southeastern U.S. is only weakly anti-cyclonic with a nearly zonal flow pattern at the 850 and 500 mb levels over the OTR. Temperatures at the surface and aloft are the coolest of any episode type. While winds aloft are nearly westerly, surface winds are generally S – SE over most of the OTR. SW – NE pressure gradients are negative along the I-95 corridor and E-W gradients are positive, consistent with the SE flow. These conditions result in below average ozone throughout the OTR due to the relatively low temperatures and southeasterly onshore flow at coastal locations.

The five episode types described in Table 3-2 exhibit characteristics, which are largely consistent across the different cluster allocations noted in Table 1 (4, 5, 6 or 7 clusters). When four clusters are specified, the Type D events are subsumed into the remaining four episode types. Finer division of days into six clusters results in a split of the Type E events into two groups (denoted as E1 and E2 in Table 1) with generally very similar meteorological conditions but distinguished in part by E-W pressure gradient anomalies that are slightly greater under type E2. Further division into seven clusters appears to preserve the Type A, B, and, to a lesser extent, Type C events along with the Type E1 and E2 events found in the seven cluster result while the Type D events are split into two new categories (denoted D1 and D2 in Table 1). Both D1 and D2 events are associated with high ozone in the west (sub-region 4) under S – SW flow as is typical of Type D but differ in the surface wind pattern, and hence ozone anomalies, along the I-95 corridor.

It is important to keep in mind that there is no *a priori* expectation that all ozone exceedance events in the OTR fall into one of a finite number of distinct patterns: daily conditions differ from one another to varying degrees and some days will always have characteristics that cross over any predetermined classification boundaries. This means that an episode classification system will always have a certain degree of arbitrariness to it and division of days into bins will always result in some days that do not fit particularly well into any single bin. Nevertheless, for purposes of this study, we seek a reasonable classification system based on a handful of pattern types each of which is uniquely identifiable by a set of characteristics related to ozone formation across the *entire* OTR.[5] Based on the clustering results described above, it appears that the episode Types A – E meet these requirements reasonably well. Frequencies of occurrence for these five types are shown in Table 3-3.

Table 3-3. Frequencies of occurrence of OTR episode types.

	Type A	Type B	Type C	Type D	Type E
No. Days	123	50	66	44	46
Pct.	37%	15%	20%	13%	14%

DEVELOPMENT OF AN OBJECTIVE CLASSIFICATION PROCEDURE

In order to complete our analysis, we needed to develop a final episode classification rule based on results of the above analysis of the 1997 – 2001 and 2003 data which can then be applied to the 2002 data to determine the classification of episodes in 2002 to the five ozone event types described above. A classification tree model was created for this purpose using the ozone and meteorological data from 1997-2001 and 2003 as predictors and the episode pattern type as the response variable. In the classification tree model, data from all exceedance days start out together in the root node of the tree and are then split into two daughter nodes based on the value of one of the predictor variables. For example, a split might consist of sending all days with resultant afternoon wind speed at Hartford, CT less than 4.8 m/s to one node and all remaining days to the other. The variable and value of that variable used to perform a split is determined by examining all possible splits and finding the one which results in the greatest reduction in deviance in the response variable (deviance is a measure of the degree of heterogeneity of the response variable in a node). The splitting process is then repeated for each resulting daughter node and so on until a stopping criterion is reached. The daughter nodes resulting from the last split along each branch of the tree are referred to as *terminal* nodes. The resulting classification tree, grown using the 1997-2001/2003 data as the *learning* dataset, can then be applied to the 2002 data for which the episode classifications are unknown by running the 2002 daily data down the tree, separating days at each node according to the previously determined splitting criteria. Each day from the 2002 data will fall into one of the terminal nodes of the tree, and the probability of that day belonging to the ith episode type is estimated from the fraction of days from the learning dataset in the terminal node belonging to the ith episode type. The *predicted* episode type for days in 2002 falling in the terminal node is taken to be the episode type with the highest probability of occurrence.

Initially, the classification tree was grown by making successive splits until only a small number of days (in this case five) ends up in each terminal node. This results in a relatively large tree with many terminal nodes, each of which will typically be very homogeneous: most of the days in any one terminal node will belong to the same episode type. This large tree represents an over fit to the data in the learning dataset. In other words, if the tree were to be validated against an independent set of days for which the episode types are known (i.e., a test dataset) the frequency of misclassification will generally be higher than the low misclassification frequency determined

[5]It is worth reiterating here that we are seeking a general classification system applicable to the whole of the OTR. More precise classification systems could be developed for individual sub-regions within the OTR but the resulting two dimensional system (consisting of a unique set of episode types for each of several sub-regions) would not only be very time-consuming to develop but would lead to results from which it would most likely be very difficult to draw any conclusions regarding the representativeness of a single season with respect to conditions over the whole of the OTR.

by applying the full tree against the learning dataset. Thus, a smaller tree (one with fewer splits and therefore fewer terminal nodes), is likely to perform at least as well against a test dataset as the initial, large tree. We therefore applied a recursive tree-pruning algorithm known as *cost-complexity pruning* to the large tree (Venables and Ripley, 1994). This results in a sequence of trees, each of which can be characterized by the number of terminal nodes and the cost-complexity parameter, which is a measure of the trade off between growth in tree size and reduction in deviance. The resulting tree sequence is shown in Figure 3-6. As this figure shows, there is a diminishing return in deviance reduction as the size of the tree increases beyond about 5 terminal nodes.

To further evaluate the relative value of different size trees, we performed a ten-fold cross-validation using the learning dataset. The ten-fold cross-validation consists of setting aside 1/10th of the days in the learning sample as a test sample, building a tree using the remaining 90% of days, and evaluating the deviance reduction using the reserved days. This process is repeated 10 times with a different set days set aside in each case. Results from the cross-validation (Figure 3-7) suggests that the residual deviance is minimized at a tree size of about five or six terminal nodes. These results, together with an examination of the misclassification rates from the learning dataset for the pruned tree sequence shows that the 6 terminal node tree is about the optimal size.

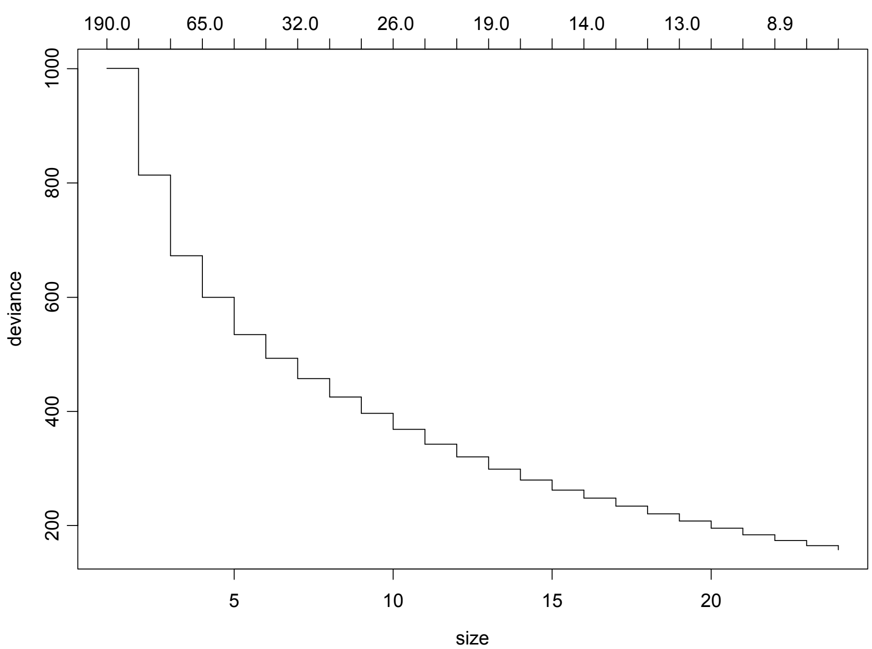

Figure 3-6. Deviance as a function of tree size (number of terminal nodes) for sequence of trees generated by the pruning algorithm.

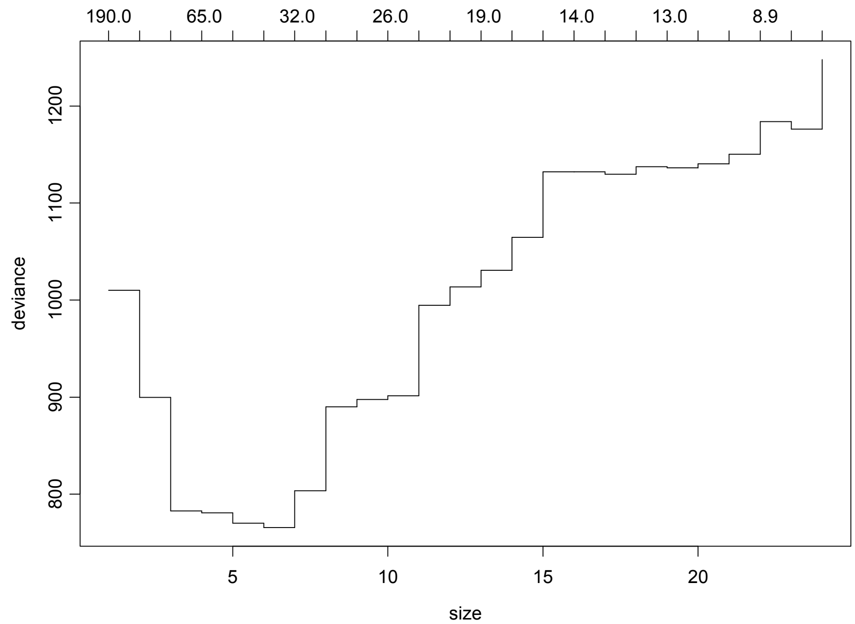

Figure 3-7. Deviance from 10-fold cross-validation as a function of tree size (number of terminal nodes) for sequence of trees generated by pruning algorithm.

The selected classification tree is shown in Figure 3-8; Table 3-4 summarizes the distribution of days by episode type in each terminal node. Two nodes are made up of predominantly Type E days, each of the rest are most representative of one of the four other episode types. Each terminal node has a dominant episode type accounting for between 64 and 81% of days assigned to the node. To use the classification tree for assigning an episode type to a previously unclassified day, we define the *predicted* episode type for all days reaching a given terminal node as the dominant episode type for the node as shown by the shaded boxes in Table 3-4. When this rule is applied to the 329 episode days during the historical period, a comparison of the predicted episode types with the episode types assigned by the cluster analysis shows an overall misclassification rate of 23%.

Table 3-4. Distribution of episode types during the 1997-2001/2003 historical period (as determined via the clustering analysis) for days in each terminal node of the classification tree shown in Figure 3-8.

	Episode Type					
Node No.	A	B	C	D	E	Total
4	6	3	0	0	16	25
5	100	16	9	1	0	126
7	5	3	53	0	5	66
8	1	25	3	0	2	31
10	5	0	0	4	19	28
11	6	3	1	39	4	53
Total	123	50	66	44	46	329

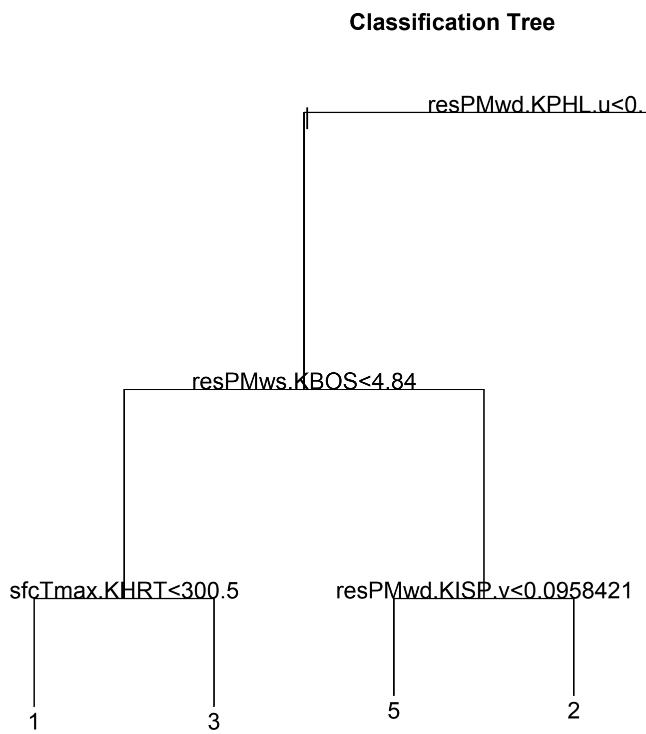

Figure 3-8. Classification tree used to group days by episode type. Variable names and values used to divide data at each splitting node are shown: days meeting the specified criterion are moved down the left branch in each case (resPMwd.KPHL.u = easterly component of the resultant afternoon wind direction at Philadelphia [m/s]; resPMws.KBOS = resultant afternoon wind speed at Boston [m/s]; H850.BUFFALO = 850 mb pressure height at Buffalo [m]; sfcTmax.KHRT = daily maximum surface temperature at Hartford, CT [K]; resPMwd.KISP.v = northerly component of afternoon wind direction at Islip, NY [m/s]). Terminal nodes are numbered 1 – 5 and are keyed to the summary in Table 3-4.

CLASSIFICATION OF 2002 OZONE EPISODES

Data from the 2002 ozone season were analyzed using the classification tree described above to yield a division of the ozone exceedance days into the five episode types. The resulting frequency distribution of episode types in 2002 was then compared with the historical episode type frequency distribution shown in Table 3-4, thereby providing an indication of the degree to which conditions during 2002 are representative of conditions observed in other years. We also compared ozone concentration distributions and composite meteorological fields by episode type in 2002 with those during the historical period as a way of further evaluating the representativeness of conditions during the 2002 ozone season.

Episode Type Classification

We applied the 6-node tree shown in Figure 3-8 to all 8-hour ozone exceedance days in 2002. Of the 71 exceedance days, 69 could be assigned to terminal nodes on the tree; missing data prevented classification of two of the days. Examination of the classification results showed that if surrogate splits[6] were used to assign these two days to one of the terminal nodes, the number of days falling into the node would change by no more than 3 percentage points, so the two days with missing data were simply ignored. The predicted episode type for each exceedance day in 2002 was taken to be the predominant episode type in the terminal node to which it was assigned (as indicated by the shaded boxes in Table 3-4). Appendix E lists the resulting episode type associated with each exceedance day in 2002. The resulting distributions of days by episode type for the 2002 season and the 1997-2001/2003 historical period are shown in Figure 3-9.[7] For the historical days, both the episode type assignments based on the classification tree and the episode types as originally assigned in the clustering analysis are shown. The overall pattern of episode type occurrence frequencies for the historical period is similar between the classification tree and the clustering analysis, as we would expect. Frequencies of occurrence of the episode types are within two percentage points of each other except for Type D events (slightly more Type D days assigned by the classification tree) and Type B events (about a third fewer Type B days determined by the classification tree).

Comparison of the occurrence frequencies over the historical period with the 2002 data also suggest a generally similar pattern of episode types. Note that the error bars in Figure 3-9 show the 10th and 90th percentile range in the frequencies of occurrence of each episode type observed within individual years during the historical period: an individual year would be expected to fall within this range with 80% probability. The 2002 type frequencies generally fall within these error bars except for a somewhat higher frequency of Type C events and a lower frequency of Type E events. As Type E events are characterized by below average ozone (relative to all exceedance days) throughout all but the southernmost OTR, this difference reflects the higher frequency of exceedance days in 2002 relative to the historical period as noted above. If we ignore the Type E events and renormalize (see Figure 3-10), the occurrence frequencies in 2002 of the remaining episode types are found to be similar to those in the historical period and fall within the 10th to 90th percentile range in each case. Thus, each of the event types A – D appear to be well represented within the 2002 season.

[6] Surrogate splitting uses the best alternative splits (based on the non-missing variable that produces nearly the same split as the primary splitting variable).

[7] The bars in this figure are scaled to the fraction of OTR exceedance days assigned to each episode type. Thus, these comparisons are not effected by the above average number of exceedance days in 2002 noted earlier.

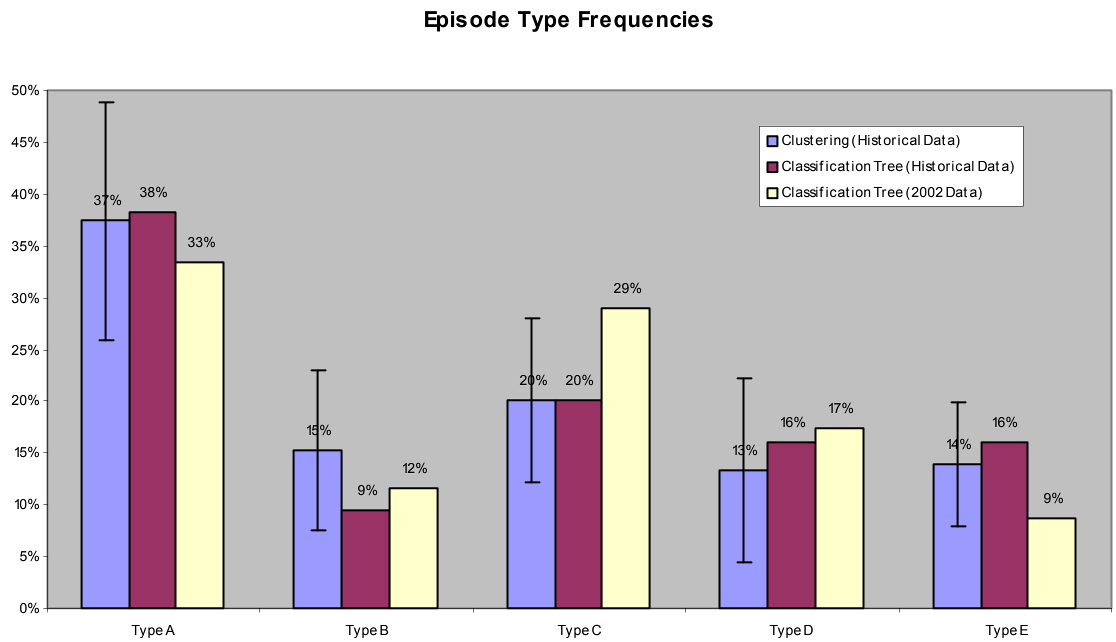

Figure 3-9. Percent of episode days by type in the 1997 – 2001/2003 historical period (as determined by the cluster analysis and by the classification tree) and in 2002; error bars show 10^{th} and 90^{th} percentiles of annual frequencies of occurrence during 1997-2001&2003.

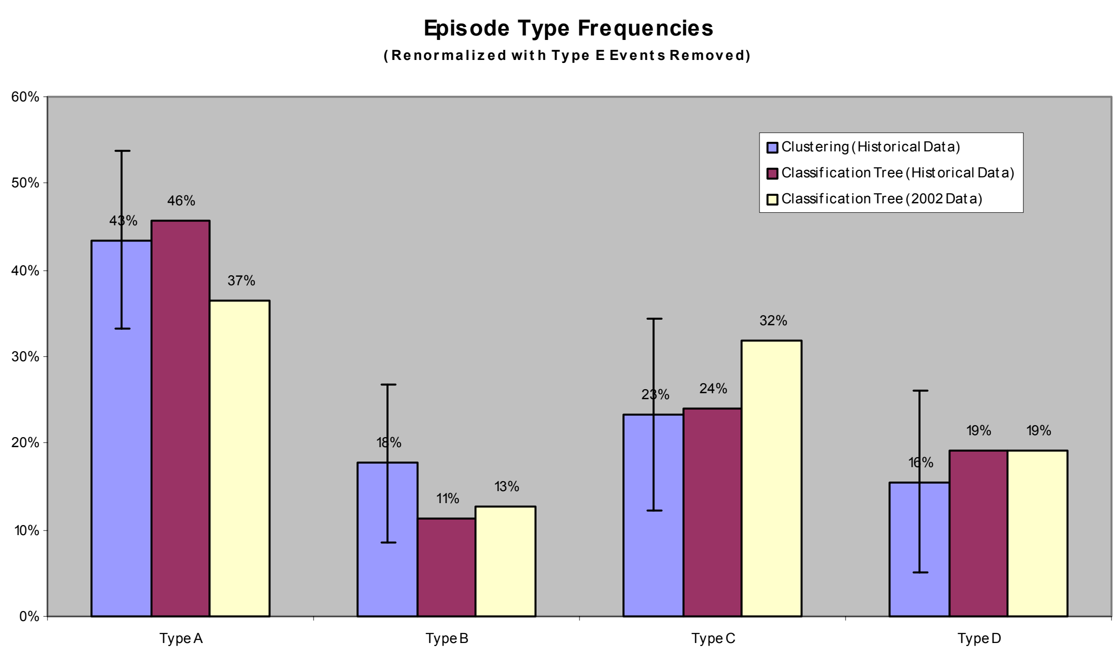

Figure 3-10. Percent of episode days by type in the 1997 – 2001/2003 historical period (as determined by the cluster analysis and by the classification tree) and in 2002 with Type E events removed and frequencies re-normalized; error bars show 10^{th} and 90^{th} percentiles of annual frequencies of occurrence during 1997-2001&2003.

Ozone Concentration levels

An exceedance of the 8-hour ozone standard occurred at one or more sites in the study region on 71 days during 2002, representing 46% of the 153 days during the May – September season analyzed in this study. For the 1997 – 2001/2003 historical period, the corresponding percentage was 36% so exceedances were more frequent during 2002. The greater frequency of ozone exceedance events was distributed throughout the OTR as shown by the comparison by monitoring sub-region in Table 3-5. Exceedances occurred with 20 – 50% greater frequency in 2002 in all sub-regions (100% greater in sub-region 3). This difference in the frequency of exceedances in 2002 as compared to the historical period does not necessarily mean, however, that the exceedance events themselves have characteristics that significantly differ from those seen during the historical period.

Table 3-5. Number of days during May-September with 8-hour daily maximum ozone greater than 0.08 ppm in each monitoring sub-region averaged over the 1997-2001/2003 historical period and in 2002.

	Sub-Region					
	1	2	3	4	5	6
>0.08 ppm						
1997-2001/2003	22.3	31.0	8.5	27.3	42.0	30.8
2002	34	38	17	39	58	44
Pct. Difference	52%	23%	100%	43%	38%	43%

Distributions of daily maximum 8-hour average ozone concentrations averaged over monitors in each sub-region (the AvgExc00 statistic) in 2002 and the historical period are compared for each event type in Figures 3-12(a-e), a key to the boxplot symbols used to summarize the ozone distribution is shown in Figure 3-11. Overall, the range of ozone under each event type in 2002 is similar to that under the corresponding event type in the historical period. The most notable exceptions are higher ozone levels during Type D events in 2002 along the Washington – New York City corridor (sub-regions 2, 5, and 6). This is consistent with a less pronounced low pressure center off the NC coast in the 2002 Type D events as compared to the historical period (see further discussion below). Aside from this difference, the overall ozone levels during the 2002 exceedance events were generally very consistent with those observed during the historical period, not withstanding the fact that exceedance days were more frequent during 2002.

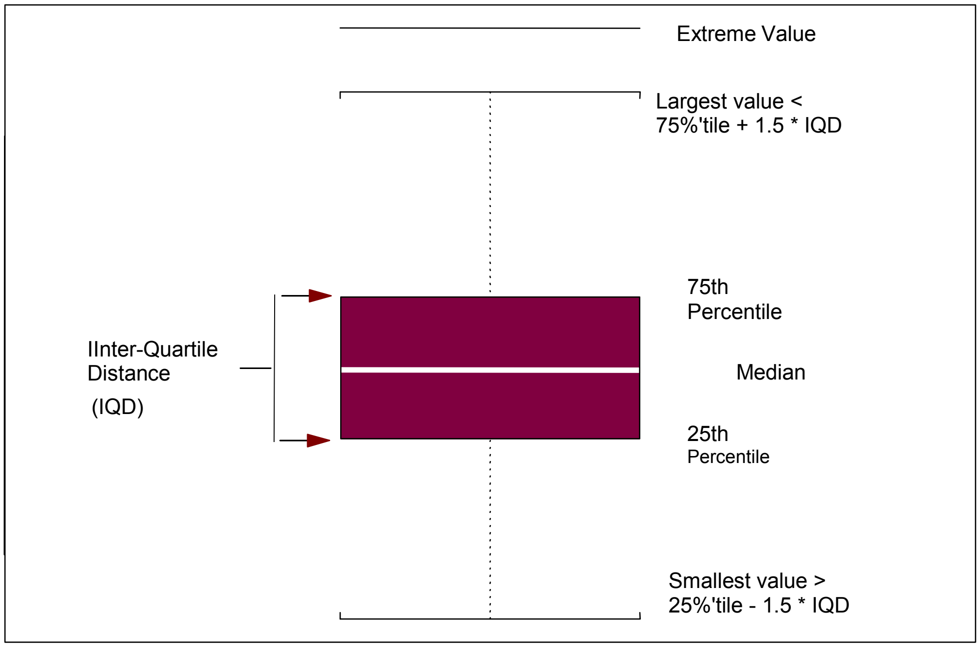

Figure 3-11. Key to boxplot symbols.

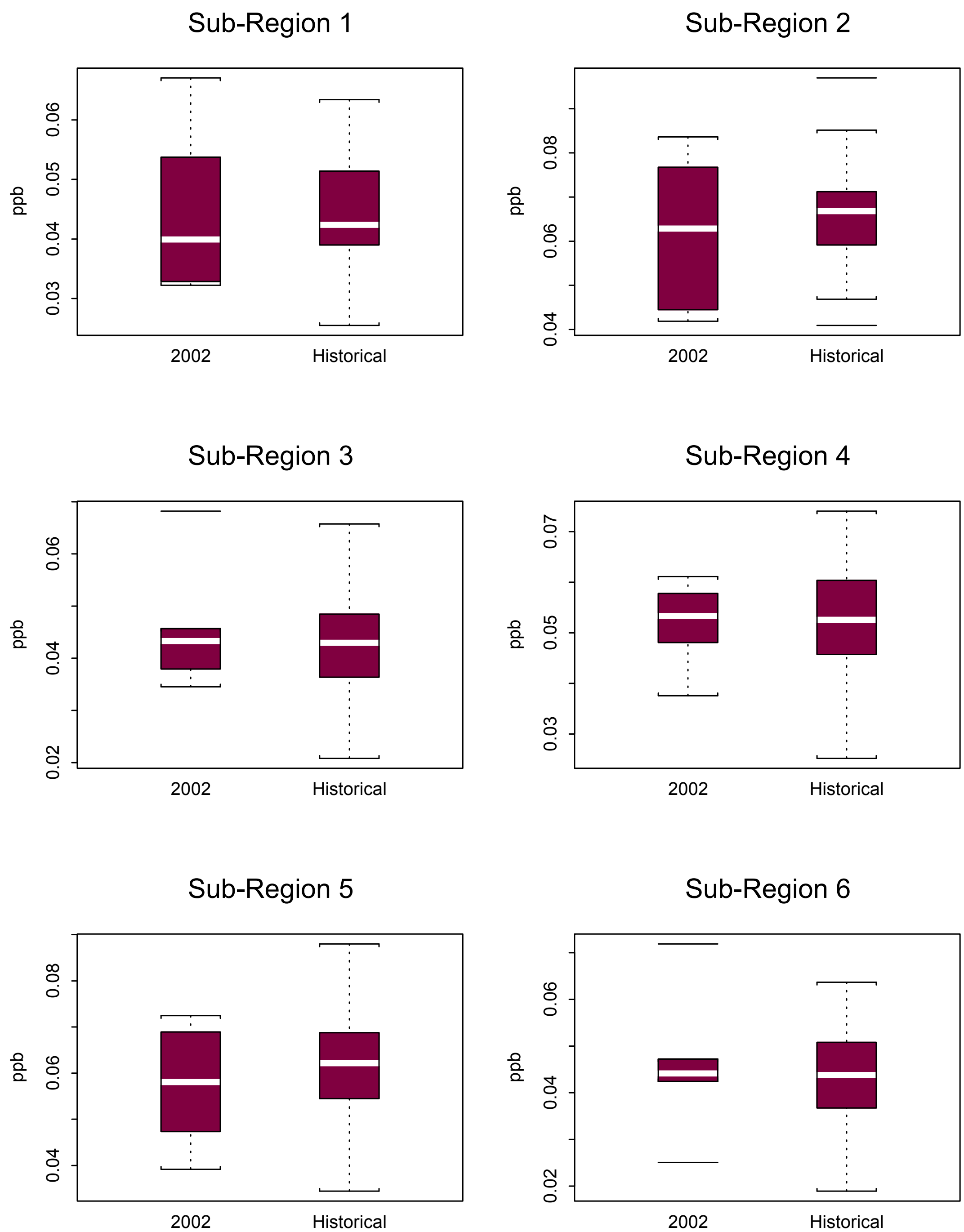

Figure 3-12a. Boxplots of average 8-hour daily maximum ozone (ppb) in each monitoring sub-region during 2002 and during the 1997-2001 and 2003 "historical" period: Type E (Pattern No. 1) events.

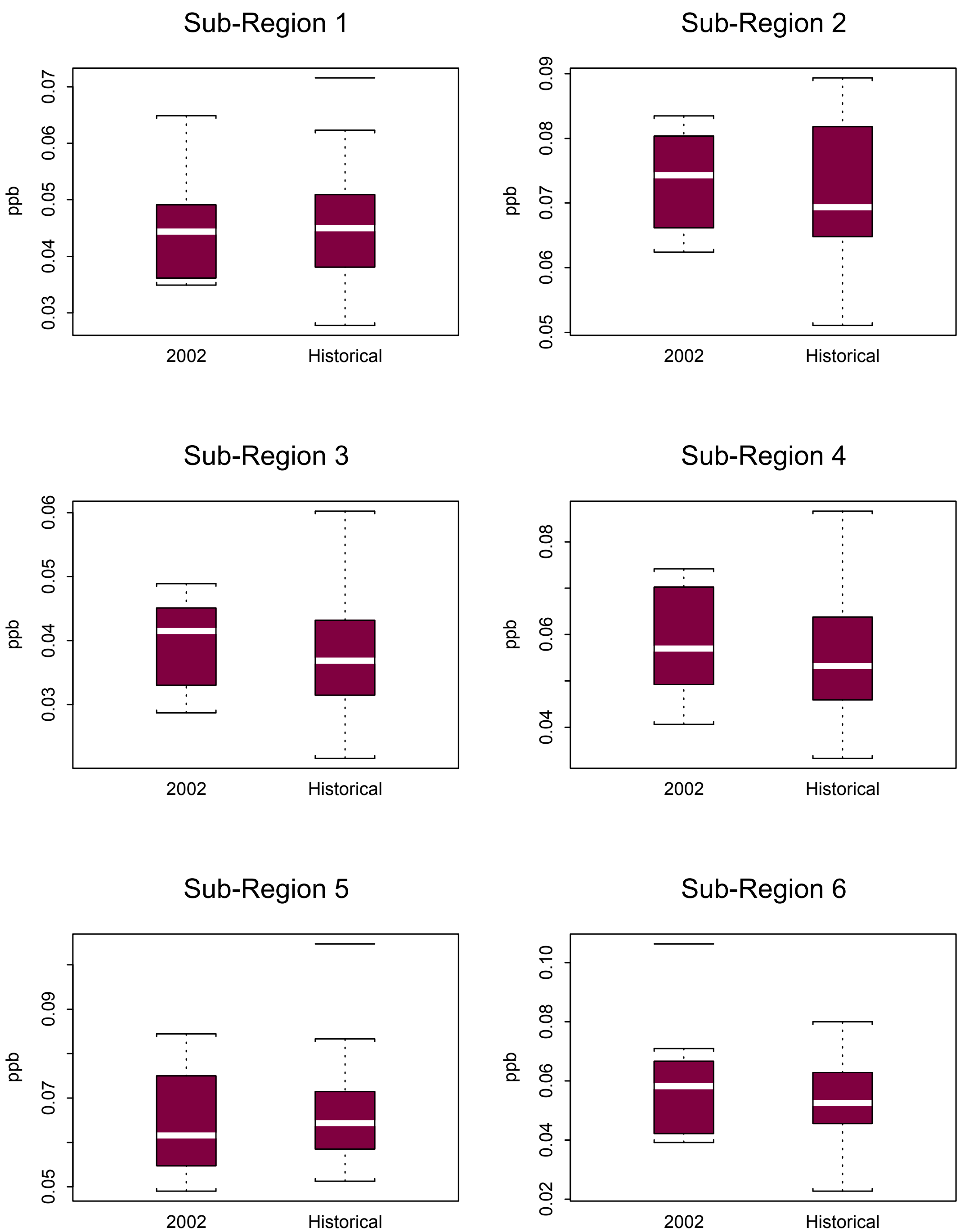

Figure 3-12b. Boxplots of average 8-hour daily maximum ozone (ppb) in each monitoring sub-region during 2002 and during the 1997-2001 and 2003 “historical” period: Type B (Pattern No. 2) events.

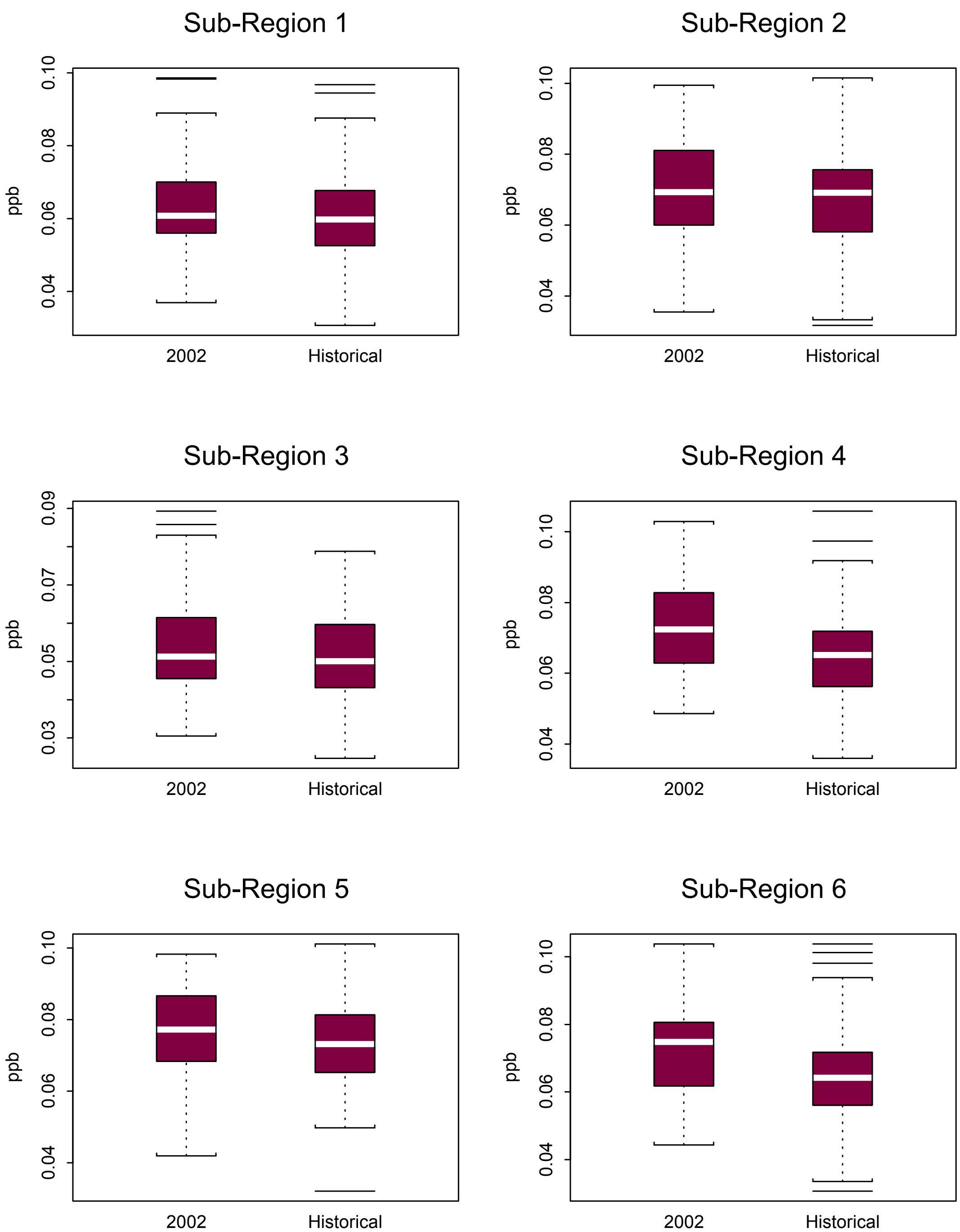

Figure 3-12c. Boxplots of average 8-hour daily maximum ozone (ppb) in each monitoring sub-region during 2002 and during the 1997-2001 and 2003 "historical" period: Type A (Pattern No. 3) events.

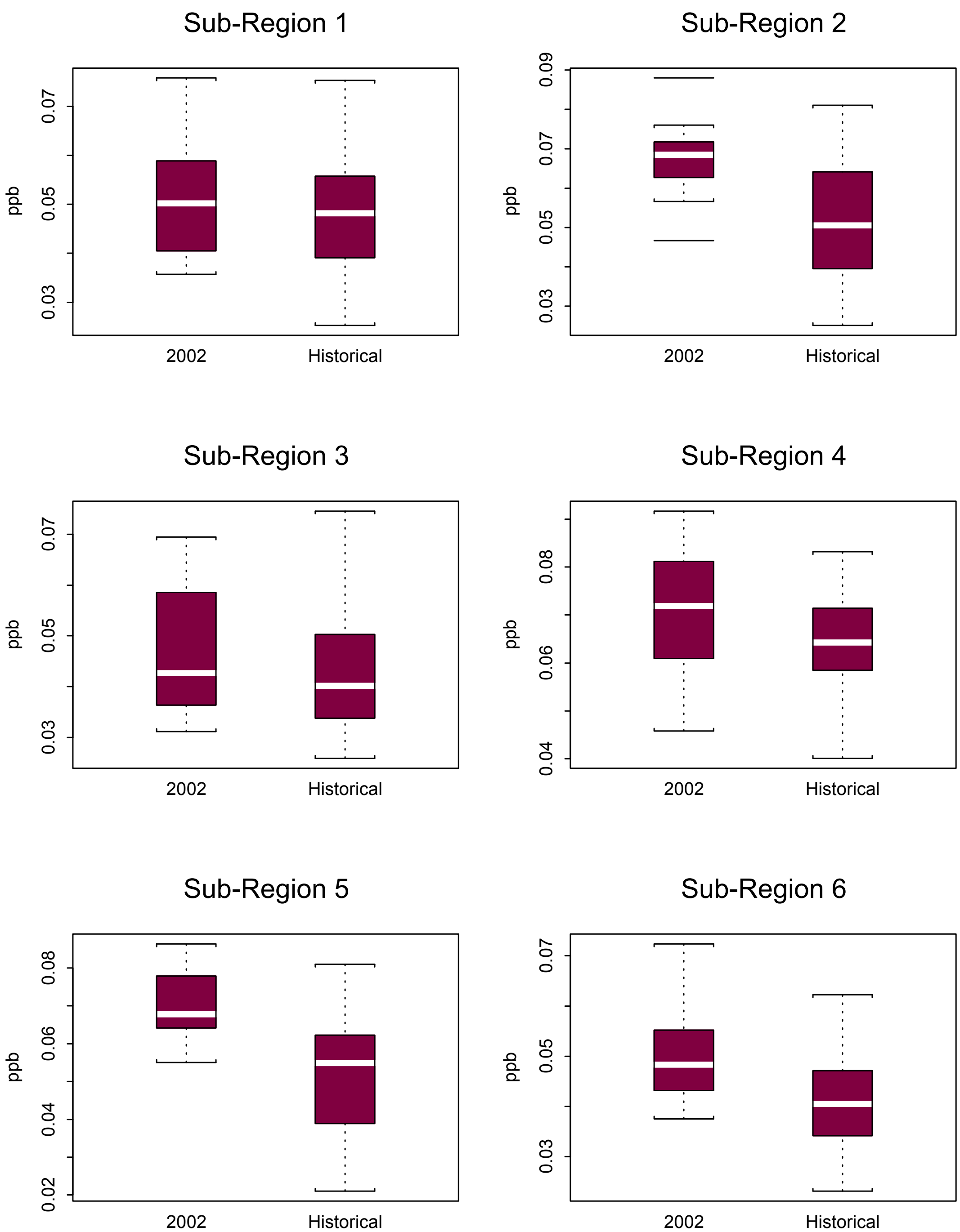

Figure 3-12d. Boxplots of average 8-hour daily maximum ozone (ppb) in each monitoring sub-region during 2002 and during the 1997-2001 and 2003 "historical" period: Type D (Pattern No. 4) events.

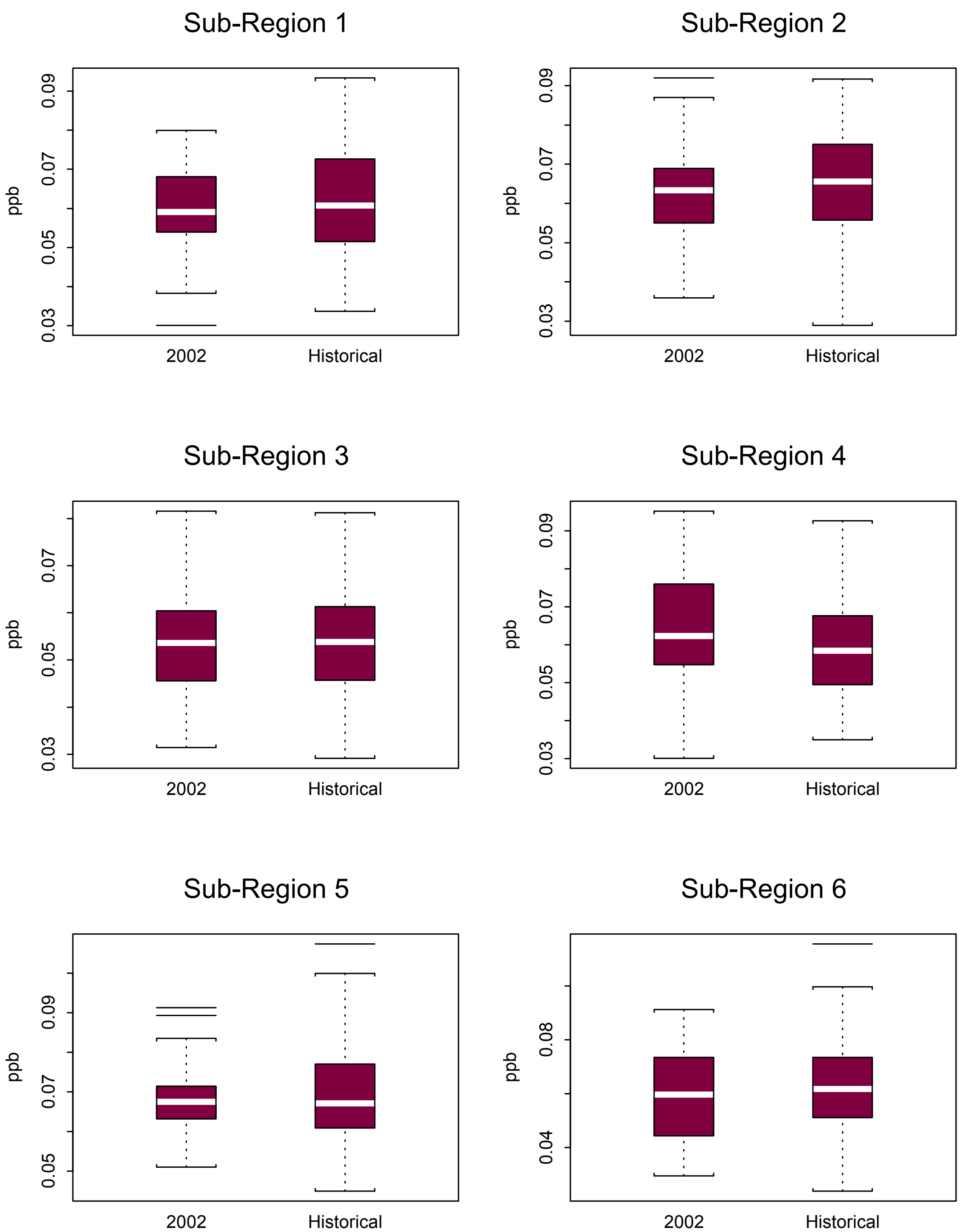

Figure 3-12e. Boxplots of average 8-hour daily maximum ozone (ppb) in each monitoring sub-region during 2002 and during the 1997-2001 and 2003 "historical" period: Type C (Pattern No. 5) events.

Meteorological Conditions

Selected composite meteorological fields for each episode type in 2002 as predicted by application of the classification tree were computed and displayed for comparison with the historical period composite fields. Results are shown in Figure 3-13 through 3-16. Comparing of these results with those for the historical period (Figures 3-2 to 3-5), we see a remarkable degree of similarity:[8] the surface and upper air meteorological patterns for a given episode type in 2002 are very similar to those for the same episode type observed in the historical period. In other words, the key characteristics of each type observed in the historical dataset are reproduced within the 2002 data. Perhaps the most significant difference is the less pronounced low pressure center off the NC coast under Type D events in 2002 which allowed for the formation of higher ozone concentrations along the Washington – New York City corridor for these event types in 2002 as compared to the historical period. Overall, however, the close match in weather patterns associated with each event type in 2002 and the historical period strongly supports the conclusion that the 2002 ozone episodes, although more numerous than in other years, are of substantially similar character.

[8]In making these comparisons, note that different color and wind vector scales had to be used in some plots of the 2002 data.

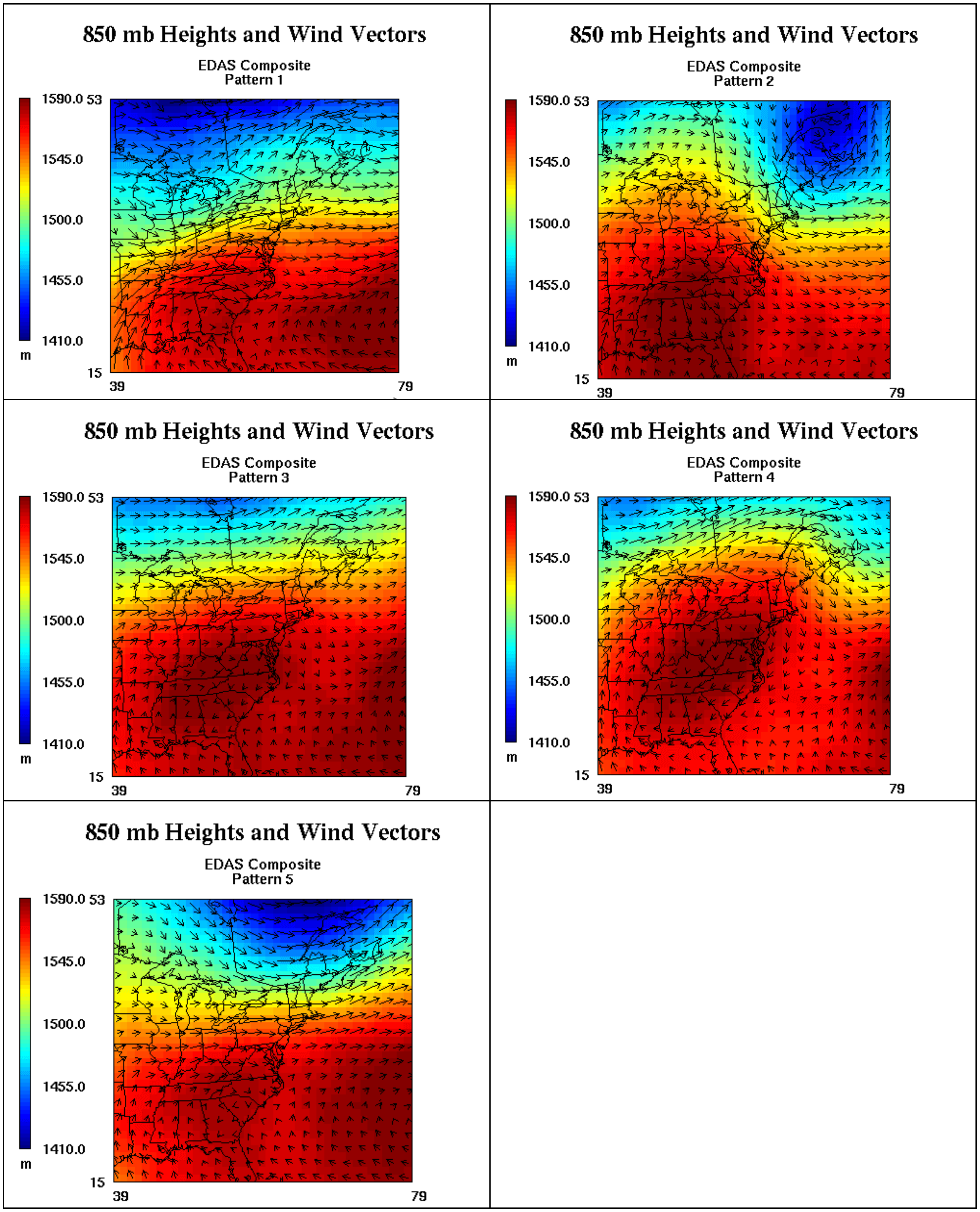

Figure 3-13. Average meteorological fields by episode type (pattern) in 2002: 850 mb heights and winds. Pattern numbers refer to the episode types listed in Table 3-2: Pattern 1 = Episode Type E, 2 = B, 3 = A, 4 = D, 5 = C).

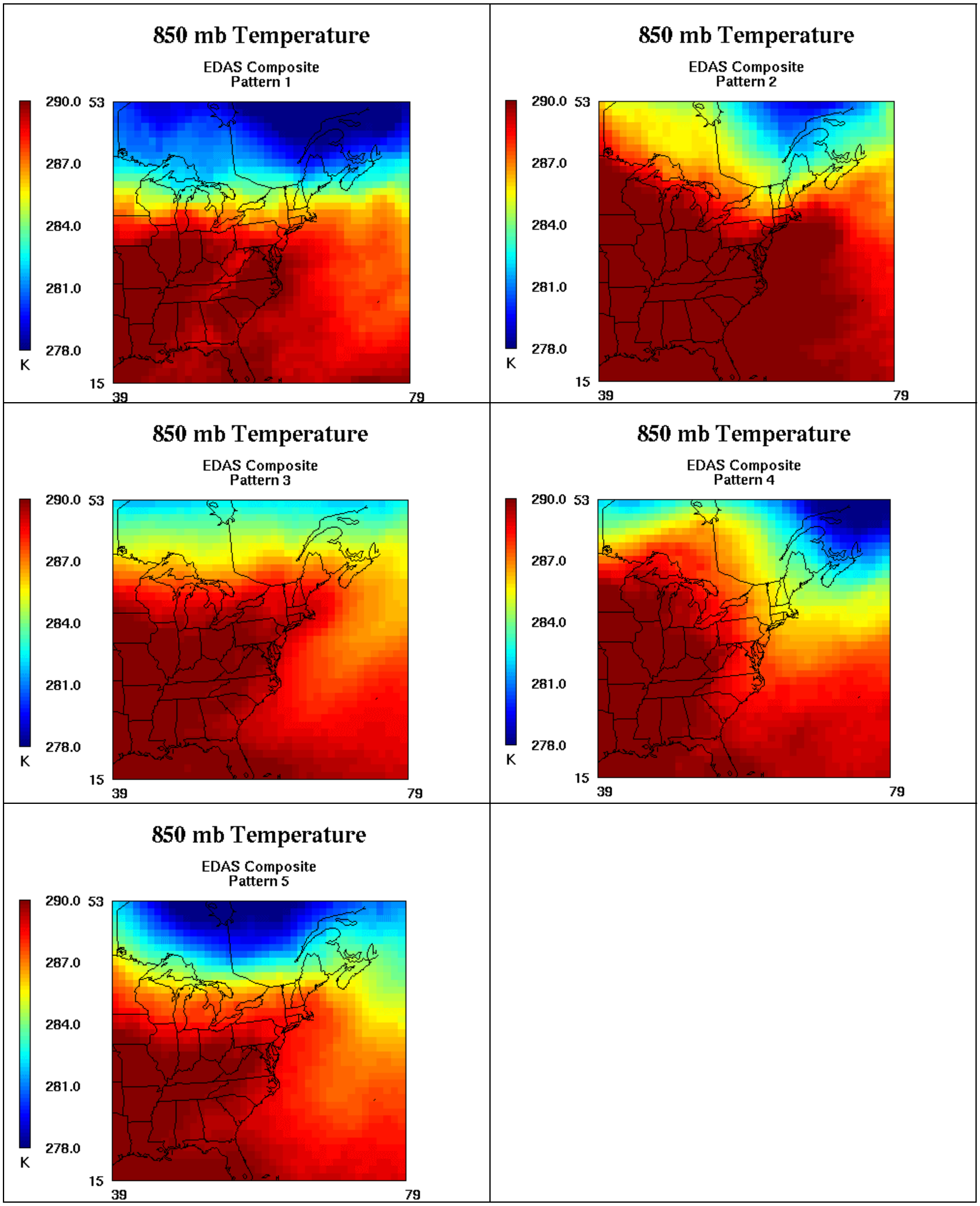

Figure 3-14. Average meteorological fields by episode type (pattern) in 2002: 850 mb temperature. Pattern numbers refer to the episode types listed in Table 3-2: Pattern 1 = Episode Type E, 2 = B, 3 = A, 4 = D, 5 = C).

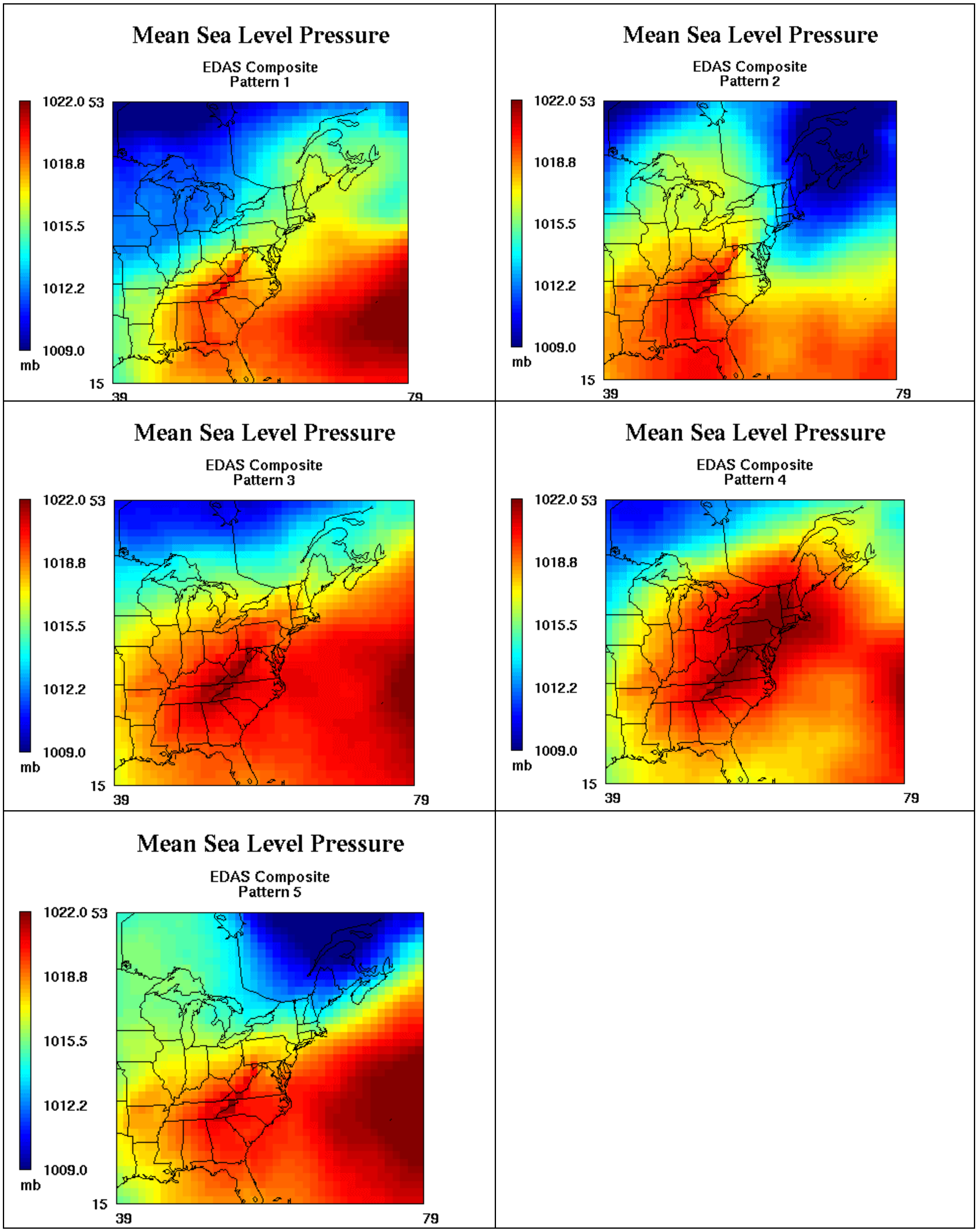

Figure 3-15. Average meteorological fields by episode type (pattern) in 2002: sea level pressure. Pattern numbers refer to the episode types listed in Table 3-2: Pattern 1 = Episode Type E, 2 = B, 3 = A, 4 = D, 5 = C).

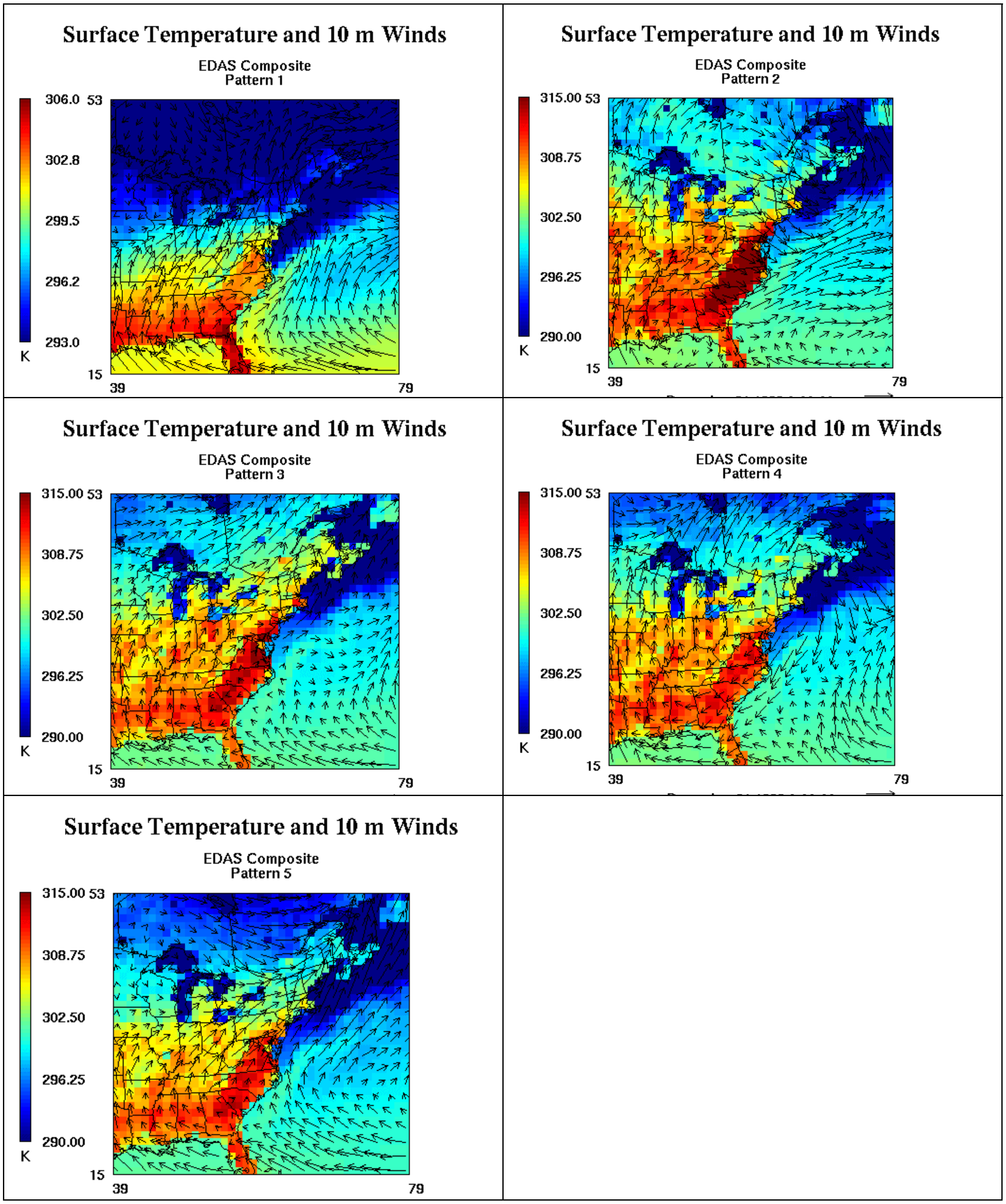

Figure 16. Average meteorological fields by episode type (pattern) in 2002: surface temperature and 10 m winds. Pattern numbers refer to the episode types listed in Table 3-2: Pattern 1 = Episode Type E, 2 = B, 3 = A, 4 = D, 5 = C).

4. CONCLUSIONS AND RECOMMENDATIONS

Results from the application of statistical clustering analyses presented in Section 3 show that regional ozone episode conditions over the OTR can be reasonably well described by a set of five different episode types. Our examination of mean ozone and meteorological conditions shows that each of these episode types is associated with a unique set of distinguishing characteristics. While we would not expect every exceedance day to exhibit all of the characteristics of one type or another, our results provide no clear evidence for the existence of any other additional sufficiently unique types that occur frequently enough to be distinguishable within the six year historical period analyzed.

Data from the 2002 ozone season were analyzed within the framework of the five identified episode types with respect to: a) frequencies of occurrence of each type and b) characteristics of the ozone and meteorological conditions within each type in 2002 as compared to the 1997 – 2001/2003 historical period.

A key feature of the 2002 season is that ozone episodes (defined as an exceedance of the 8-hour ozone NAAQS at one or more monitoring sites within the OTR) occurred more frequently than during the historical period (71 exceedance days during the May – September season in 2002 as compared to an average of 55 days per season during the historical period). Taken by itself, however, this difference does not necessarily mean that region-wide meteorological and ozone concentration patterns *during exceedance days* were significantly different in 2002 as compared to other years: the greater number of exceedance days in 2002 may just reflect a lower than average frequency of days with meteorological conditions not conducive to ozone formation in 2002. The higher than average exceedance rate in 2002 is by itself not an indication of any lack of representativeness of the 2002 exceedance events.

Our examination of conditions during exceedance days in 2002 showed that:

- Except for the Type E events during which ozone exceedances are typically confined to the extreme southeastern corner of the OTR, each of the five episode types identified in the historical period was found to occur on about as many days in 2002 as one would expect based on their rate of occurrence during the historical record. Thus the meteorological conditions on episode days in 2002 exhibit a normal range of variation and each of the five types of episodes are well represented.
- Type E events are under represented in the 2002 season. This is consistent with the higher than average frequency of exceedance days in 2002. The relative lack of Type E events in 2002 should not be of concern from a SIP modeling standpoint, however, as these events are characterized by relatively low ozone levels throughout nearly all of the OTR (except the Washington and Virginia area).
- The distribution of daily maximum 8-hour average ozone levels during each event type in 2002 is generally very similar to that within the same event type during the historical period. The only significant exception is higher ozone along the Washington – New York City corridor under Type D events in 2002 as compared to the historical average.
- Regional-scale meteorological conditions during each event type in 2002 exhibit the same key characteristics as observed for the event types during the historical period. A less

pronounced low pressure center off of the NC coast under the 2002 Type D events appears to be responsible for the higher Washington – New York City ozone levels under this event type noted in the previous bullet.

In summary, while ozone exceedances were more frequent during 2002, conditions during the 2002 exceedance events were for the most part very similar to those found to occur in other years. This leads us to conclude that the 2002 season can be considered to be representative for purposes of photochemical modeling in support of SIP development.

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Appendix A

Composites Representing Mean Meteorological Conditions During Each Ozone Episode Pattern

Composites Representing Mean Meteorological Conditions During Each Ozone Episode Pattern

Mean meteorological fields were computed over days falling into each of the five ozone episode patterns in the Ozone Transport Region defined in the text. The five episode patterns and their composite pattern identifiers are:

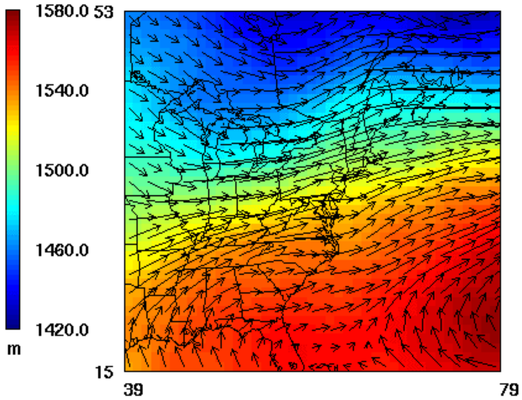
Composite Pattern	Episode Type
3	Type A: High ozone throughout the OTR
2	Type B: High ozone confined to extreme southeastern OTR
5	Type C: High ozone along I-95 corridor and northern New England
4	Type D: High ozone in the western OTR
1	Type E: Generally low ozone throughout the OTR

Mean fields were computed for the following parameters extracted from the EDAS data:

Parameter ID	Description
H850	850 mb height
850 mb Wind	Resultant wind vector at 850 mb
T(850 mb)	850 mb temperature (deg K)
MSLP	Mean sea level pressure (mb)
TSFC	Surface temperature (deg K)
10m Wind	Resultant wind vector at 10 m height
w_500	w (vertical) component of 500 mb wind vector
H500	500 mb heights

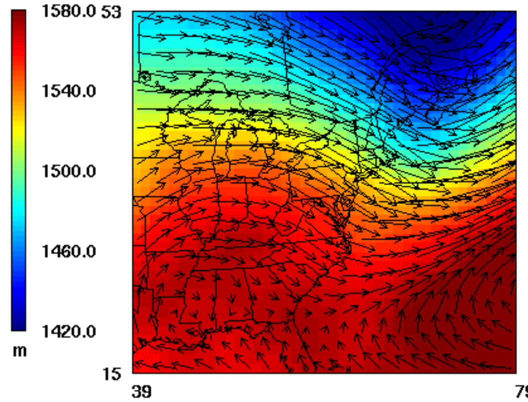
850 mb Heights and Winds

EDAS Composite
Pattern 1



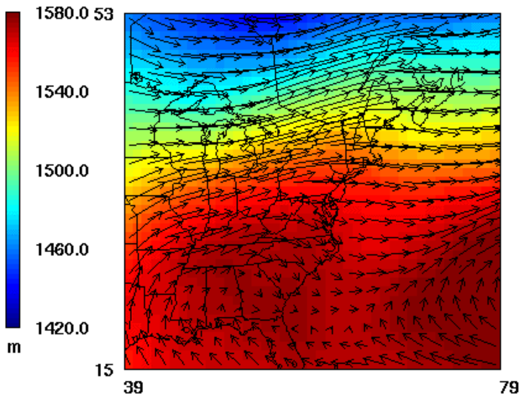
850 mb Heights and Winds

EDAS Composite
Pattern 2



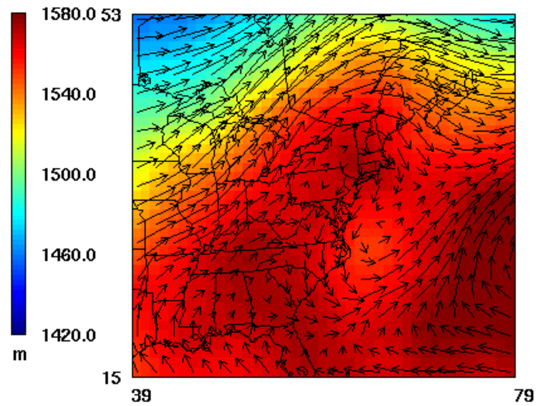
850 mb Heights and Winds

EDAS Composite
Pattern 3



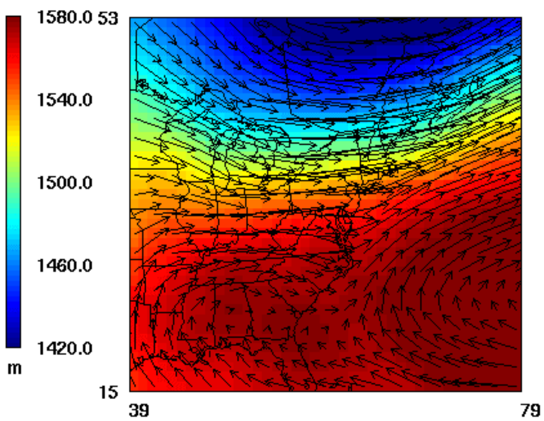
850 mb Heights and Winds

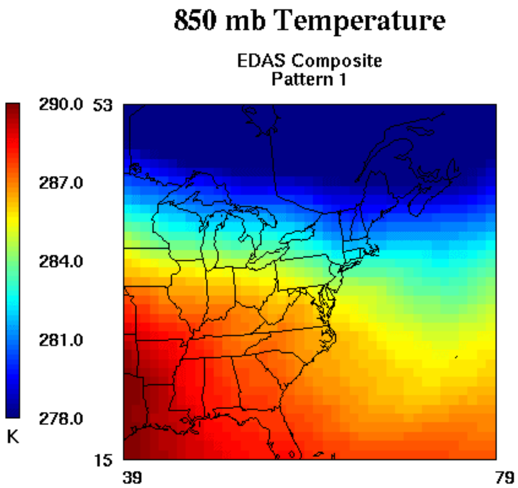
EDAS Composite
Pattern 4

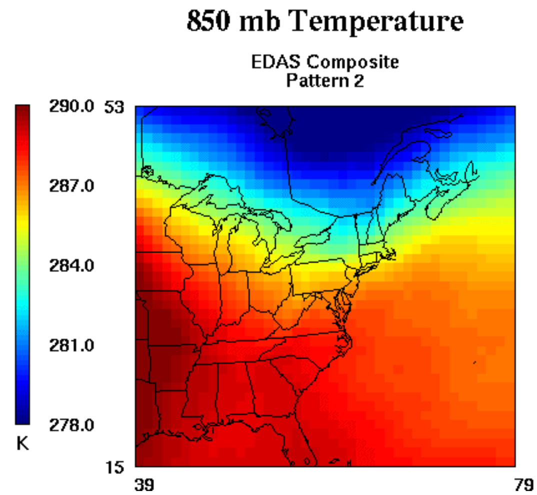


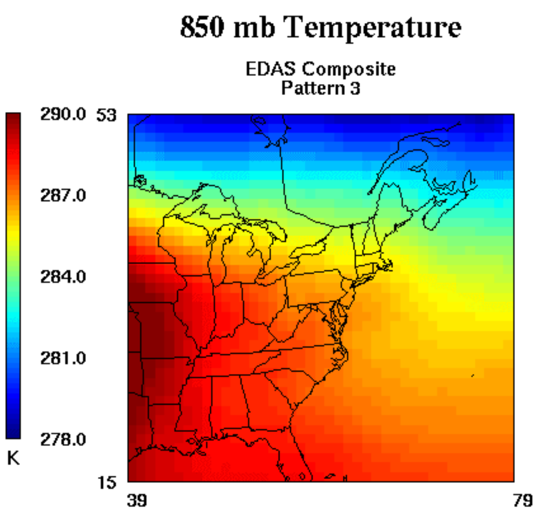
850 mb Heights and Winds

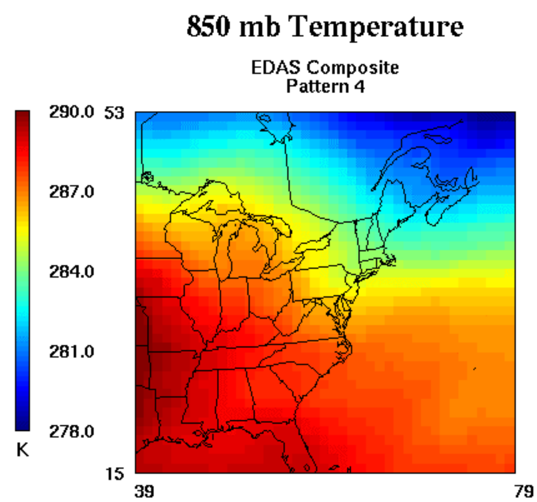
EDAS Composite
Pattern 5




850 mb Temperature
EDAS Composite
Pattern 1
290.0
287.0
284.0
281.0
278.0
K
53
15
39
79


850 mb Temperature
EDAS Composite
Pattern 2
290.0
287.0
284.0
281.0
278.0
K
53
15
39
79


850 mb Temperature
EDAS Composite
Pattern 3
290.0
287.0
284.0
281.0
278.0
K
53
15
39
79


850 mb Temperature
EDAS Composite
Pattern 4
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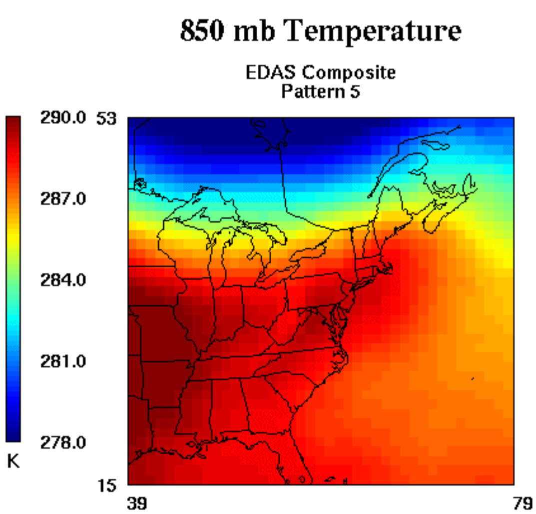
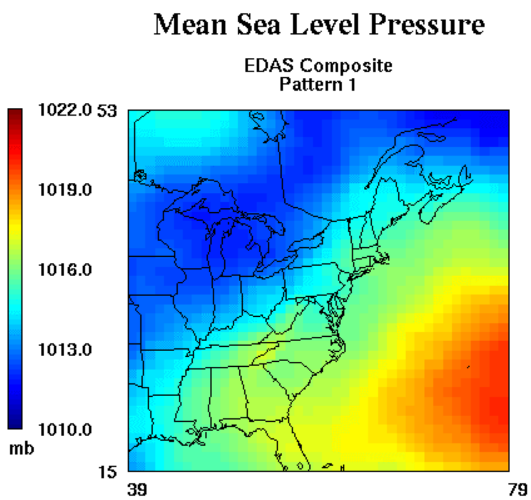
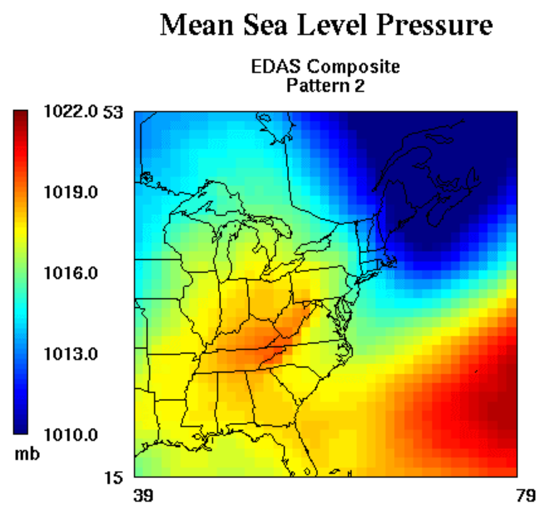
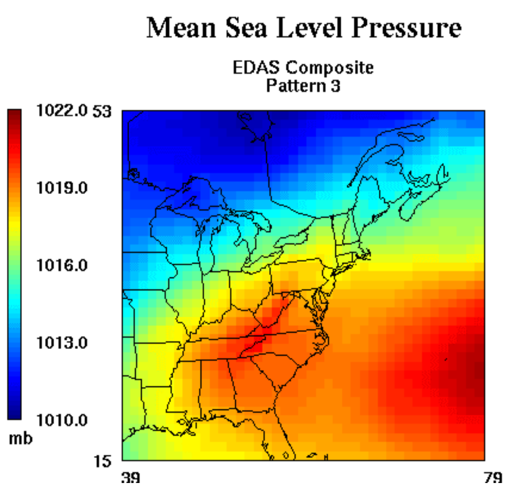
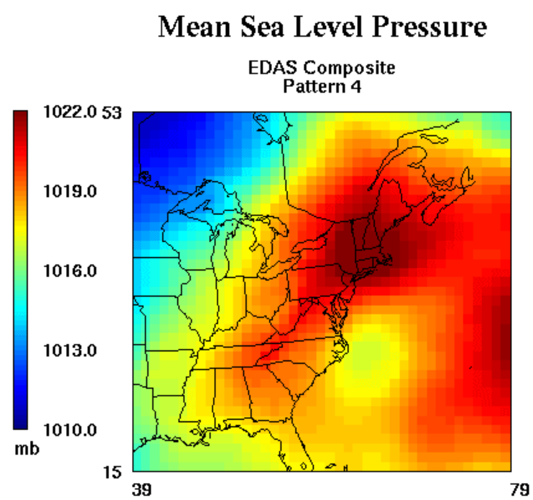
287.0
284.0
281.0
278.0
K
53
15
39
79

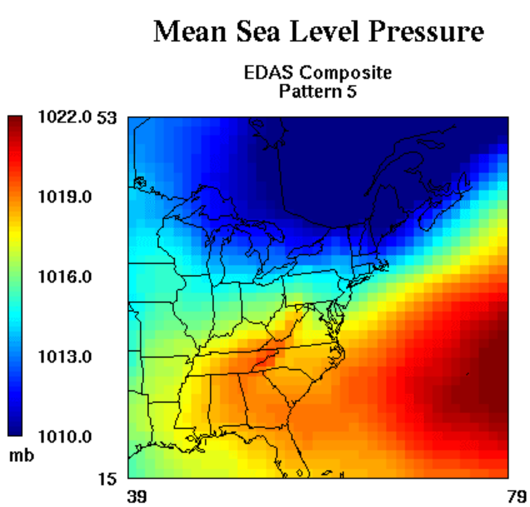

850 mb Temperature
EDAS Composite
Pattern 5
290.0
287.0
284.0
281.0
278.0
K
53
15
39
79


Mean Sea Level Pressure
EDAS Composite
Pattern 1
1022.0
1019.0
1016.0
1013.0
1010.0
mb
53
15
39
79

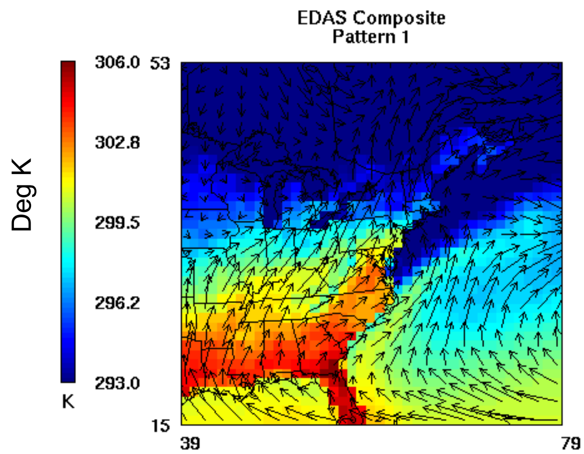

Mean Sea Level Pressure
EDAS Composite
Pattern 2
1022.0
1019.0
1016.0
1013.0
1010.0
mb
53
15
39
79


Mean Sea Level Pressure
EDAS Composite
Pattern 3
1022.0
1019.0
1016.0
1013.0
1010.0
mb
53
15
39
79

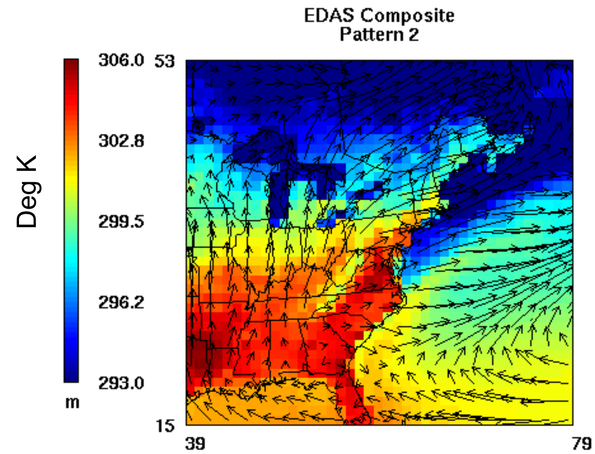

Mean Sea Level Pressure
EDAS Composite
Pattern 4
1022.0
1019.0
1016.0
1013.0
1010.0
mb
53
15
39
79


Mean Sea Level Pressure
EDAS Composite
Pattern 5
1022.0
1019.0
1016.0
1013.0
1010.0
mb
53
15
39
79

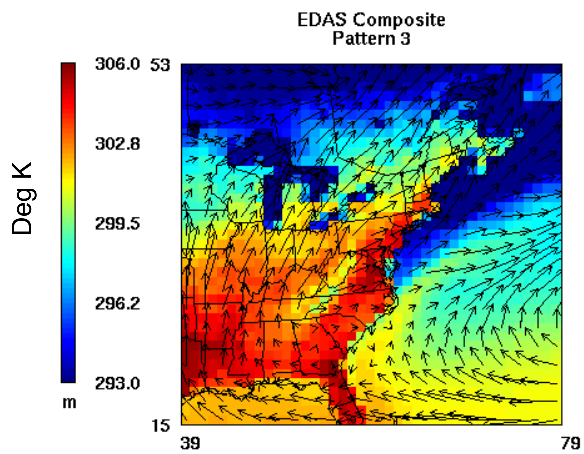
Surface Temperature and 10 m Winds



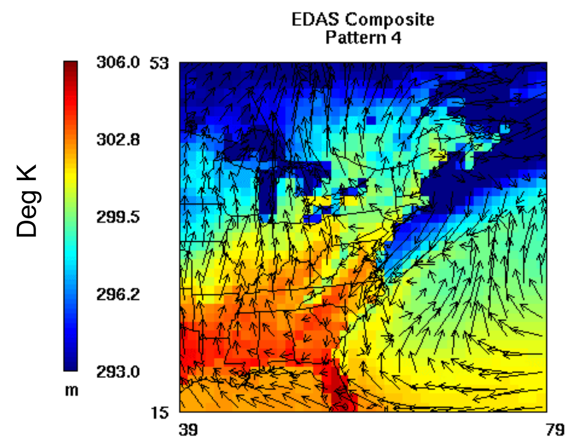
Surface Temperature and 10 m Winds



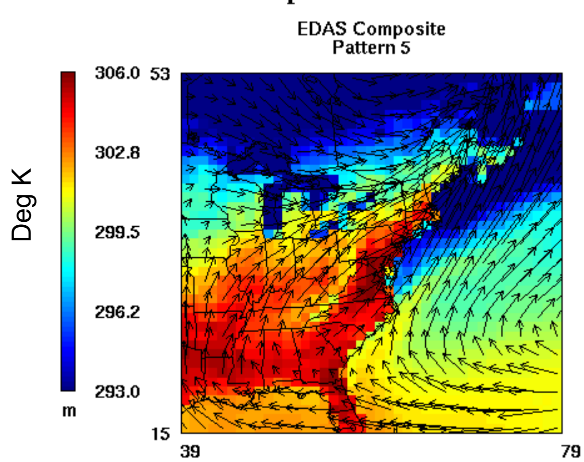
Surface Temperature and 10 m Winds



Surface Temperature and Winds

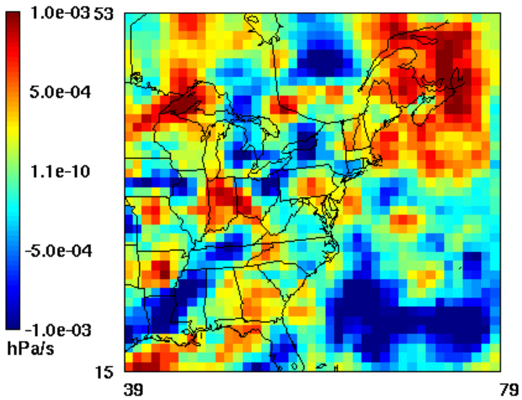


Surface Temperature and 10 m Winds



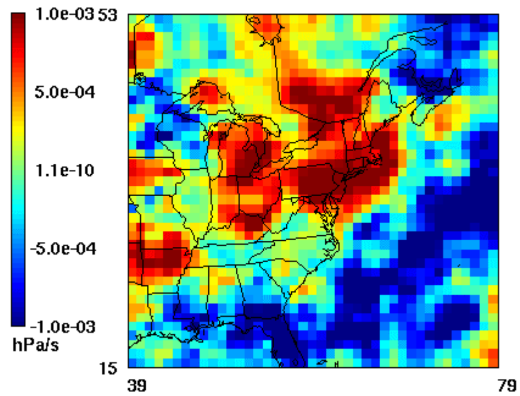
500 mb Vertical Velocity

EDAS Composite
Pattern 1



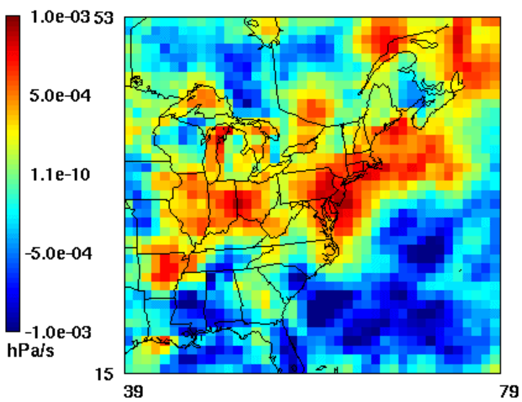
500 mb Vertical Velocity

EDAS Composite
Pattern 2



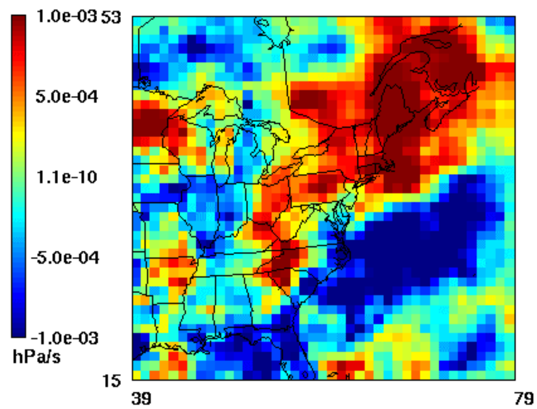
500 mb Vertical Velocity

EDAS Composite
Pattern 3



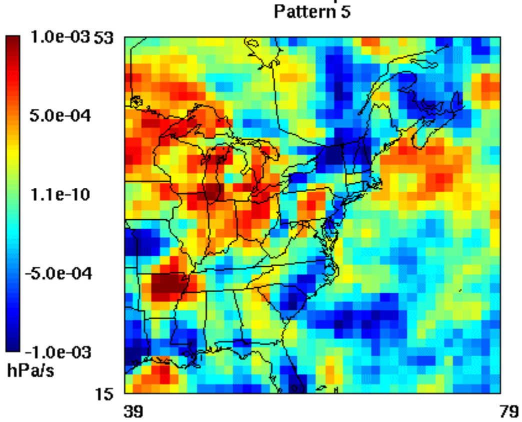
500 mb Vertical Velocity

EDAS Composite
Pattern 4



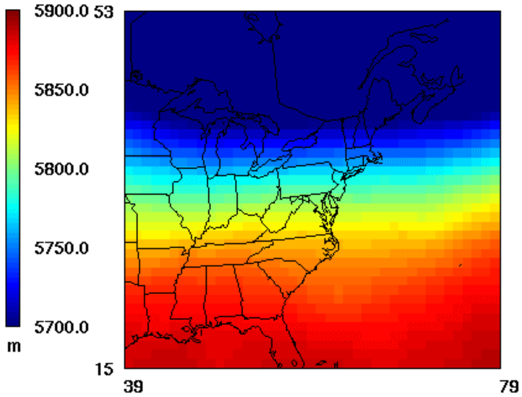
500 mb Vertical Velocity

EDAS Composite
Pattern 5



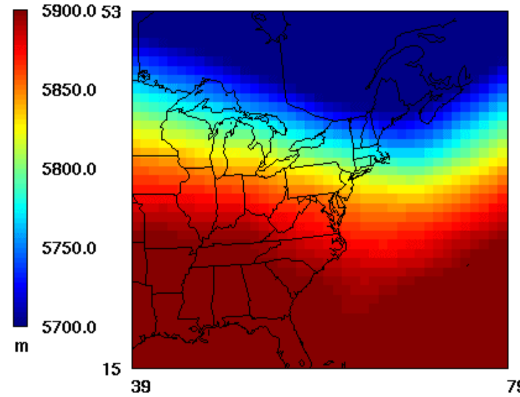
500 mb Heights

EDAS Composite
Pattern 1



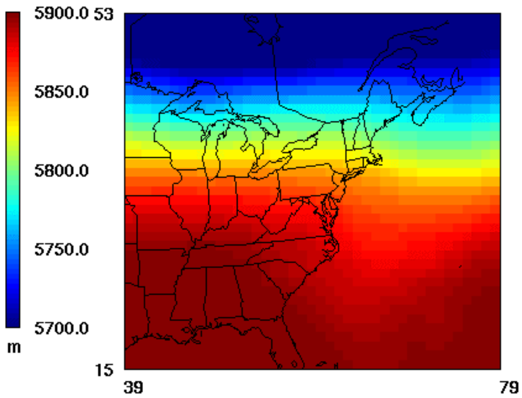
500 mb Heights

EDAS Composite
Pattern 2



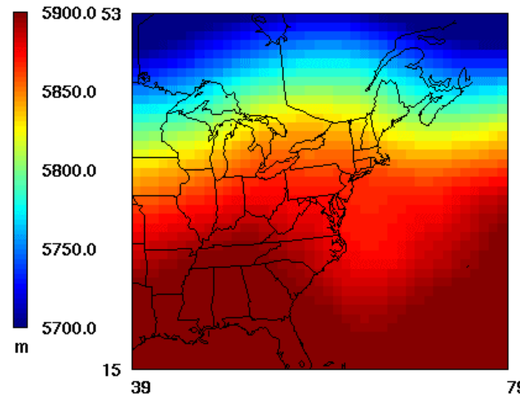
500 mb Heights

EDAS Composite
Pattern 3



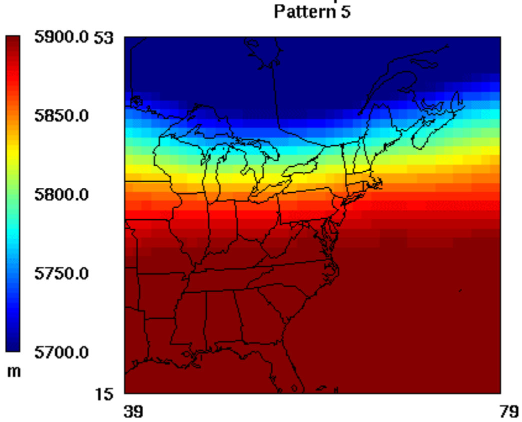
500 mb Heights

EDAS Composite
Pattern 4



500 mb Heights

EDAS Composite
Pattern 5



Appendix B

Boxplots of Key Meteorological Variables

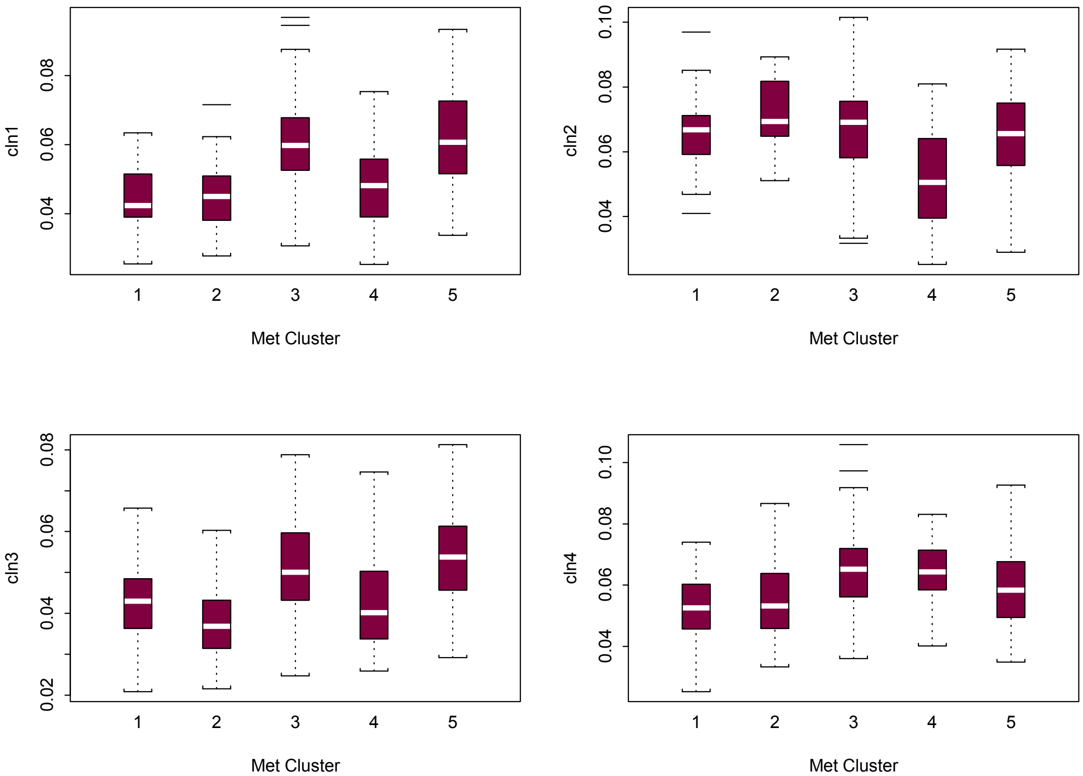
Boxplots Of Key Meteorological Variables

Boxplots in this Appendix summarize distributions of the sub-regional ozone summary statistic, AvgEx00, described in the text along with selected key daily meteorological variables by episode pattern membership for the five cluster case. Pattern membership identifiers ("Met Cluster") used in these plots correspond to the episode types described in the text as follows:

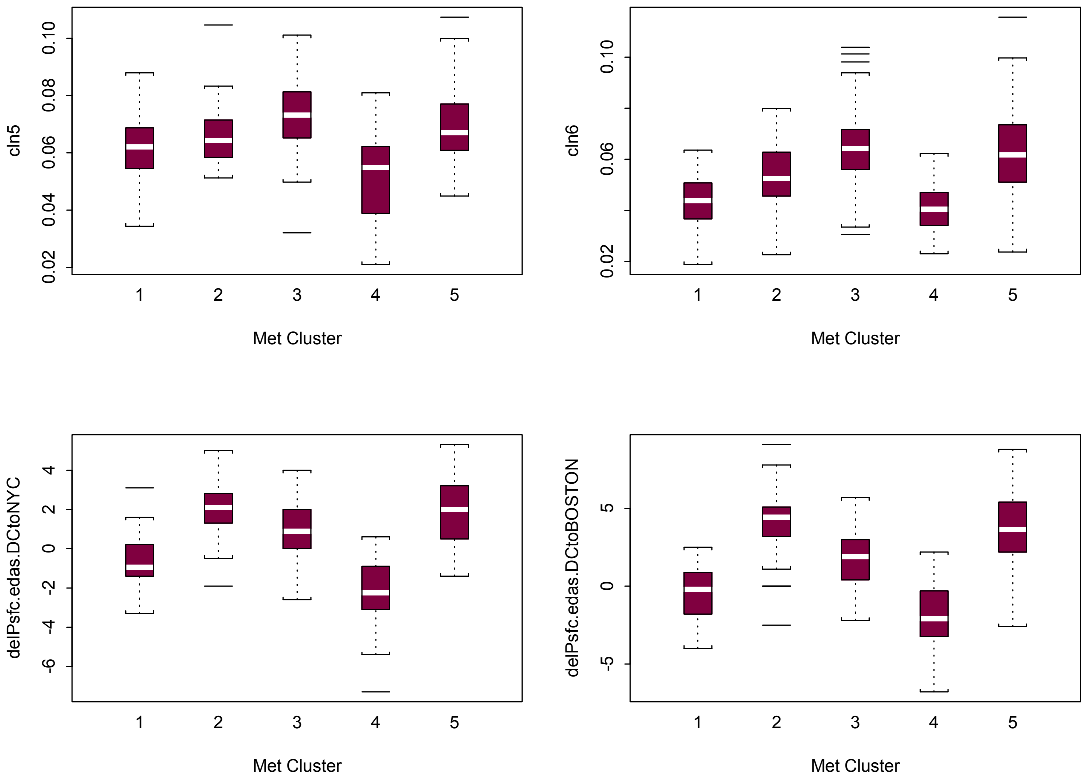
Met Cluster	Episode Type
1	Type E
2	Type B
3	Type A
4	Type D
5	Type C

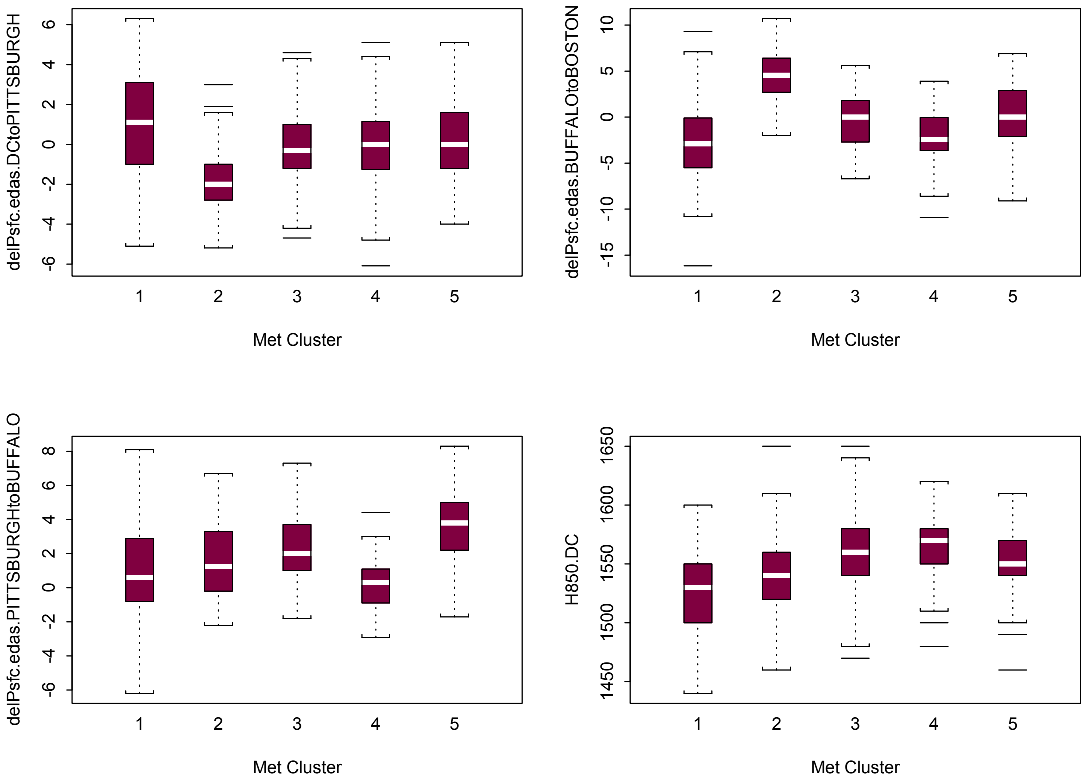
Ozone and meteorological variables are:

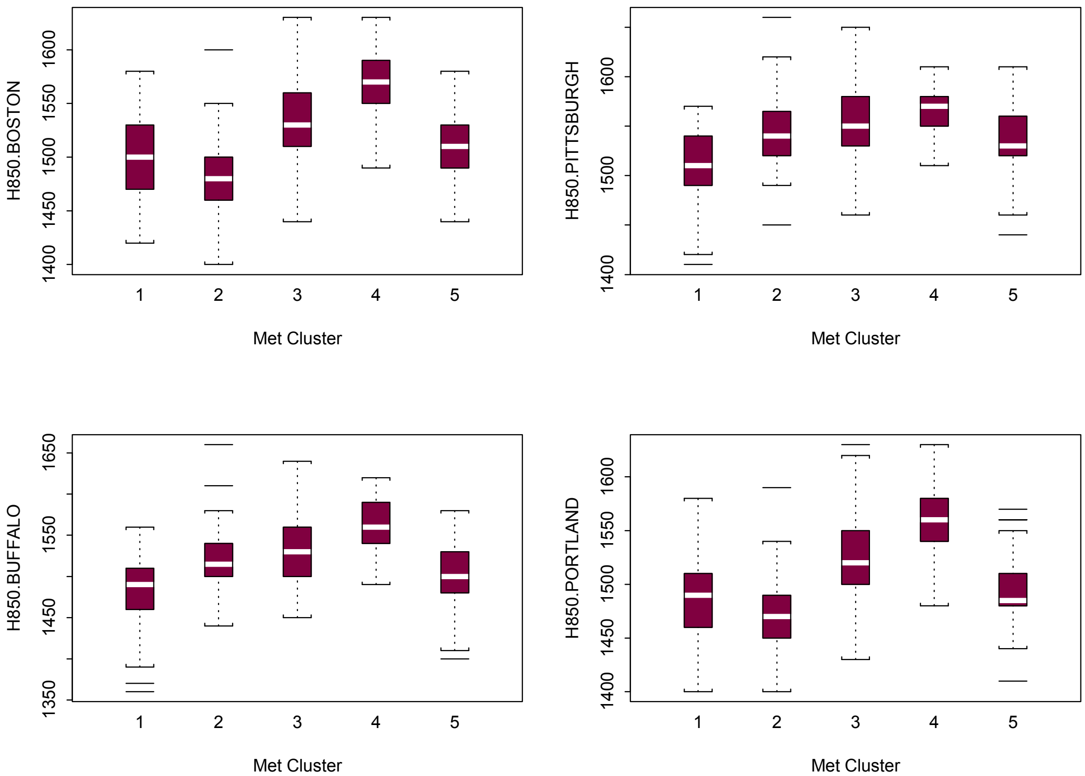
Variable	**Description**
clnx	AvgEx00 ozone summary statistic for ozone monitoring cluster x (x = 1,2…6; see Figure 1 in text)
DelPsfc.edas.DCtoNYC	Surface pressure gradient: Washington DC – New York City
DelPsfc.edas.DCtoBOSTON	Surface pressure gradient: Washington DC to Boston
DelPsfc.edas.DCtoPITTSBURGH	Surface pressure gradient: Washington DC to Pittsburgh
DelPsfc.edas.BUFFALOtoBOSTON	Surface pressure gradient: Buffalo to Boston
DelPsfc.edas.PITTSBURGHtoBUFFALO	Surface pressure gradient: Pittsburgh to Buffalo
H850.DC	850 mb height: Washington DC
H850.BOSTON	850 mb height: Boston
H850.PITTSBURGH	850 mb height: Pittsburgh
H850.BUFFALO	850 mb height: Buffalo
H850.PORTLAND	850 mb height: Portland, ME
H850.NYC	850 mb height: New York City
T850.DC	850 mb temperature: Washington DC
T850.BOSTON	850 mb temperature: Boston
T850.PITTSBURGH	850 mb temperature: Pittsburgh
T850.BUFFALO	850 mb temperature: Buffalo
T850.PORTLAND	850 mb temperature: Portland, ME
T850.NYC	850 mb temperature: New York City
sfcTmax.KLGA	Daily max surface temperature: La Guardia
sfcTmax.KPHL	Daily max surface temperature: Philadelphia
sfcTmax.KBOS	Daily max surface temperature: Boston
sfcTmax.KBUF	Daily max surface temperature: Buffalo
sfcTmax.KALB	Daily max surface temperature: Albany
sfcTmax.KDCA	Daily max surface temperature: Washington DC



cln1
0.04
0.06
0.08
1
2
3
4
5
Met Cluster
cln2
0.04
0.06
0.08
0.10
1
2
3
4
5
Met Cluster
cln3
0.02
0.04
0.06
0.08
1
2
3
4
5
Met Cluster
cln4
0.04
0.06
0.08
0.10
1
2
3
4
5
Met Cluster


cln5
0.02
0.04
0.06
0.08
0.10
1
2
3
4
5
Met Cluster
cln6
0.02
0.06
0.10
1
2
3
4
5
Met Cluster
delPsfc.edas.DCtoNYC
-6
-4
-2
0
2
4
1
2
3
4
5
Met Cluster
delPsfc.edas.DCtoBOSTON
-5
0
5
1
2
3
4
5
Met Cluster


delPsfc.edas.DCtoPITTSBURGH
delPsfc.edas.BUFFALOtoBOSTON
delPsfc.edas.PITTSBURGHtoBUFFALO
H850.DC
Met Cluster
Met Cluster
Met Cluster
Met Cluster



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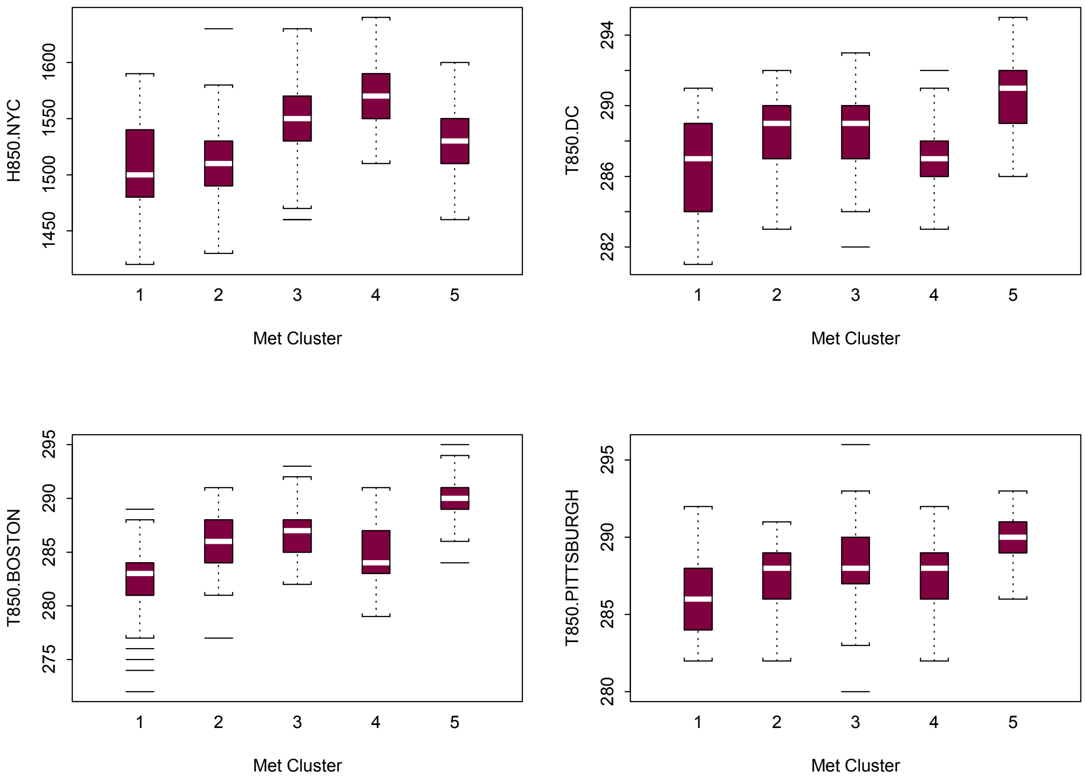
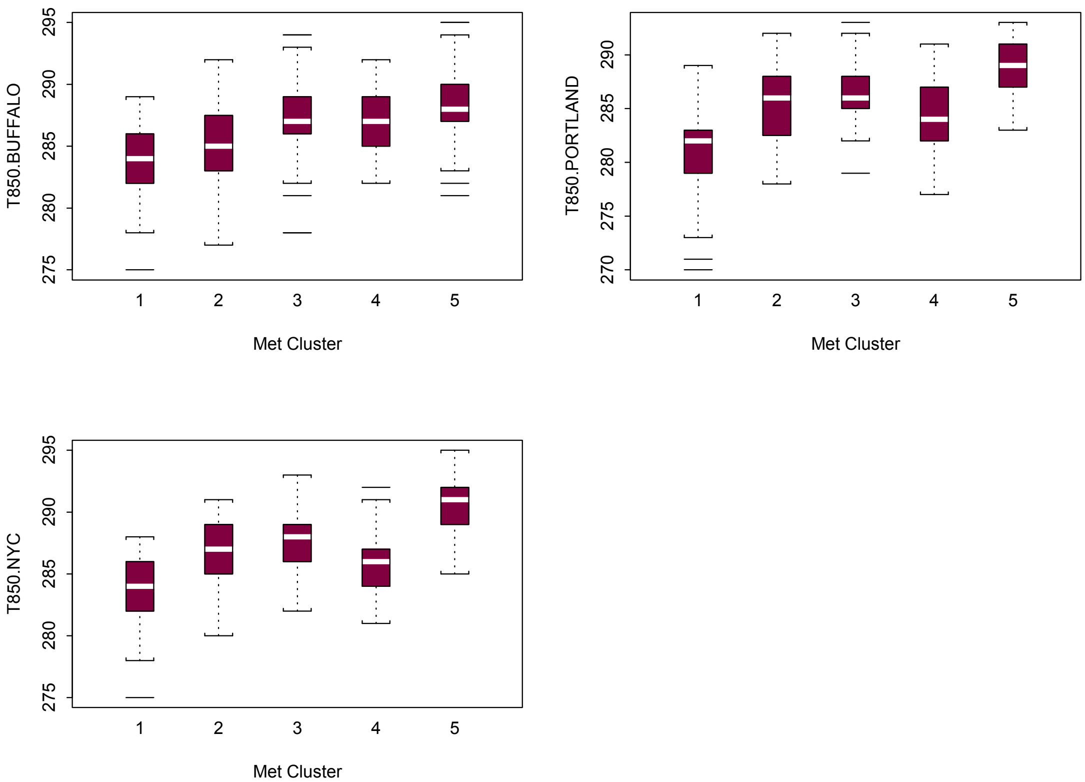
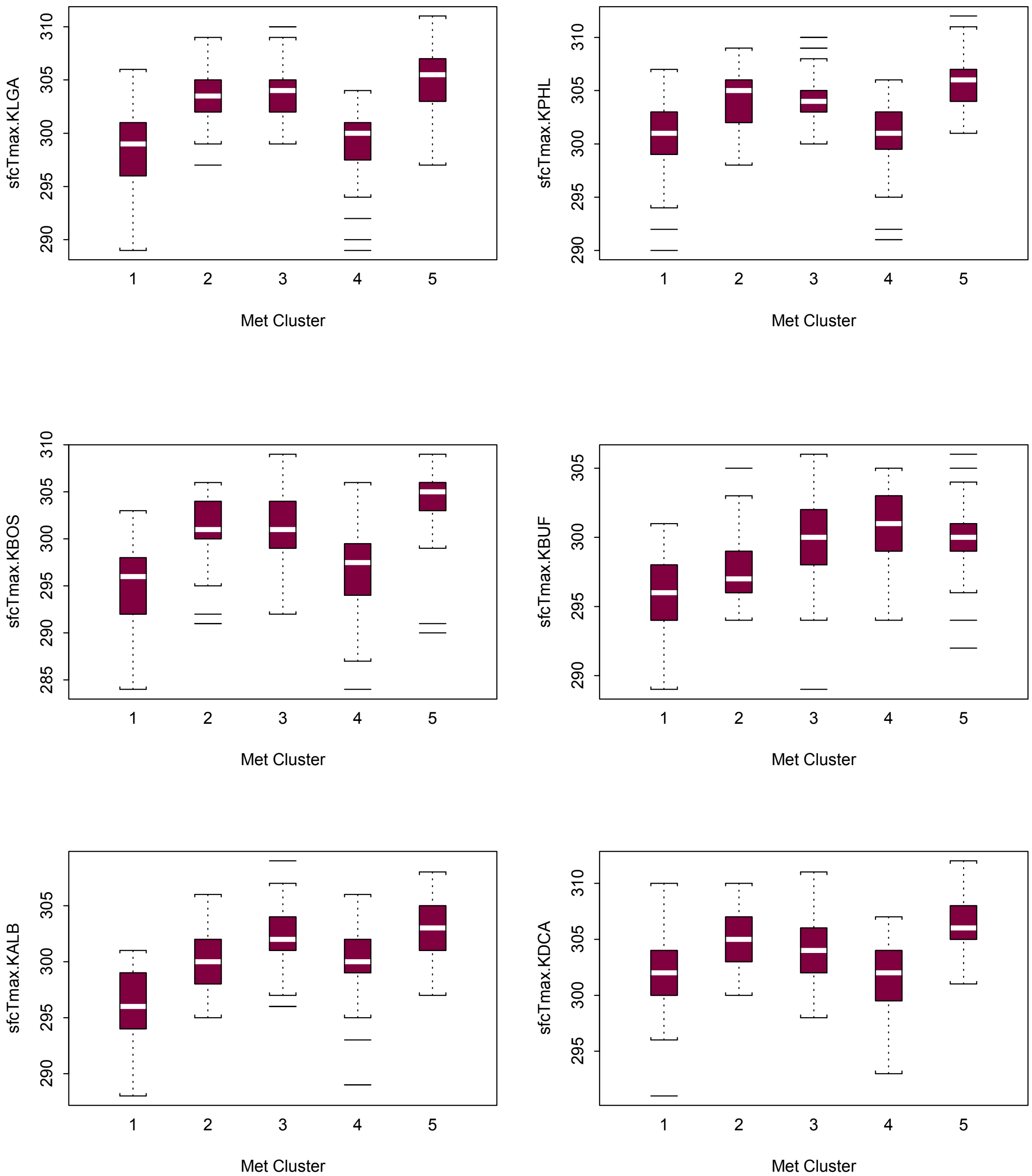
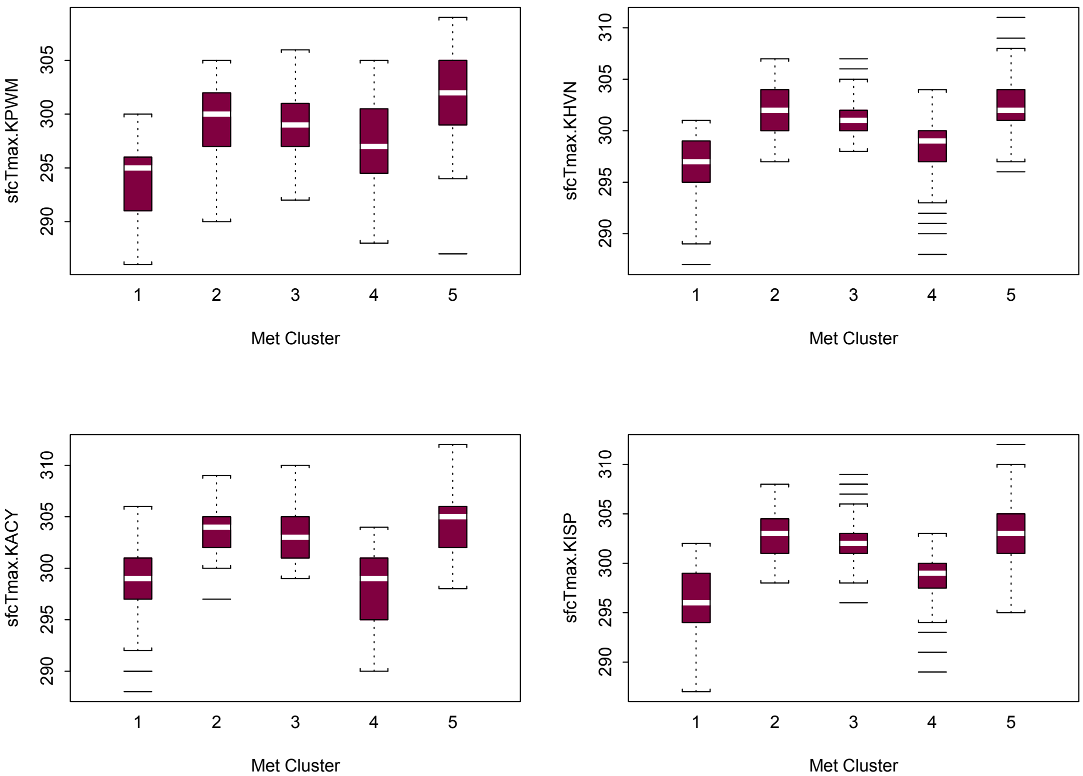
H850.PITTSBURGH
H850.BUFFALO
H850.PORTLAND
Met Cluster
1 2 3 4 5


H850.NYC
1450
1500
1550
1600
1
2
3
4
5
Met Cluster
T850.DC
282
286
290
294
1
2
3
4
5
Met Cluster
T850.BOSTON
275
280
285
290
295
1
2
3
4
5
Met Cluster
T850.PITTSBURGH
280
285
290
295
1
2
3
4
5
Met Cluster



T850.BUFFALO
T850.PORTLAND
T850.NYC
Met Cluster


sfcTmax.KLGA
sfcTmax.KPHL
sfcTmax.KBOS
sfcTmax.KBUF
sfcTmax.KALB
sfcTmax.KDCA
Met Cluster
Met Cluster
Met Cluster
Met Cluster
Met Cluster
Met Cluster


sfcTmax.KPWM
sfcTmax.KHVN
sfcTmax.KACY
sfcTmax.KISP
290
295
300
305
310
1
2
3
4
5
Met Cluster

Appendix C

Wind Direction Frequency Tables

Wind Direction Frequency Tables

Contingency tables showing resultant surface wind direction frequencies were prepared for the five cluster membership cases. These results show relative frequency of days with the indicated wind direction in each cluster, i.e., the values for each cluster (column) sum to 100%. Tabulations are shown for both morning (AM) and afternoon (PM) resultant wind direction. Site location codes referenced in these tables are shown below.

Site Code	Location
KLGA	LaGuardia airport, New York, NY
KPHL	Philadelphia, PA
KBOS	Boston, MA
KBUF	Buffalo, NY
KALB	Albany, NY
KDCA	Washington, DC
KPWM	Portland, ME
KHVN	New Haven, CT
KACY	Atlantic City, NJ
KISP	Islip, Long Island, NY
KHYA	Hayannis, Cape Cod, MA
KWOR	Worcester, MA (KORH)
KHRT	Hartford, CT (KHFD)

Table B-1. Morning and afternoon daily resultant wind direction frequencies (%) by cluster membership for the five cluster case (columns sum to 100%). Header row for each table indicates AM or PM and four letter site ID as described in text (e.g., KLGA = LaGuardia, NY). Cluster identifier (A, B, C, D, E) is shown in first row of each table.

a) Morning wind directions

$resAMwd.KLGA:

	E	B	A	D	C
E	2	2	5	47	3
N	4	4	1	0	0
NE	27	4	7	35	0
NW	7	42	10	0	0
S	33	6	12	5	6
SE	11	0	7	7	2
SW	16	10	34	2	76
W	0	32	23	5	14

$resAMwd.KPHL:

	E	B	A	D	C
E	9	0	2	32	2
N	4	4	1	2	0
NE	7	0	0	34	0
NW	4	28	4	5	0
S	24	4	17	9	29
SE	20	0	4	7	2
SW	26	34	55	9	64
W	7	30	17	2	5

$resAMwd.KBOS:

	E	B	A	D	C
E	2	0	4	9	2
N	2	0	1	0	0
NE	9	4	1	14	0
NW	9	22	13	20	0
S	17	8	11	16	11
SE	15	2	2	7	3
SW	22	26	43	20	77
W	24	38	25	14	8

$resAMwd.KBUF:

	E	B	A	D	C
E	16	2	3	16	0
N	0	0	1	0	0
NE	13	0	0	5	3
NW	0	10	0	0	5
S	31	29	44	16	17
SE	24	0	24	57	6
SW	16	40	25	7	59
W	0	19	2	0	11

$resAMwd.KALB:

	E	B	A	D	C
E	2	0	8	6	0
N	10	7	5	20	2
NE	2	0	1	3	0
NW	10	20	4	3	0
S	34	20	55	49	87
SE	15	0	9	6	3
SW	20	26	12	9	8
W	7	28	5	6	0

$resAMwd.KDCA:

	E	B	A	D	C
E	4	0	0	26	0
N	2	14	2	2	0
NE	7	0	1	28	0
NW	9	24	5	5	0
S	46	24	38	16	68
SE	4	0	5	16	2
SW	22	28	45	2	29
W	7	10	5	5	2

$resAMwd.KPWM:

	E	B	A	D	C
E	10	8	3	2	3
N	2	0	1	7	0
NE	7	2	0	0	2
NW	12	17	14	17	2
S	12	8	11	5	27
SE	2	4	7	2	5
SW	15	8	16	29	50
W	39	52	49	38	12

$resAMwd.KACY:

	E	B	A	D	C
E	7	0	1	26	0
N	2	2	2	10	0
NE	5	0	1	23	0
NW	5	22	7	10	0
S	29	0	17	10	41
SE	12	2	6	8	3
SW	22	29	45	8	52
W	17	45	22	5	5

$resAMwd.KISP:

	E	B	A	D	C
E	9	0	5	14	0
N	9	9	6	19	0
NE	9	0	7	36	0
NW	0	34	10	5	0
S	32	2	8	2	11
SE	14	0	3	14	2
SW	11	21	44	7	80
W	16	34	18	2	8

$resAMwd.KHYA:

	E	B	A	D	C
E	6	0	0	8	0
N	3	13	3	14	0
NE	11	2	1	43	0
NW	6	20	6	0	0
S	14	7	6	11	3
SE	8	4	6	3	0
SW	31	22	41	19	60
W	22	33	38	3	37

$resAMwd.KWOR:

	E	B	A	D	C
E	5	2	0	7	0
N	0	4	3	10	0
NE	10	0	1	15	2
NW	5	23	10	17	0
S	5	2	0	5	2
SE	5	0	2	7	0
SW	33	4	19	12	62
W	38	65	65	27	35

$resAMwd.KHRT:

	E	B	A	D	C
E	5	5	5	19	0
N	5	2	2	6	0
NE	8	2	2	9	0
NW	3	7	0	0	0
S	51	36	71	41	94
SE	5	12	13	16	3
SW	19	19	2	6	3
W	3	17	5	3	0

Table B-1 (concl).
b) Afternoon wind directions

$resPMwd.KLGA:

	E	B	A	D	C
E	9	0	7	20	0
N	0	6	1	0	0
NE	30	0	15	68	0
NW	4	68	26	0	8
S	30	6	12	2	8
SE	13	2	8	7	0
SW	11	6	17	0	48
W	2	12	14	2	36

$resPMwd.KPHL:

	E	B	A	D	C
E	13	2	4	57	0
N	0	8	2	0	0
NE	4	0	0	32	0
NW	2	40	5	0	2
S	22	0	20	2	8
SE	26	4	3	9	2
SW	30	22	50	0	73
W	2	24	16	0	17

$resPMwd.KBOS:

	E	B	A	D	C
E	20	2	13	34	5
NE	9	2	2	9	0
NW	4	30	2	0	0
S	17	4	23	18	8
SE	15	2	20	25	0
SW	26	10	24	7	65
W	9	50	16	7	23

$resPMwd.KBUF:

	E	B	A	D	C
E	7	2	3	19	0
N	0	2	0	0	0
NE	11	4	1	5	5
NW	2	6	6	0	8
S	28	12	20	33	3
SE	11	6	2	16	0
SW	37	51	61	28	68
W	4	16	7	0	17

$resPMwd.KALB:

	E	B	A	D	C
E	2	0	3	8	0
N	2	2	2	11	0
NE	4	2	2	3	0
NW	7	41	6	0	2
S	59	2	45	50	58
SE	15	2	5	18	2
SW	7	20	17	8	24
W	4	31	20	3	15

$resPMwd.KDCA:

	E	B	A	D	C
E	7	4	5	23	0
N	0	4	2	2	0
NE	9	6	2	48	0
NW	2	34	4	0	5
S	57	14	53	9	59
SE	11	6	9	11	3
SW	11	6	17	2	21
W	4	26	8	5	12

$resPMwd.KPWM:

	E	B	A	D	C
E	11	8	17	20	5
N	0	4	2	0	0
NE	13	2	2	7	2
NW	11	42	11	0	2
S	20	6	24	27	29
SE	20	4	16	25	6
SW	16	14	15	14	33
W	9	20	13	7	24

$resPMwd.KACY:

	E	B	A	D	C
E	15	2	3	42	0
N	0	6	1	2	0
NE	7	4	1	47	0
NW	2	48	11	0	0
S	33	4	21	0	23
SE	24	0	10	9	0
SW	13	8	26	0	55
W	7	28	27	0	22

$resPMwd.KISP:

	E	B	A	D	C
E	11	0	6	36	0
N	2	10	5	2	0
NE	11	0	3	36	0
NW	2	52	11	2	3
S	38	0	17	2	14
SE	20	0	8	18	0
SW	11	8	39	2	68
W	4	29	13	0	15

$resPMwd.KHYA:

	E	B	A	D	C
E	16	11	7	9	0
N	0	9	2	7	0
NE	9	4	5	27	0
NW	0	11	6	0	0
S	13	9	12	20	5
SE	18	6	8	20	0
SW	38	21	48	16	75
W	7	30	11	0	20

$resPMwd.KWOR:

	E	B	A	D	C
E	14	4	3	17	2
N	5	4	1	2	0
NE	14	4	4	22	0
NW	9	35	9	2	0
S	9	0	7	22	5
SE	5	0	3	10	0
SW	37	4	28	7	54
W	7	49	44	17	40

$resPMwd.KHRT:

	E	B	A	D	C
E	11	2	16	16	0
N	4	9	3	3	0
NE	0	4	7	22	0
NW	2	22	1	0	0
S	56	13	43	22	52
SE	13	11	18	24	2
SW	11	11	9	11	35
W	2	28	4	3	11

Appendix D

Ozone Monitoring Stations by Sub-Region

Cluster	Site ID	State	City	Location
6	90010017	Connecticut	GREENWICH	GREENWICH POINT PARK
1	90011123	Connecticut	DANBURY	TRAILER, W. CONNECTICUT STATE UNIVERSITY
6	90013007	Connecticut	STRATFORD	USCG LIGHTHOUSE, PROSPECT STREET
6	90019003	Connecticut	WESTPORT	SHERWOOD ISLAND STATE PARK
1	90031003	Connecticut	EAST HARTFORD	MCAULIFFEE PARK
1	90070007	Connecticut	MIDDLETOWN	CONN. VALLEY HOSP., SHEW HALL, EASTERN D
6	90093002	Connecticut	MADISON	HAMMONASSET STATE PARK
6	90110008	Connecticut	GROTON	UNIVERSITY OF CONNECTICUT, AVERY POINT
1	90131001	Connecticut	STAFFORD	ROUTE 190, SHENIPSIT STATE FOREST
2	100010002	Delaware	NOT IN A CITY	STATE ROAD 384
5	100031003	Delaware	NOT IN A CITY	RIVER ROAD PARK, BELLEFONTE
5	100031007	Delaware	NOT IN A CITY	LUMS POND STATE PARK
5	100031010	Delaware	NOT IN A CITY	BRANDYWINE CREEK STATE PARK
2	100051002	Delaware	SEAFORD	350 VIRGINIA AVE SEAFORD
2	100051003	Delaware	LEWES	UNIV. OF DE COLLEGE OF MARINE STUDIES
5	110010025	Washington DC	NOT IN A CITY	TAKOMA SC. PINEY BRANCH RD & DAHLIA ST N
5	110010041	Washington DC	NOT IN A CITY	34TH. AND DIX STREETS, N.E.
5	110010043	Washington DC	NOT IN A CITY	S.E. END MCMILLIAN RESERVOIR, WASH. DC.
1	230052003	Maine	CAPE ELIZABETH	TWO LIGHTS STATE PARK
1	230090102	Maine	BAR HARBOR	TOP OF CADILLAC MOUNTAIN
1	230090103	Maine	BAR HARBOR	MCFARLAND HILL-DISPRO SITE
3	230112005	Maine	GARDINER	PRAY STREET SCHOOL
1	230130004	Maine	NOT IN A CITY	PORT CLYDE, MARSHALL POINT LIGHTHOUSE
3	230173001	Maine	NOT IN A CITY	ROUTE 5, NORTH LOVELL DOT
3	230194008	Maine	NOT IN A CITY	SUMMIT OF RIDER BLUFF (WLBZ TRANSMITTER)
1	230312002	Maine	NOT IN A CITY	OCEAN AVE/PARSONS WAY, KENNEBUNKPORT
1	230313002	Maine	KITTERY	FRISBEE SCHOOL, GOODSOE ROAD
2	240030014	Maryland	NOT IN A CITY	QUEEN ANNE AND WAYSON ROADS
5	240030019	Maryland	FORT MEADE	9001 'Y'STREET, FT. MEADE, ANNE ARUNDEL MD
5	240051007	Maryland	COCKEYSVILLE	GREENSIDE DRIVE, COCKEYSVILLE MD
5	240053001	Maryland	ESSEX	WOODWARD & DORSEY RDS, ESSEX MD
5	240130001	Maryland	NOT IN A CITY	1300 W. OLD LIBERTY ROAD, WINFIELD, MD
5	240150003	Maryland	NOT IN A CITY	RTE.273, FAIR HILL, CEIL CO., MARYLAND
2	240170010	Maryland	NOT IN A CITY	SO MD CORRECTIONAL CAMP, HUGHESVILLE MD
5	240251001	Maryland	EDGEWOOD	EDGEWOOD ARMY CHEM CENTER EDGEWOOD MD
5	240259001	Maryland	NOT IN A CITY	3538 ALDINO ROAD, HARFORD COUNTY MARYLAND
5	240290002	Maryland	NOT IN A CITY	KENT COUNTY; MILLINGTON
5	240313001	Maryland	ROCKVILLE	LOTHROP E SMITH ENV.ED CENTER ROCKVILLE
5	240330002	Maryland	GREENBELT	GODDARD SPACE FLIGHT CENTER
6	250010002	Massachusetts	TRURO	FOX BOTTOM AREA-CAPE COD NAT'L SEASHORE
1	250034002	Massachusetts	ADAMS	MT. GREYLOCK SUMMIT
6	250051002	Massachusetts	FAIRHAVEN	LEROY WOOD SCHOOL
1	250051005	Massachusetts	EASTON	1 BORDERLAND ST.
1	250092006	Massachusetts	LYNN	390 PARKLAND AVE. (LYNN WATER TREATMENT)
1	250094004	Massachusetts	NEWBURY	SUNSET BOULEVARD
1	250130003	Massachusetts	AGAWAM	152 SOUTH WESTFIELD STREET, FEEDING HILL

Cluster	Site ID	State	City	Location
1	250130008	Massachusetts	CHICOPEE	ANDERSON ROAD AIR FORCE BASE
1	250150103	Massachusetts	AMHERST	NORTH PLEASANT ST. U. MASS PATHOLOGY DEPT
1	250154002	Massachusetts	WARE	QUABBIN SUMMIT
1	250250042	Massachusetts	BOSTON	HARRISON AVENUE
1	250270015	Massachusetts	WORCESTER	WORCESTER AIRPORT
1	330050007	New Hampshire	KEENE	RAILROAD STREET
3	330090008	New Hampshire	HAVERHILL	HAVERHILL ARMORY, RT 116, HAVERHILL, NH
1	330111010	New Hampshire	NASHUA	SANDERS ASSOCIATES, PARKING LOT D
1	330130007	New Hampshire	CONCORD	STORRS STREET
1	330150012	New Hampshire	RYE	RYE HARBOR STATE PARK OCEAN BLVD, RTE. 1A
3	330173002	New Hampshire	ROCHESTER	ROCHESTER HILL ROAD, ROCHESTER
3	330190003	New Hampshire	CLAREMONT	SOUTH STREET
5	340010005	New Jersey	NOT IN A CITY	BRIGANTINE WILDLIFE REFUGE, NACOTE CREEK
5	340070003	New Jersey	NOT IN A CITY	COPEWOOD E. DAVIS STS; TRAILER
5	340071001	New Jersey	NOT IN A CITY	ANCORA STATE HOSPITAL, ANCORA
5	340110007	New Jersey	NOT IN A CITY	LINCOLN AVE.&HIGHWAY 55,NE OF MILLVILLE
5	340150002	New Jersey	NOT IN A CITY	CLARKSBORO, SHADY LANE REST HOME
5	340170006	New Jersey	BAYONNE	VETERANS PARK ON NEWARK BAY
5	340190001	New Jersey	FLEMINGTON	RARITAN STP, RTE.613S, THREE BRIDGES
5	340210005	New Jersey	NOT IN A CITY	RIDER COLLEGE; LAWRENCE TOWNSHIP
5	340230011	New Jersey	NOT IN A CITY	R.U. VEG RESEARCH FARM 3,RYDERS LN, NEWB
5	340250005	New Jersey	WEST LONG BRANC	MONMOUTH COLLEGE, WEST LONG BRANCH
5	340273001	New Jersey	NOT IN A CITY	BLDG.#1, BELL LABS, OFF ROUTE 513
5	340290006	New Jersey	NOT IN A CITY	COLLIERS MILLS, JACKSON TOWNSHIP
1	360010012	New York	ALBANY	LOUDONVILLE RESERVOIR
6	360050083	New York	NEW YORK CITY	200TH STREET AND SOUTHERN BLVD
6	360050110	New York	NEW YORK CITY	E 156TH ST BET DAWSON AND KELLY
4	360130006	New York	DUNKIRK	STP LAKESIDE BLD DUNKIRK
4	360130011	New York	NOT IN A CITY	TOWN OF WESTFIELD
4	360150003	New York	ELMIRA	SULLIVAN ST., WATER TR. PL.
1	360270007	New York	NOT IN A CITY	VILLAGE OF MILLBROOK
4	360290002	New York	AMHERST	AUDUBON GOLF COURSE, MAPLE ROAD
3	360310002	New York	NOT IN A CITY	SUMMIT, WHITEFACE MTN, WEATHER STATION
3	360310003	New York	NOT IN A CITY	BASE WHITEFACE MTN, ASRC, SUNY
3	360410005	New York	NOT IN A CITY	PISECO LAKE AIRPORT
3	360430005	New York	NOT IN A CITY	NICKS LAKE CAMPGROUND
4	360450002	New York	NOT IN A CITY	VADAI ROAD, PERCH RIVER, BROWNVILLE
4	360530006	New York	NOT IN A CITY	TOWN OF GEORGETOWN
4	360551004	New York	NOT IN A CITY	TRAILER, WEST END OF FARMINGTON ROAD
4	360631006	New York	NOT IN A CITY	MIDDLEPORT STP, NORTH HARTLAND RD
4	360671015	New York	NOT IN A CITY	5895 ENTERPRISE PARKWAY,
1	360715001	New York	NOT IN A CITY	1175 ROUTE 17K, MONTGOMERY
1	360790005	New York	NOT IN A CITY	NYSDEC FIELD HQTRS GYPSY TRAIL ROAD
6	360810098	New York	NEW YORK CITY	120-07 15TH AVE
5	360850067	New York	NEW YORK CITY	SUSAN WAGNER HS, BRIELLE AVE.& MANOR RD,
3	360910004	New York	NOT IN A CITY	SARATOGA NATIONAL HISTORICAL PARK
1	360930003	New York	SCHENECTADY	MT.PLEASANT HS, NORWOOD AVE.& FOREST RD.

Cluster	Site ID	State	City	Location
6	361030002	New York	BABYLON	EAST FARMINGDALE WATER DIST., GAZZA BLVD.
6	361030004	New York	RIVERHEAD	39 SOUND AVENUE, RIVERHEAD
3	361111005	New York	NOT IN A CITY	BELLEAYRE MOUNTAIN
4	361173001	New York	NOT IN A CITY	WAYNE EDUCATIONAL CENTER, WILLIAMSON
6	361192004	New York	WHITE PLAINS	WHITE PLAINS PUMP STATION, ORCHARD STREET
4	420030008	Pennsylvania	PITTSBURGH	BAPC 301 39TH STREET BLDG #7
4	420030067	Pennsylvania	NOT IN A CITY	OLD OAKDALE ROAD SOUTH FAYETTE
4	420031005	Pennsylvania	NOT IN A CITY	CALIFORNIA & 11TH, HARRISON TWP
4	420050001	Pennsylvania	KITTANNING	GLADE DR. & NOLTE RD. KITTANNING
4	420070002	Pennsylvania	NOT IN A CITY	ROUTE 168 & TOMLINSON ROAD
4	420070005	Pennsylvania	NOT IN A CITY	1015 SEBRING ROAD
4	420070014	Pennsylvania	BEAVER FALLS	EIGHT STREET AND RIVER ALLEY
5	420110001	Pennsylvania	KUTZTOWN	KUTZTOWN UNIVERSITY - GRIM SCIENCE BLDG
5	420110009	Pennsylvania	READING	UGI CO MONGANTOWN RD AND PROSPECT ST
5	420130801	Pennsylvania	ALTOONA	2ND AVE & 7TH ST
5	420170012	Pennsylvania	BRISTOL (BOROUG	ROCKVIEW LANE
5	420210011	Pennsylvania	NOT IN A CITY	MILLER AUTO SHOP 1 MESSENGER ST
5	420430401	Pennsylvania	HARRISBURG	1833 UPS DRIVE HARRISBURG PA
5	420431100	Pennsylvania	HERSHEY	SIPE AVE & MAE STREET
5	420450002	Pennsylvania	CHESTER	FRONT ST & NORRIS ST
4	420490003	Pennsylvania	NOT IN A CITY	10TH AND MARNE STREETS
5	420550001	Pennsylvania	NOT IN A CITY	FOREST ROAD - METHODIST HILL
1	420690101	Pennsylvania	NOT IN A CITY	WILSON FIRE CO. ERIE & PLEASANT
1	420692006	Pennsylvania	SCRANTON	GEORGE ST TROOP AND CITY OF SCRANTON
5	420710007	Pennsylvania	LANCASTER CITY	ABRAHAM LINCOLN JR HIGH GROFFTOWN RD
4	420730015	Pennsylvania	NEW CASTLE	CROTON ST & JEFFERSON ST.
5	420770004	Pennsylvania	ALLENTOWN	STATE HOSPITAL REAR 1600 HANOVER AVE
1	420791100	Pennsylvania	NANTICOKE	255 LOWER BROADWAY (NEXT TO LEON&EDDY'S)
1	420791101	Pennsylvania	WILKES-BARRE	CHILWICK & WASHINGTON STS
4	420850100	Pennsylvania	NOT IN A CITY	PA518 (NEW CASTLE ROAD) & PA418
5	420910013	Pennsylvania	NORRISTOWN	STATE ARMORY - 1046 BELVOIR RD
5	420950025	Pennsylvania	NOT IN A CITY	WASHINGTON & CAMBRIA STS. FREEMANSBURG
5	420990301	Pennsylvania	NOT IN A CITY	ROUTE 34 LITTLE BUFFALO STATE PARK
5	421010004	Pennsylvania	PHILADELPHIA	1501 E LYCOMING AVE AMS LAB
5	421010014	Pennsylvania	PHILADELPHIA	ROXY WATER PUMP STA EVA-DEARNLEY STS
5	421010024	Pennsylvania	PHILADELPHIA	GRANT-ASHTON ROADS PHILA NE AIRPORT
5	421010136	Pennsylvania	PHILADELPHIA	AMTRAK, 5917 ELMWOOD AVENUE
4	421250005	Pennsylvania	CHARLEROI	CHARLER01 WASTE TREATMENT PLANT
4	421250200	Pennsylvania	WASHINGTON	MCCARRELL AND FAYETTE STS
4	421255001	Pennsylvania	NOT IN A CITY	HILLMAN STATE PARK - KINGS CREEK ROAD
4	421290006	Pennsylvania	NOT IN A CITY	OLD WILLIAM PENN HWY & SARDIS AVE
5	421330008	Pennsylvania	YORK	HILL ST.
1	440030002	Rhode Island	NOT IN A CITY	W. ALTON JONES CAMPUS URI PARKERFIELD WE
1	440071010	Rhode Island	EAST PROVIDENCE	FRANCIS SCHOOL, 64 BOURNE AVE
6	440090007	Rhode Island	NARRAGANSETT	TARWELL ROAD, NARRAGANSETT
3	500030004	Vermont	BENNINGTON	AIRPORT RD, BENNINGTON, VERMONT
3	500070007	Vermont	UNDERHILL	PROCTOR MAPLE RESEARCH FARM

Cluster	Site ID	State	City	Location
5	510130020	Virginia	NOT IN A CITY	S 18TH AND HAYES ST
2	510360002	Virginia	NOT IN A CITY	SHIRLEY PLANTATION, ROUTE 5
2	510410004	Virginia	NOT IN A CITY	BEACH, INTERSECTION OF CO.ROADS 655 & 654
5	510590005	Virginia	NOT IN A CITY	CUBRUN LEE RD CHANT, (CUBRUN TREAT PLANT)
5	510590018	Virginia	NOT IN A CITY	MT.VERNON 2675 SHERWOOD HALL LANE
5	510591004	Virginia	SEVEN CORNERS	6100 ARLINGTON BLVD MONTG WARD
5	510595001	Virginia	MC LEAN	LEWINSVILLE 1437 BALLS HILL RD
5	510610002	Virginia	NOT IN A CITY	RT651 C PHELPS WILDLIFE MANAGEMENT AREA
5	510690010	Virginia	NOT IN A CITY	RTE 669, BUTLER MANUF. CO NEAR REST VA
2	510870014	Virginia	NOT IN A CITY	2401 HARTMAN STREET MATH & SCIENCE CTR
2	511130003	Virginia	NOT IN A CITY	SHENANDOAH NP BIG MEADOWS
5	511530009	Virginia	NOT IN A CITY	JAMES S. LONG PARK
2	511611004	Virginia	VINTON	EAST VINTON ELEMENTARY SCHOOL
5	511790001	Virginia	NOT IN A CITY	WIDEWATER ELEM. SCH., DEN RICH ROAD
2	511970002	Virginia	NOT IN A CITY	16-B RURAL RETREAT SEWAGE DISPOSAL
5	515100009	Virginia	ALEXANDRIA	517 N SAINT ASAPH ST, ALEXANDRIA HEALTH
2	518000004	Virginia	SUFFOLK	TIDEWATER COMM. COLLEGE, FREDERIC CAMPUS
2	518000005	Virginia	SUFFOLK	TIDEWATER RESEARCH STATION, HARE ROAD

Appendix E

Episode Types Associated with 8-Hour Ozone Exceedance Days in 2002

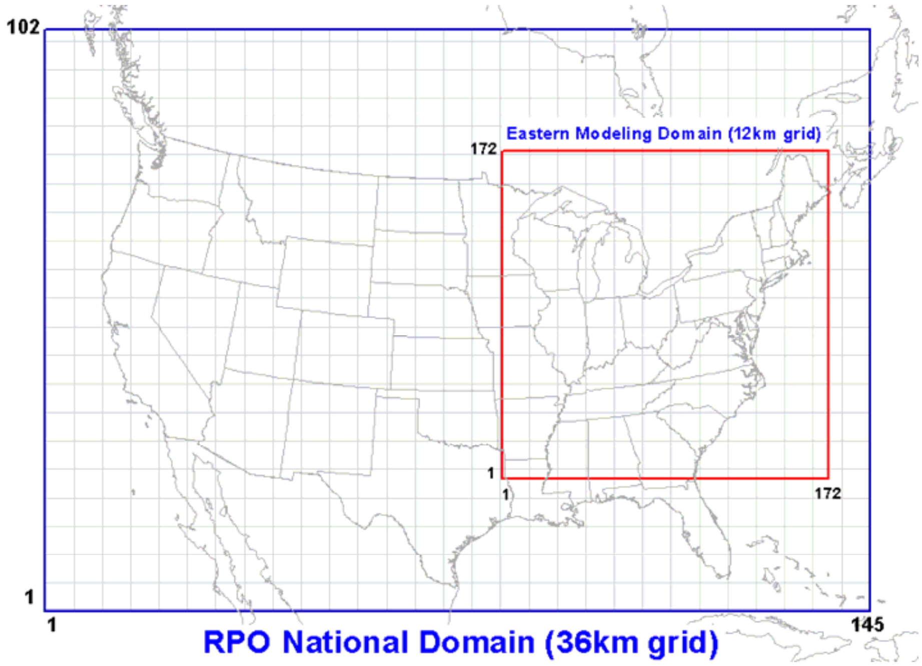
Episode Pattern	Year	Month	Day
5	2002	5	16
3	2002	5	24
1	2002	5	25
5	2002	6	1
5	2002	6	5
5	2002	6	6
5	2002	6	9
4	2002	6	10
5	2002	6	11
1	2002	6	12
4	2002	6	20
5	2002	6	21
3	2002	6	22
3	2002	6	23
2	2002	6	24
4	2002	6	25
5	2002	6	26
5	2002	6	27
5	2002	6	29
3	2002	6	30
5	2002	7	1
3	2002	7	2
3	2002	7	3
3	2002	7	4
2	2002	7	5
3	2002	7	7
3	2002	7	8
5	2002	7	9
4	2002	7	12
3	2002	7	13
3	2002	7	14
5	2002	7	15
2	2002	7	16
3	2002	7	17
2	2002	7	18
3	2002	7	19
4	2002	7	20
4	2002	7	21
5	2002	7	22
5	2002	7	23
1	2002	7	27
1	2002	7	28
2	2002	7	29
2	2002	7	30
2	2002	7	31

Episode Pattern	Year	Month	Day
3	2002	8	1
4	2002	8	2
3	2002	8	3
3	2002	8	4
5	2002	8	5
4	2002	8	9
3	2002	8	10
3	2002	8	11
3	2002	8	12
3	2002	8	13
3	2002	8	14
5	2002	8	15
3	2002	8	16
3	2002	8	17
3	2002	8	18
1	2002	8	19
4	2002	8	21
5	2002	8	22
2	2002	8	23
3	2002	9	7
4	2002	9	8
4	2002	9	9
5	2002	9	10
5	2002	9	13
1	2002	9	14
4	2002	9	18

Appendix 8C

OTC Modeling Grid Configurations

Developed by NYDEC


102
Eastern Modeling Domain (12km grid)
172
1
1
172
1
1
145
RPO National Domain (36km grid)

OTC Grid Definitions for MM5 and CMAQ

Model	Columns Dot (nx)	Rows Dot (ny)	X-Origin (km)	Y-Origin (km)
MM5 36-km	149	129	-2664	-2304
CMAQ 36-km	145	102	-2628	-1728
MM5 12-km	175	175	252	-900
CMAQ 12-km	172	172	264	-888

NYDEC, June 2005

OTC MM5/SMOKE/CMAQ Modeling System Grid Configurations

OTC MM5/SMOKE/CMAQ modeling system for 2002 annual simulation is applied with a Lambert Conformal Conic projection with parallels at 33N and 45N. A spherical earth radius of 6370km is used in these programs.

MM5 Setup

MM5 was run with two-way nesting at 36 and 12km horizontal grid spacing and with 29 vertical layers. The top is at 50 mb.

For 36km domain, the center is at 97W and 40N. There are 149 grids (dot-points) in east-west direction and 129 grids (dot-points) in north-south direction. The south-west corner is at (-2664km, -2304km) and the north-east corner is at (2664km, 2304km)

For 12km domain, there are 175 grids in east-west direction and 175 grids in north-south direction. The south-west corner is at (252km, -900km) and the north-east corner is at (2340km, 1188km)

The 30 sigma-levels for the 29 vertical layers are:

1.0000, 0.9974, 0.9940, 0.9890, 0.9820, 0.9720, 0.9590, 0.9430, 0.9230, 0.8990, 0.8710, 0.8390, 0.8030, 0.7630, 0.7180, 0.6680, 0.6180, 0.5680, 0.5180, 0.4680, 0.4180, 0.3680, 0.3180, 0.2680, 0.2180, 0.1680, 0.1230, 0.0800, 0.0400, 0.0000

CMAQ Setup

CMAQ 36km modeling domain has 145 cells in east-west direction and 102 cells in north-south direction. The south-west corner is at (-2628km, -1728km) and the north-east corner is at (2592km, 1944km)

CMAQ 12km modeling domain has 172 cells in east-west directions and 172 cells in north-south direction. The south-west corner is at (264km, -888km) and the north-east corner is at (2328km, 1176km)

There are 22 vertical layers for CMAQ. The sigma-levels for these 22 layers are:

1.0000, 0.9974, 0.9940, 0.9890, 0.9820, 0.9720, 0.9590, 0.9430, 0.9230, 0.8990, 0.8710, 0.8390, 0.8030, 0.7630, 0.7180, 0.6680, 0.5680, 0.4680, 0.3680, 0.2680, 0.1680, 0.0800, 0.0000

SMOKE Setup

SMOKE modeling domains are same as CMAQ, except that the emissions are limited to the lower 16 CMAQ layers.

OTC Vertical Layer Definition for MM5 Simulations and Approach For Reducing CMAQ Layers By Collapsing Multiple MM5 Layers

MM5					CMAQ				
Layer	Sigma	Pres(mb)	Height(m)	Depth(m)	Layer	Sigma	Pres(mb)	Height(m)	Depth(m)
29	0.000	50	18600	2145	23	0.000	50	18600	4290
28	0.040	88.5	16450	2145					
27	0.080	127.1	14300	1460	21	0.080	127.1	14300	2920
26	0.123	168.5	12800	1460					
25	0.168	211.8	11400	1200	20	0.168	211.8	11400	2390
24	0.218	260.0	10200	1200					
23	0.268	308.1	8990	934	19	0.268	308.1	8990	1870
22	0.318	356.3	8060	934					
21	0.368	404.5	7120	772	18	0.368	404.5	7120	1540
20	0.418	452.6	6350	772					
19	0.468	500.8	5580	662	17	0.468	500.8	5580	1320
18	0.518	549.0	4920	662					
17	0.568	597.1	4250	581	16	0.568	597.1	4250	1160
16	0.618	645.3	3670	581					
15	0.668	693.4	3090	532	15	0.668	693.4	3090	532
14	0.718	741.6	2560	455	14	0.781	741.6	2560	455
13	0.763	785.0	2110	388	13	0.763	785.0	2110	388
12	0.803	823.5	1720	337	12	0.803	823.5	1720	337
11	0.839	858.2	1380	290	11	0.839	858.2	1380	290
10	0.871	889.0	1090	247	10	0.871	889.0	1090	247
9	0.899	916.0	844	207	9	0.899	916.0	844	207
8	0.923	939.1	637	169	8	0.923	939.1	637	169
7	0.943	958.3	468	133	7	0.943	958.3	468	133
6	0.959	973.7	334	107	6	0.959	973.7	334	107
5	0.972	986.3	227	82	5	0.972	986.3	227	82
4	0.982	995.9	145	57	4	0.982	995.9	145	57
3	0.989	1002.6	89	40	3	0.989	1002.6	89	40
2	0.994	1007.5	48	27	2	0.994	1007.5	48	27
1	0.9974	1010.7	21	21	1	0.9974	1010.7	21	21
0	1.000	1013.24	0	0	0	1.000	1013.24	0	0

Note: Layer-top pressures assume a surface pressure of 1013.24 hPa. Layer-top heights are determined by averaging MM5 (CMAQ)-calculated layer-top heights over time (August 2002) and space (the entire 172x172 domain).

Appendix 8D

MM5 Model Configuration

OTC MM5 Meteorological Model Configuration

Science Options	Configuration	Details/Comments
Model Code	MM5 Version 3.6	
Horizontal Grid Mesh	36km/12km	
36-km grid	149x129 cells	
12-km grid	175x175 cells	
Vertical Grid Mesh	29 layers	
Grid Interaction	No feedback	Two-way nesting
Initialization	Eta first guess fields/LittleR	
Boundary Conditions	Eta first guess fields/LittleR	
Microphysics	Simple Ice	
Cumulus Scheme	Kain-Fritsch	36km/12km grids
Planetary Boundary Layer	High-resolution Blackadar PBL	
Radiation	Simple cooling	
Vegetation Data	USGS	24 Category Scheme
Land Surface Model	Five-Layer Soil model	
Shallow Convection	None	
Sea Surface Temperature	Do not update SST	
Thermal Roughness	Default	
Snow Cover Effects	None	
4D Data Assimilation	Analysis Nudging: 36km/12km	
Integration Time Step	75 seconds	
Simulation Periods	2002	
Platform	Linux Cluster	Done at UMD

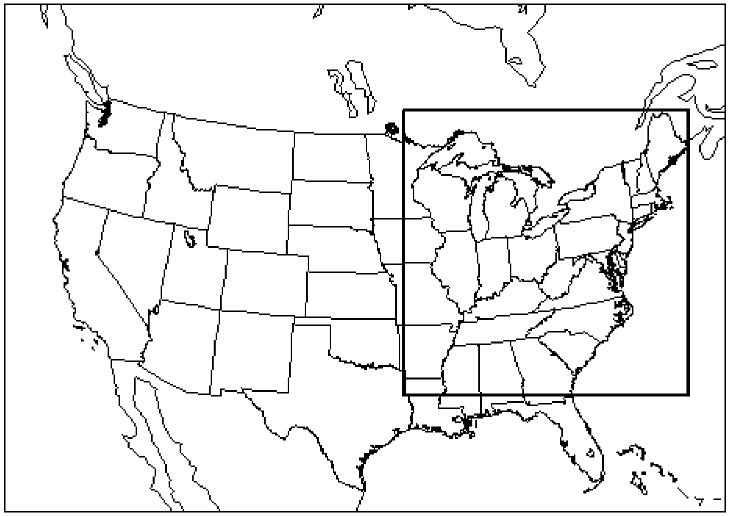
Appendix 8E

MM5 Model Evaluation
Document #1

Meteorological Data Analysis

Urban, Regional Modeling and Analysis Section
Division of Air Resources
New York State Department of Environmental Conservation
November 16, 2005

OTC Air Quality Modeling Domains



36km Domain (145x102x22)

12km Domain (172x172x22)

- MM5 input and output files were received from UMD for entire 2002 in 128 3.5-day chunks with 12-hour overlapping period between adjacent pieces

- Evaluation was limited to 12km air quality modeling domain for 12km MM5 output files over the 5-month period of may to September 2002

- Surface observation datasets include NCAR ds472.0 (around 800 stations) and CASTNet data (around 50 stations)

METSTAT program from Environ was used to examine surface wind speed and direction, temperature and humidity

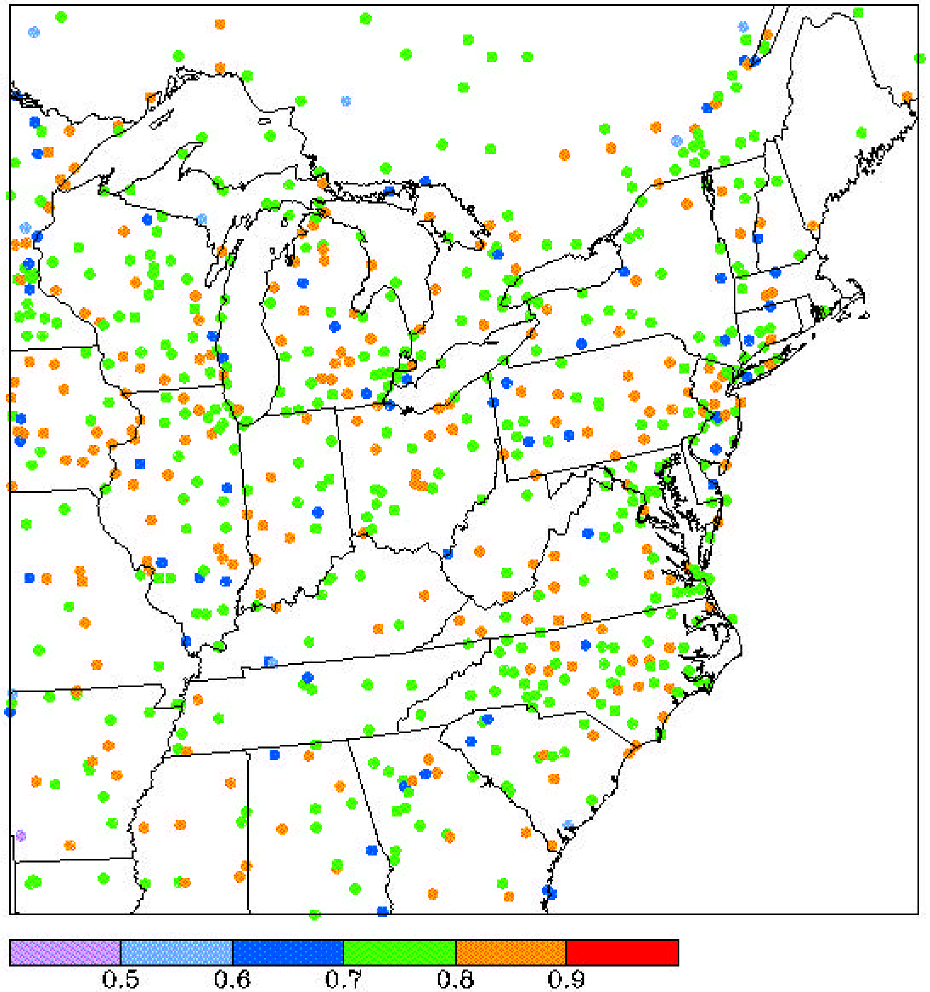
Correlation coefficients were calculated for surface wind speed, temperature and humidity

Wind speed correlation with TDL are ranging from 0.7 to 0.8

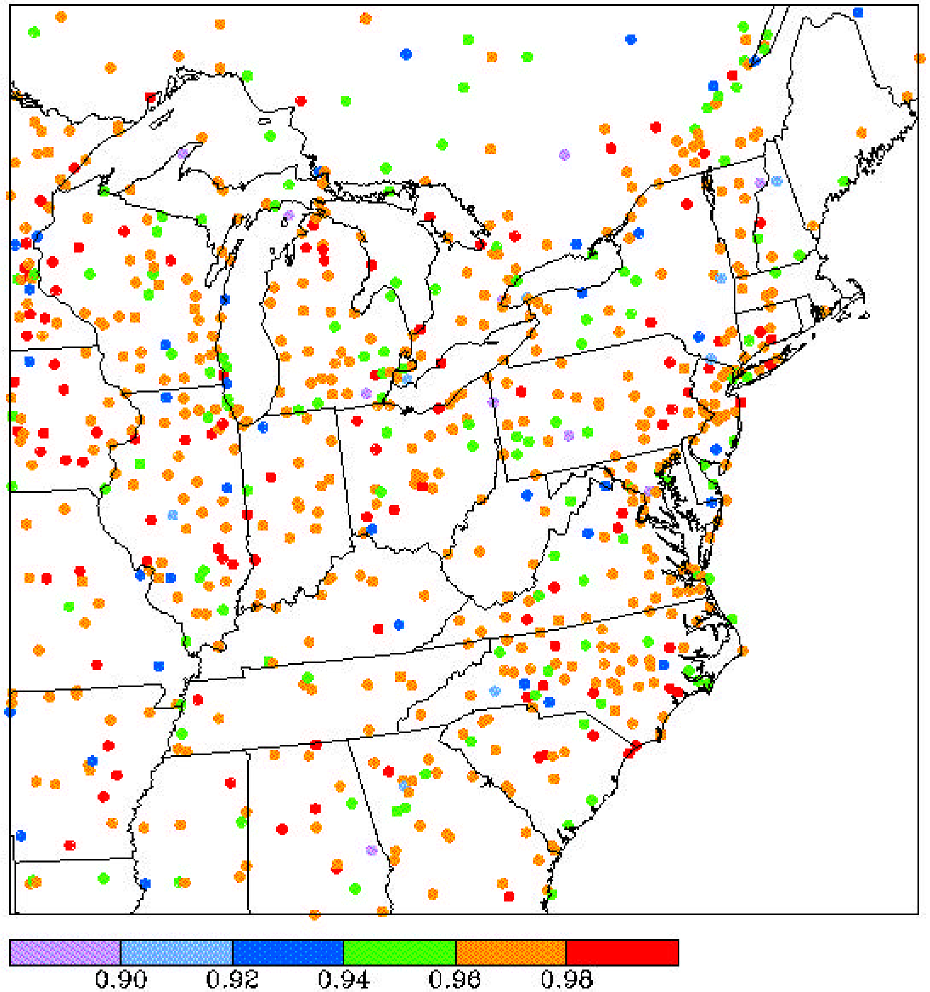
Temperature correlation with TDL are .96 and better

Humidity correlation with TDL are ranging from 0.8 to 0.9

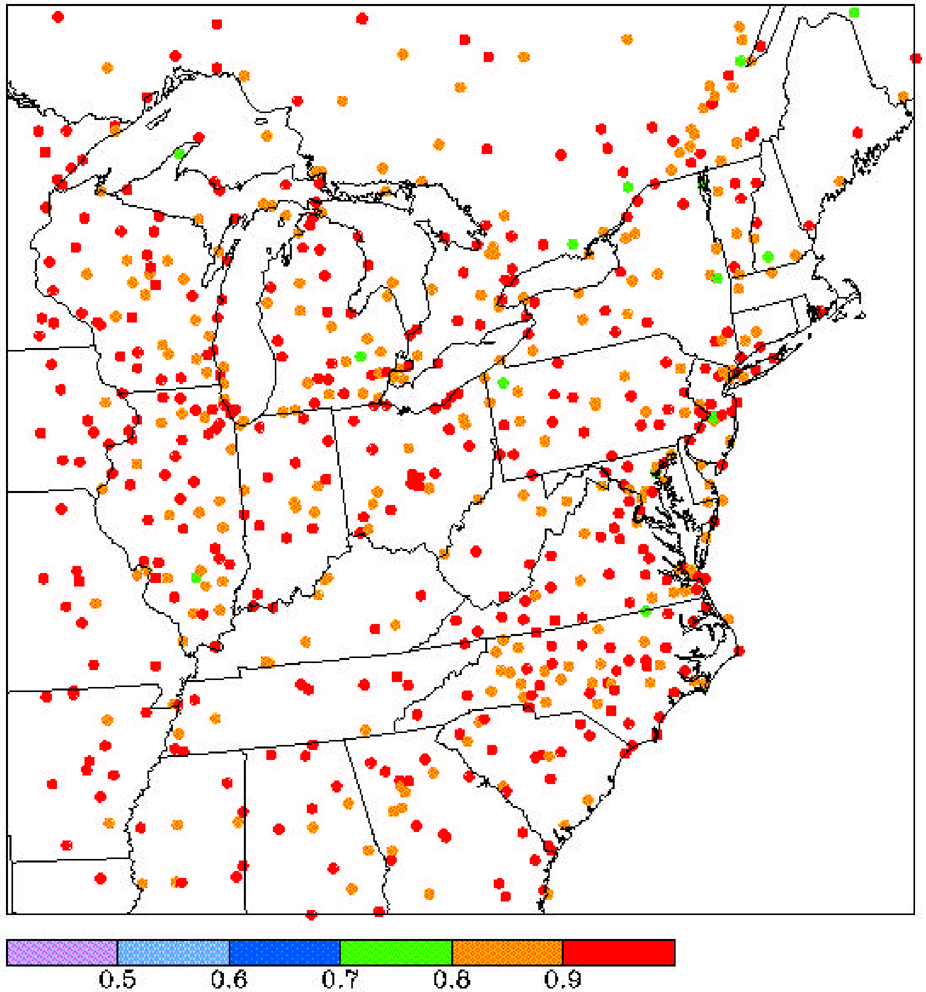
MM5 Sfc Wind Speed Correlation with TDL May to Sept 2002



MM5 Sfc Temperature Correlation with TDL May to Sept 2002



MM5 Sfc Humidity Correlation with TDL May to Sept 2002

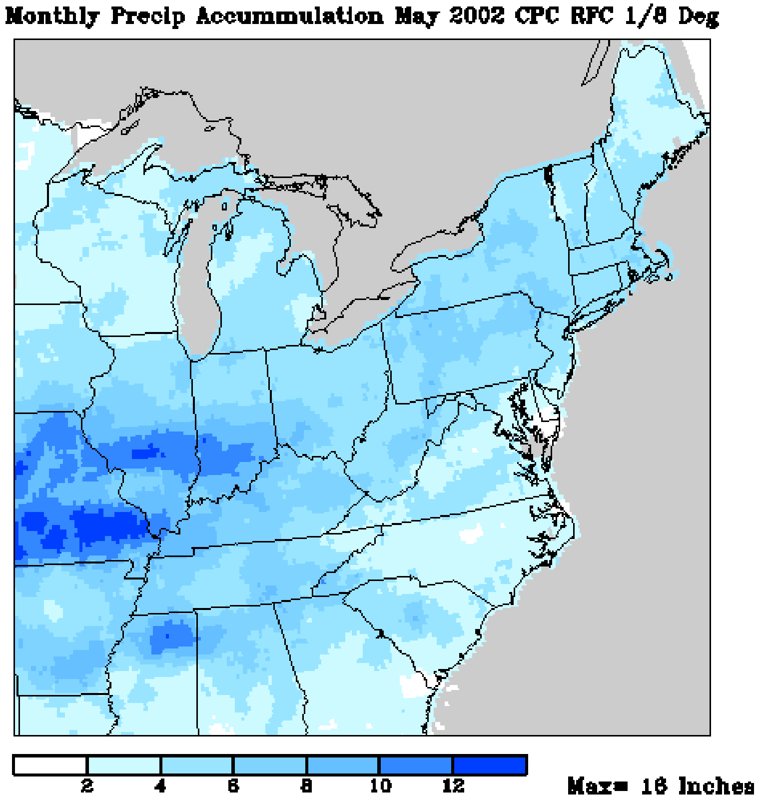


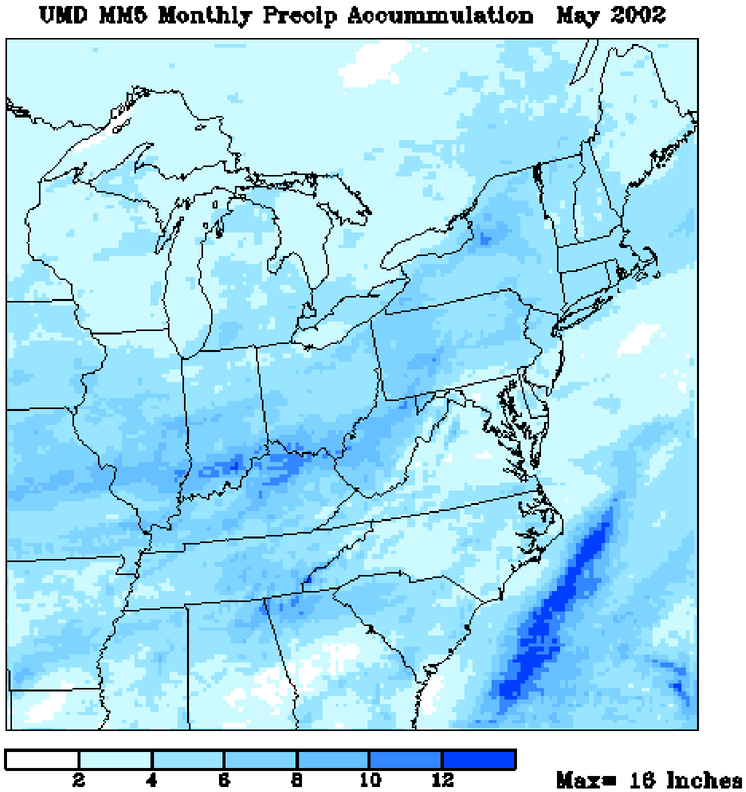
Monthly total of MM5 predicted precipitation was compared with 1/8-degree CPC rain gauge analysis

For months of May and September 2002, MM5 is doing a fair job capturing the rainfall patterns

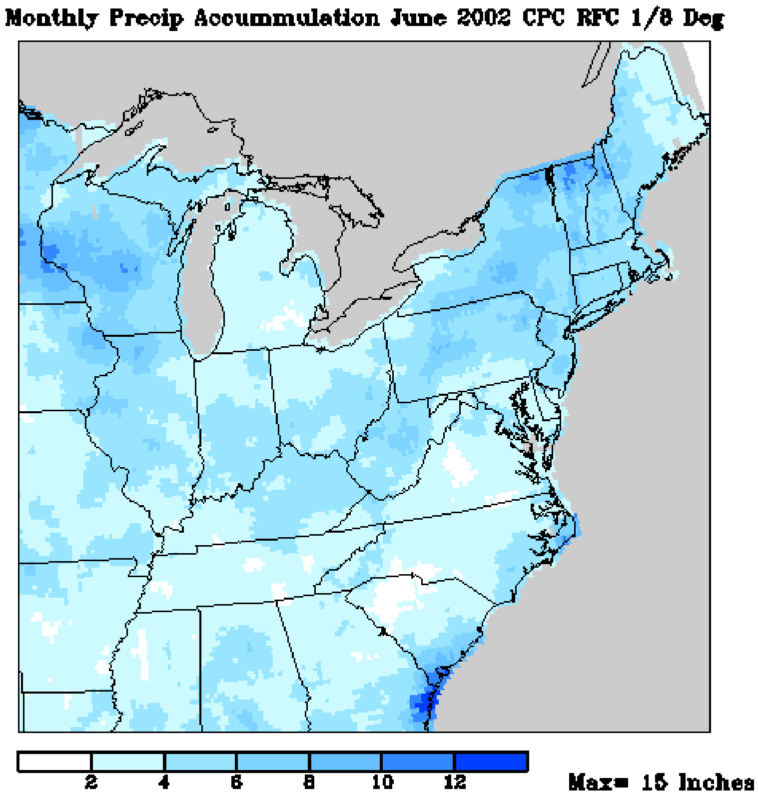
For months of June, July and August, the model is not doing well in terms of pattern and amount, probably is related to summertime convective activities

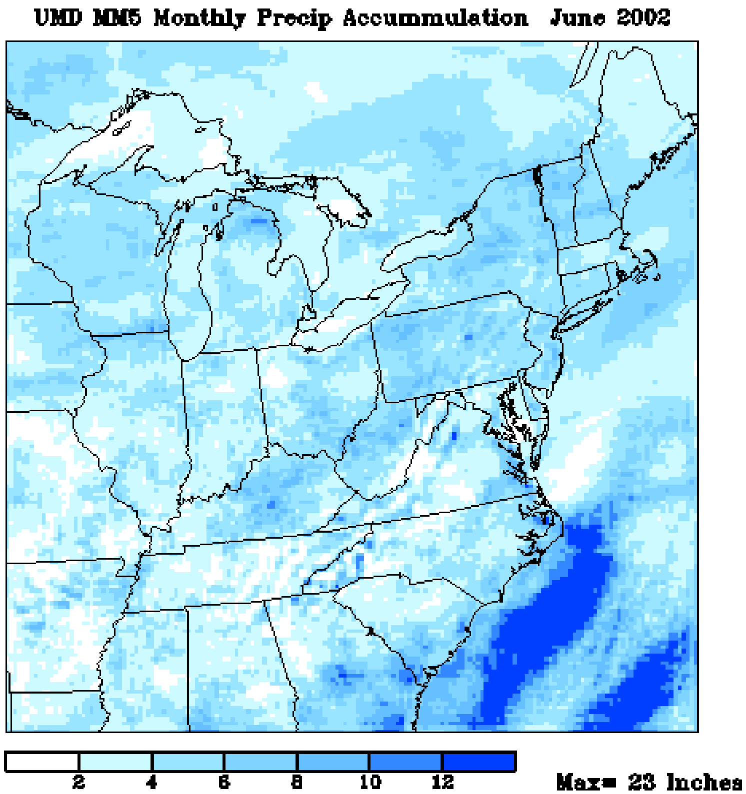
Obs May 2002 MM5



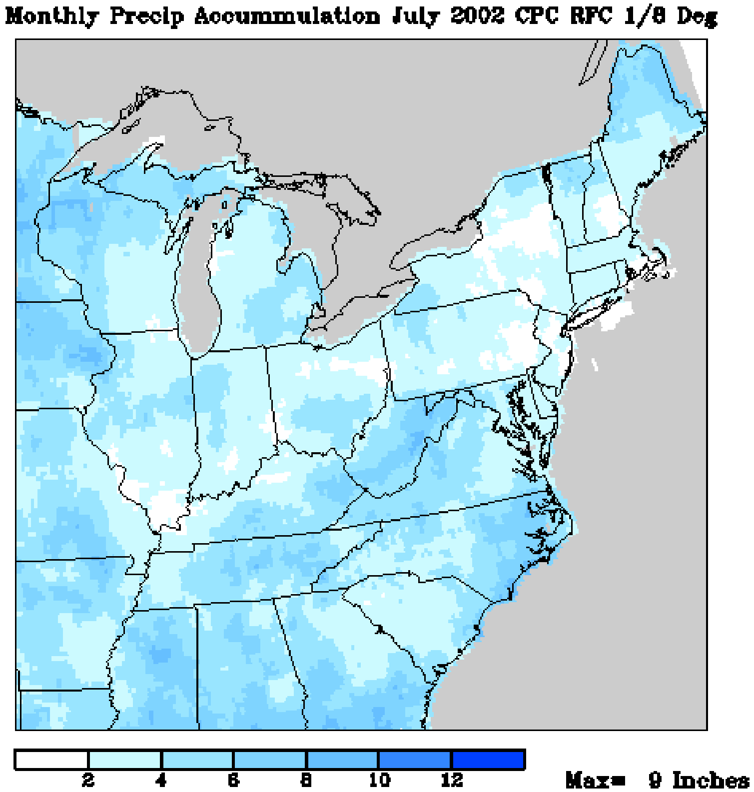


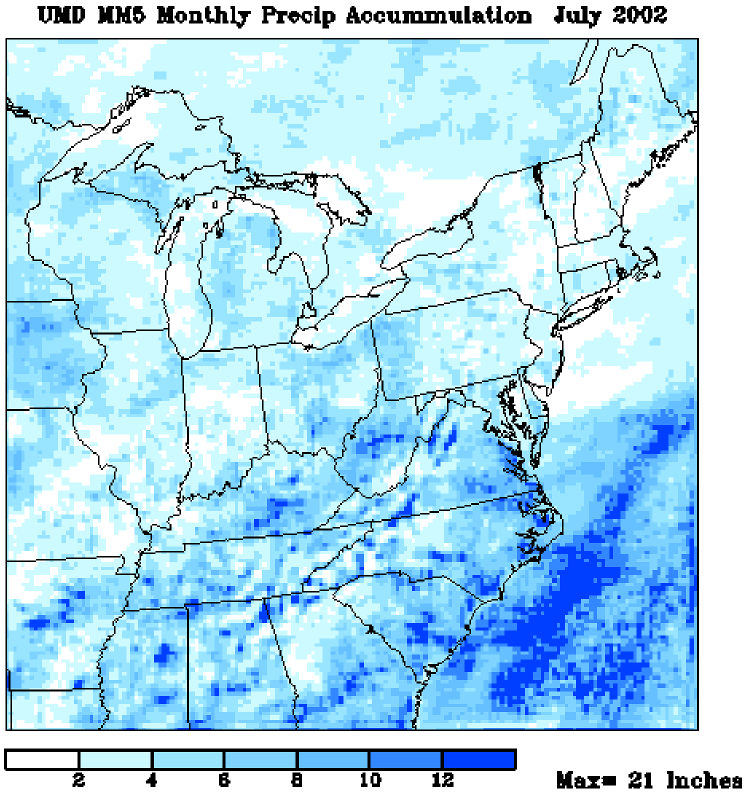
Obs June 2002 MM5



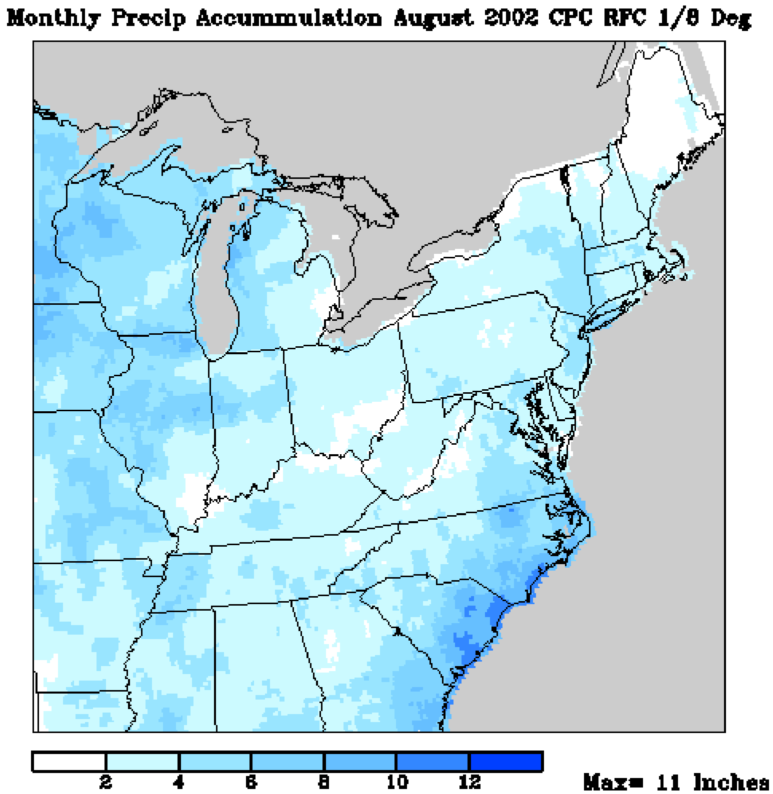


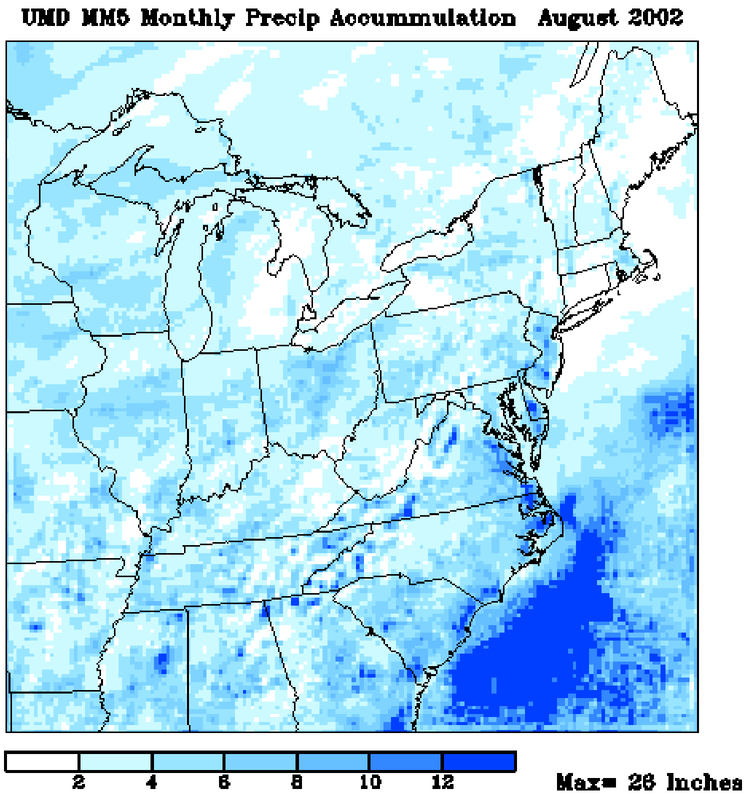
Obs July 2002 MM5



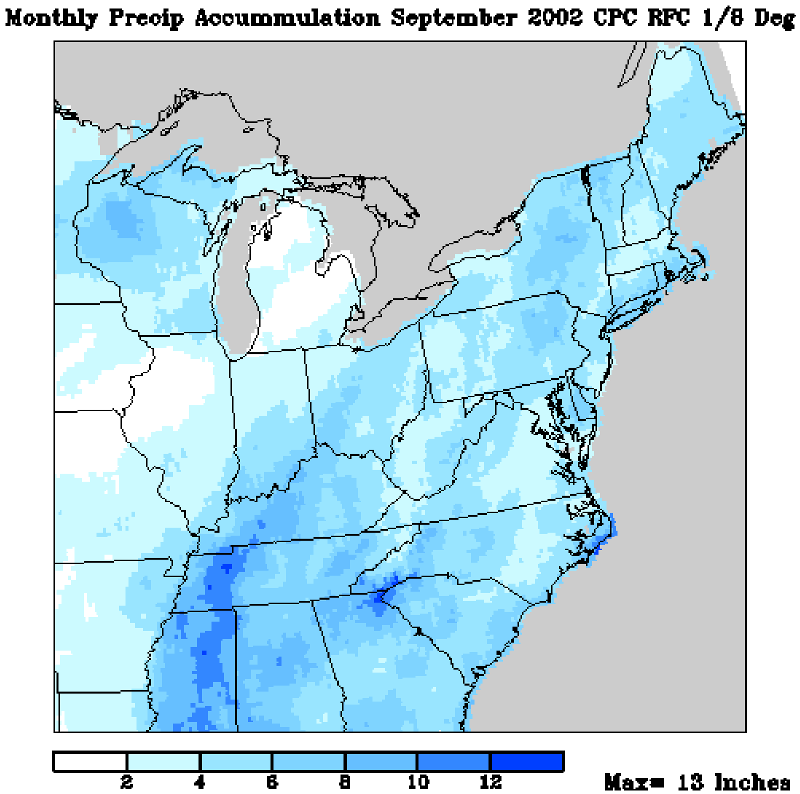


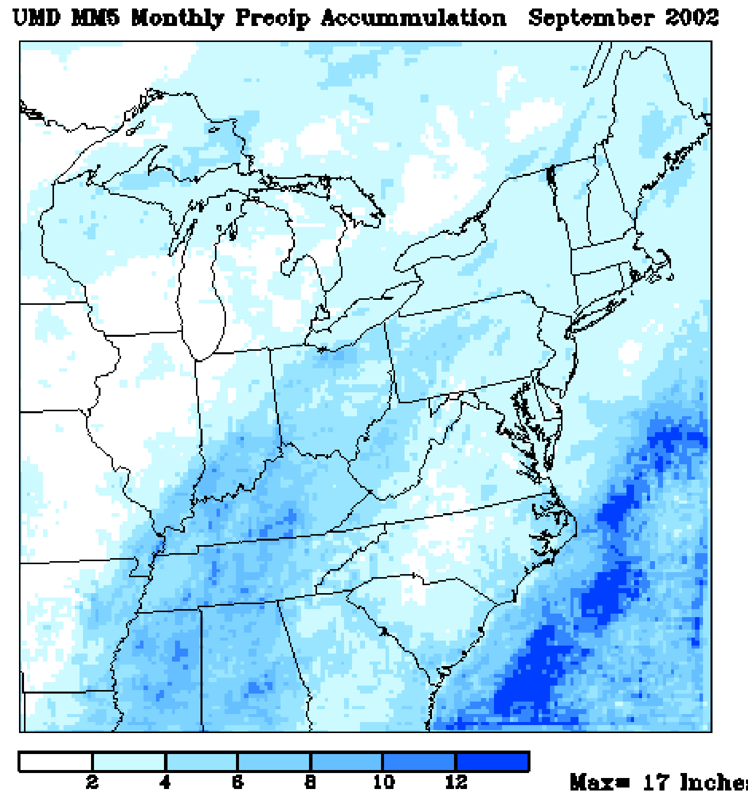
Obs August 2002 MM5





Obs September 2002 MM5





MM5 cloud cover was compared qualitatively with UMD Surface Radiation Budget Groups' products

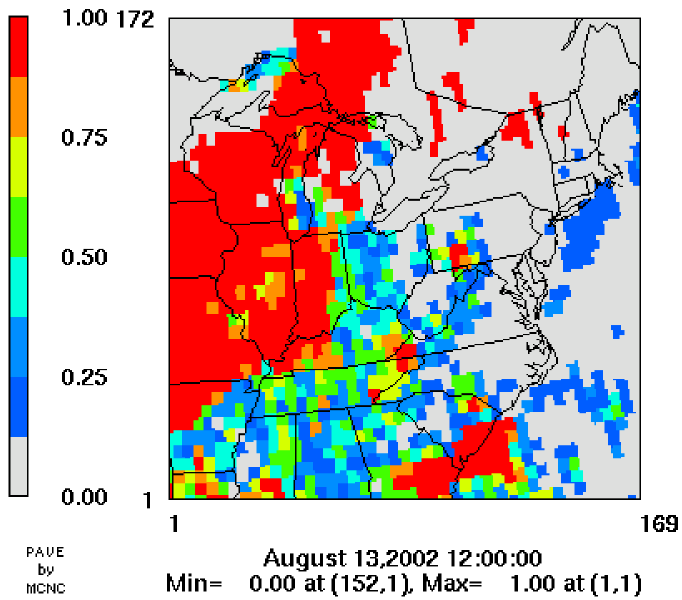
The observed cloud interpolated from satellite base data of 0.5^{o} by 0.5^{o} resolution

Total cloud fraction estimated by MCIP from MM5 low, middle and high cloud fraction

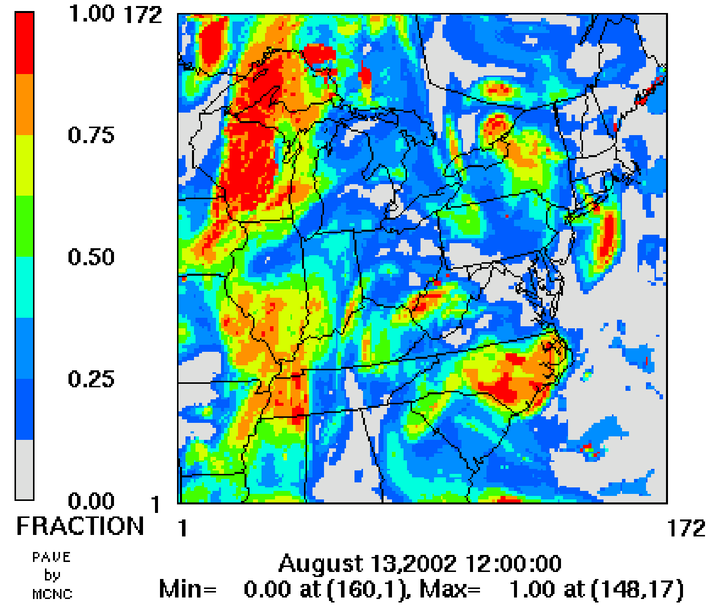
MM5 is doing a fair job to simulate cloud patterns for the time periods we examined

Observed and Simulated Cloud field on August 13, 2002

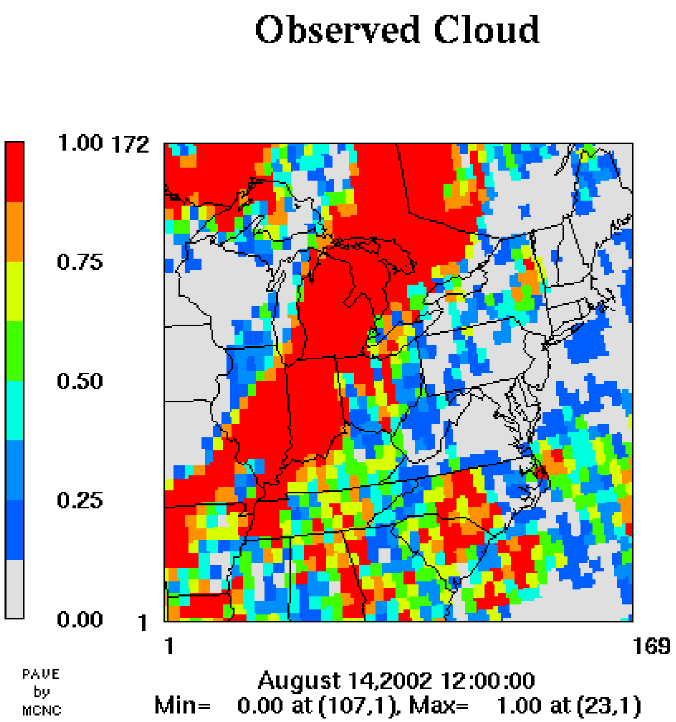
Observed Cloud

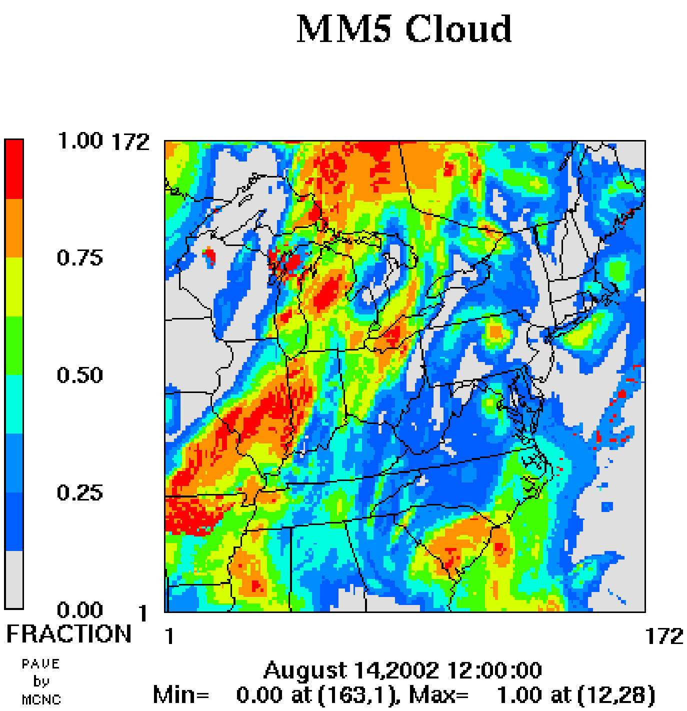


MM5 Cloud

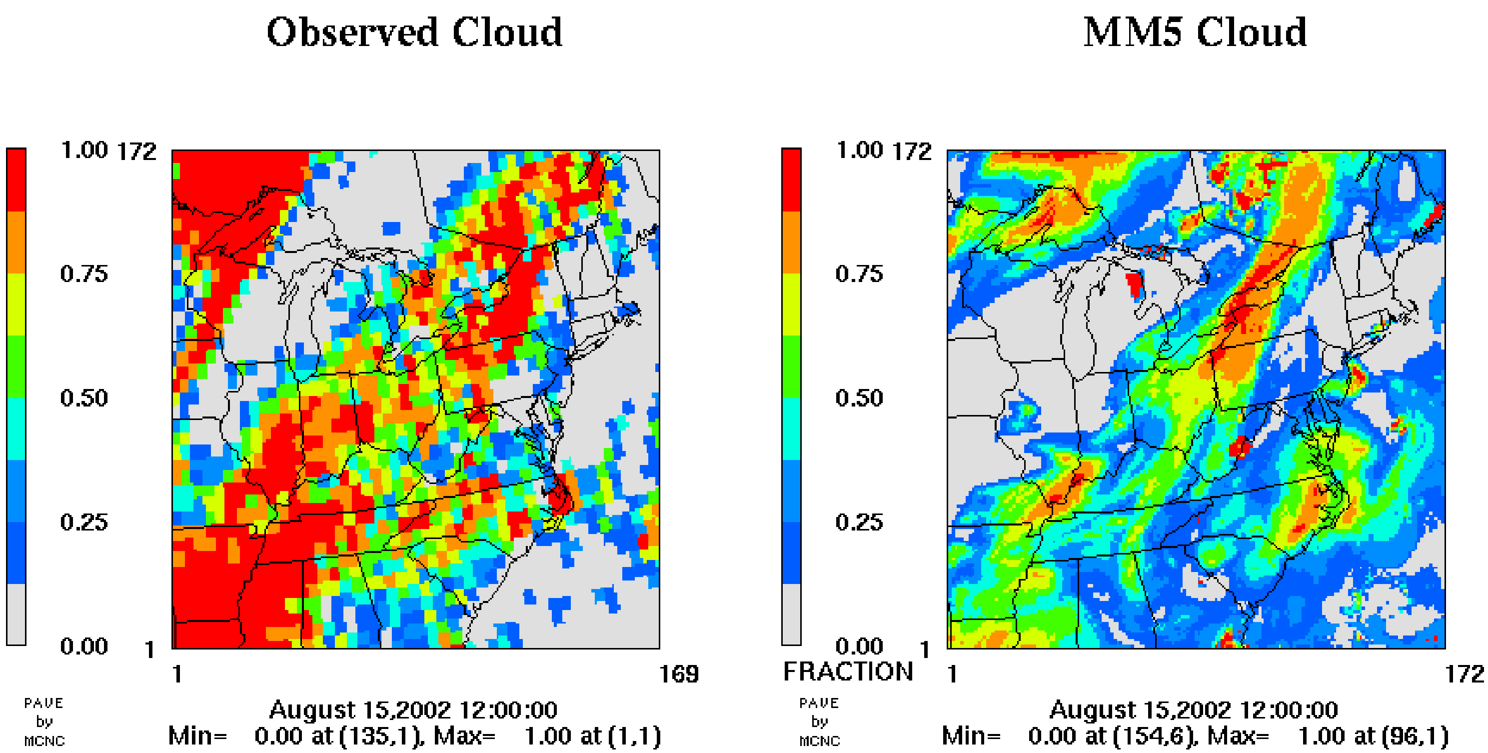


Observed and Simulated Cloud Field on August 14, 2002



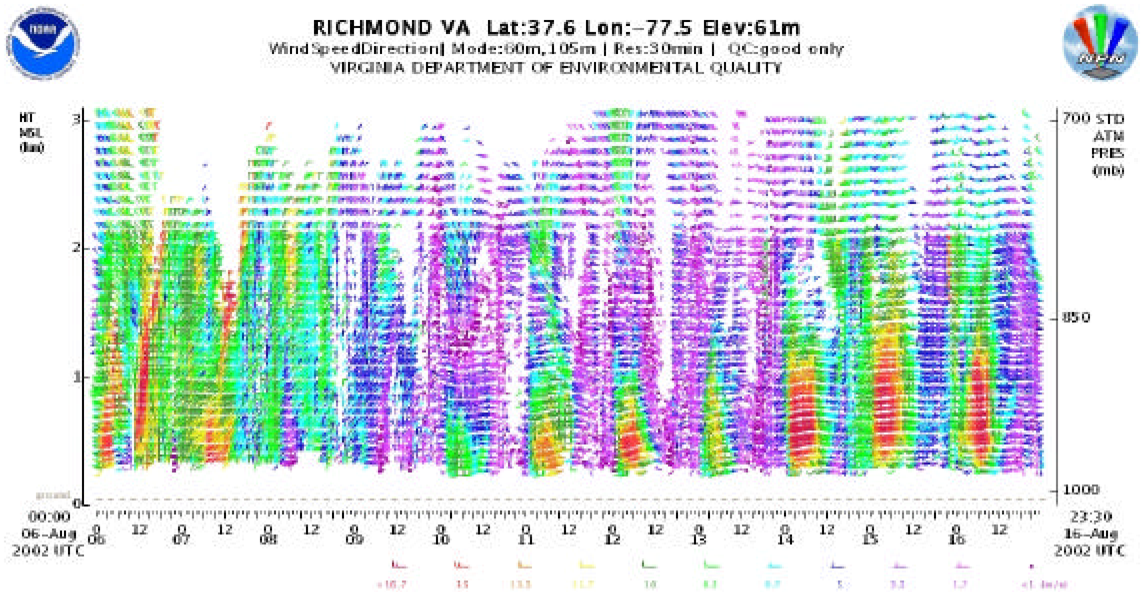


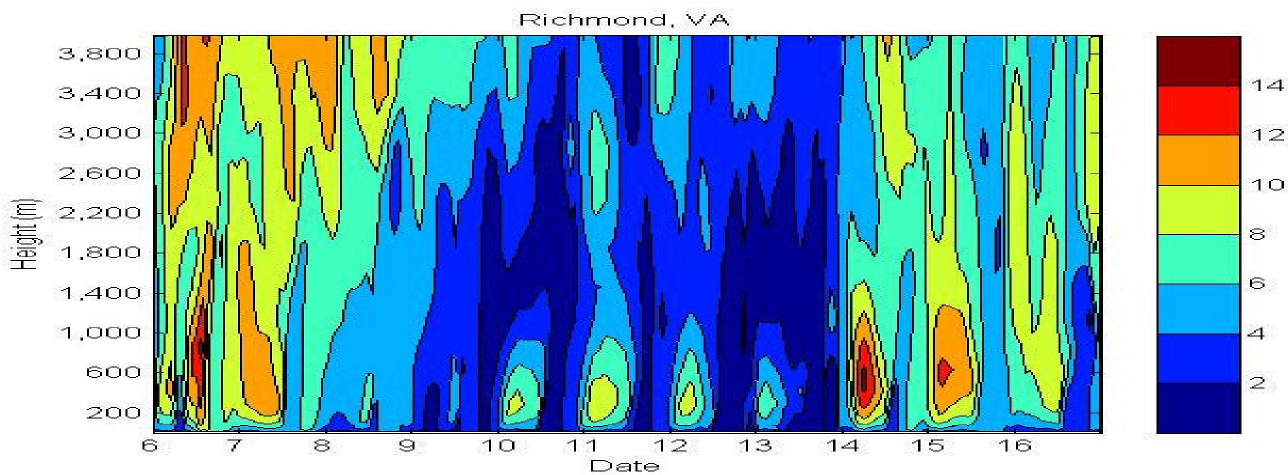
Observed and Simulated Cloud Field on August 15, 2002



MM5 vertical wind speed profiles were compared qualitatively with wind profilers observations, using low level jets (LLJ) as an indicator

MM5 is doing a fair job capturing LLJ events


RICHMOND VA Lat:37.6 Lon:-77.5 Elev:61m
WindSpeedDirection| Mode:60m,105m | Res:30min | QC:good only
VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
HT MSL (km)
700 STD ATM PRES (mb)
850
1000
00:00 06-Aug 2002 UTC
23:30 16-Aug 2002 UTC


Richmond, VA
Height (m)
Date
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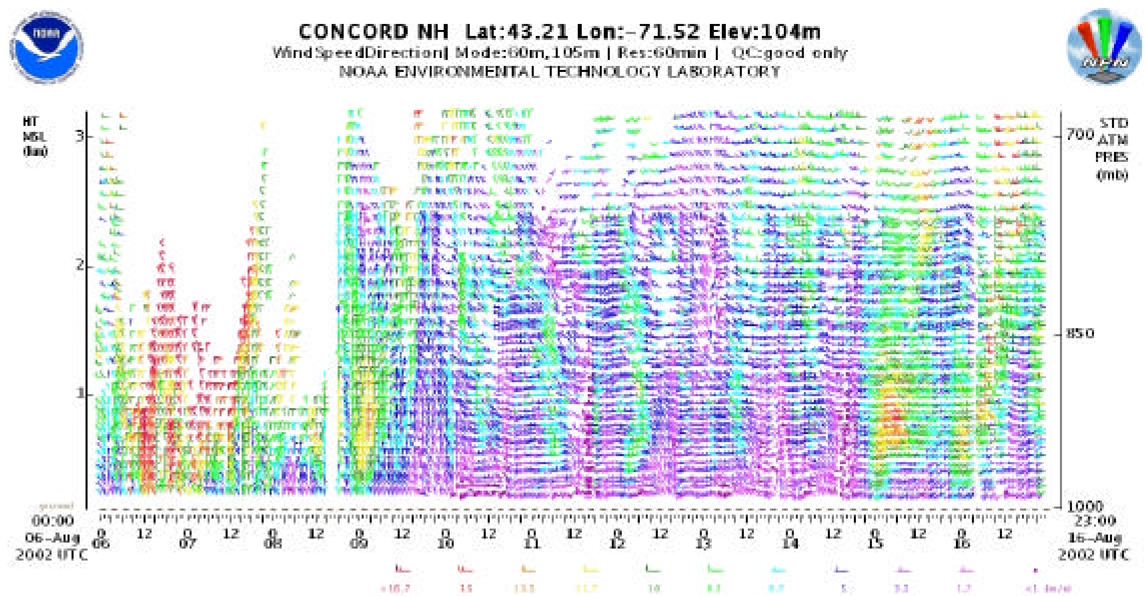
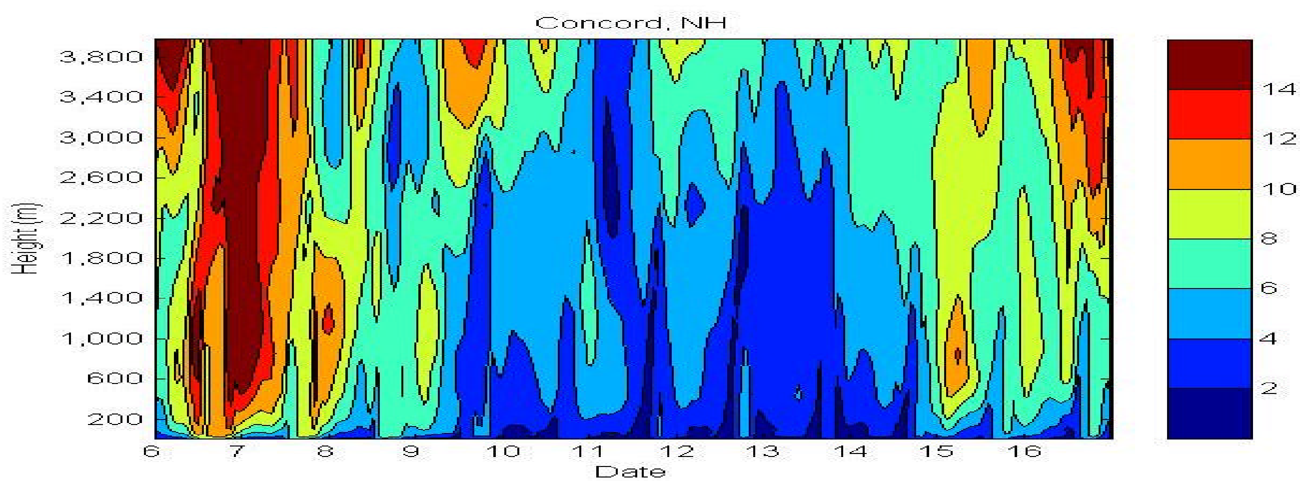
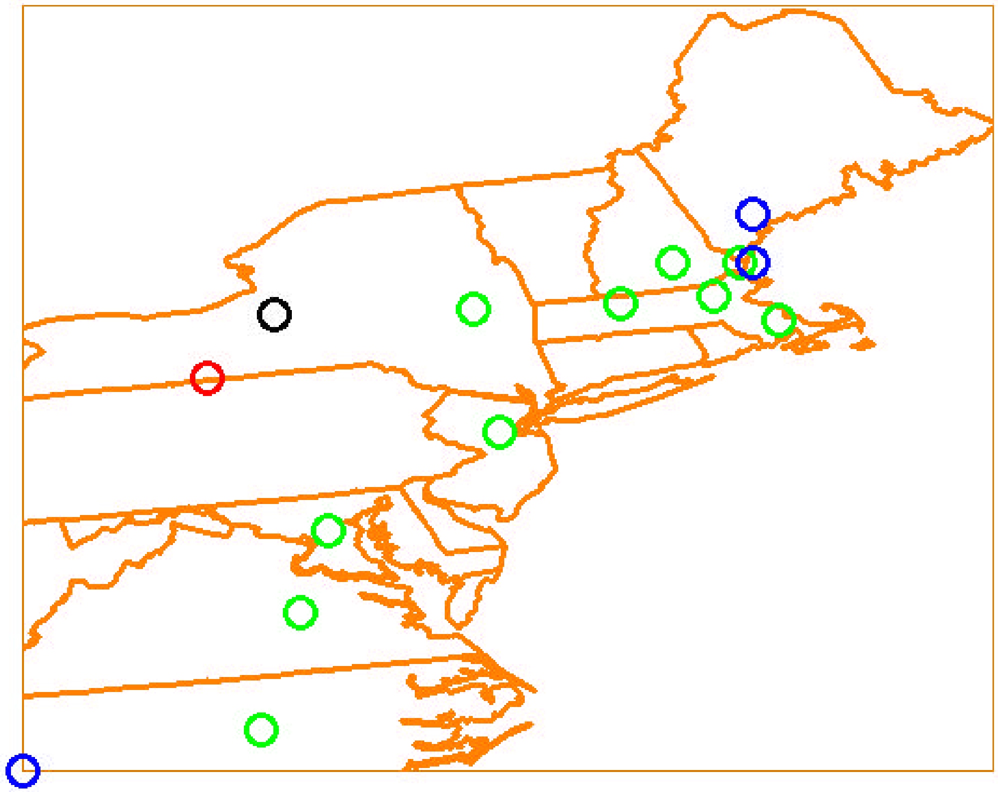
3,400
3,000
2,600
2,200
1,800
1,400
1,000
600
200
6
7
8
9
10
11
12
13
14
15
16
14
12
10
8
6
4
2


CONCORD NH Lat:43.21 Lon:-71.52 Elev:104m
WindSpeedDirection| Mode:60m,105m | Res:60min | QC:good only
NOAA ENVIRONMENTAL TECHNOLOGY LABORATORY
HT MSL (km)
STD ATM PRES (mb)
700
850
1000
00:00 06-Aug 2002 UTC
23:00 16-Aug 2002 UTC


Concord, NH
Height (m)
3,800
3,400
3,000
2,600
2,200
1,800
1,400
1,000
600
200
6
7
8
9
10
11
12
13
14
15
16
Date
14
12
10
8
6
4
2

August 15, 2002



Appendix 8F

MM5 Model Evaluation
Document #2

Evaluation of 2002 Annual 12km MM5 Surface Parameters for OTC Modeling

Shan He and Gary Kleiman

NESCAUM

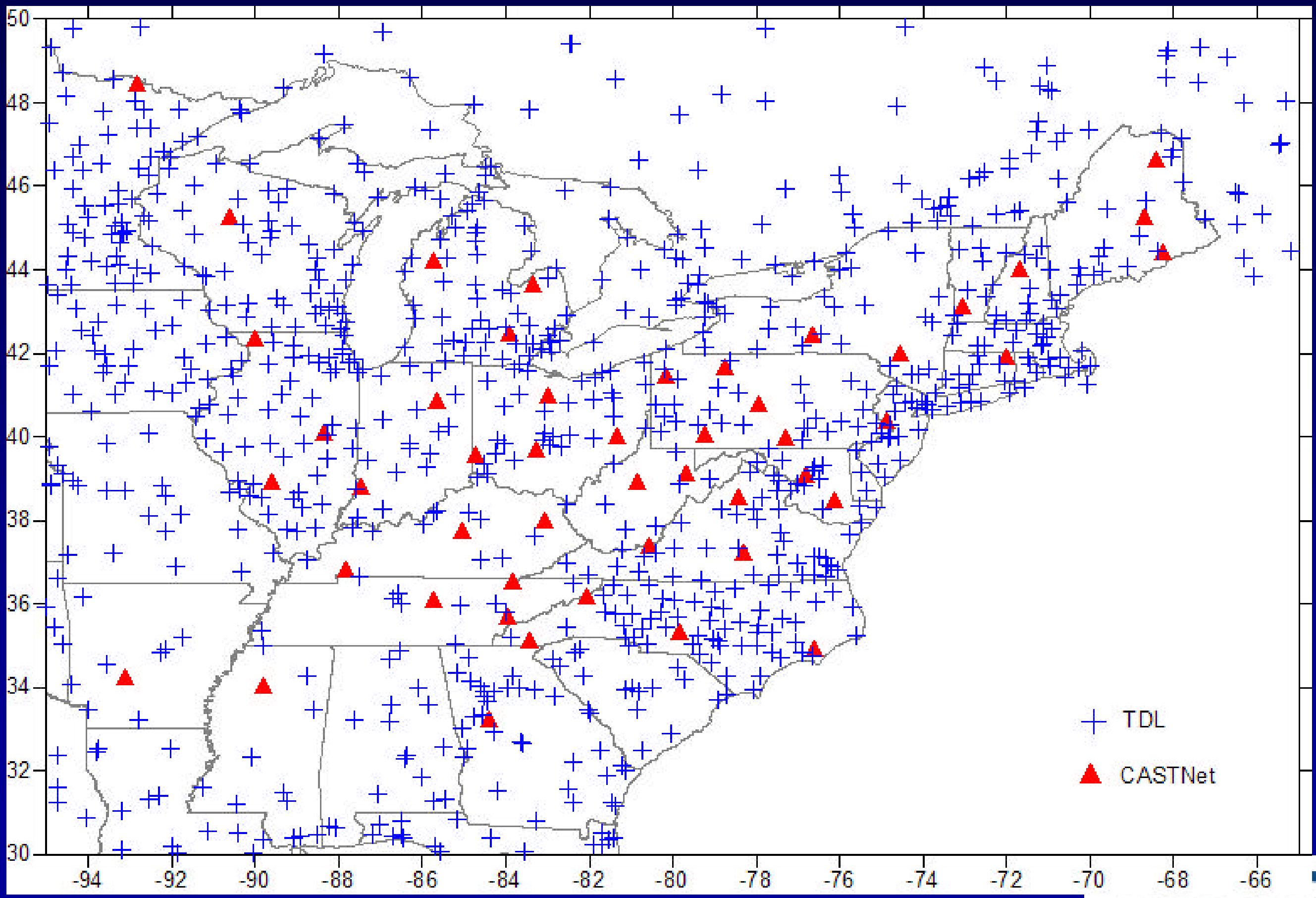
And

Winston Hao

NYDEC

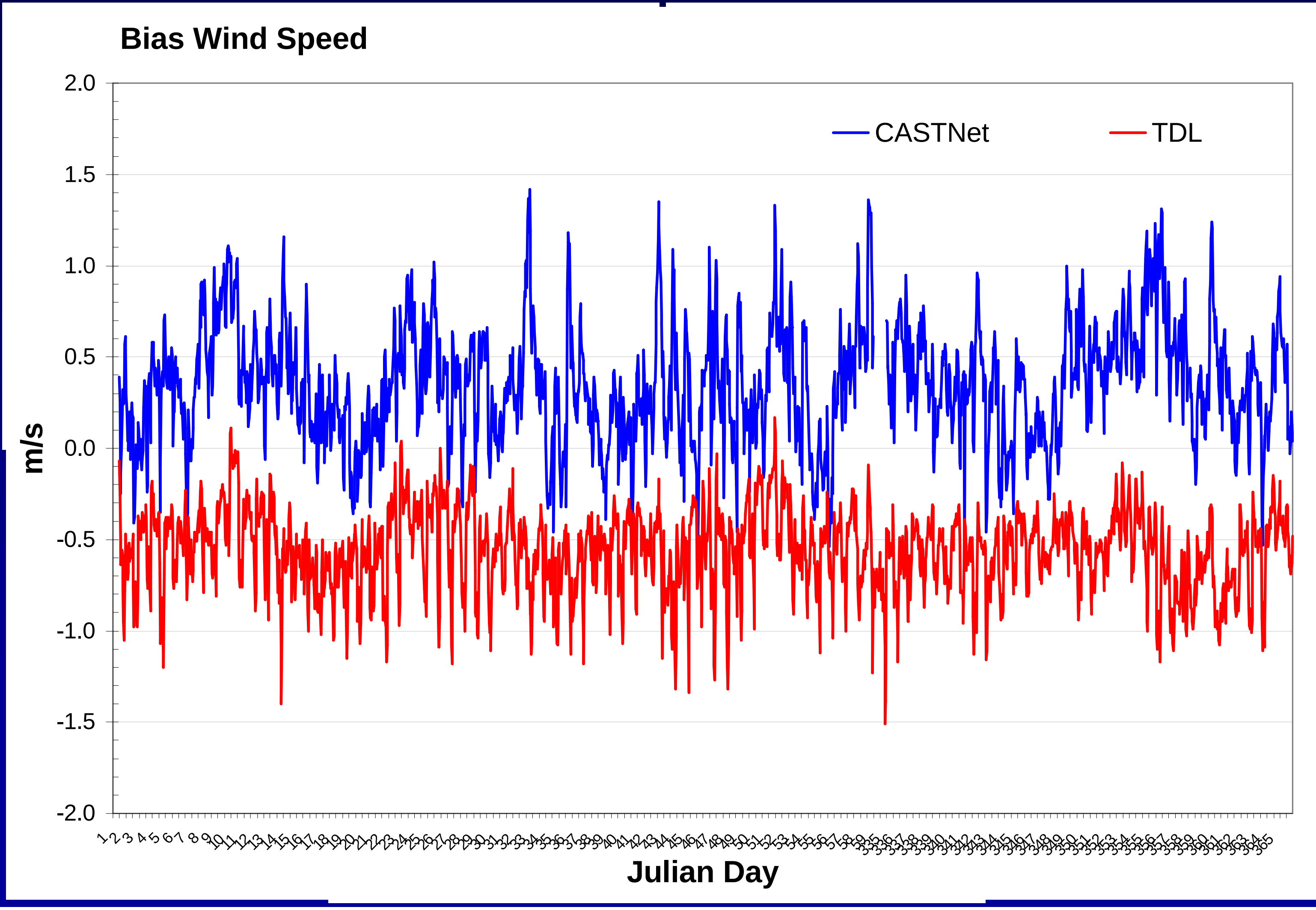
Review of Application and Assessment of CMAQ in OTC
Albany, NY
November 16, 2005

Observation Network

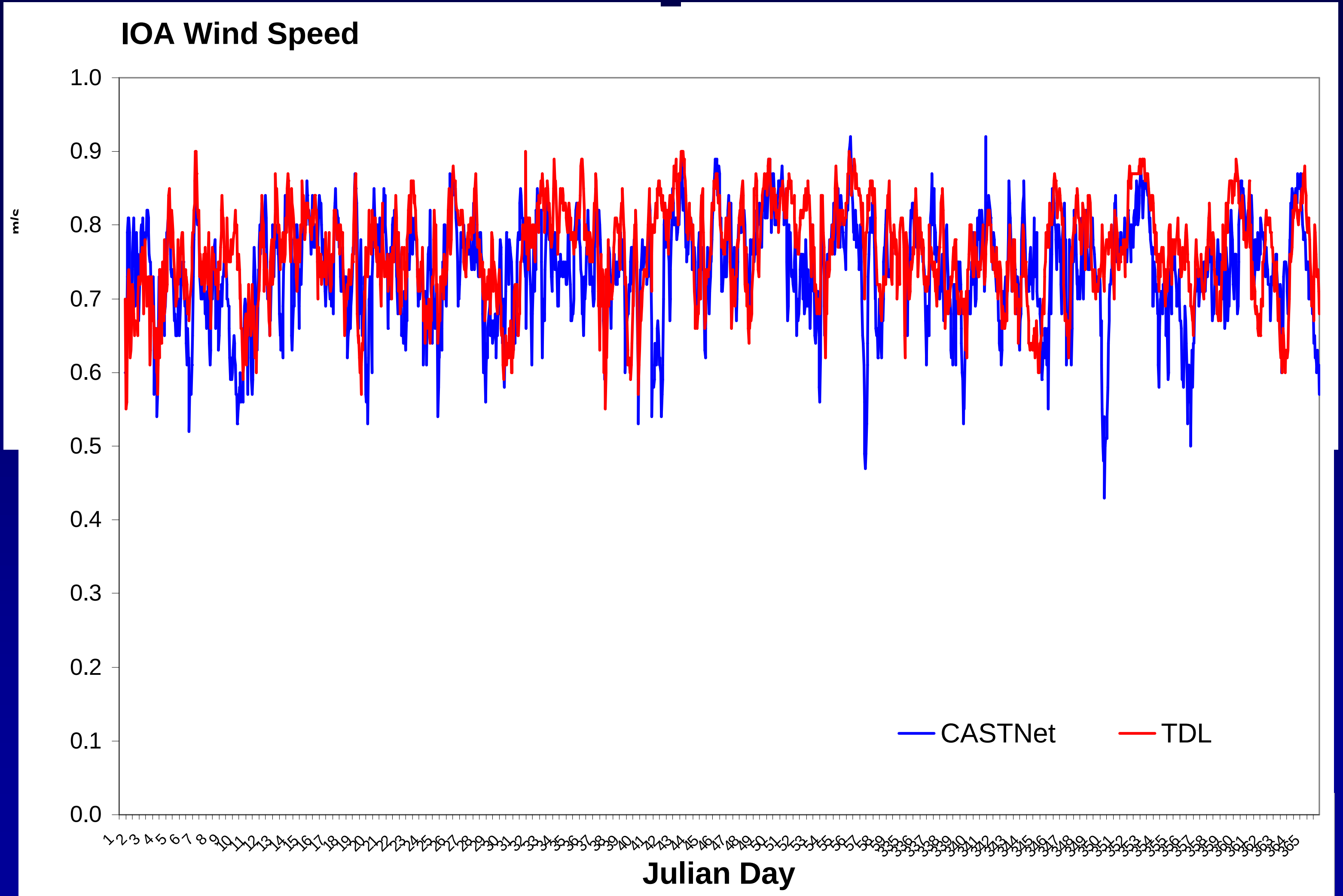


WIND

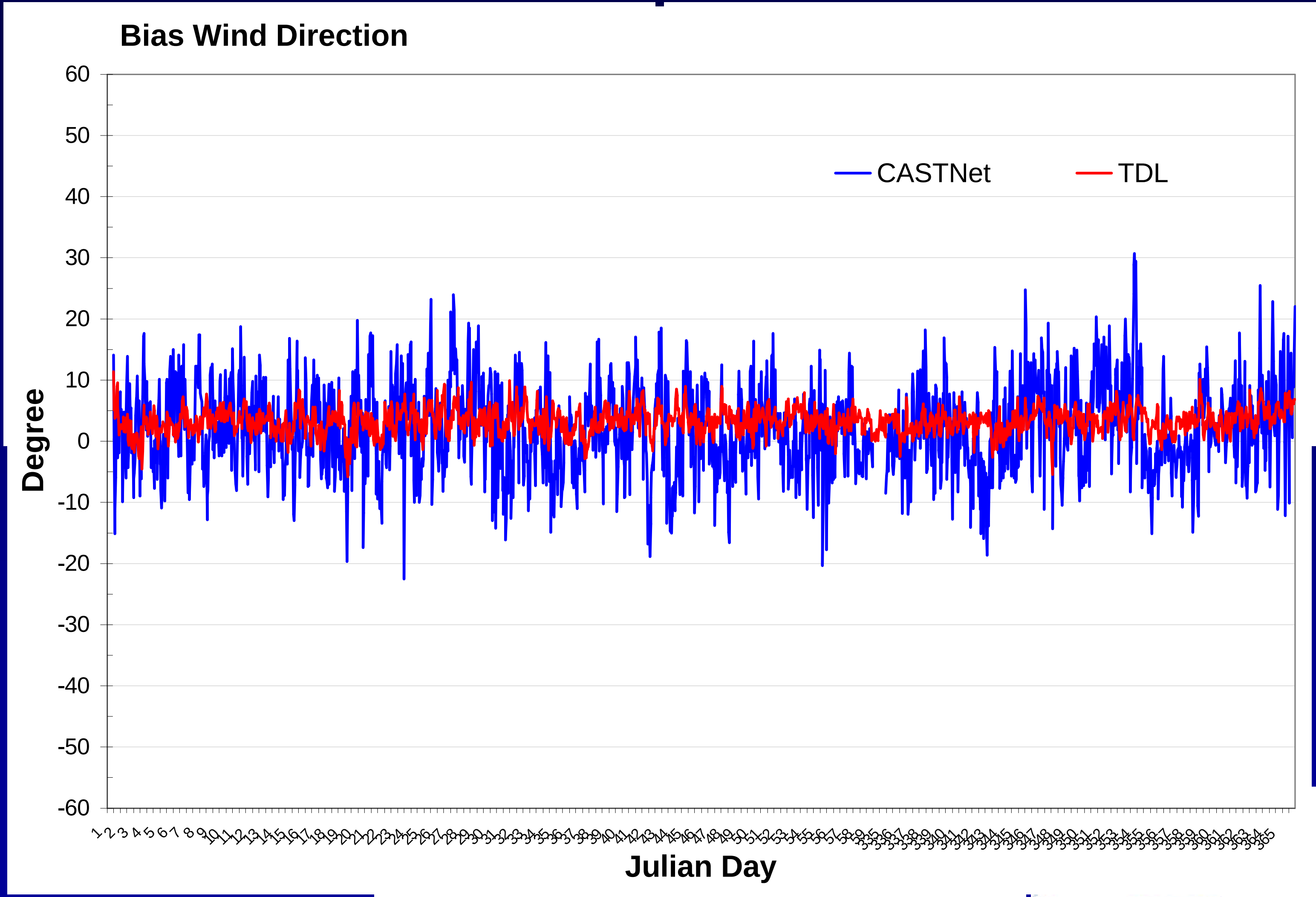
WINTER   Wind Speed



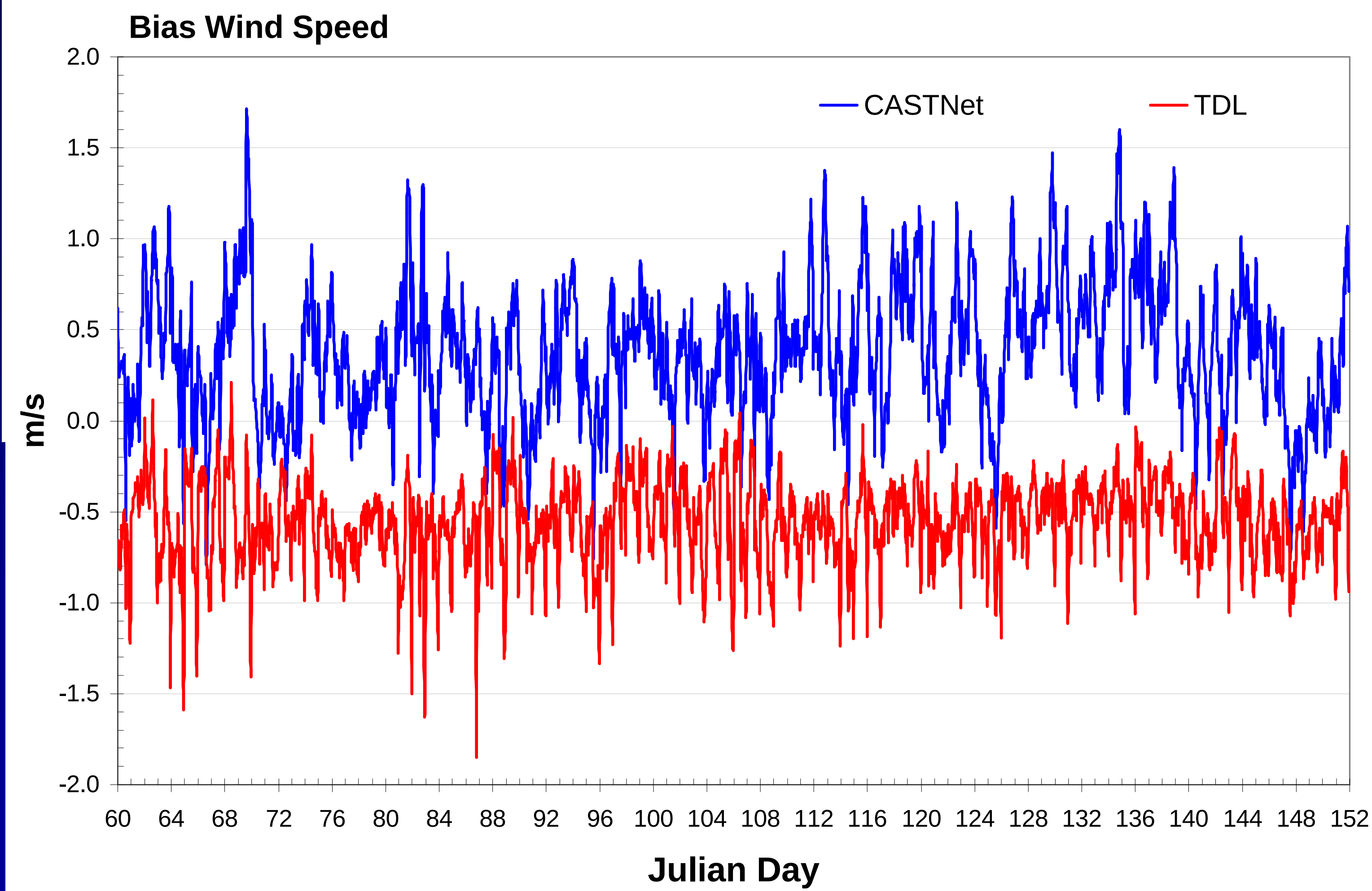
WINTER   Wind Speed (II)



WINTER   Wind Direction

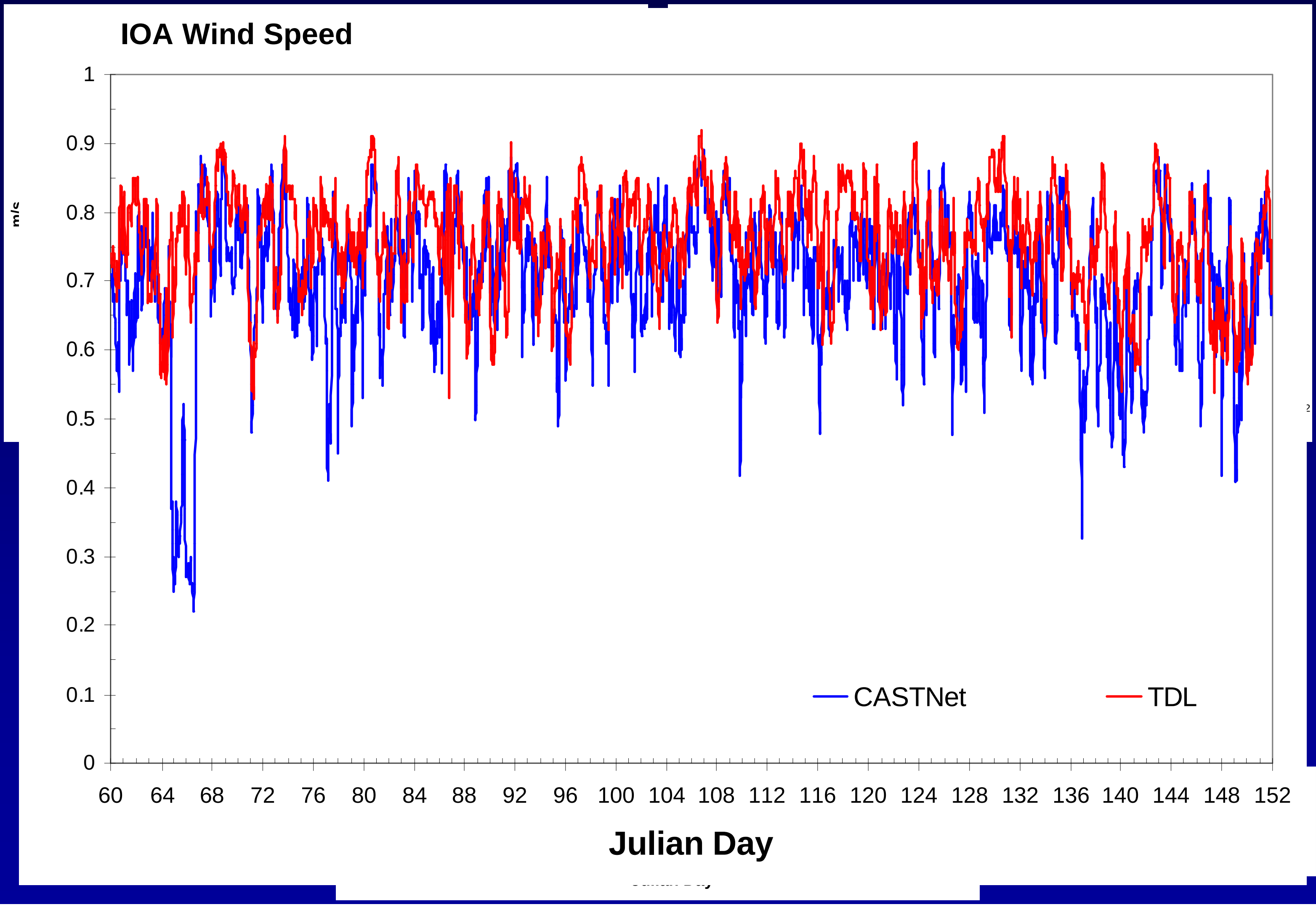


SPRING Wind Speed

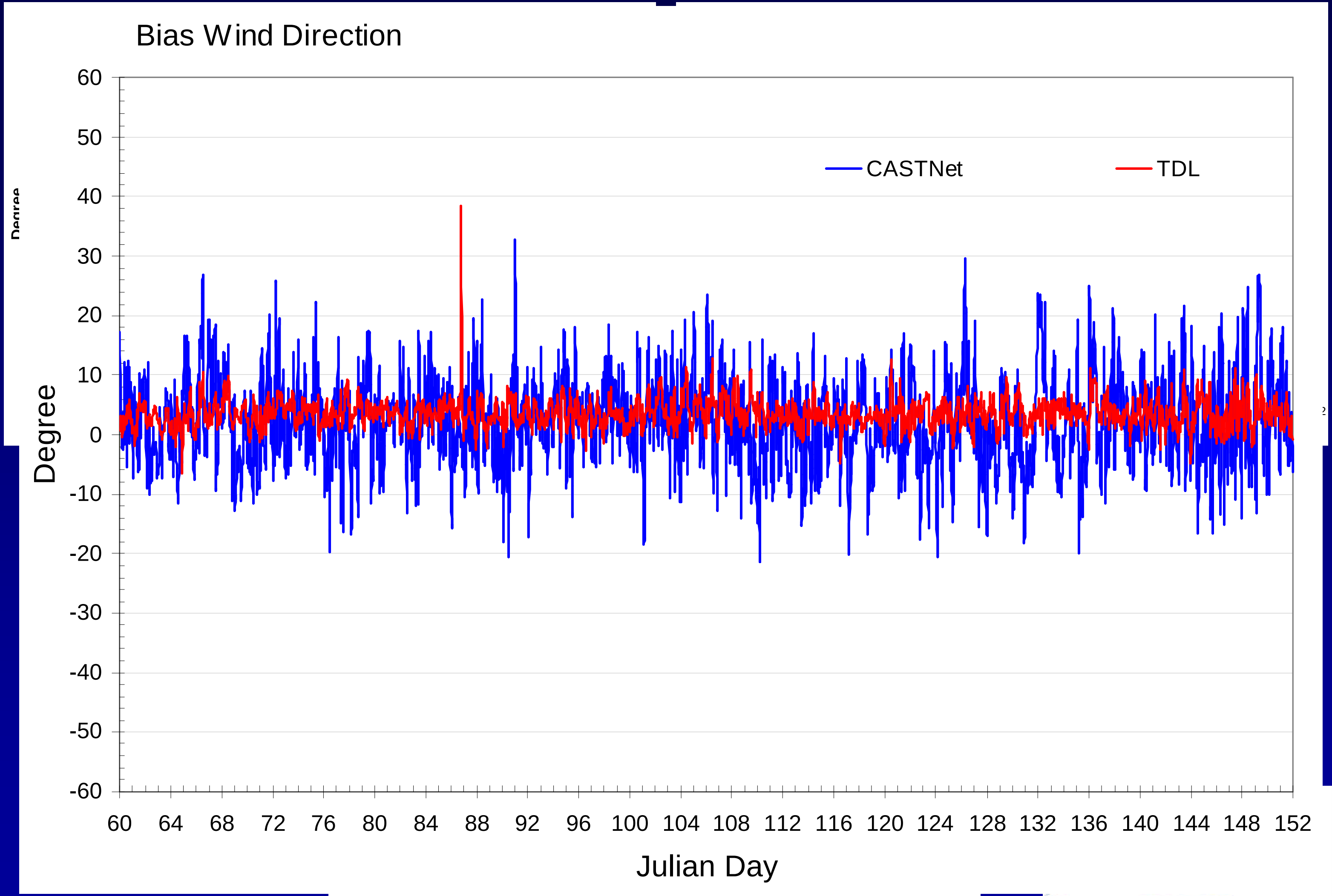


2

SPRING Wind Speed (II)



SPRING Wind Direction



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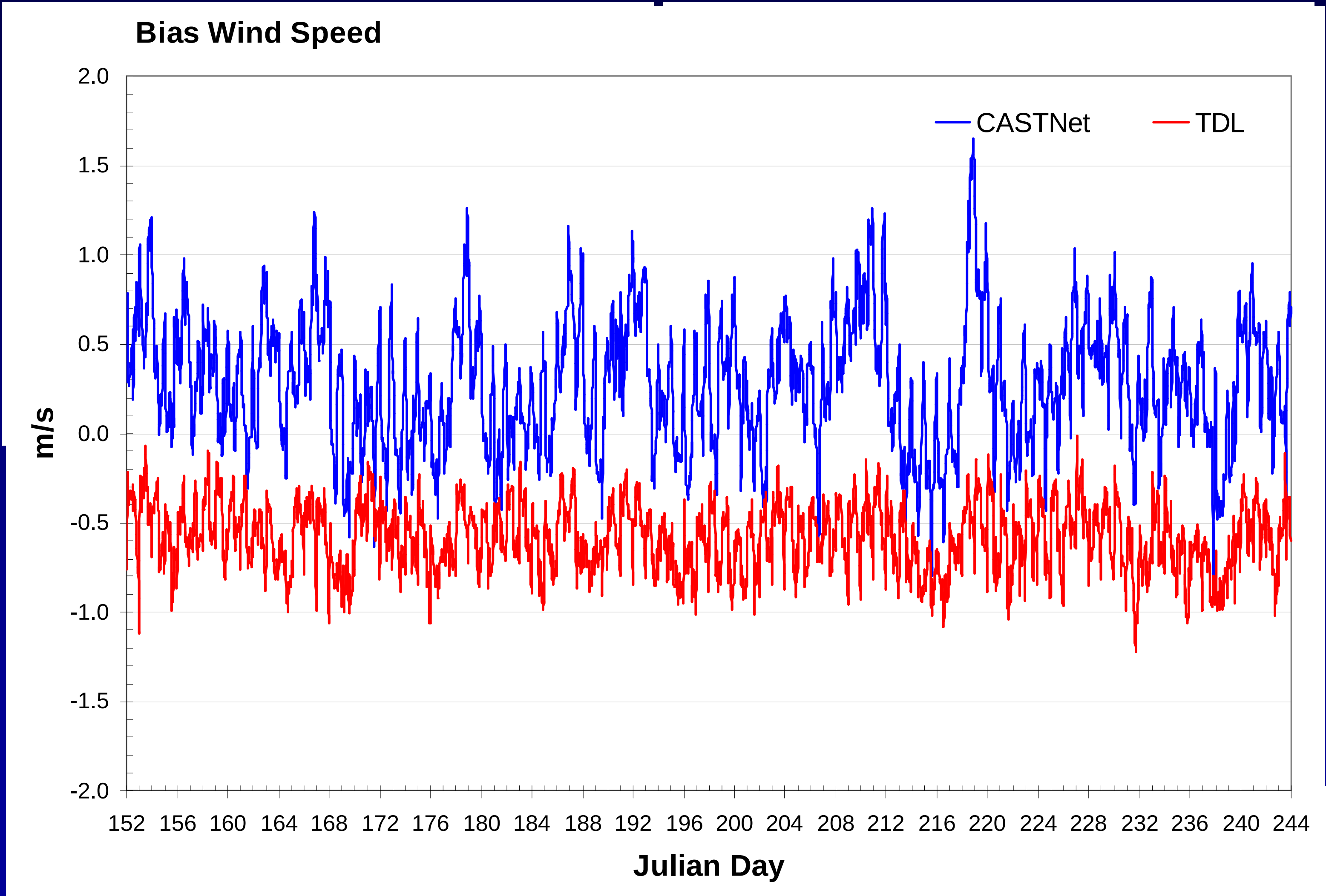

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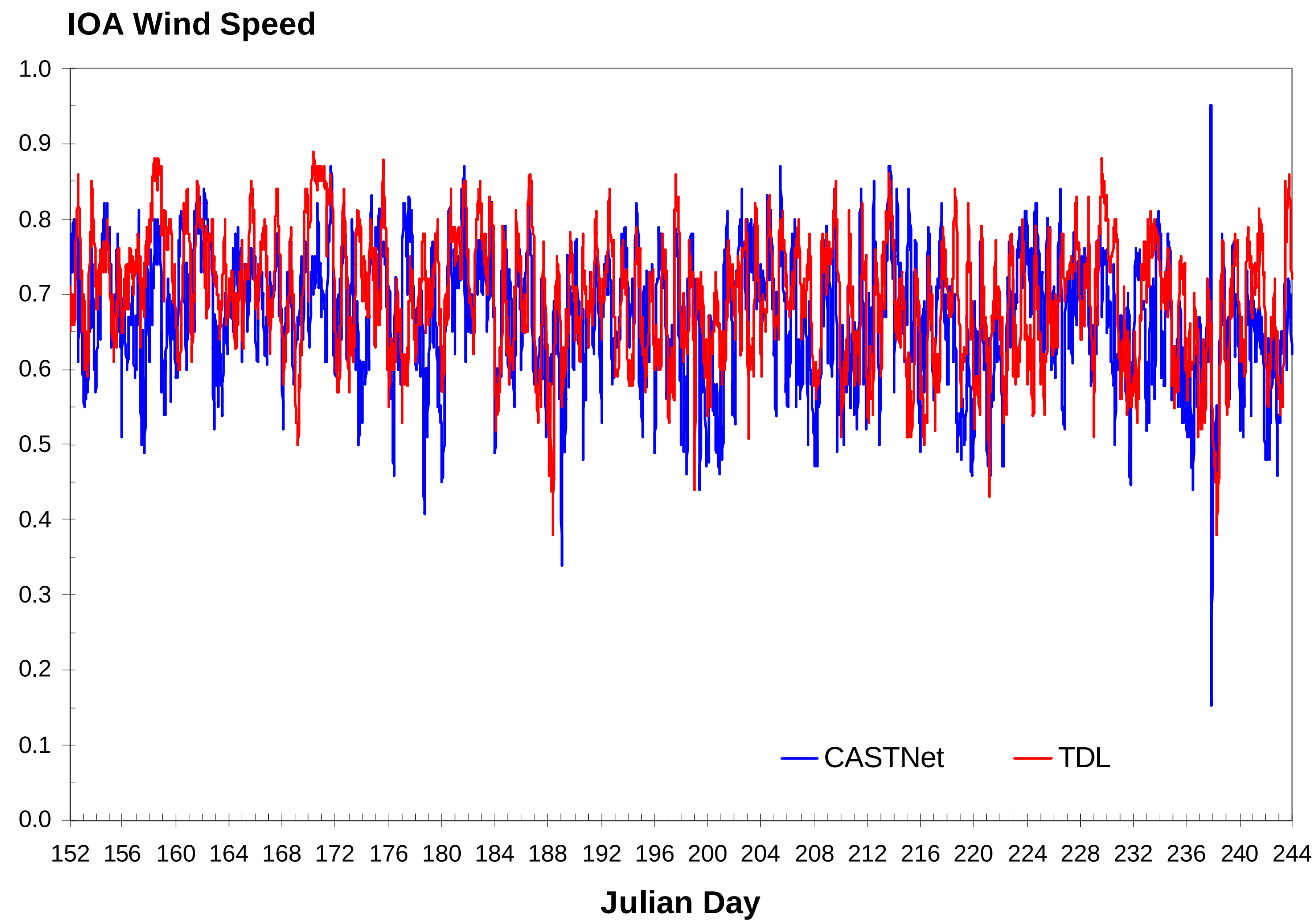

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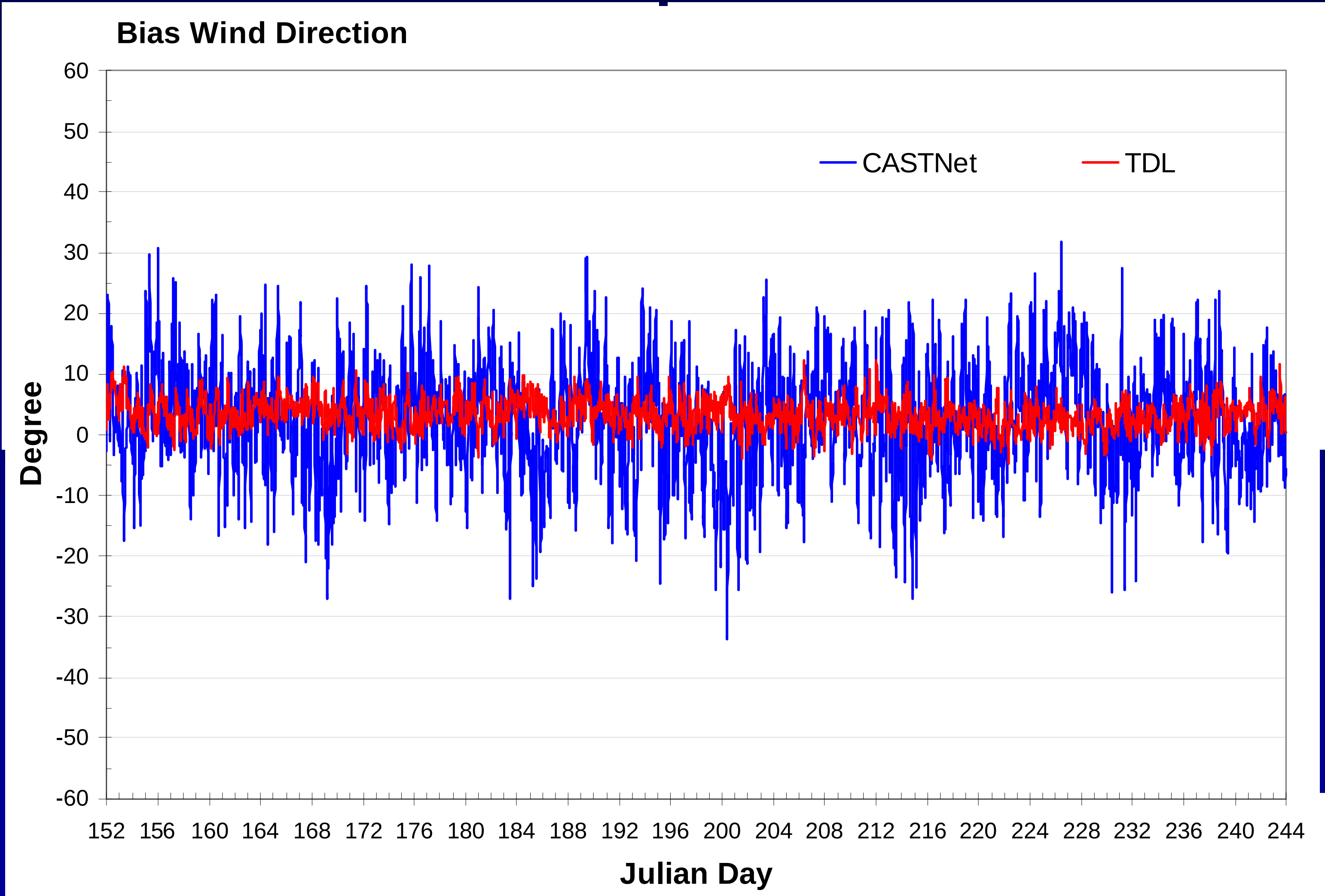

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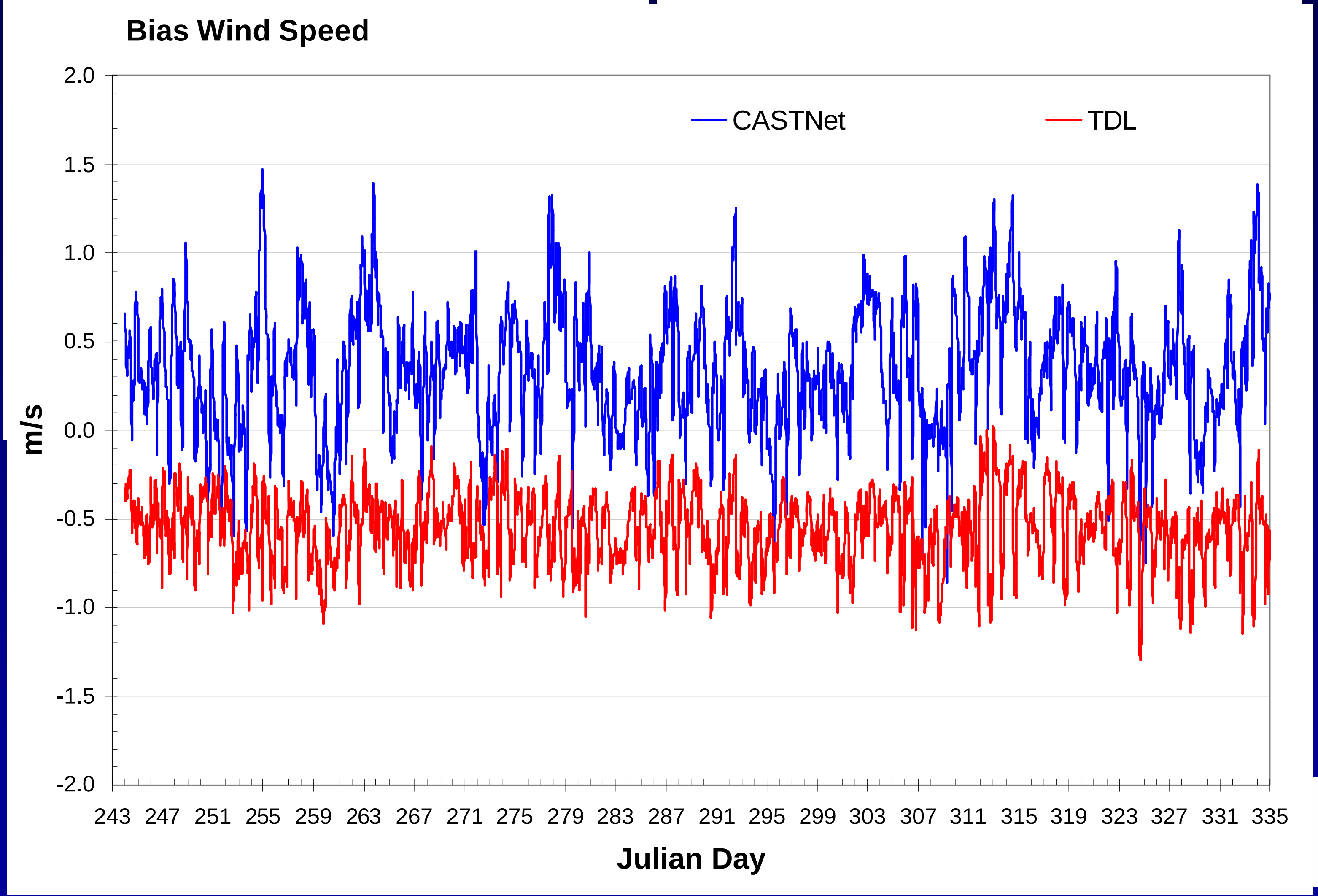
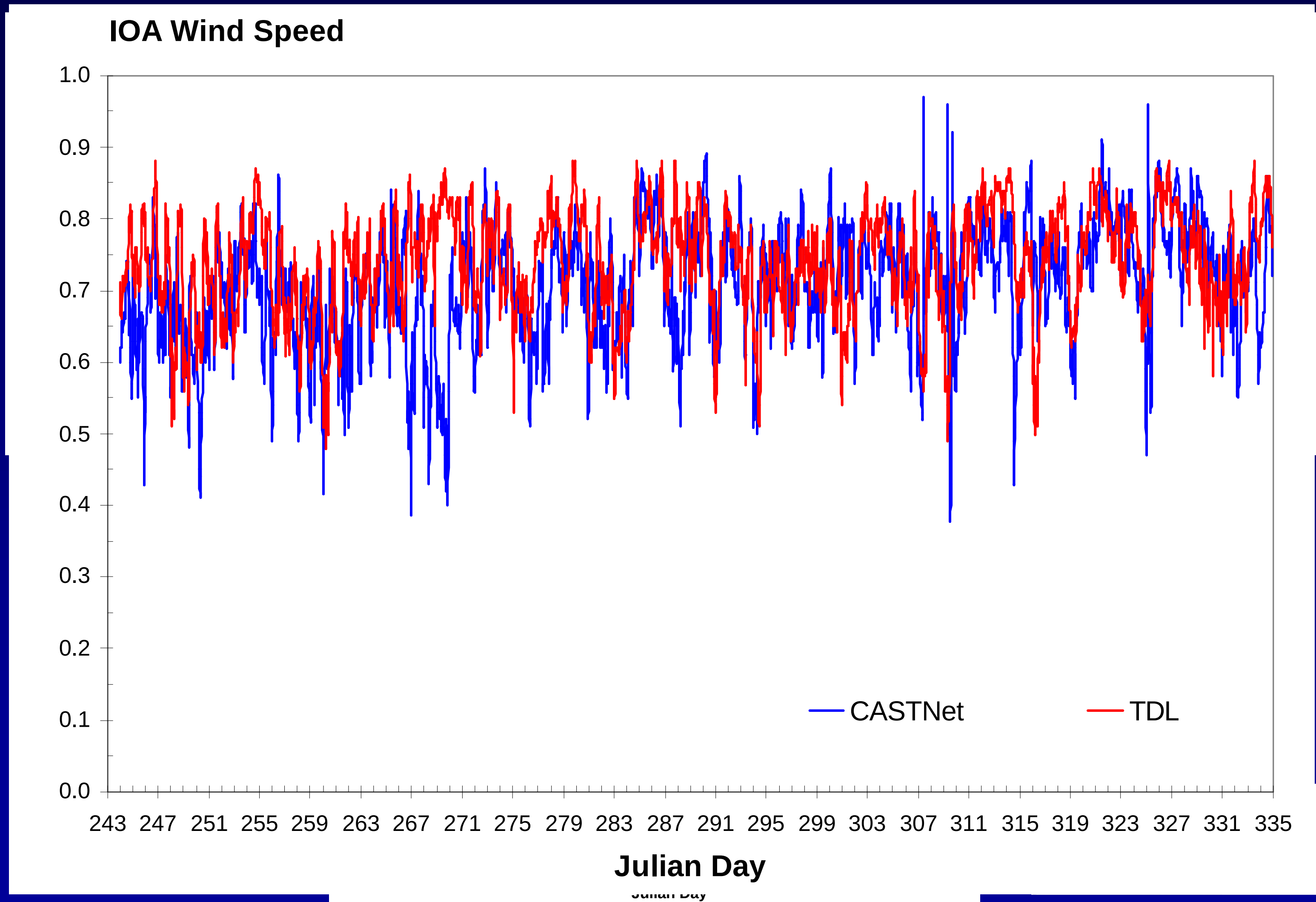
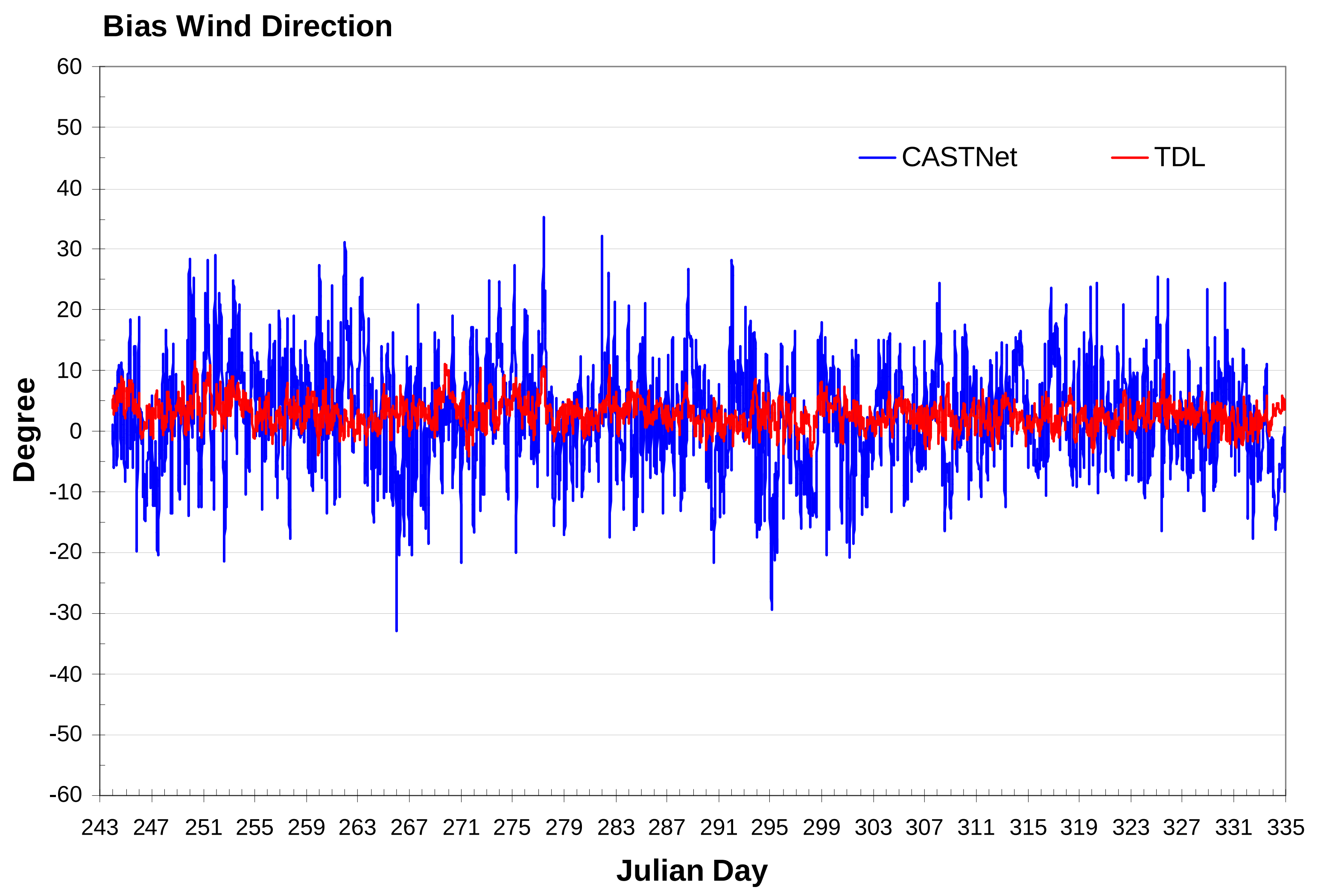


FALL   Wind Speed (II)



FALL Wind Direction



WIND

2002	Network	Wind Speed						Wind Direction		
		Bias			IOA			Bias		
		Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
JAN	CASTNET	1.16	-0.42	0.34	0.88	0.52	0.73	23.98	-22.55	2.54
	TDL	0.11	-1.40	-0.53	0.90	0.55	0.74	11.42	-5.81	3.12
FEB	CASTNET	1.42	-0.61	0.31	0.92	0.47	0.75	18.55	-20.29	0.88
	TDL	0.17	-1.51	-0.56	0.90	0.55	0.79	8.98	-2.80	3.31
MAR	CASTNET	1.70	-0.79	0.31	0.89	0.22	0.70	26.54	-20.04	1.93
	TDL	0.21	-1.85	-0.59	0.91	0.53	0.76	38.45	-6.45	3.48
APR	CASTNET	1.37	-0.76	0.38	0.89	0.42	0.73	32.74	-21.19	2.49
	TDL	0.04	-1.33	-0.55	0.92	0.58	0.77	12.80	-4.59	3.61
MAY	CASTNET	1.60	-0.76	0.44	0.88	0.33	0.69	29.64	-20.58	2.33
	TDL	-0.04	-1.19	-0.52	0.91	0.54	0.74	11.25	-4.80	3.53
JUN	CASTNET	1.25	-0.63	0.28	0.87	0.41	0.69	30.65	-26.33	3.33
	TDL	-0.07	-1.11	-0.56	0.89	0.50	0.73	11.15	-3.65	3.89
JUL	CASTNET	1.26	-0.58	0.31	0.87	0.34	0.66	29.26	-33.34	1.44
	TDL	-0.14	-1.01	-0.58	0.86	0.38	0.68	12.30	-3.84	3.62
AUG	CASTNET	1.65	-0.87	0.24	0.95	0.16	0.65	31.83	-26.96	2.34
	TDL	-0.02	-1.22	-0.61	0.88	0.38	0.67	11.76	-4.67	2.74
SEP	CASTNET	1.47	-0.75	0.30	0.87	0.39	0.67	30.95	-32.73	3.01
	TDL	-0.09	-1.09	-0.54	0.88	0.48	0.72	11.54	-4.19	3.31
OCT	CASTNET	1.32	-0.72	0.32	0.89	0.50	0.72	35.10	-28.90	1.39
	TDL	-0.10	-1.05	-0.56	0.88	0.51	0.74	10.82	-4.09	2.81
NOV	CASTNET	1.39	-0.86	0.37	0.97	0.38	0.74	25.62	-17.68	2.35
	TDL	0.02	-1.29	-0.57	0.88	0.49	0.75	9.30	-3.58	2.28
DEC	CASTNET	1.31	-0.53	0.39	0.92	0.43	0.74	30.70	-18.60	2.69
	TDL	-0.08	-1.17	-0.59	0.89	0.60	0.76	10.08	-5.47	3.41

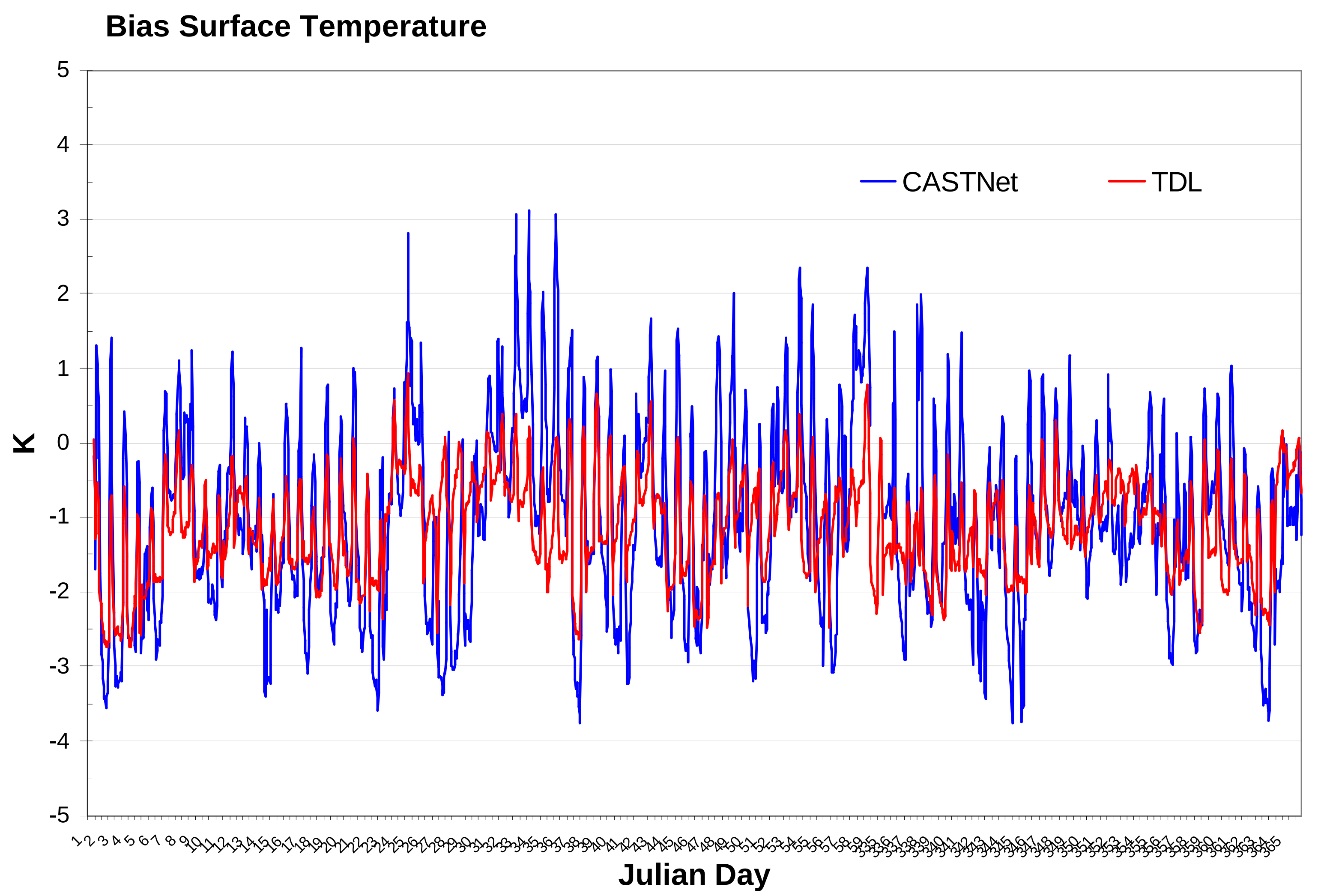
- MM5 tends to overestimate wind speed at CASTNet sites, and underestimate wind speed at TDL sites
- Mean bias of MM5 wind speed to CASTNet wind speed is ~0.3 to 0.4m/s, while mean bias of MM5 wind speed to TDL wind speed is about ~-0.5 to -0.6m/s
- MM5 wind speed shows similar IOA (~0.7 to 0.8) for both CASTnet data and TDL data
- MM5 wind direction shows larger variation to CASTNet wind direction than to TDL wind direction
- However, mean bias of MM5 wind direction to CASTNet wind direction is smaller than mean bias of MM5 wind direction to TDL wind direction

NESCAUM

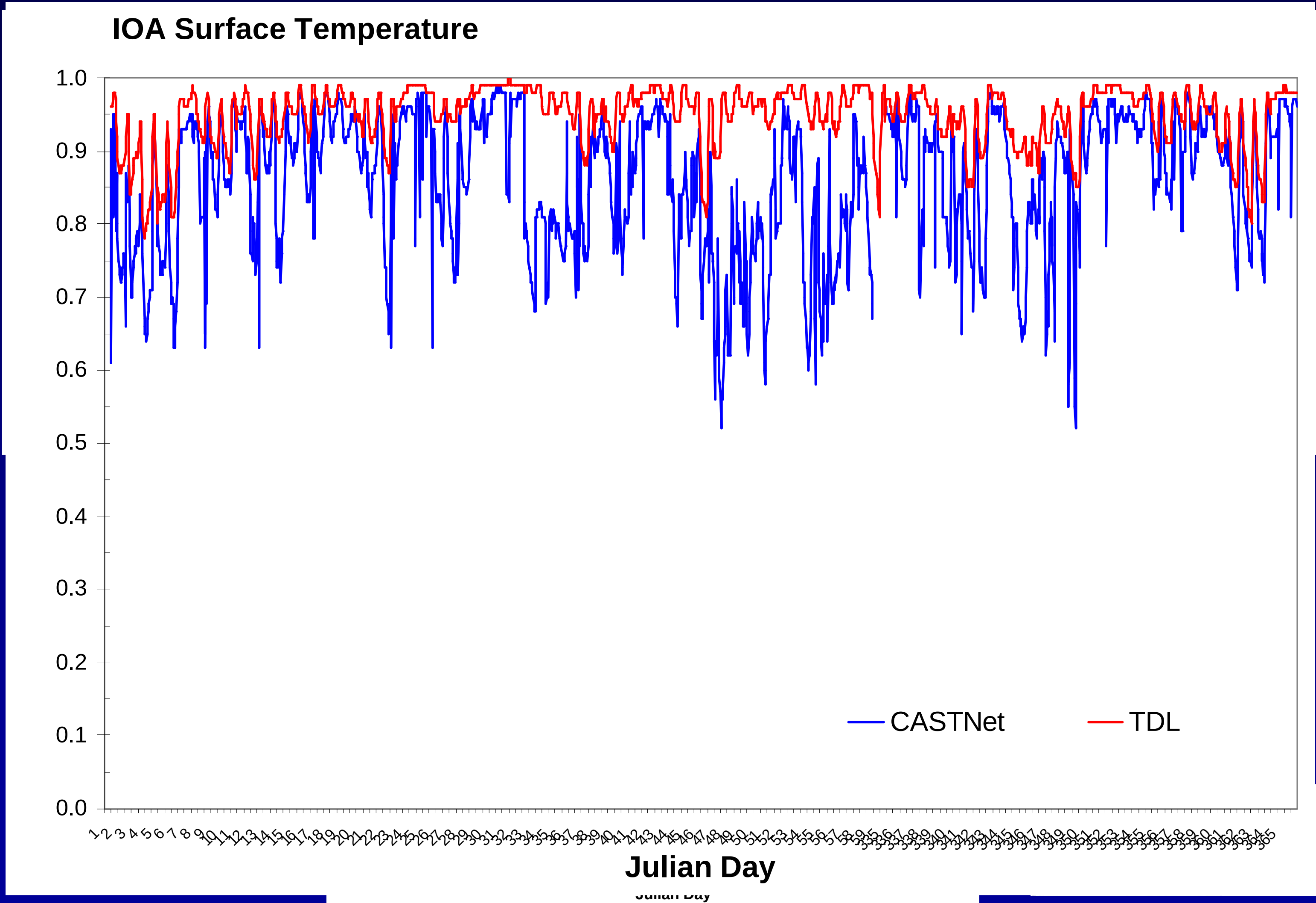
TEMPERATURE

NESCAUM

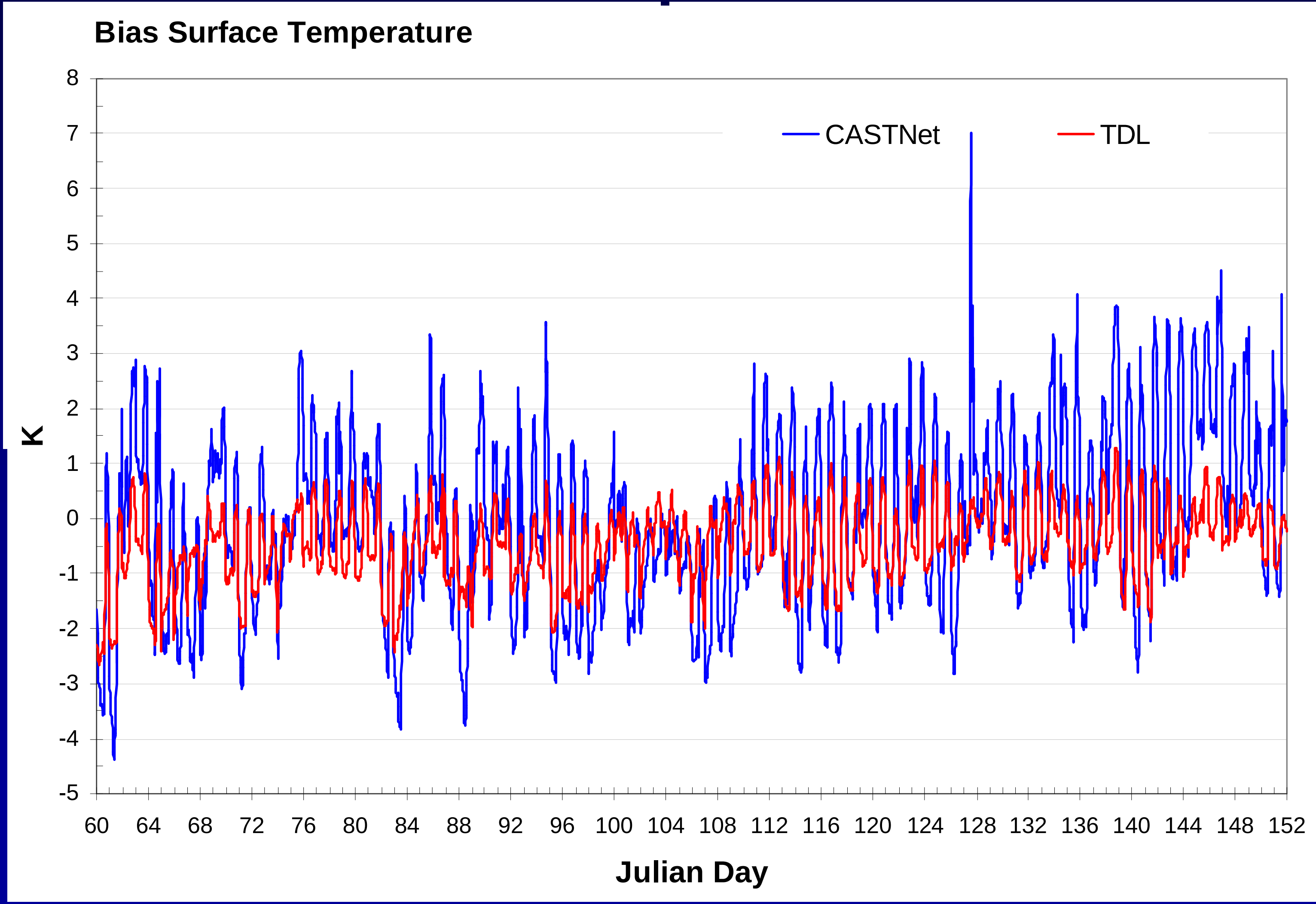
WINTER Temperature



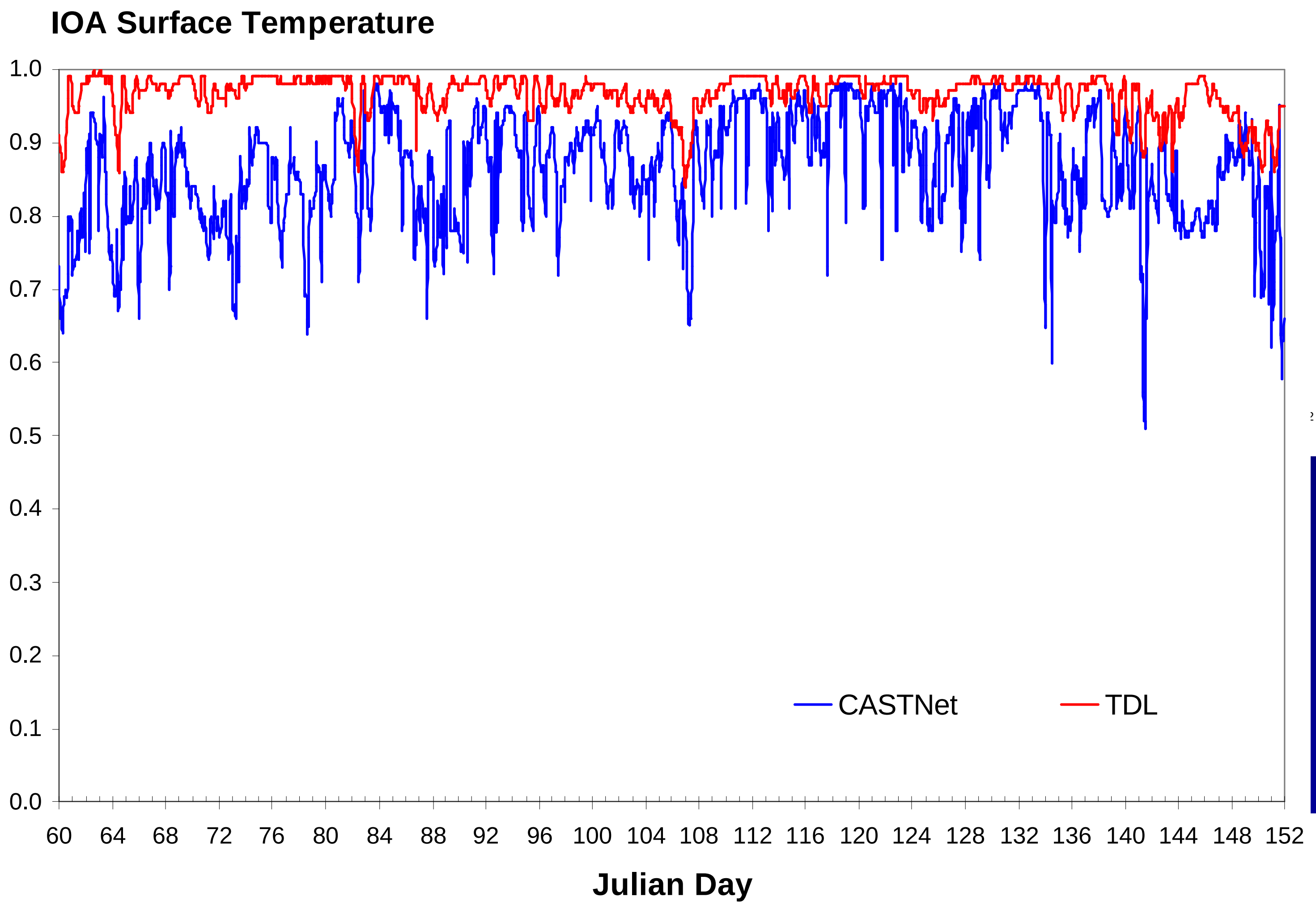
WINTER Temperature (II)



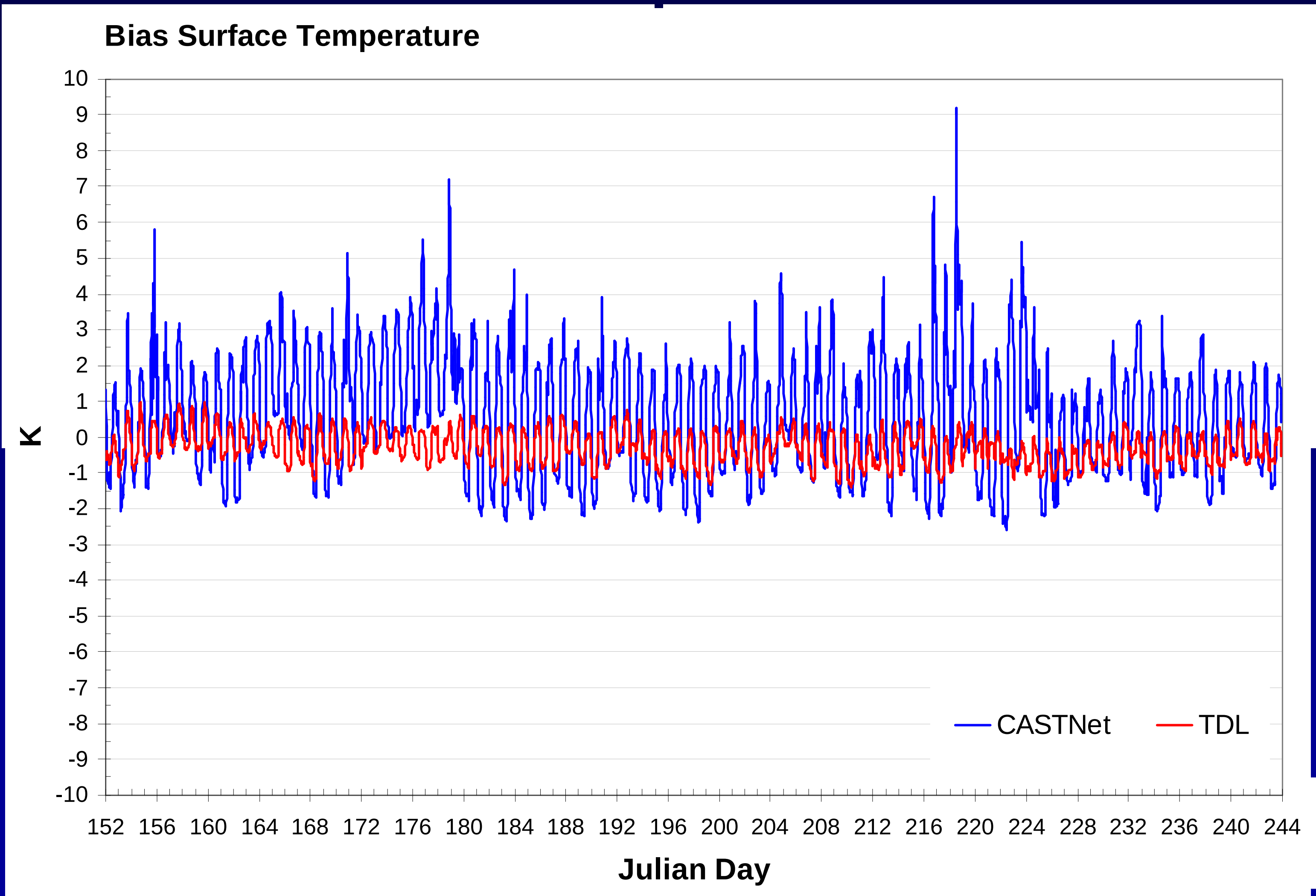
SPRING Temperature



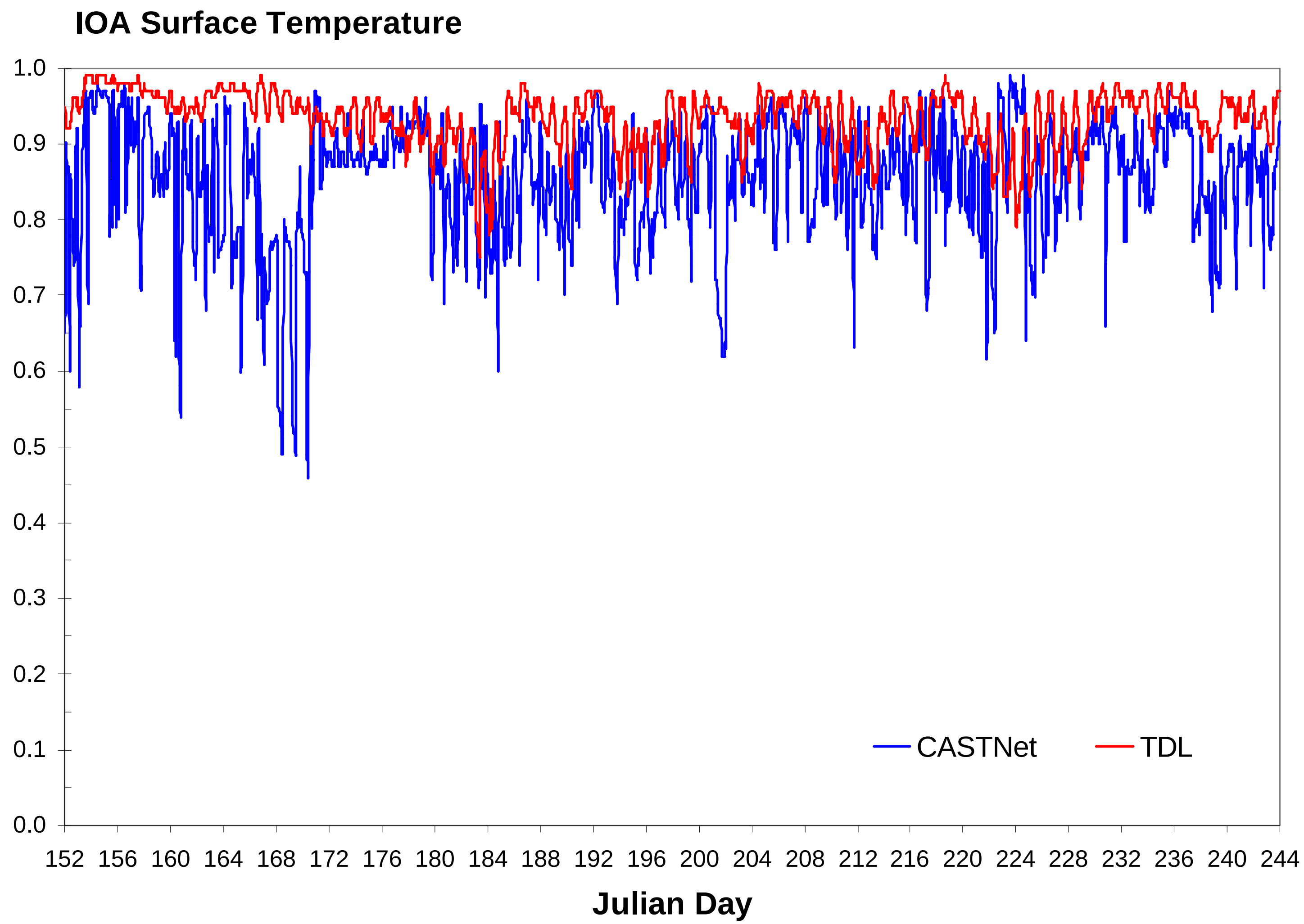
SPRING Temperature (II)



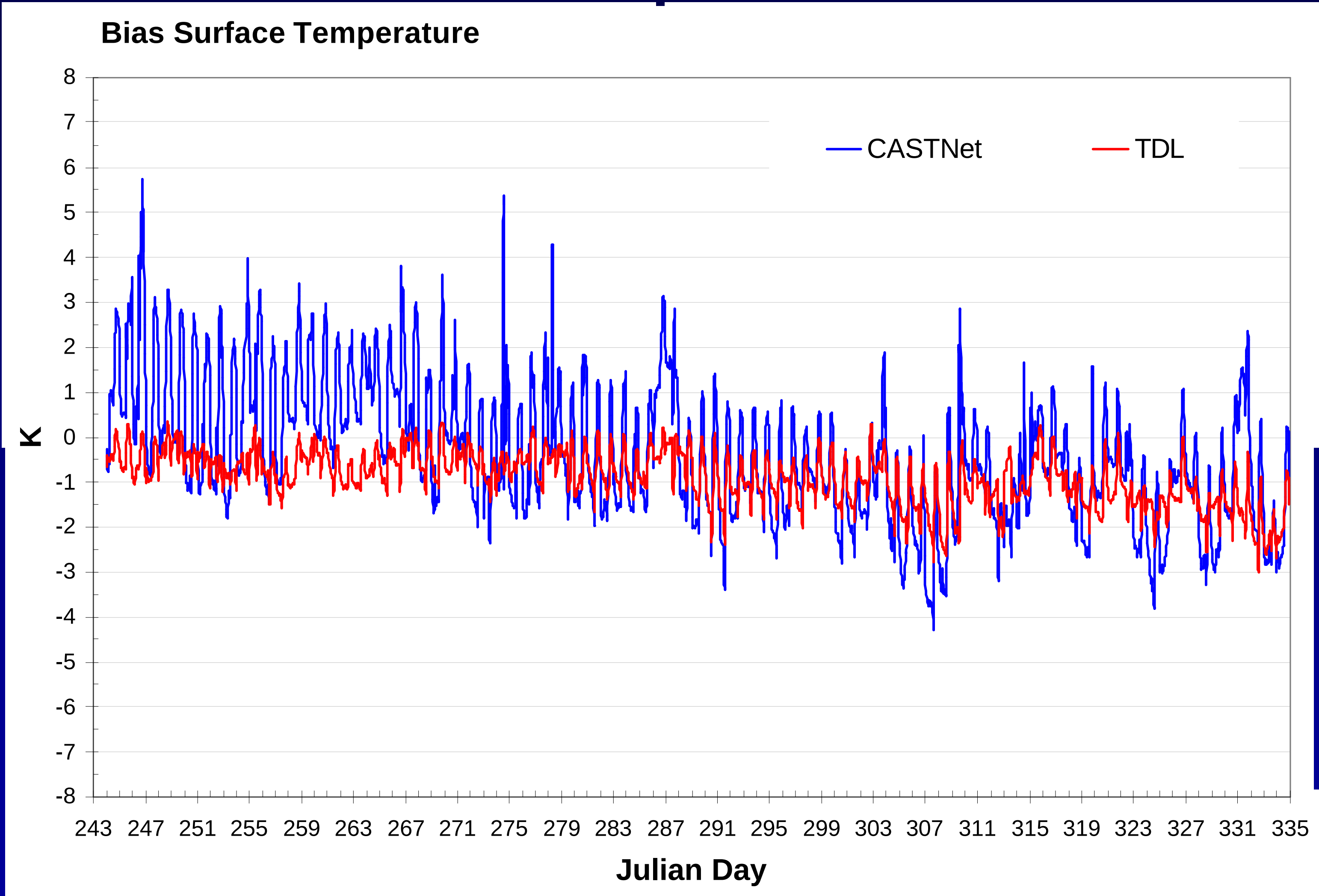
SUMMER   Temperature



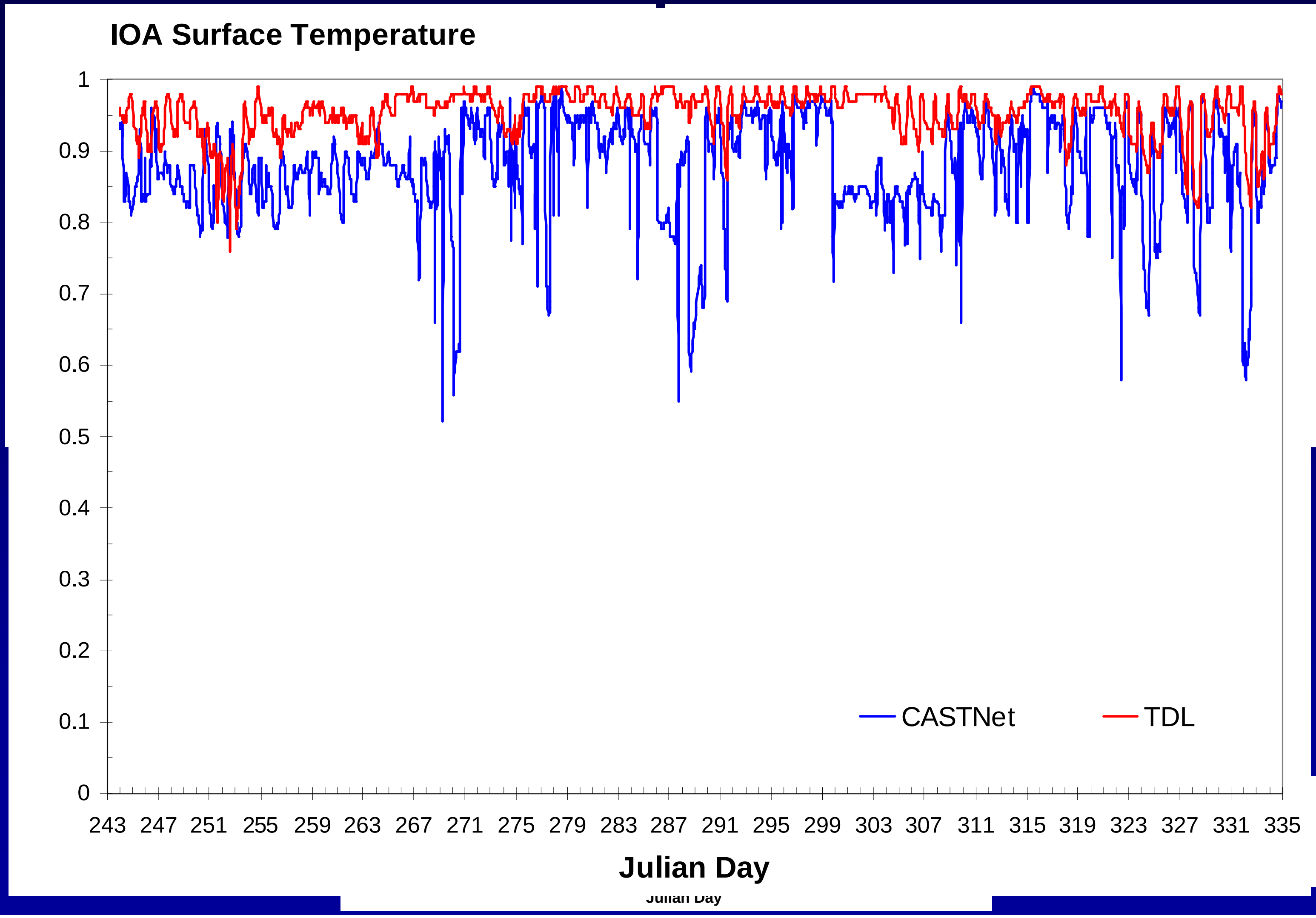
SUMMER Temperature (II)



FALL Temperature



FALL Temperature (II)



TEMPERATURE

2002	Network	Temperature					
		Bias			IOA		
		Max	Min	Mean	Max	Min	Mean
JAN	CASTNET	2.81	-3.59	-1.25	0.99	0.61	0.88
	TDL	0.94	-2.73	-1.18	1.00	0.78	0.94
FEB	CASTNET	3.12	-3.77	-0.65	0.98	0.52	0.81
	TDL	0.79	-2.64	-1.00	0.99	0.81	0.96
MAR	CASTNET	3.31	-4.39	-0.35	0.98	0.64	0.83
	TDL	0.81	-2.65	-0.72	1.00	0.86	0.97
APR	CASTNET	3.52	-2.97	-0.52	0.98	0.65	0.90
	TDL	1.13	-2.06	-0.48	0.99	0.84	0.97
MAY	CASTNET	7.02	-2.83	0.67	0.99	0.51	0.87
	TDL	1.27	-1.88	-0.18	0.99	0.86	0.96
JUN	CASTNET	7.13	-2.23	1.03	0.98	0.46	0.85
	TDL	0.98	-1.21	-0.12	0.99	0.85	0.95
JUL	CASTNET	4.70	-2.40	0.34	0.97	0.60	0.85
	TDL	0.74	-1.38	-0.34	0.98	0.75	0.92
AUG	CASTNET	9.03	-2.59	0.32	0.99	0.62	0.86
	TDL	0.53	-1.28	-0.42	0.99	0.79	0.93
SEP	CASTNET	5.72	-2.37	0.76	0.97	0.52	0.86
	TDL	0.34	-1.57	-0.54	0.99	0.76	0.94
OCT	CASTNET	5.17	-3.39	-0.56	0.99	0.55	0.89
	TDL	0.29	-2.39	-0.79	0.99	0.86	0.97
NOV	CASTNET	2.83	-4.29	-1.25	0.99	0.58	0.88
	TDL	0.25	-2.99	-1.35	0.99	0.82	0.95
DEC	CASTNET	1.98	-3.76	-1.17	0.98	0.52	0.88
	TDL	0.29	-2.55	-1.20	0.99	0.80	0.94

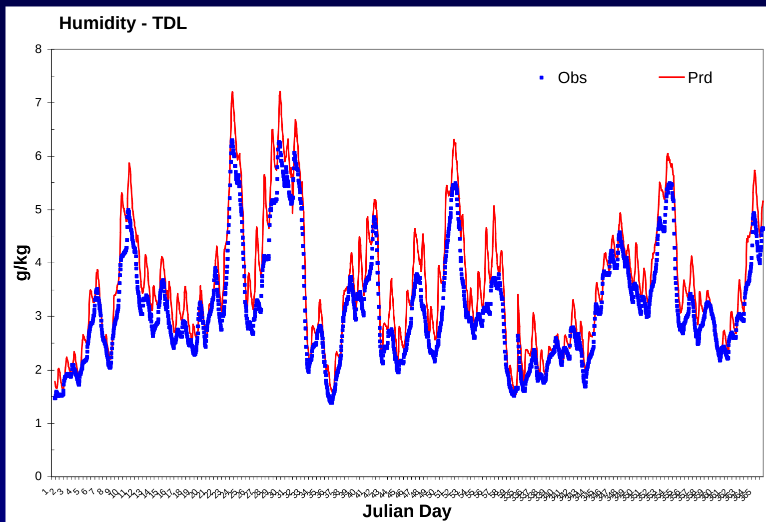
- MM5 tends to underestimate temperature at TDL sites all year, and at CASTNet sites for seasons other than 5month summer
- MM5 performs better on temperature for Summer than for Winter
- Unsystematic RMSE dominates RMSE at TDL sites consistently, while at CASTNet sites, RMSEU weights similar as RMSES
- MM5 shows good IOA at TDL sites (~0.9), better than at CASTNet sites (~0.8)

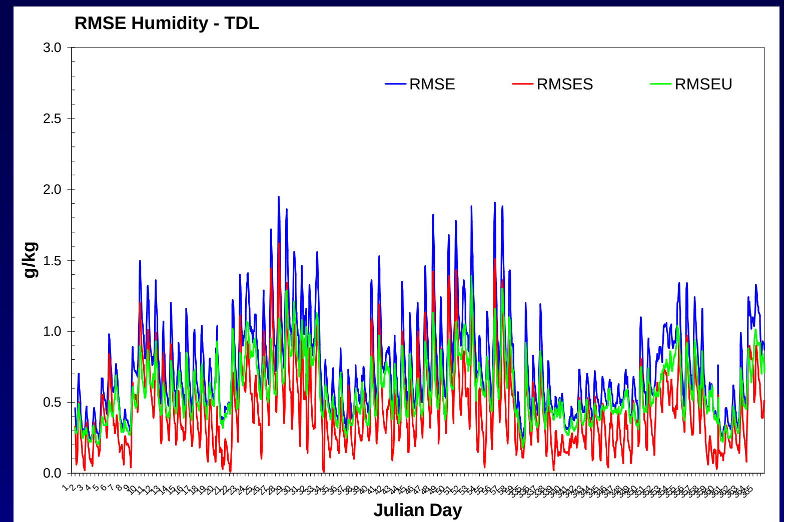
NESCAUM

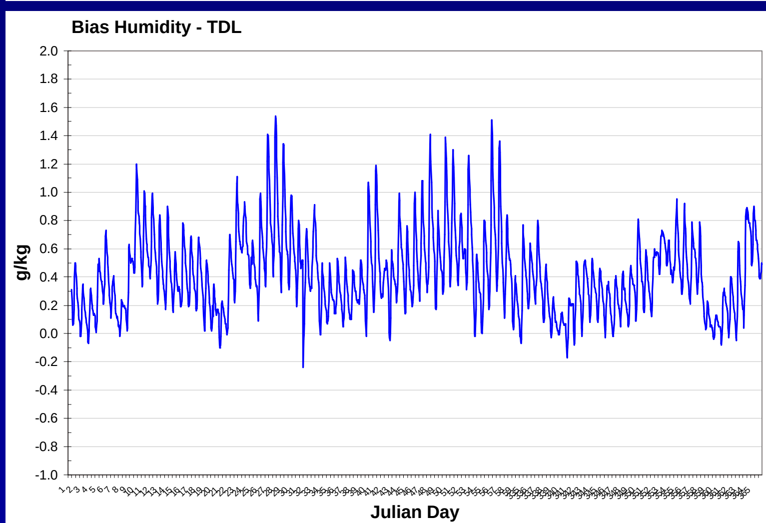
HUMIDITY

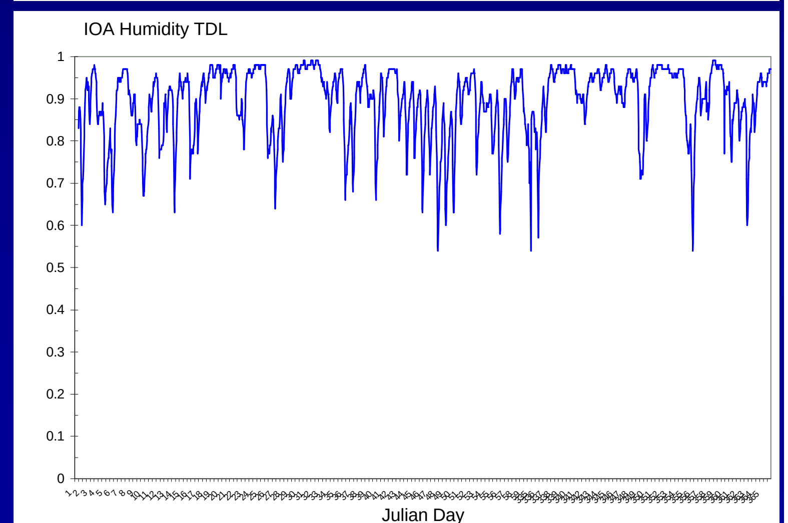
NESCAUM

WINTER Humidity









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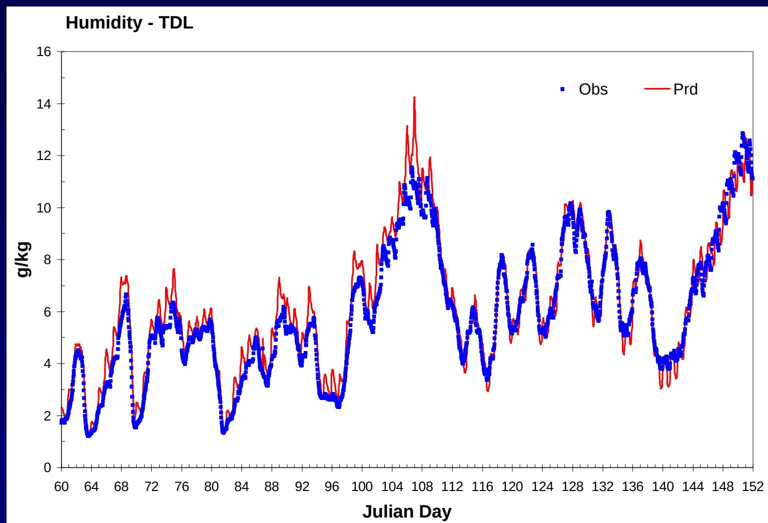
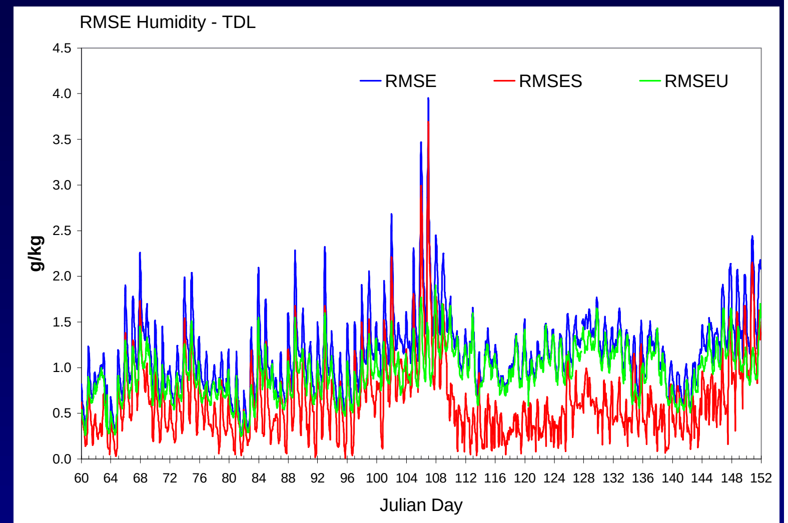
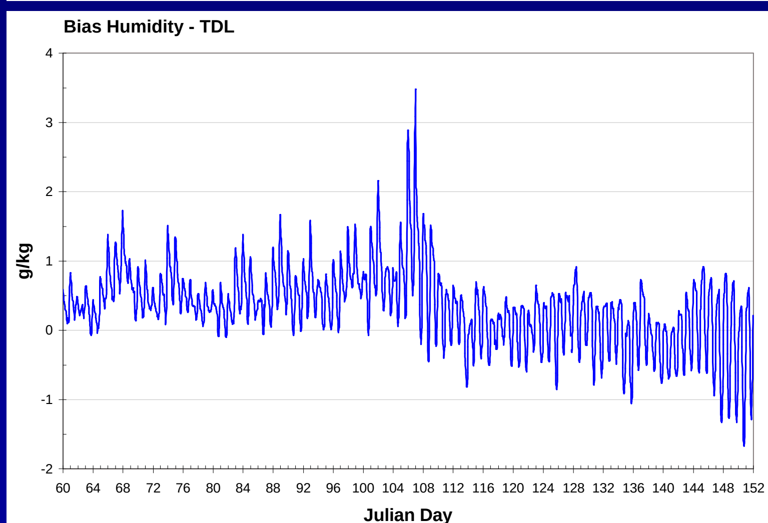
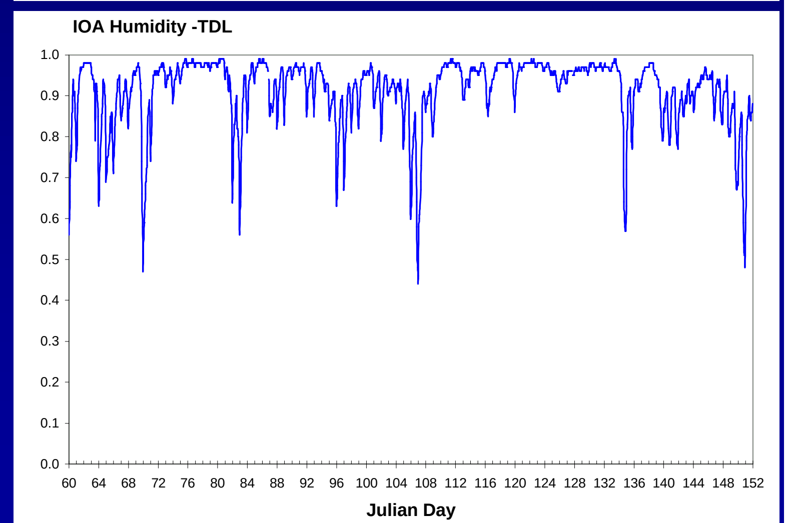
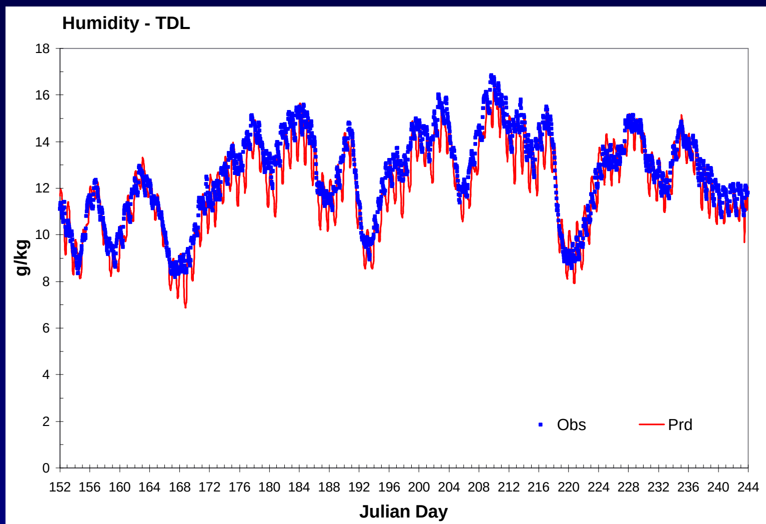


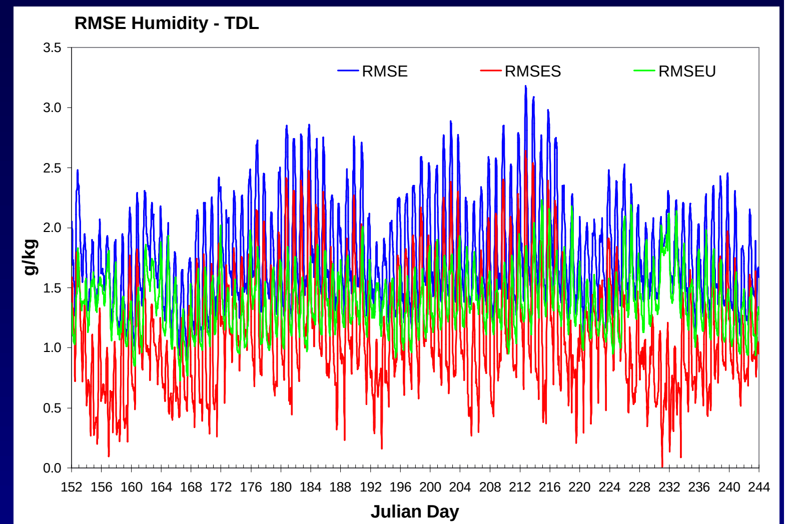


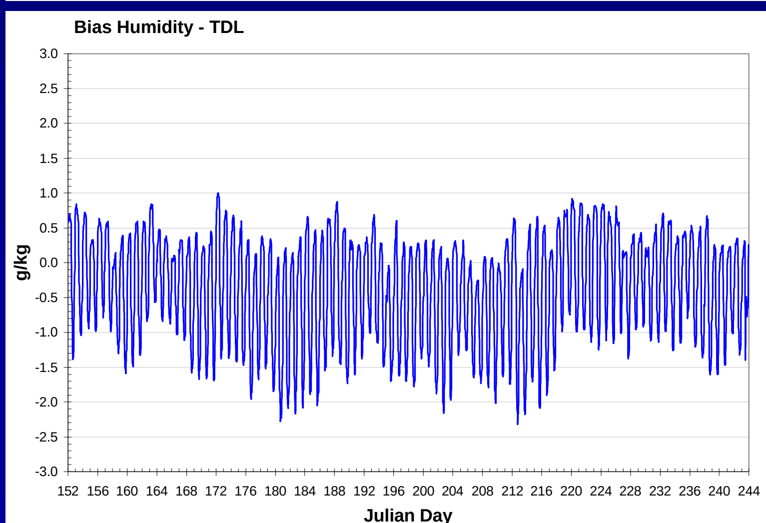


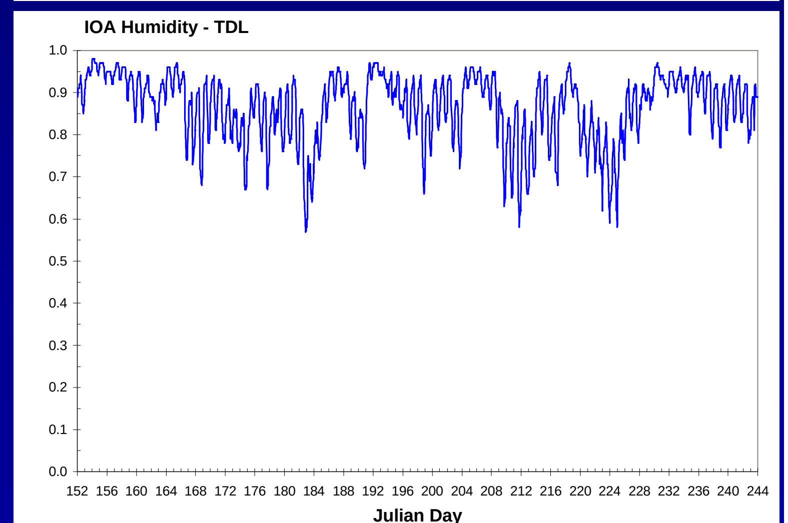


SUMMER Humidity









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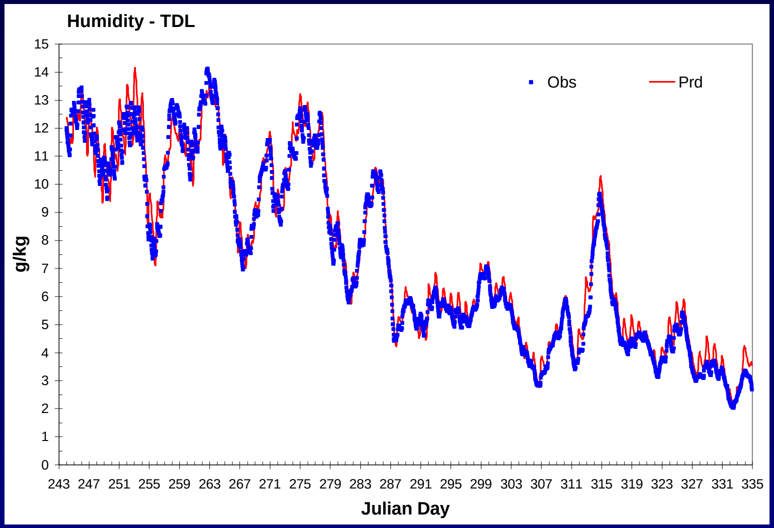

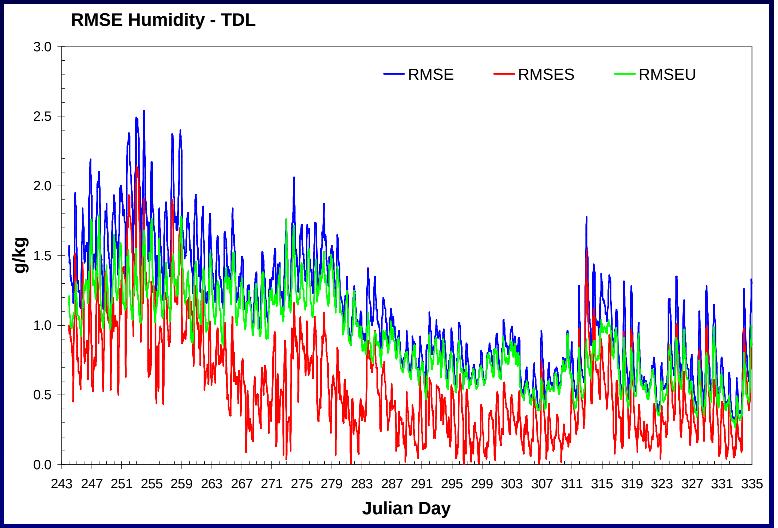

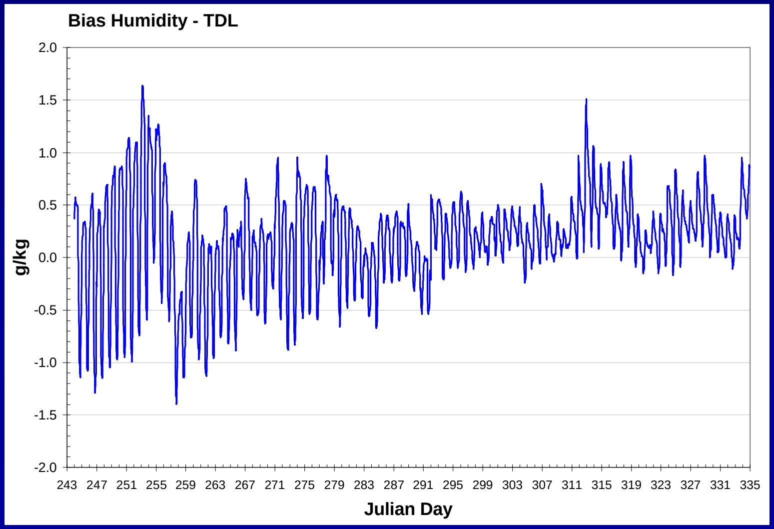

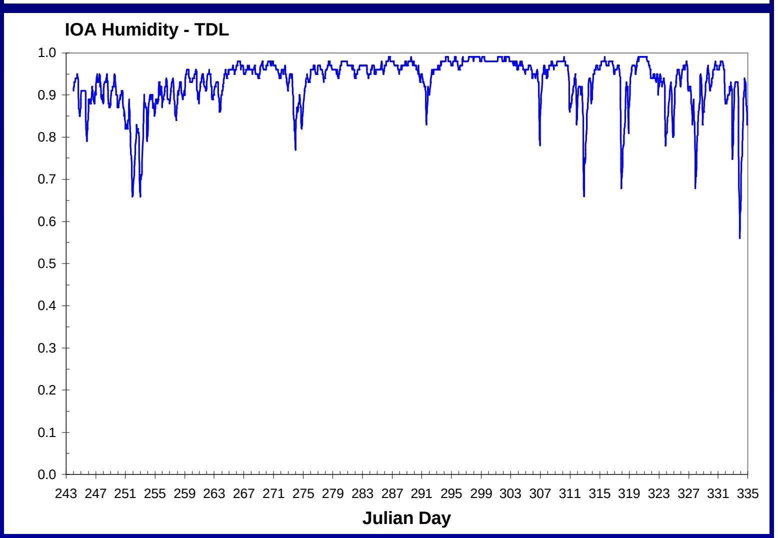

HUMIDITY

2002	Network	Humidity					
		Bias			IOA		
		Max	Min	Mean	Max	Min	Mean
JAN	TDL	-0.24	-1.54	0.45	0.99	0.60	0.89
FEB	TDL	1.51	-0.07	0.48	0.99	0.54	0.87
MAR	TDL	1.73	-0.10	0.52	0.99	0.47	0.91
APR	TDL	3.48	-0.82	0.52	0.99	0.44	0.91
MAY	TDL	0.92	-1.67	-0.02	0.99	0.48	0.91
JUN	TDL	1.00	-2.27	-0.33	0.98	0.67	0.88
JUL	TDL	0.87	-2.32	-0.55	0.97	0.57	0.86
AUG	TDL	0.92	-2.17	-0.23	0.97	0.58	0.86
SEP	TDL	1.64	-1.39	0.03	0.98	0.66	0.91
OCT	TDL	0.97	-0.67	0.15	0.99	0.80	0.96
NOV	TDL	1.51	-0.17	0.34	0.99	0.56	0.92
DEC	TDL	0.95	-0.17	0.34	0.99	0.54	0.91

- MM5 captures general trend of humidity change
- MM5 tends to overestimate humidity in Winter, Spring, and Fall, but underestimate humidity in 5 month Summer
- MM5 often shows larger diurnal variations than observation
- Unsystematic RMSE dominates RMSE
- MM5 shows good IOA (~0.9) all year

NESCAUM

Appendix 8G

Documentation of the Base G
2002 Base Year, 2009 and 2018,
Emission Inventories for VISTAS

Documentation of the Base G 2002 Base Year, 2009 and 2018, Emission Inventories for VISTAS

Prepared for:

Visibility Improvement State and Tribal Association of the Southeast (VISTAS)

Prepared by:

MACTEC, Inc.

William R. Barnard
Sr. Principal Scientist

Edward Sabo
Principal Scientist

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Acronyms and Abbreviations

AEO	Annual Energy Outlook
AF&PA	American Forest and Paper Association
APCD	Air Pollution Control District
ATP	Anti-Tampering Program
BLRID	Boiler Identification (Boiler ID)
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CEM	Continuous Emissions Monitoring
CAMD	Clean Air Markets Division
CERR	Consolidated Emissions Reporting Rule
CMU	Carnegie Mellon University
CMV	commercial marine vessels
CE	Control Efficiency
CO	carbon monoxide
DENR	North Carolina Department of Environment and Natural Resources
DHEC	South Carolina Department of Health and Environmental Control
EDMS	Emissions Data Management Systems
ESD	Emissions Standards Division
EPA	Environmental Protection Agency
EGU	Electric Generating Unit
ICF	ICF International, Inc.
FIP	Federal Implementation Plan
FLM	Federal Land Manager
FTP	File transfer protocol
FR	Federal Register
FS	Forest Service
HDD	Heavy Duty Diesel
HDD RULE	Heavy Duty Diesel Rule
ICF	ICF International, Inc.
ID	Identification
I/M	Inspection and Maintenance
IPM®	Integrated Planning Model®
IAQTR	Interstate Air Quality Transport Rule
LTO	Landing and take off
MACT	Maximum achievable control technology

Acronyms and Abbreviations (continued)

MACTEC	MACTEC Engineering and Consulting, Inc.
MOBILE 6	MOBILE emissions estimation model version 6
MRPO	Midwest Regional Planning Organization
NH_3	Ammonia
NEI	National Emission Inventory
NIF	National Emission Inventory Format
NLEV	National Low Emission Vehicle regulation
NMIM	National Mobile Inventory Model
NONROAD	no acronym (model name)
NO_x	Oxides of nitrogen
NWR	National Wildlife Refuge
OTB	On the books
OTW	On the way
ORIS	Office of Regulatory Information Systems
OTAQ	Office of Transportation and Air Quality
OTC	Ozone Transport Commission
PFC	Portable fuel containers
PM	Particulate matter
PM_{10}-FIL	Particulate matter less than or equal to 10 microns in diameter that can be captured on a filter
PM_{10}-PRI	Particulate matter less than or equal to 10 microns in diameter that includes both the filterable and condensable components of particulate matter
$PM_{2.5}$-FIL	Particulate matter less than or equal to 2.5 microns in diameter that can be captured on a filter
$PM_{2.5}$-PRI	Particulate matter less than or equal to 2.5 microns in diameter that includes both the filterable and condensable components of particulate matter
PM-CON	Particulate matter created by the condensation of hot materials to form particulates, usually less than 2.5 microns in diameter
ppmW	parts per million by weight
PRI	Primary
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
REMI	Regional Economic Models, Inc.
RFG	Reformulated gasoline
RVP	Reid Vapor Pressure
SCC	Source Classification Code

	Acronyms and Abbreviations (continued)
SCR	Selective Catalytic Reduction
SIP	State Implementation Plan
SIWG	Special Interest Workgroup
S/L/T	State/Local/Tribal
SMOKE	Sparse Matrix Operator Kernel Emissions Modeling System
S/L	State and Local
SO_2	Oxides of Sulfur
T4	Tier 4
VISTAS	Visibility Improvement State and Tribal Association of the Southeast
VMT	Vehicle Miles Traveled
VOC	Volatile organic compounds
WRAP	Western Regional Air Partnership

Documentation of the Base G 2002 Base Year, 2009 and 2018, Emission Inventories for VISTAS

Introduction

History of VISTAS Base and Projection Year Emission Inventory Development

This section is provided to supply the history behind the development of the base and projection year inventories provided to VISTAS. Through the various iterations, the inventories that have been developed have typically had version numbers provided by the contractors who developed the inventories and to a certain extent these were also based on their purpose. Different components of the 2002 base year inventories have been supplied by E.H. Pechan and Associates, Inc. (Pechan), MACTEC Engineering and Consulting, Inc. (MACTEC), and by Alpine Geophysics, Inc.

The initial 2002 base year inventory was jointly developed by Pechan and MACTEC. Pechan developed the on-road and non-road mobile source components of the inventory while MACTEC developed the point and area source component of the inventory. This version of the inventory included updates to on-road mobile that incorporated information from the 1999 NEI Version 2 final along with updated information on VMT, fuel programs, and other inputs to the MOBILE6 model to produce a draft version of the 2002 inventory. For non-road sources, a similar approach was used. Updated State information on temperatures and fuel characteristics were obtained from VISTAS States and used with the NONROAD 2002 model to calculate 2002 emissions for NONROAD model sources. These estimates were coupled with data for commercial marine vessels, locomotives and airplanes projected to 2002 using appropriate growth surrogates. A draft version of these inventories was prepared in late 2003, with a final version in early 2004. An overview of the development of the on-road component can be found at: http://www.vistas-sesarm.org/documents/Pechan_drafton-roadinventory_082803.ppt while an overview of the non-road component can be found at: http://www.vistas-sesarm.org/documents/Pechan_Non-roadInventory_082803.ppt.

Similarly, draft versions of the 2002 point and area source base year inventories were prepared by MACTEC in the same timeframe (late 2003 for the draft, final in early 2004). The point source component was based on data submitted by the VISTAS States or on the 1999 NEI. The data submitted by the States ranged from 1999 to 2001 and was all projected to 2002 using appropriate growth surrogates from Economic Growth

Analysis System (EGAS) version 4. Toxic Release Inventory (TRI) data were used to augment the inventory for NH_3. Continuous Emissions Monitor (CEM) data from the U.S. EPA's Clean Air Markets Division was used to supply emissions for electric generating utilities (EGUs). Particulate matter emissions were augmented (when missing) by using emission factor ratios. Details on all these calculations are discussed in Section 1.1.1.3 of this document.

The area source component of the 2002 draft base year emissions was prepared similarly to the point sources, using State submittals and the 1999 NEI Version 2 final as the basis for projecting emissions to 2002 using EGAS growth factors. For ammonia area sources the Carnegie Mellon University (CMU) ammonia model was used to calculate emissions. Finally, data on acreage burned on a fire by fire basis was solicited from State forestry agencies in order to calculate fire emissions on a fire by fire basis. Virtually all VISTAS State forestry agencies provided data for these calculations at least for wild and prescribed fires. An overview of the point and area source development methods can be found at:
http://www.vistas-sesarm.org/documents/MACTEC_draftpointareainventory_82803.ppt.

Three interim versions of the 2002 base year inventory were developed. The first was delivered in August of 2003, the second in April of 2004 and the final one in October of 2004. The August 2003 and April 2004 inventories were prepared by MACTEC and Pechan. A draft version of the revised 2002 base year inventory was released in June of 2004, with a final version released in October 2004. That 2002 base year inventory was solely prepared by MACTEC. The October 2004 inventory incorporated 2002 Consolidated Emissions Reporting Rule (CERR) data into the inventory along with some updated data from the VISTAS States. This inventory is typically referred to as version 3.1 of the VISTAS inventory

Closely following the version 3.1 2002 base year inventory, a "preliminary" 2018 projection inventory was developed. This "preliminary" 2018 inventory was developed in late 2004 (Oct/Nov) and was designed solely for use in modeling sensitivity runs to provide a quick and dirty assessment of what "on the books" and "on the way" controls could be expected to provide in terms of improvements to visibility and regional haze impairment. A brief overview of the history of the three versions of the 2002 base year and the 2018 preliminary inventory use can be found at: http://www.vistas-sesarm.org/documents/STAD1204/2002and2018Emissions14Dec2004.ppt.

Following preparation of the final 3.1 version of the 2002 base year inventory, States were asked to review and provide comments on that inventory to MACTEC for update and revision. At the same time MACTEC prepared a revised draft version of the 2018 projection inventory (January 2005) and a draft version of a 2009 projection inventory (April 2005). All of these were known as version 3.1 and were provided to the VISTAS States for review and comment. Comments were received and updates to the inventories based on these comments were prepared. The revised inventories were provided to the VISTAS States. At that time to be consistent with the modeling nomenclature being used by AG in performing their modeling runs, the inventory became the Base F VISTAS inventory. The Base F inventory was delivered for review and comment in August of 2005. In addition, MACTEC delivered a report entitled *Documentation of the Revised 2002 Base Year, Revised 2018, and Initial 2009 Emission Inventories for VISTAS* on August 2, 2005 that described the methods used to develop the Base F inventories. For the Electric Generating Utilities (EGU) different versions of the Integrated Planning Model were used between Base D and Base F, resulting in different projections of future EGU emissions.

Over the period from August 2005 until June/July 2006 MACTEC received comments and updates to some categories from VISTAS States, particularly EGU. In addition, a new NONROAD model (NONROAD05) was released. Thus additional updates to the inventory were prepared based on the comments received along with revised NONROAD emission estimates from NONROAD05. The resultant inventory became the Base G inventory.

This document details the development of the Base G inventories for 2002, 2009 and 2018. The information that follows describes the development of the VISTAS inventory by sector from version 3.1 forward. Unless specific updates were made to an inventory sector, the methods used for version 3.1 were retained. Similarly unless specific changes were made to methods used for Base F, Base G methods were the same as Base F/version 3.1 (if unchanged in Base F).

Table I-1 through Table I-3 indicate roughly which version of the inventory is in use for each sector of the inventory as of Base G.

Table I-1: Inventory Version in Use by Year and Source Sector Through Base G - 2002

Source	AL	FL	GA	KY	MS	NC	SC	TN	VA	WV
EGU	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G
Non-EGU Point	Base F with some source specific revisions in Base G	Base F with some source specific revisions in Base G	Base F with some source specific revisions in Base G	Base F with some source specific revisions in Base G	Base F with some source specific revisions in Base G	Base F with some source specific revisions in Base G	Base F with some source specific revisions in Base G	Base F with some source specific revisions in Base G	Base F with some source specific revisions in Base G	Base F with some source specific revisions in Base G
Area[1]	Base F for ammonia sources (CMU Model) and for some area sources, Base G for selected sources updated by the State with State supplied data	Base F except for some emissions zeroed out (and records removed) for some southern FL counties for Base G.	Base F	Base F	Base F	Base F for ammonia sources (CMU Model) and for some area sources, Base G for selected sources updated by the State with State supplied data. Some corrections applied by MACTEC to correct PM values	Base F	Base F	Base F for ammonia Sources (CMU Model) and for some area sources, Base G for selected sources updated by the State with State supplied data.	Base F
On-road	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G
Non-road	Base G for all sources included in the NONROAD model. Base F for non-NONROAD model sources, except aircraft and locomotives updated for Base G.	Base G for all sources included in the NONROAD model. Base F for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F for non-NONROAD model sources except for aircraft in Cincinnati/N. KY Int. Airport, which are Base G.	Base G for all sources included in the NONROAD model. Base F for non-NONROAD model sources	Base G for all sources included in the NONROAD model. NC moved from Southern to Mid-Atlantic State in seasonal adjustment file. Base F for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F for non-NONROAD model sources, except for aircraft emissions which are Base G.	Base G for all sources included in the NONROAD model. Base F for non-NONROAD model sources
Fires	Base F Typical	Base F Typical	Base F Typical	Base F Typical	Base F Typical	Base F Typical	Base F Typical	Base F Typical	Base F Typical	Base F Typical

Notes:

Base G global Area Source changes that apply to ALL States: A) removal of Stage II refueling from area source file to non-road and on-road; B) modification of PM2.5 ratio for several fugitive dust sources per WRAP methodology; C) addition of portable fuel container (PFC) emissions to all States based on OTAQ report.

Table I-2: Inventory Version in Use by Year and Source Sector Through Base G - 2009

Source	AL	FL	GA	KY	MS	NC	SC	TN	VA	WV
EGU[1]	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G
Non-EGU Point[2]	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G
Area	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model. Some specific source categories updated using State supplied file to override projected values.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.
On-road	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G
Non-road	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources.	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources except for aircraft in Cincinnati/N. KY Int. Airport, which are Base G using State supplied growth factors.	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources
Fires	Base F typical except for Rx fires	Base F typical	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires

Notes:

1. All EGU emissions updated with new IPM runs in Base G
2. Revised growth factors from DOE AEO2006 fuel use projections

Table I-3: Inventory Version in Use by Year and Source Sector Through Base G - 2018

Source	AL	FL	GA	KY	MS	NC	SC	TN	VA	WV
EGU[1]	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G
Non-EGU Point[2]	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G	Base F methodology but with revised growth factors for fuel fired sources in Base G
Area	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model. Some specific source categories updated using State supplied file to override projected values.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.	Base F with updated AEO growth factors for fuel fired sources. Agricultural ammonia sources from CMU model.
On-road	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G	Base G
Non-road	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources.	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources except for aircraft in Cincinnati/N. KY Int. Airport, which are Base G using State supplied growth factors.	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources	Base G for all sources included in the NONROAD model. Base F projection methodology used for non-NONROAD model sources
Fires	Base F typical except for Rx fires	Base F typical	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires	Base F typical except for Rx fires

Notes:
1. All EGU emissions updated with new IPM runs in Base G
2. Revised growth factors from DOE AEO2006 fuel use projections

1.0 2002 Base Year Inventory Development

1.1 Point Sources

This section details the development of the 2002 base year inventory for point sources. There were two major components to the development of the point source sector of the inventory. The first component was the incorporation of data submitted by the Visibility Improvement State and Tribal Association of he Southeast (VISTAS) States and local (S/L) agencies to the United States Environmental Protection Agency (EPA) as part of the Consolidated Emissions Reporting Rule (CERR) requirements Work on incorporating the CERR data into the revised base year involved: 1) obtaining the data from EPA or the S/L agency, 2) evaluating the emissions and pollutants reported in the CERR submittals, 3) augmenting CERR data with annual emission estimates for PM_{10}-PRI and $PM_{2.5}$-PRI; 4) evaluating the emissions from electric generating units, 5) completing quality assurance reviews for each component of the point source inventory, and 6) updating the database with corrections or new information from S/L agencies based on their review of the 2002 inventory. The processes used to perform those operations are described in the first portion of this section.

The second component was the development of a “typical” year inventory for electric generating units (EGUs). VISTAS determined that a typical year electric generating units (EGU) inventory was necessary to smooth out any anomalies in emissions from the EGU sector due to meteorology, economic, and outage factors in 2002. The typical year EGU inventory is intended to represent the five year (2000-2004) period that will be used to determine the regional haze reasonable progress goals. The second part of this section discusses the development of the typical year EGU inventory.

1.1.1 Development of 2002 Point Source Inventory

MACTEC developed a draft 2002 emission inventory in June 2004 (*Development of the Draft 2002 VISTAS Emission Inventory for Regional Haze Modeling – Point Sources*, MACTEC, June 18, 2004). The starting point for the draft 2002 emission inventory was EPA’s 1999 National Emission Inventory (NEI), Version 2 Final (NEI99V2). For several states, we replaced the NEI99V2 data with more recent inventories for either calendar year 1999, 2000, or 2001 as submitted by the S/L agencies. We also performed several other updates, including updating emission estimates for selected large source of ammonia, incorporating 2002 Continuous Emissions Monitoring-(CEM)-based SO_2 and NO_x emissions for electric utilities, adding PM_{10} and $PM_{2.5}$ emissions when they were missing from an S/L submittal, and performing a variety of additional Quality assurance/Quality control (QA/QC) checks.

The next version of the 2002 inventory (referred to as Base F) was released in August 2005 (*Documentation of the Revised 2002 Base Year, Revised 2018, and Initial 2009 Emission Inventories for VISTAS*, MACTEC, August 2, 2005). The primary task in preparing the Base F 2002 base year inventory was the replacement of NEI99V2 data with data submitted by the VISTAS S/L agencies as part of the CERR submittal and included in EPA's 2002 NEI.

The current version of the 2002 inventory (referred to as Base G) was released in August 2006 and is documented in this report. The primary task in preparing the Base G 2002 base year inventory was the incorporation of corrections and new information as submitted by the S/L agencies based on their review of the Base F inventory. The following subsections document the data sources for the Base G inventory, the checks made on the CERR submittals, the process for augmenting the inventory with PM_{10} and $PM_{2.5}$ emissions, the evaluation of EGU emissions, other QA/QC checks, and other Base G updates. The final subsection summarizes the Base G 2002 inventory by state, pollutant, and sector (EGU and non-EGU).

1.1.1.1 Data Sources

Several data sources were used to compile the Base F point source inventory: 1) the inventories that the S/L submitted to EPA from May through July 2004 as required by the CERR; 2) supplemental data supplied by the S/L agencies that may have been revised or finalized after the CERR submittal to EPA, and 3) the draft VISTAS 2002 inventory in cases where S/L CERR data were not available. For the Base G inventory, we replaced data from Hamilton County, Tennessee, using data from Hamilton County's CERR submittal as contained in EPA's 2002 NEI inventory (in Base F, the inventory for Hamilton County was based on the draft VISTAS 2002 inventory, which in turn was based on the 1999 NEI).

Table 1.1-1 summarizes the data used as the starting point for the Base F 2002 inventory. Once all of the files were obtained, MACTEC ran the files through the EPA National Emission Inventory Format (NIF) Basic Format and Content checking tool to ensure that the files were submitted in standard NIF format and that there were no referential integrity issues with those files. In a couple of cases small errors were found. For example, in one case non-standard pollutant designations were used for particulate matter (PM) and ammonia emissions. MACTEC contacted each VISTAS State point source contact person to resolve the issues with the files and corrections were made. Once all corrections to the native files were made, MACTEC continued with the incorporation of the data into the VISTAS point source files. S/L agencies completed a detailed review of the Base F inventory. Additional updates and corrections to the Base F inventory were requested by S/L agencies and incorporated into the Base G inventory. The Base G changes are documented in more detail in Section 1.1.1.6.

Table 1.1-1. State Data Submittals Used for the Base F 2002 Point Source Inventory.

State / Local Program	Point Source Emissions Data Source
AL	C
FL	B
GA	B
KY	C
MS	B
NC	C
SC	C
TN	C
VA	B
WV	B
Davidson County, TN	B
Hamilton County, TN	D
Memphis/Shelby County, TN	B
Knox County, TN	B
Jefferson County, AL	B
Jefferson County, KY	B
Buncombe County, NC	B
Forsyth County, NC	B
Mecklenburg County, NC	B

Key
A = Draft VISTAS 2002
B = CERR Submittal from EPA's file transfer protocol (FTP) site
C = Other (CERR or other submittal sent directly from S/L agency to MACTEC)
D = CERR Submittal from EPA's NEI 2002 Final Inventory

1.1.1.2 Initial Data Evaluation

For the Base F inventory, we conducted an initial review of the 2002 point source CERR data in accordance with the QA procedures specified in the Quality Assurance Project Plan (QAPP) for this project. The following evaluations were completed to identify potential data quality issues associated with the CERR data:

- Compared the number of sites in the CERR submittal to the number of sites in the VISTAS draft 2002 inventory; for all States, the number of sites in the CERR submittal was less than in the VISTAS draft 2002 inventory, since the CERR data was limited to major sources, while the VISTAS draft 2002 inventory contained data for both major and minor sources; verified with S/L contacts that minor sources not included in the CERR point source inventory were included in the CERR area source inventory.

- Checked for correct pollutant codes and corrected to make them NIF-compliant; for example, some S/L agencies reported ammonia emissions using the CAS Number or as “ammonia”, rather than the NIF-compliant “NH_3” code.

- Checked for types of particulate matter codes reported (i.e., PM-FIL, PM-CON, PM-PRI, PM_{10}-PRI, PM10-FIL, $PM_{2.5}$-PRI, $PM_{2.5}$-FIL); corrected codes with obvious errors (i.e., changed PMPRI to PM-PRI). (The PM augmentation process for filling in missing PM pollutants is discussed later in Section 1.1.1.3)

- Converted all emission values that weren't in tons to tons to allow for preparation of emission summaries using consistent units.

- Checked start and end dates in the PE and EM tables to confirm consistency with the 2002 base year.

- Compared annual and daily emissions when daily emissions were reported; in some cases, the daily value was non-zero (but very small) but the annual value was zero. This was generally the result of rounding in an S/L agency's submittal.

- Compared ammonia emissions as reported in the CERR submittals and the 2002 Toxics Release Inventory; worked with S/L agencies to resolve any outstanding discrepancies.

- Compared SO_2 and NO_x emissions for EGUs to EPA's Clean Air Markets Division CEM database to identify any outstanding discrepancies. (A full discussion of the EGU emissions analysis is discussed later in Section 1.1.1.4)

- Prepared State-level emission summaries by pollutant for both the EGU and non-EGU sectors to allow S/L agencies to compare emissions as reported in the 1999 NEI Version 2, the VISTAS draft 2002 inventory, and the CERR submittals.

- Prepared facility-level emission summaries by pollutant to allow S/L agencies to review facility level emissions for reasonableness and accuracy.

We communicated the results of these analyses through email/telephone exchanges with the S/L point source contacts as well as through Excel summary spreadsheets. S/L agencies submitted corrections and updates as necessary to resolve any QA/QC issues from these checks.

1.1.1.3 PM Augmentation

Particulate matter emissions can be reported in many different forms, as follows:

PM Category	Description
PM-PRI	Primary PM (includes filterable and condensable)
PM-CON	Primary PM, condensable portion only (all less than 1 micron)
PM-FIL	Primary PM, filterable portion only

PM_{10}-PRI	Primary PM_{10} (includes filterable and condensable)
PM_{10}-FIL	Primary PM_{10} filterable portion only
$PM_{2.5}$ -PRI	Primary $PM_{2.5}$ (includes filterable and condensable)
$PM_{2.5}$ -FIL	Primary $PM_{2.5}$ filterable portion only

S/L agencies did not report PM emissions in a consistent manner. The State/local inventories submitted for VISTAS included emissions data for either PM-FIL, PM-PRI, PM_{10}-FIL, PM_{10}-PRI, $PM_{2.5}$ -FIL, $PM_{2.5}$ -PRI, and/or PM-CON. From any one of these pollutants, EPA has developed augmentation procedures to estimate PM_{10}-PRI, PM_{10}-FIL, $PM_{2.5}$ -PRI, $PM_{2.5}$ -FIL, and PM-CON. If not included in a State/local inventory, PM_{10}-PRI and $PM_{2.5}$ -PRI were calculated by adding PM_{10}-FIL and PM-CON or $PM_{2.5}$ -FIL and PM-CON, respectively.

The procedures for augmenting point source PM emissions are documented in detail in Appendix C of *Documentation for the Final 1999 National Emissions Inventory {Version 3} for Criteria Air Pollutants and Ammonia – Point Sources*, January 31, 2004). Briefly, the PM data augmentation procedure includes the following five steps:

- Step 1: Prepare S/L/T PM and PM_{10} Emissions for Input to the PM Calculator
- Step 2: Develop and Apply Source-Specific Conversion Factors
- Step 3: Prepare Factors from PM Calculator
- Step 4: Develop and Apply Algorithms to Estimate Emissions from S/L/T Inventory Data
- Step 5: Review Results and Update the NEI with Emission Estimates and Control Information.

Please refer to the EPA documentation for a complete description of the PM augmentation procedures.

Table 1.1-2 compares the original PM emission estimates from the S/L CERR submittals and the revised 2002 VISTAS emissions estimates calculated using the above methodology. This table is intended to show that we took whatever States provided in the way of PM and filled in gaps to add in PM-CON where emissions were missing in order to calculate PM_{10}-PRI and $PM_{2.5}$ -PRI for all processes to get a complete set of particulate data. We did not compare any other pollutants besides PM, since for other pollutants CERR emissions equal VISTAS emissions. As noted in Table 1.1-2, we made significant revisions to the PM emissions for Kentucky in the Base F inventory and for South Carolina in the Base G inventory.

Table 1.1-2. Comparison of Particulate Matter Emissions from the S/L Data Submittals and the Base G 2002 VISTAS Point Source Inventory

State	Database	PM-PRI	PM-FIL	PM-CON	PM_{10}-PRI	PM_{10}-FIL	$PM_{2.5}$ -PRI	$PM_{2.5}$ -FIL
AL	CERR	28,803	9,174	0	16,522	6,548	8,895	4,765
	VISTAS	43,368	33,336	10,129	32,791	22,661	23,290	13,328
FL	CERR	0	33,732	0	0	32,254	0	0
	VISTAS	61,728	37,325	24,403	57,243	32,840	46,147	21,744
GA	CERR	42,846	0	0	27,489	0	15,750	0
	VISTAS	44,835	37,088	7,799	33,202	25,403	22,777	15,085
KY	CERR	0	3,809	0	19,748	1,360	0	0
	VISTAS	27,719	22,349	5,329	21,326	15,963	14,173	8,749
MS	CERR	23,925	0	0	20,968	0	10,937	0
	VISTAS	23,928	17,632	6,296	21,089	14,793	11,044	5,739
NC	CERR	48,110	0	0	36,222	0	24,159	0
	VISTAS	48,114	41,407	6,708	36,992	30,284	27,512	21,113
SC	CERR	0	43,837	0	0	32,656	0	21,852
	VISTAS	43,844	38,633	5,210	34,799	29,588	26,418	21,207
TN	CERR	1,660	25,500	21,482	43,413	22,164	34,167	12,140
	VISTAS	56,797	32,085	24,715	50,937	26,269	41,442	16,774
VA	CERR	0	0	0	17,065	0	12,000	0
	VISTAS	40,856	36,414	4,442	17,065	12,623	12,771	8,607
WV	CERR	0	29,277	0	0	14,778	0	8445
	VISTAS	36,188	29,392	6,795	22,053	15,258	15,523	8,733

Note 1: CERR refers to data as submitted by S/L agencies; VISTAS refers to data calculated by MACTEC using the PM augmentation methodologies described in this document.

Note 2: KY DEP's initial CERR submittal reported particulate matter emissions using only PM-PRI pollutant code. MACTEC used this pollutant code during the initial PM augmentation routine. In February 2005, KY DEP indicated that data reported using the PM-PRI code should actually have been reported using the PM_{10}-PRI code. MACTEC performed a subsequent PM augmentation in April 2005 using the PM_{10}-PRI code. These changes were reflected in the Base F emission inventory.

Note 3: South Carolina Department of Health and Environmental Control (SC DHEC) initial CERR submittal reported particulate matter emissions using the PM-FIL, PM_{10}-FIL, and $PM_{2.5}$ -FIL pollutant codes. MACTEC used these pollutant codes during the initial PM augmentation routine. In August 2005, SC DHEC indicated that data reported using the PM-FIL, PM_{10}-FIL, and $PM_{2.5}$ -FIL pollutant codes should actually have been reported using the PM-PRI, PM_{10}-PRI, and $PM_{2.5}$ _PRI codes. MACTEC performed a subsequent PM augmentation in April 2006 using the revised pollutant codes. These changes were reflected in the Base G emission inventory.

Note 4: The emission values in the VISTAS emission rows above differ slightly from the final values in the Base G inventory. This is due to several corrections and updates to the 2002 inventory submitted by S/L agencies after the PM augmentation was performed as discussed in Section 1.1.1.6.

After the PM augmentation process was performed, we executed a series of checks to identify potential inconsistencies in the PM inventory. These checks included:

- PM-PRI less than PM_{10}-PRI, $PM_{2.5}$ -PRI, PM_{10}-FIL, $PM_{2.5}$ -FIL, or PM-CON;
- PM-FIL less than PM_{10}-FIL, $PM_{2.5}$ -FIL;
- PM_{10}-PRI less than $PM_{2.5}$ -PRI, PM_{10}-FIL, $PM_{2.5}$ -FIL or PM-CON;
- PM_{10}-FIL less than $PM_{2.5}$ -FIL;
- PM25-PRI less than $PM_{2.5}$ -FIL or PM-CON;
- The sum of PM_{10}-FIL and PM-CON not equal to PM_{10}-PRI; and
- The sum of $PM_{2.5}$ -FIL and PM-CON not equal to $PM_{2.5}$ -PRI.

S/L agencies were asked to review this information and provide corrections where the inconsistencies were significant. In general, corrections (or general directions) were provided in the case of the potential inconsistency issues. In other cases, the agency provided specific process level pollutant corrections.

Note that for the Base G inventory, only the PM_{10}-PRI and $PM_{2.5}$ -PRI emission estimates were retained since they are the only two PM species that are included in the air quality modeling. Other PM species were removed from the Base G inventory to facilitate emissions modeling.

1.1.1.4 EGU Analysis

We made a comparison of the annual SO_2 and NO_x emissions for EGUs as reported in the S/L agencies CERR submittals and the data from EPA's Clean Air Markets Division (CAMD) CEM database to identify any outstanding discrepancies. Facilities report hourly CEM data to EPA for units that are subject to CEM reporting requirements of the NO_x State Implementation Plan (SIP) Call rule and Title IV of the Clean Air Act (CAA). EPA sums the hourly CEM emissions to the annual level, and we compared these annual CEM emissions to those in the S/L inventories. The 2002 CEM inventory containing NO_x and SO_2 emissions and heat input data were downloaded from the EPA CAMD web site (www.epa.gov/airmarkets). The data were provided by quarter and emission unit.

The first step in the EGU analysis involved preparing a crosswalk file to match facilities and units in the CAMD inventory to facilities and units in the S/L inventories. In the CAMD inventory, the Office of Regulatory Information Systems (ORIS) identification (ID) code identifies unique facilities and the unit ID identifies unique boilers and internal combustion engines (i.e., turbines and reciprocating engines). In the S/L inventories, the State and county FIPS and State facility ID together identify unique facilities and the emission unit ID identifies unique boilers or internal combustion engines. In most cases, there is a one-to-one correspondence between the CAMD identifiers and the S/L identifiers. However, in some of the S/L inventories, the emissions for multiple emission units are summed and reported under one emission unit ID. We created an Excel spreadsheet that contained an initial crosswalk with the ORIS ID and unit ID in the CEM inventory matched to the State and county Federal Implementation Plan (FIPS), State facility ID, and emission unit ID in the S/L inventory. The initial crosswalk contained both the annual emissions summed from the CAMD database as well as the S/L emission estimate. It should be noted that the initial matching of the IDs in both inventories was based on previous crosswalks that had been developed for the preliminary VISTAS 2002 inventory and in-house information compiled by MACTEC and Alpine Geophysics. The matching at the facility level was nearly complete. In some cases, however, S/L agency or stakeholder assistance was needed to match some of the CEM units to emission units in the S/L inventories.

The second step in the EGU analysis was to prepare an Excel spreadsheet that compared the annual emissions from the hourly CAMD inventory to the annual emissions reported in the S/L inventory. The facility-level comparison of CEM to emission inventory NO_x and SO_2 emissions found that for most facilities, the annual emissions from the S/L inventory equaled the CAMD CEM emissions. Minor differences could be explained because the facility in the S/L inventory contained additional small or emergency units that were not included in the CAMD database.

The final step in the EGU analysis was to compare the SO_2 and NO_x emissions for select Southern Company units in the VISTAS region. Southern Company is a super-regional company that owns EGUs in four VISTAS States – Alabama, Florida, Georgia, and Mississippi – and participates in VISTAS as an industry stakeholder. Southern Company independently provided emission estimates for 2002 as part of the development of the preliminary VISTAS 2002 inventory. In most cases, these estimates were reviewed by the States and incorporated into the States CERR submittal. The exception to this was a decision made by Georgia’s Department of Environmental Protection (GDEP) to utilize CEM-based emissions for the actual 2002 emissions inventory for sources within the State when Southern Company also provided data. There were no major inconsistencies between the Southern Company data, the CAMD data, and the S/L CERR data.

The minor inconsistencies found included small differences in emission estimates (<2 percent difference), exclusion/inclusion of small gas-fired units in the different databases, and grouping of emission units in S/L CERR submittals where CAMD listed each unit individually. We compared SO_2 and NO_x emissions on a unit by unit basis and did not find any major inconsistencies.

1.1.1.5 QA Review of Base F Inventory

QA checks were run on the Base F point source inventory data set to ensure that all corrections provided by the S/L agencies and stakeholders were correctly incorporated into the S/L inventories and that there were no remaining QA issues. After exporting the inventory to ASCII text files in NIF 3.0, the EPA QA program was run on the ASCII files and the QA output was reviewed to verify that all QA issues that could be addressed were resolved

Throughout the inventory development process, QA steps were performed to ensure that no double counting of emissions occurred, and to ensure that a full and complete inventory was developed for VISTAS. QA was an important component to the inventory development process and MACTEC performed the following QA steps on the point source component of the VISTAS revised 2002 base year inventory:

1. Facility level emission summaries were prepared and evaluated to ensure that emissions were consistent and that there were no missing sources.
2. State-level EGU and non-EGU comparisons (by pollutant) were developed between the Base F 2002 base year inventory, the draft VISTAS 2002 inventory, and the 1999 NEI Version 2 inventory.
3. Data product summaries and raw NIF 3.0 data files were provided to the VISTAS Emission Inventory Technical Advisor and to the Point Source, EGU, and non-EGU Special Interest Work Group representatives for review and comment. Changes based on these comments were reviewed and approved by the S/L point source contact prior to implementing the changes in the files.
4. Version numbering was used for all inventory files developed. The version numbering process used a decimal system to track major and minor changes. For example, a major change would result in a version going from Base F1 to Base F2.

1.1.1.6 Additional Base G Updates and Corrections

S/L agencies completed a detailed review of the Base F inventory. Table 1.1-3 summarizes the updates and corrections to the Base F inventory that were requested by S/L agencies and incorporated into the Base G inventory.

There was a discrepancy between the base year 2002 and 2009/2018 emissions for PM_{10}-PRI, $PM_{2.5}$-PRI, and NH_3. The 2002 emissions were provided directly by the S/L agencies and were estimated using a variety of techniques (i.e., EPA emission factors, S/L emission factors, site-specific emission factors, and source test data). The 2009/2018 emissions, on the other hand, were estimated by Pechan (see Section 2.1.1.3) using an emission factor file based solely on AP-42 emission factors. An adjustment was made for 2002 EGU PM and NH_3 emissions to reconcile these differences. The post-processed Integrated Planning Model® (IPM®) 2009/2018 output uses a set of PM and NH_3 emission factors that are “the most recent EPA approved uncontrolled emission factors” – these are most likely not the same emission factors used by States and emission inventory preparation contractors for estimating these emissions in 2002 for EGUs in the VISTAS domain. VISTAS performed a set of modifications to replace 2002 base year PM and NH_3 emission estimates with estimates derived from the most recent EPA-approved emission factors. For further details of the methodology used to make this adjustment, see *EGU Emission Factors and Emission Factor Assignment*, memorandum from Greg Stella to VISTAS State Point Source Contacts and VISTAS EGU Special Interest Workgroup, June 13, 2005.

Table 1.1-3. Summary of Updates and Corrections to the Base F 2002 Inventory Incorporated into the 2002 Base G Inventory.

Affected State(s)	Nature of Update/Correction
TN, WV	The latitude and longitude values for TN (except the four local programs) and WV were truncated to two decimal places in the Base F inventory. MACTEC re-exported the NIF ER tables in a manner that so that the latitude and longitude were not truncated in the Base G inventory.
AL	Corrected the latitude and longitude for two facilities: Ergon Terminalling (Site ID: 01-073-010730167) and Southern Power Franklin (Site ID: 01-081-0036).
	Corrections to stack parameters at 10 facilities for stacks with parameters that do not appear to fall into the ranges typically termed "acceptable" for AQ modeling.
FL	Corrected emission values for the Miami Dade RRF facility (Site ID: 12-086-0250348).
GA	Hercules Incorporated (12-051-05100005) had an erroneous process id (#3) within emission unit id SB9 and was deleted. This removes about 6,000 tons of SO_2 from the 2002 inventory.
	Provided a revised file of location coordinates at the stack level that was used to replace the location coordinated in the ER file.
NC	Made several changes to Base F inventory to correct the following errors: 1. Corrected emissions at Hooker Furniture (Site ID: 37-081-08100910), release point G-29, 9211.38 tons volatile organic compounds (VOC's) should be 212.2 tons, 529.58 tons PM_{10} should be 17.02 tons, 529.58 tons PM2.5 should be 15.79 tons in 2002 inventory. 2. Identified many stack parameters in the ER file that were unrealistic. Several have zero for height, diameter, gas velocity, and flow rate. NC used the procedures outlined in Section 8 of the document ""National Emission Inventory QA and Augmentation Report" to correct unrealistic stack parameters. 3. Identified truncated latitude and longitude values in Base F inventory. NC updated all Title V facility latitude and longitude that was submitted to EPA for those facilities in 2004. Smaller facilities with only two decimal places were not corrected. 4. Corrected emissions for International Paper (3709700045) Emission Unit ID, G-12, should be 1.8844 tons VOCs instead of 2819.19 tons in 2002
SC	Corrected PM species emission values. SC DHEC's initial CERR submittal reported particulate matter emissions using the PM-FIL, PM_{10}-FIL, and PM25-FIL pollutant codes. In August 2005, SC DHEC indicated that data reported using the PM-FIL, PM_{10}-FIL, and PM25-FIL pollutant codes should actually have been reported using the PM-PRI, PM_{10}-PRI, and PM25_PRI codes. MACTEC performed a subsequent PM augmentation in April 2006 using the revised pollutant codes. These changes were reflected in the Base G emission inventory.
TN	Identified six facilities that closed in 2000/2001 but had non-zero emissions in the 2002 Base F inventory. MACTEC changed emissions to zero for all pollutants in the Base G 2002 inventory.
	Supplied updated emission inventory for the Bowater facility (47-107-0012) based on the facility's updated 2002 emission inventory update.
	Replaced data from Hamilton County, Tennessee, using data from Hamilton County's CERR submittal as contained in EPA's 2002 NEI (in Base F, the inventory for Hamilton County was based on the draft VISTAS 2002 inventory, which in turn was based on the 1999 NEI).
	Updated emissions for PCS Nitrogen Fertilizer LP (Site ID: 47-157-00146)
WV	Updated emissions for Steel of West Virginia (Site ID: 54-011-0009)
	Made changes to several Site ID names due to changes in ownership
	Made corrections to latitude/longitude and stack parameters at a few facilities for stacks with parameters that do not appear to fall into the ranges typically termed "acceptable" for AQ modeling.

1.1.1.7 Summary of Base G 2002 Inventory

Tables 1.1-4 through 1.1-10 summarize the Base G 2002 base year inventory. All values are in tons. For the purposes of Tables 1.1-4 through 1.1-10, EGU emissions include the emissions from all processes with a Source Classification Code (SCC) of either 1-01-xxx-xx (External Combustion Boilers – Electric Generation) or 2-01-xxx-xx (Internal Combustion Engines – Electric Generation). Emissions for all other SCCs are included in the non-EGU column. Note that aggregating emissions into EGU and non-EGU sectors based on the above SCCs causes a minor inconsistency with the EGU emissions reported in EPA's CAMD database. The EGU emissions summarized in these tables may include emissions from some smaller electric generating units in the VISTAS inventory that are not in CAMD's 2002 CEM database or the IPM forecasted emissions. The minor inconsistencies result in a less than 2 percent difference between the summary tables below and the data from CAMD's CEM database.

Table 1.1-4. Base G 2002 VISTAS Point Source Inventory for SO_2 (tons/year).

State	All Point Sources	EGUs	Non-EGUs
AL	544,309	447,828	96,481
FL	518,721	453,631	65,090
GA	568,731	514,952	53,778
KY	518,086	484,057	34,029
MS	103,388	67,429	35,960
NC	522,113	477,990	44,123
SC	259,916	206,399	53,518
TN	413,755	334,151	79,604
VA	305,106	241,204	63,903
WV	570,153	516,084	54,070
Total	**4,324,278**	**3,743,725**	**580,556**

Note: EGU emissions include SCCs 1-01-xxx-xx and 2-01-xxx-xx; non-EGU has all other SCCs.

Table 1.1-5. Base G 2002 VISTAS Point Source Inventory for NO_x (tons/year).

State	All Point Sources	EGUs	Non-EGUs
AL	244,348	161,038	83,310
FL	302,834	257,677	45,156
GA	196,767	147,517	49,251
KY	237,209	198,817	38,392
MS	104,661	43,135	61,526
NC	196,782	151,854	44,928
SC	130,394	88,241	42,153
TN	221,652	157,307	64,344
VA	147,300	86,886	60,415
WV	277,589	230,977	46,612
Total	**2,059,536**	**1,523,449**	**536,087**

Note: EGU emissions include SCCs 1-01-xxx-xx and 2-01-xxx-xx; non-EGU has all other SCCs.

Table 1.1-6. Base G 2002 VISTAS Point Source Inventory for VOC (tons/year).

State	All Point Sources	EGUs	Non-EGUs
AL	49,332	2,295	47,037
FL	40,995	2,524	38,471
GA	34,952	1,244	33,709
KY	46,321	1,487	44,834
MS	43,852	648	43,204
NC	62,170	988	61,182
SC	38,927	470	38,458
TN	85,254	926	84,328
VA	43,906	754	43,152
WV	15,775	1,180	14,595
Total	**461,484**	**12,516**	**448,970**

Note: EGU emissions include SCCs 1-01-xxx-xx and 2-01-xxx-xx; non-EGU has all other SCCs.

Table 1.1-7. Base G 2002 VISTAS Point Source Inventory for CO (tons/year).

State	All Point Sources	EGUs	Non-EGUs
AL	185,550	11,279	174,271
FL	139,045	57,113	81,933
GA	140,561	9,712	130,850
KY	122,555	12,619	109,936
MS	59,871	5,303	54,568
NC	64,461	13,885	50,576
SC	63,305	6,990	56,315
TN	122,348	7,084	115,264
VA	70,688	6,892	63,796
WV	100,220	10,341	89,879
Total	**1,068,604**	**141,218**	**927,388**

Note: EGU emissions include SCCs 1-01-xxx-xx and 2-01-xxx-xx; non-EGU has all other SCCs.

Table 1.1-8. Base G 2002 VISTAS Point Source Inventory for PM_{10}-PRI (tons/year).

State	All Point Sources	EGUs	Non-EGUs
AL	32,886	7,646	25,240
FL	57,243	21,387	35,857
GA	32,834	11,224	21,610
KY	21,326	4,701	16,626
MS	21,106	1,633	19,472
NC	36,592	22,754	13,838
SC	35,542	21,400	14,142
TN	49,814	14,640	35,174
VA	17,211	3,960	13,252
WV	22,076	4,573	17,503
Total	**326,630**	**113,918**	**212,714**

Note: EGU emissions include SCCs 1-01-xxx-xx and 2-01-xxx-xx; non-EGU has all other SCCs.

Table 1.1-9. Base G 2002 VISTAS Point Source Inventory for $PM_{2.5}$ -PRI (tons/year).

State	All Point Sources	EGUs	Non-EGUs
AL	23,291	4,113	19,178
FL	46,148	15,643	30,504
GA	22,401	4,939	17,462
KY	14,173	2,802	11,372
MS	11,044	1,138	9,906
NC	26,998	16,498	10,500
SC	27,399	17,154	10,245
TN	39,973	12,166	27,807
VA	12,771	2,606	10,165
WV	15,523	2,210	13,313
Total	**239,721**	**79,269**	**160,452**

Note: EGU emissions include SCCs 1-01-xxx-xx and 2-01-xxx-xx; non-EGU has all other SCCs.

Table 1.1-10. Base G 2002 VISTAS Point Source Inventory for NH_3 (tons/year).

State	All Point Sources	EGUs	Non-EGUs
AL	2,200	317	1,883
FL	1,657	234	1,423
GA	3,697	83	3,613
KY	1,000	326	674
MS	1,359	190	1,169
NC	1,234	54	1,180
SC	1,553	142	1,411
TN	1,817	204	1,613
VA	3,230	127	3,104
WV	453	121	332
Total	**18,200**	**1,798**	**16,402**

Note: EGU emissions include SCCs 1-01-xxx-xx and 2-01-xxx-xx; non-EGU has all other SCCs.

1.1.2 Development of Typical Year EGU inventory

VISTAS developed a typical year 2002 emission inventory for EGUs to avoid anomalies in emissions due to variability in meteorology, economic, and outage factors in 2002. The typical year inventory represents the five year (2000-2004) starting period that would be used to determine the regional haze reasonable progress goals.

Data from EPA's CAMD were used to develop normalization factors for producing a 2002 typical year inventory for EGUs. We used the ratio of the 2000-2004 average heat input and the 2002 actual heat input to normalize the 2002 actual emissions. MACTEC obtained data from EPA's CAMD for utilities regulated by the Acid Rain program. Annual data for the period 2000 to 2004 were obtained from the CAMD web site (www.epa.gov/airmarkets). The parameters available were the SO_2 and NO_x emission rates, heat input, and operating hours.

We used the actual 2002 heat input and the average heat input for the 5-year period from 2000-2004 as the normalization factor, as follows:

$$\text{Normalization Factor:} \quad \frac{\text{2000-2004 average heat input}}{\text{2002 actual heat input}}$$

If the unit did not operate for all five years, then the 2000-2004 average heat input was calculated for the one or two years in which the unit did operate. For example, if the unit operated only during 2002, then the normalization factor would be 1.0. The annual actual emissions were multiplied by the normalization factor to determine the typical emissions for 2002, as follows:

$$\text{Typical Emissions} = \text{2002 actual emissions} \times \text{Normalization Factor}$$

After applying the normalization factor, some adjustments were needed for special circumstances. For example, a unit may not have operated in 2002 and thus have zero emissions. If the unit had been permanently retired prior to 2002, then we used zero emissions for the typical year. If the unit had not been permanently retired and would normally operate in a typical year, then we used the 2001 (or 2000) heat input and emission rate to calculate the typical year emissions.

The Southern Company provided typical year data for their sources. Hourly emissions data for criteria pollutants were provided. MACTEC aggregated the hourly emissions into annual values. Further documentation of how Southern Company created the typical year inventory for their units can be found in *Developing Southern Company Emissions and Flue Gas Characteristics for VISTAS Regional Haze Modeling (April 2005, presented at 14th International Emission Inventory Conference* http://www.epa.gov/ttn/chief/conference/ei14/session9/kandasamy.pdf). Since Southern Company only supplied filterable particulate emissions, we ran the $PM_{10}/PM_{2.5}$ augmentation routine to calculate annual emission estimates for PM_{10}-PRI and $PM_{2.5}$-PRI.

The Southern Company typical year data were used for Southern Company sources in Alabama, Florida, and Mississippi. Georgia EPD elected to use the typical year normalization factor derived from the CAMD data instead of the Southern Company typical year data (as was used in the Base F inventory).

The final step was to replace the 2002 actual emissions with the 2002 typical year data described above. MACTEC provided the raw data and results of the typical year calculations in a spreadsheet for S/L agency review and comment. Any comments made were incorporated into the Base G inventory.

Table 1.1-11 summarizes emissions by State and pollutant for the actual 2002 EGU inventory and the typical year EGU inventory. For the entire VISTAS region, actual 2002 SO_2 emissions were about 0.5 percent higher than the typical year emissions. The differences on a state-be-state basis ranged from actual emissions being 6.6 percent lower in Florida to 10.9 percent higher in Mississippi. For the entire VISTAS region, actual 2002 NO_x emissions were about 0.1 percent lower than the typical year emissions. The differences on a state-be-state basis ranged from actual emissions being 9.6 percent lower in Florida to 6.3 percent higher in Mississippi.

Table 1.1-11. Comparison of SO_2 and NO_x Emissions (tons/year) for EGUs from Base G Actual 2002 Inventory and Typical 2002 Inventory.

	SO_2 Emissions (tons/year)			NO_x Emissions (tons/year)		
State	**Actual 2002**	**Typical 2002**	**Percentage Difference**	**Actual 2002**	**Typical 2002**	**Percentage Difference**
AL	447,828	423,736	5.4	161,038	154,704	3.9
FL	453,631	483,590	-6.6	257,677	282,507	-9.6
GA	514,952	517,633	-0.5	147,517	148,126	-0.4
KY	484,057	495,153	-2.3	198,817	201,928	-1.6
MS	67,429	60,086	10.9	43,135	40,433	6.3
NC	477,990	478,489	-0.1	151,854	148,812	2.0
SC	206,399	210,272	-1.9	88,241	88,528	-0.3
TN	334,151	320,146	4.2	157,307	152,137	3.3
VA	241,204	233,691	3.1	86,886	85,081	2.1
WV	516,084	500,381	3.0	230,977	222,437	3.7
Total	**3,743,725**	**3,723,177**	**0.5**	**1,523,449**	**1,524,693**	**-0.1**

1.2 Area Sources

This section details the development of the Base G 2002 base year inventory for area sources. There are three major components of the area source sector of the inventory. The first component is the “typical” year fire inventory. Version 3.1 of the VISTAS base year fire inventory provided actual 2002 emissions estimates. Since fire emissions are not easily grown or projected, in order to effectively represent fires in both the base and future year inventories, VISTAS determined that a typical year fire inventory was necessary. Development of the “typical” year fire inventory covered wildfire, prescribed burning, agricultural fires and land clearing fires. The first part of this section of the report discusses the development of the typical year fire inventory. The methodology provided in that section is identical to the documentation provided for Base F since the “typical” year inventory was developed as part of the Base F development effort. The major change in Base G for the fire component of the inventory was the development of projection year inventories that represent alternatives to the “typical” year inventory. These alternative projections incorporated projected changes in the acreage burned for prescribed fires on Federal lands. These projections are an augmentation of the “typical” year inventory.

The second component of the area source inventory was the incorporation of data submitted by the VISTAS States to the United States Environmental Protection Agency (EPA) as part of the CERR. Work on incorporating the CERR data into the revised base year involved: 1) obtaining the data from EPA, 2) evaluating the emissions and pollutants reported in order to avoid double counting and 3) backfilling from the existing VISTAS 2002 base year inventory for missing sources/pollutants. The processes used to perform those operations are described in the second portion of this section. That work was performed as part of the Base F inventory effort. In general no changes to that method were made as part of the Base G inventory updates. The methods used for the Base F inventory development effort using the CERR submittals have been maintained in this document. Where necessary, additional documentation has been added to 1) reflect changes that resulted from VISTAS States review of the Base F inventory and the incorporation of those changes into Base G, 2) changes made to how certain sources were estimated or 3) addition of new sources not found in Base F.

The final component of the area source inventory was related to the development of NH_3 emission estimates for livestock and fertilizers and paved road PM emissions. For the NH_3 emission estimates for livestock and fertilizers we used version 3.6 of the Carnegie Mellon University (CMU) NH_3 model. For the paved road PM emissions, we used the most recent estimates developed by EPA as part of the National Emission Inventory (NEI) development effort. EPA had developed an improved methodology for estimating paved road emissions so those values were substituted directly into the inventory after receiving consensus from all of the VISTAS States to perform the replacement. Details on these methods are provided in the third portion of this section of the document. That section is virtually identical to that from the Base F inventory document as there were only a couple of changes to the ammonia portion of the inventory and some updates to all fugitive dust categories including paved roads on a global basis between Base F and Base G.

Finally, quality assurance steps for each component of the area source inventory are discussed.

1.2.1 Development of a "typical" year fire inventory

Typical year fire emissions were developed starting from the actual fire acreage data and emission calculated for each VISTAS State. The table below shows the data submitted by each State in the VISTAS region indicating what data was received from each State for the purposes of calculating actual fire emissions.

Fire Type	AL	FL	GA	KY	MS	NC	SC	TN	VA	WV
Land Clearing	✓	✓	✓				✓			
Ag Burning	✓	✓	✓				✓			
Wildfires	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Prescribed	✓	✓	✓	✓	✓	✓	✓	✓		✓

In order to effectively characterize fire emissions in the VISTAS region, a typical (as opposed to strictly 2002 year based inventory) was required. Development of a typical year fire inventory provided the capability of using a comparable data set for both the base year and future years. Thus fire emissions would remain the same for air quality and visibility modeling in both the base and any future years. MACTEC originally proposed five different methods for developing the typical fire year to the VISTAS Fire Special Interest Work Group (SIWG) and requested their feedback and preference for developing the final typical year inventory. The method that was selected by SIWG members was to use a method similar to that used to develop an early version of a 2018 projection inventory. For that early 2018 inventory, State level ratios of acres over a longer term record (three or more years) developed for each fire type relative to 2002. The 2002 acreage was then scaled up or down based on these ratios to develop a typical year inventory. For Base F and G, the decision of the VISTAS Fire SIWG was to base the ratio on county level data for States that supplied long term fire-by-fire acreage data rather than State-level ratios. Where States did not supply long term fire-by-fire acreage data, MACTEC reverted to using State-level ratios. With one broad exception (wildfires) this method was implemented for all fires. MACTEC solicited long term fire-by-fire acreage data by fire type from each VISTAS State. A minimum of three or more years of data were used to develop the ratios. Those data were then used to develop a ratio for each county based on the number of acres burned in each county for each fire type relative to 2002.

Thus if we had long term county prescribed fire data from a State, we developed a county acreage ratio of:

$$Ratio = \frac{\text{Long term average county level Rx acres}}{\text{2002 actual county level Rx acreage}}$$

This ratio was then multiplied times the actual 2002 acreage to get a typical value (basically the long term average county level acres). Wherever possible this calculation was performed on a fire by fire basis. The acreage calculated using the ratio was then used with the fuel loading and emission factor values that we already had (and had been reviewed by the SIWG) to calculate emissions using the same method used for the 2002 actual values (which were previously documented). The following lists indicate which counties used the State ratios by fire type.

Land Clearing		**Agricultural Fires**		**Prescribed Burning**	
FIPS	COUNTY	FIPS	COUNTY	FIPS	COUNTY
12086	Miami-Dade County	13063	Clayton County	13059	Clarke County
12037	Franklin County	13083	Dade County	13083	Dade County
12043	Glades County	13089	Dekalb County	13089	Dekalb County
12045	Gulf County	13097	Douglas County	13097	Douglas County
12049	Hardee County	13121	Fulton County	13121	Fulton County
12057	Hillsborough County	13135	Gwinnett County	13123	Gilmer County
12073	Leon County	13137	Habersham County	13135	Gwinnett County
12077	Liberty County	13215	Muscogee County	13139	Hall County
12081	Manatee County	13227	Pickens County	13215	Muscogee County
12095	Orange County	13241	Rabun County	13241	Rabun County
12097	Osceola County	13247	Rockdale County	13247	Rockdale County
12103	Pinellas County	13311	White County		
12115	Sarasota County				
13015	Bartow County				
13021	Bibb County				
13045	Carroll County				
13047	Catoosa County				
13057	Cherokee County				
13059	Clarke County				
13063	Clayton County				
13073	Columbia County				
13077	Coweta County				
13083	Dade County				
13089	Dekalb County				
13097	Douglas County				
13117	Forsyth County				
13121	Fulton County				
13129	Gordon County				
13135	Gwinnett County				
13137	Habersham County				
13143	Haralson County				
13147	Hart County				
13151	Henry County				
13169	Jones County				
13215	Muscogee County				
13237	Putnam County				
13241	Rabun County				
13291	Union County				
13311	White County				

There were three exceptions to this method.

Exception 1: Use of State Ratios for Wildfires

The first exception was that wildfires estimates were developed using State ratios rather than county ratios. This change was made after initial quality assurance of the draft estimates revealed that some counties were showing unrealistic values created by very short term data records or missing data that created unrealistic ratios. In addition, exceptionally large and small fires were removed from the database since they were felt to be atypical. For example the Blackjack Complex fire in Georgia was removed from the dataset because the number of acres burned was "atypical" in that fire. We also removed all fires less than 0.1 acres from the dataset.

Exception 2: Correction for Blackened Acres on Forest Service Lands

Following discussions with the United States Forest Service (Forest Service) (memo from Cindy Huber and Bill Jackson, dated August 13, 2004), it was determined that the acres submitted by the Forest Service for wildfires and prescribed fires represented perimeter acres rather than "blackened" acres. Thus for wildfires and prescribed fires on Forest Service lands, a further correction was implemented to correct the perimeter acre values to blackened acres. The correction was made based on the size of the fire. For prescribed fires over 100 acres in size the acreage was adjusted to be 80 percent of the initial reported value. For prescribed fires of 100 acres or less the acreage values were maintained as reported. For wildfires, all reported acreage values were adjusted to be 66 percent of their initially reported values. These changes were made to all values reported for Forest Service managed lands.

Exception 3: Missing/Non-reported data

When we did not receive data from a VISTAS State for a particular fire type, a composite average for the entire VISTAS region was used to determine the typical value for that type fire. For example, if no agricultural burning long term acreage data was reported for a particular State, MACTEC determined an overall VISTAS regional average ratio that was used to multiply times the 2002 values to produce the "typical" values. This technique was applied to all fire types when data was missing.

In addition, for wildfires and prescribed burning, ratios were developed for "northern" and "southern" tier States within the VISTAS region and those ratios were applied to each State with missing data depending upon whether they were considered a "northern" or "southern" tier State. Development of "southern" and "northern" tier data was an attempt to account for a change from a predominantly pine/evergreen ecosystem (southern) to a pine/deciduous ecosystem (northern). States classified as "southern" included: AL, FL, GA, MS, and SC. States classified as "northern" included: KY, NC, TN, VA, and WV.

Finally for land clearing and agricultural fires, there are no NH_3 and SO_2 emissions. This is due to the lack of emission factors for these pollutants for these fire types.

Table 1.2-1 shows fire emissions from the original base year emission inventory (VISTAS 3.1), the actual 2002 emissions and the typical year emissions for the entire VISTAS region. The actual 2002 and typical fire emissions represent the Base F and Base G 2002 emissions. The typical emissions also represent the 2009 and 2018 emissions for all fire types with the exception of prescribed burning. Revisions made to the typical year prescribed fire emissions for 2009 and 2018 are detailed in the projection section. Also, State level Base G emissions from fires for all years can be found in the tables in Appendix A. Values for fires in those tables are “typical” year values.

Figures 1.2-1 through 1.2-4 show the State by State changes in emissions between the original 2002 base year fire inventories, the actual 2002 and the typical year inventories for carbon monoxide (CO) by fire type. Due to the relative magnitude of CO emissions compared to other criteria and PM pollutants from fires; this pollutant is normally chosen to represent the distribution of fires in the example plots.

Table 1.2-1. Emissions from Fires in the VISTAS Region – Comparison between Original Base Year 2002 (VISTAS 3.1), 2002 Actual and Typical Year Base G Emissions.

		CO	NH_3	NO_X	PM_{10}-FIL	PM_{10}-PRI	$PM_{2.5}$-FIL	$PM_{2.5}$-PRI	SO_2	VOC
Total LC	Actual (Base G)	492,409	0	14,568	62,146	62,146	62,146	62,146	0	33,799
	Typical (Base G)	675,838	0	19,995	80,598	80,598	80,598	80,598	0	46,389
	VISTAS 3.1	484,240	0	14,327	61,325	61,325	61,325	61,325	0	33,238
Total Ag	Actual (Base G)	164,273	0	903	30,958	30,958	30,385	30,385	0	21,946
	Typical (Base G)	161,667	0	903	30,465	30,465	29,892	29,892	0	21,595
	VISTAS 3.1	331,073	0	903	41,480	41,480	40,192	40,192	0	41,875
Total WF	Actual (Base G)	298,835	1,333	6,628	28,923	28,923	24,926	24,926	1,611	16,804
	Typical (Base G)	547,174	2,451	11,955	53,070	53,070	45,635	45,635	3,072	28,491
	VISTAS 3.1	275,766	1,230	6,133	26,680	26,680	23,002	23,002	1,476	15,718
Total RX	Actual (Base G)	1,678,216	7,616	36,561	168,938	168,938	145,175	145,175	9,839	78,988
	Typical (Base G)	1,635,776	7,425	35,650	164,811	164,811	141,636	141,636	9,590	76,990
	VISTAS 3.1	1,724,940	7,822	37,556	173,590	173,590	149,181	149,181	10,101	81,188

Key: LC = Land Clearing; Ag = Agricultural burning; WF = wildfires; RX = prescribed burning. Actual and Typical represent Base F and Base G (e.g., no change in methodology for Base F and Base G) for 2002.

Figure 1.2-1. CO Emissions from Agricultural Burning for the Original Base Year, 2002 Actual Base G, and 2002 Typical Base G Inventories.

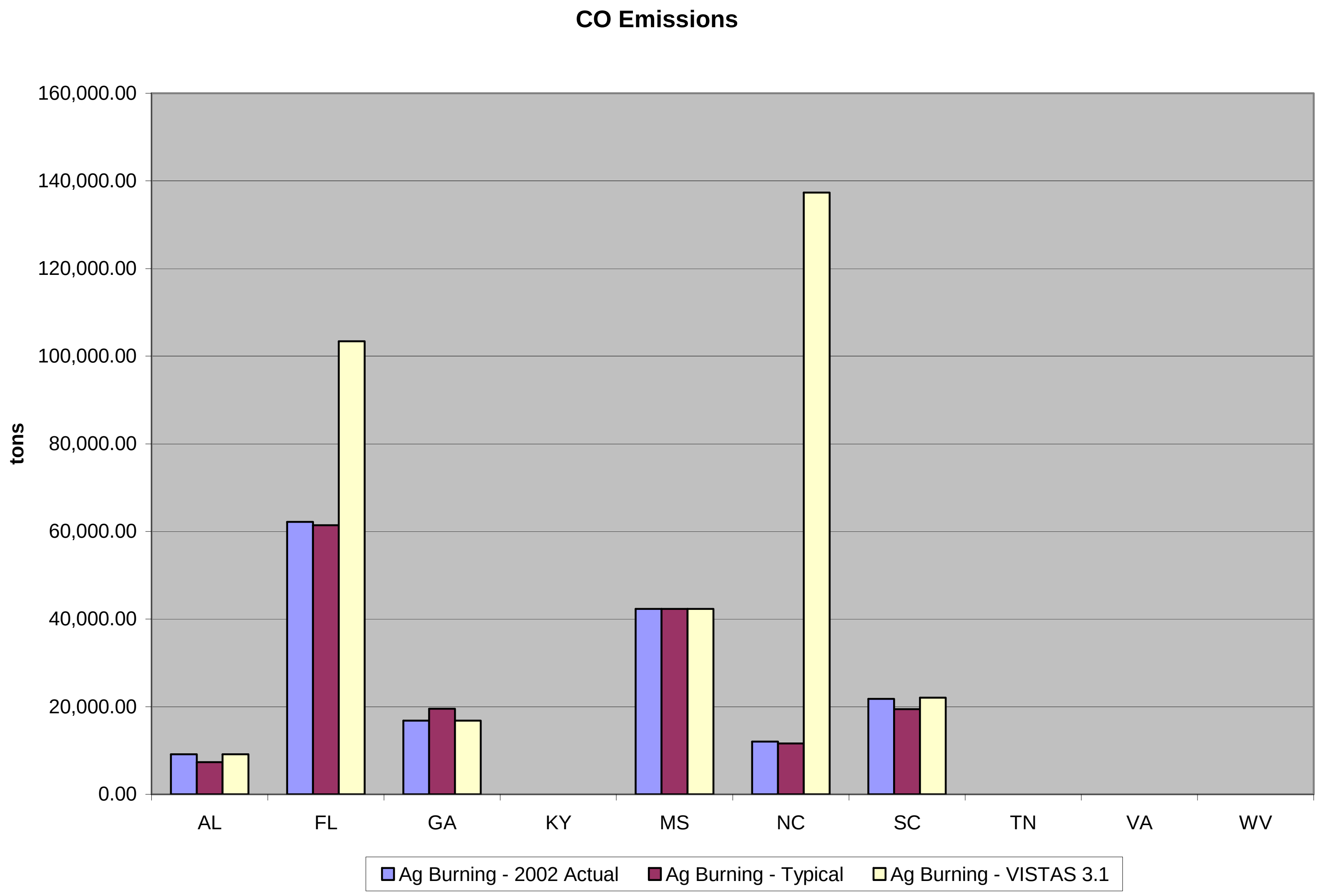


Figure 1.2-2. CO Emissions from Land Clearing Burning for the Original Base Year, 2002 Actual Base G and 2002 Typical Base G Inventories.

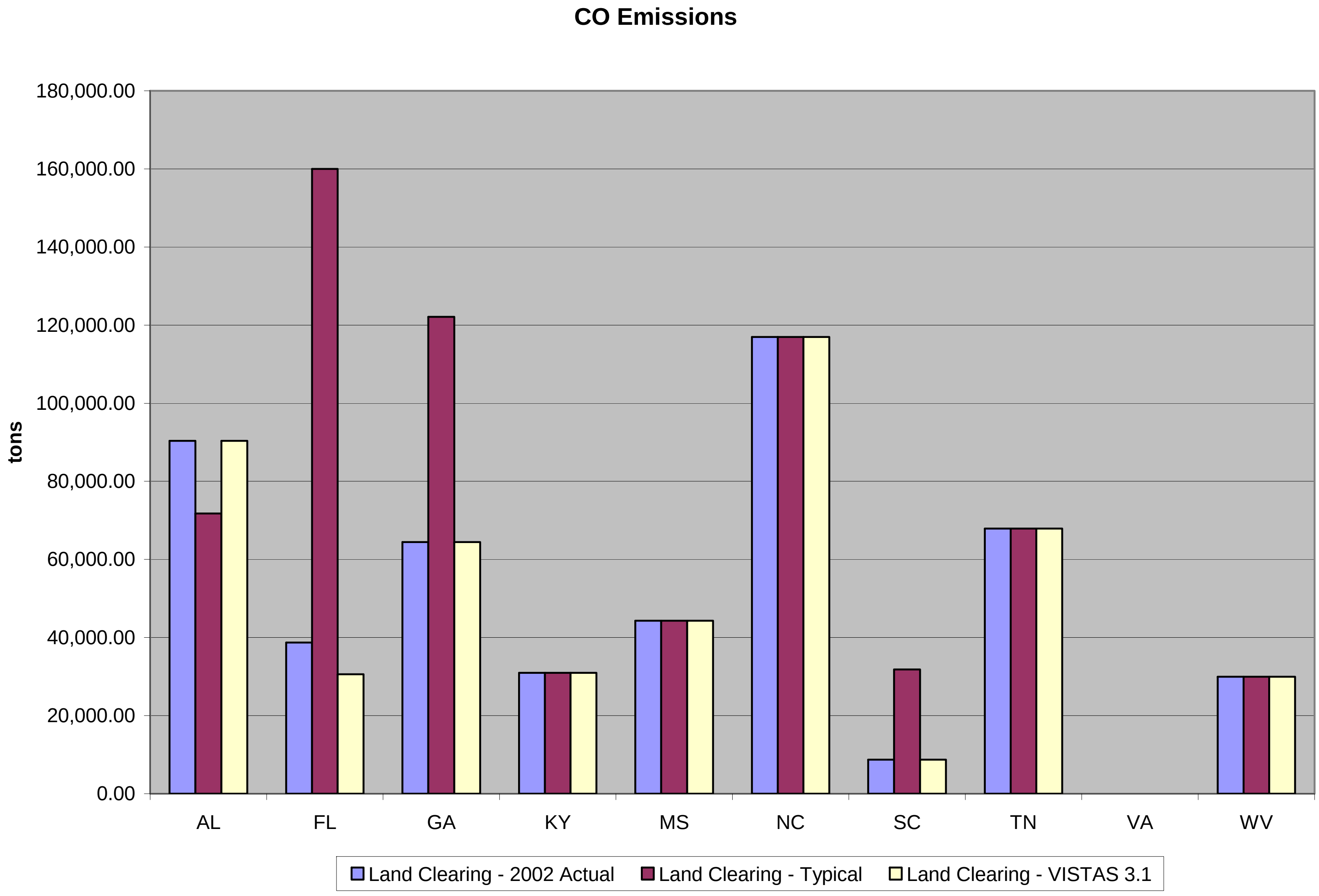


Figure 1.2-3. CO Emissions from Prescribed Burning for the Original Base Year, 2002 Actual Base G and 2002 Typical Base G Inventories.

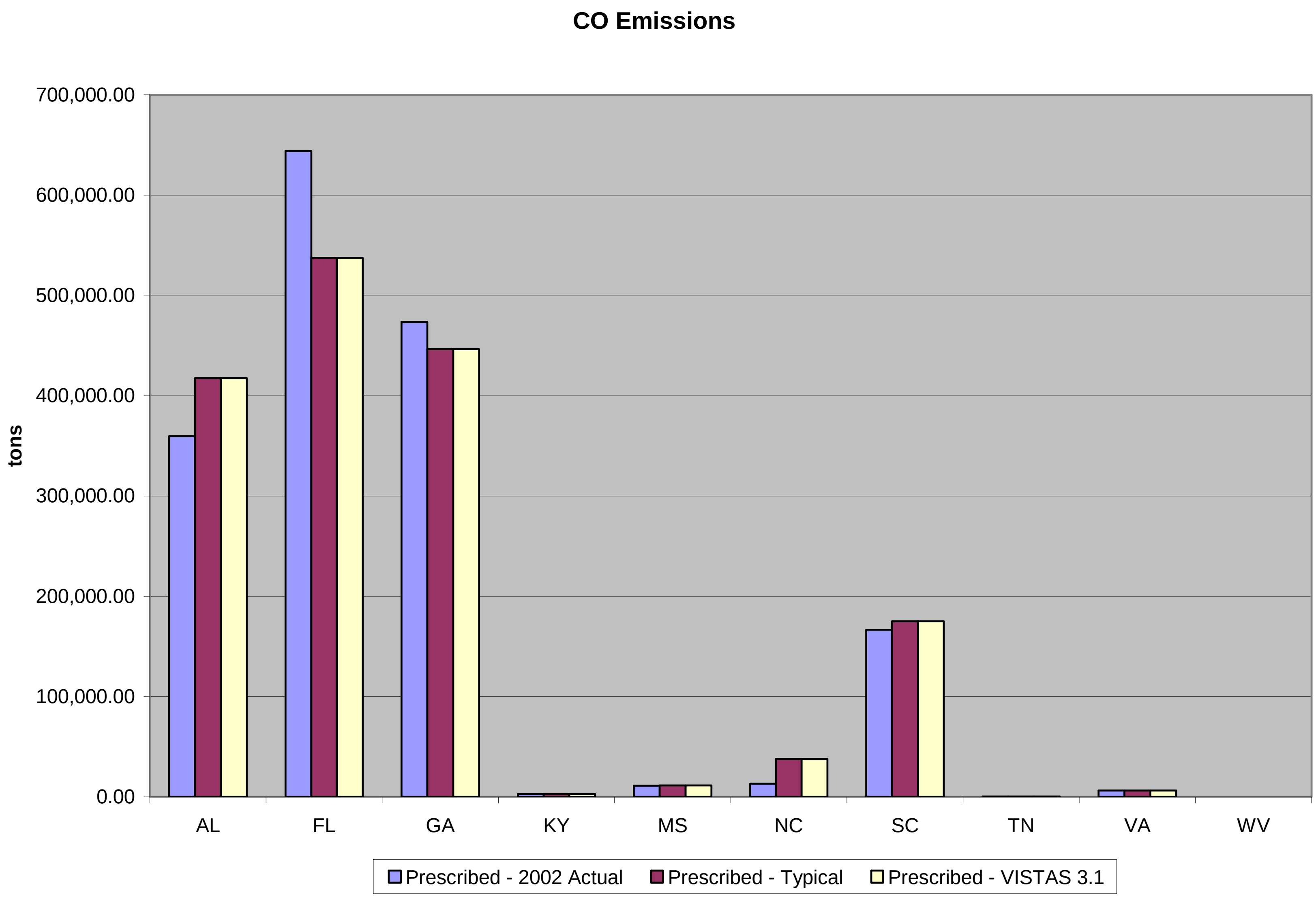
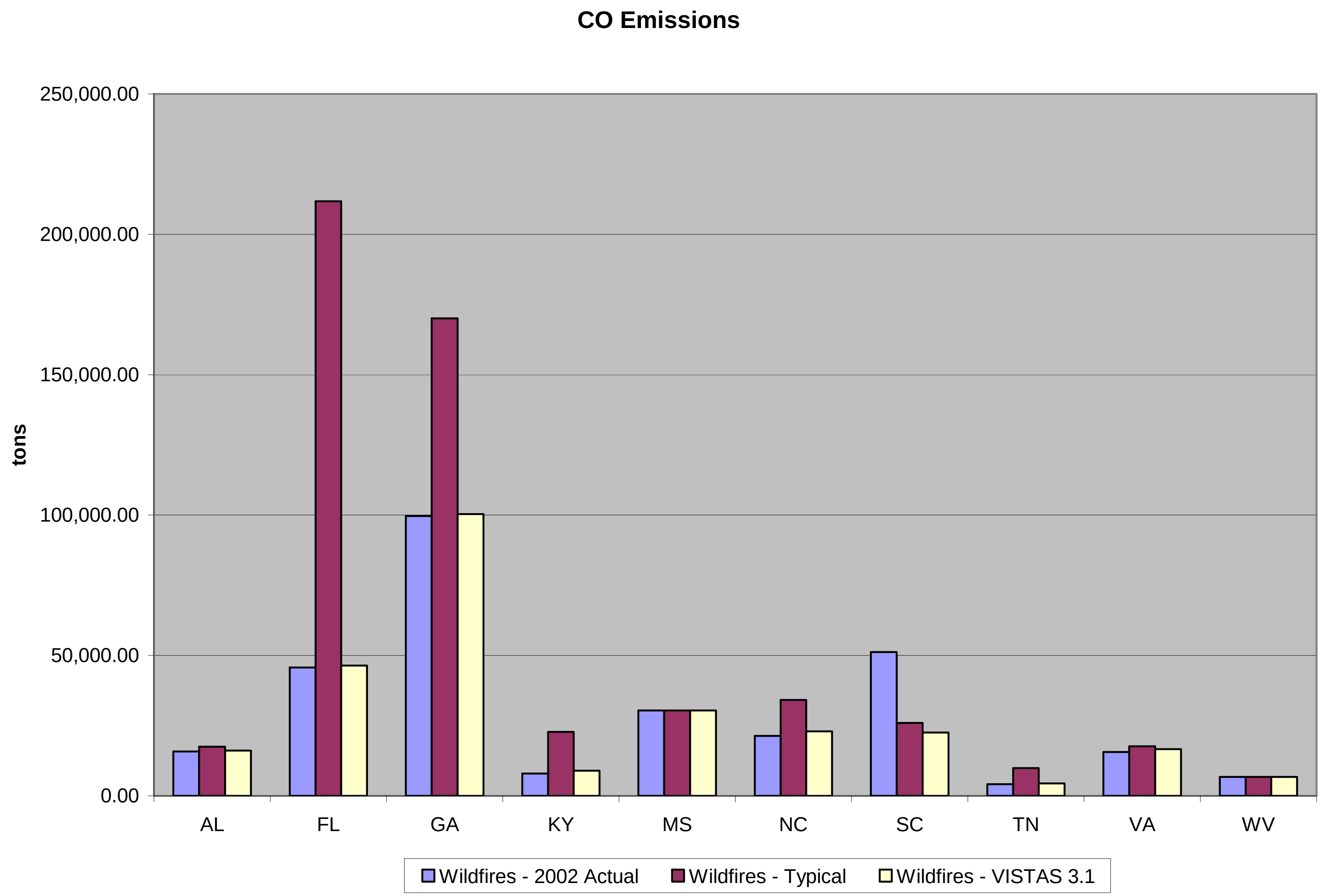


Figure 1.2-4. CO Emissions from Wildfire Burning for the Original Base Year, 2002 Actual Base G and 2002 Typical Base G Inventories.



1.2.2 Development of non-fire inventory

The second task in preparing the area source component of the Base F and Base G 2002 base year inventory was the incorporation of data submitted by the VISTAS States to the EPA as part of the CERR. With few exceptions, Base F and Base G inventories for this component of the inventory are identical. Modifications to the Base F methodology (described below) only resulted from modifications from the VISTAS States during review of the Base F inventory. The changes made to the inventory based on these reviews are described in the last portion of this section of the report. The information presented below describes the method used to incorporate CERR data as part of Base F.

Work on incorporating the CERR data into the 2002 Base F inventory involved: 1) obtaining the data from EPA, 2) evaluating the emissions and pollutants reported in order to avoid double counting and 3) backfilling from the earlier version of the VISTAS 2002 base year inventory for missing sources/pollutants. The processes used to perform those operations are described below. This work did not include any of the fire emission estimates described above. In addition it did not include emission estimates for ammonia from agricultural and fertilizer sources. Finally it did not include PM emissions from paved roads. Each of those categories was estimated separately.

Data on the CERR submittals was obtained from EPA’s Draft NEI download file transfer protocol (FTP) site where the data are stored after they’ve been processed for review. The data submitted in National Emission Inventory Format (NIF) was downloaded from that site. Once all of the files were obtained, MACTEC ran the files through the EPA NIF Format and Content checking tool to ensure that the files were submitted in standard NIF format and that there were no issues with those files. In a couple of cases small errors were found. For example, in one case a county FIPs code that was no longer in use was found. MACTEC contacted each VISTAS State area source contact person to resolve the issues with the files and corrections were made. Once all corrections to the native files were completed, MACTEC continued with the incorporation of the data into the VISTAS area source files.

Our general assumption was that unless we determined otherwise, the CERR submittals represented full and complete inventories. Where a State submitted a complete inventory, our plan was to simply delete the previous 2002 base year data and replace it with the CERR submittal. Prior to this replacement however, we stripped out the following emissions:

1. All wildfire, prescribed burning, land clearing and agricultural burning emissions submitted to EPA by the States as part of the CERR process were removed since they were to be replaced with emissions estimated using methods described earlier.
2. All fertilizer and agricultural ammonia emission records submitted to EPA by the States as part of the CERR process were removed. These were replaced with the estimates developed using the CMU Ammonia model.

3. All emissions from paved roads submitted to EPA by the States as part of the CERR process were removed. These emissions were replaced with updated emissions developed by U.S. EPA as part of their 2002 NEI development effort.

This approach was used for most State and Local emission submittals to prepare the Base F inventory. There were a few cases where alternative data were used to prepare the Base F inventory. In general, these alternatives involved submittal of alternative files to the CERR data by S/L agencies. Table 1.2-2 below summarizes the data used to prepare the Base F inventory. In general the data were derived from one of the following sources:

1. CERR submittal obtained from EPA FTP site as directed by VISTAS States;
2. State submitted file (either revised from CERR submittal or separate format);
3. VISTAS original 2002 base year (VISTAS version 3.1 base year file); or
4. EPA's preliminary 2002 NEI.

Table 1.2-2. Summary of State Data Submittals for the 2002 VISTAS Area Source Base F Inventory

State / Local Program	Area Source Emissions Data Source
AL	B
FL	B
GA	C
KY	A
MS	B
NC	C
SC	B
TN	B
VA	B
WV	A/C
Davidson County, TN	B
Hamilton County, TN	C
Memphis/Shelby County, TN	A
Knox County, TN	B
Jefferson County, AL	* so B from State
Jefferson County, KY	B
Buncombe County, NC	* so C from State
Forsyth County, NC	* so C from State
Mecklenburg County, NC	* so C from State

A = VISTAS 2002 (version 3.1)
B = CERR Submittal from EPA's ftp site
C = Other (CERR or other submittal sent directly from State to MACTEC)
* = No response

In order to track the sources of data in the final Base F and Base G NIF files, a field was added to the NIF format files developed for VISTAS to track each data source. A field named Data_Source was added to the EM table. A series of codes were added to this field to mark the source of each emissions value in the Base F and Base G inventories. Values in this field are detailed in Table 1.2-3.

Table 1.2-3: Data Source Codes and Data Sources for VISTAS 2002 Base F Area Source Emissions Inventory.

Data Source Codes	Data Source
Base F Codes	
CMU Model	CMU Ammonia model v 3.6
E-02-X or E-99-F or L-02-X or S-02-X	EPA CERR submittal (from FTP site)
EPA Paved	EPA Paved Road emissions estimates
EPAPRE02NEI	EPA Preliminary 2002 NEI
STATEFILE	State submitted file
VISTBASYR31	VISTAS 2002 Base Year version 3.1
VISTRATIO	Developed from VISTAS Ratios (used only for missing pollutants)
Additional Base G Codes	
ALBASEGFILE	Base G update file provided by AL
NCBASEGFILE	Base G update file provided by NC
OTAQRPT	Portable Fuel Container Emissions from OTAQ Report
STELLA	Revised data provided by VISTAS EI Advisor Greg Stella
VABASEGFILE	Base G update file provided by VA
VAStateFile	Revisions/additions to Base G update file provided by VA

Most States submitted complete inventories for Base F. Virginia's inventory required a two stage update. Virginia's CERR submittal only contained ozone precursor pollutants (including CO). For Virginia, MACTEC's original plan was to maintain the previous 2002 VISTAS base year emissions for non-ozone pollutants and then do a simple replacement for ozone pollutants. However during the QA phase of the work, MACTEC discovered that there were categories that had ozone precursor or CO emissions in the submittal that weren't in the original 2002 VISTAS base year inventory that should have PM or SO_2 emissions. For those records, MACTEC used an emissions ratio to build records for emissions of these pollutants. Data for Virginia PM and SO_2 emissions were generated by developing SCC level ratios to NO_x from the VISTAS 2002 base year inventory (version 3.1) or from emission factors and then calculating the emissions based on that ratio.

1.2.3 2002 Base G inventory updates

After the Base F inventory was submitted and used for modeling, VISTAS States were provided an opportunity for further review and comment on the Base F inventory. As a result of this review and comment period, several VISTAS States provided revisions to the Base F inventory.

In addition to and as an outgrowth of some of the comments provided by the States during the review process, some of the changes made to the inventory were made globally across the entire VISTAS region. This section discusses the specific State changes followed by the global changes made to the area source component of the inventory for all VISTAS States.

1.2.3.1 Changes resulting from State review and comment

Alabama

Alabama suggested several changes and had questions concerning a few categories in the Base F inventory. The changes/questions were:

1. For Source Classification Code (SCC) 2102005000 (Industrial Boilers: Residual Oil) and SCC 2103007000 (Institutional/Commercial Heating: Liquefied Petroleum Gas) the Alabama noted that the Base F VISTAS inventory had values for NO_x, VOC and CO for the State, but no values for SO_2, PM_{10} or $PM_{2.5}$.

MACTEC evaluated this information and found that there were actually emissions for two counties in AL for that SCC that had either SO_2 and/or PM emissions. The data used to develop the 2002 Base F inventory for AL came from the preliminary 2002 CERR submittals (see above) which should have included SO_2 and PM but did not except for two counties. According to MACTEC's protocol for use of these files, the files received from EPA were to be used "as is" unless the States provided comments during the Base F comment period to correct the CERR submittal. No comments were received from AL on the CERR submittal used for Base F. For 2002 Base G, AL provided an updated database file for these SCCs for all counties in the State that provided revised values for emissions and included SO_2 and PM. The revised file was used to update the Base F data for Base G.

2. AL noted that the Base F inventory included SCC 2401002000 (Solvent Utilization, Surface Coating, Architectural Coatings - Solvent-based, Total: All Solvent Types) and 2401003000 (Solvent Utilization, Surface Coating,

Architectural Coatings - Water-based, Total: All Solvent Types) as well as SCC 2401001000 (Solvent Utilization, Surface Coating, Architectural Coatings, Total: All Solvent Types). This resulted in double counting of the emissions for this category. AL suggested removal of the breakdown SCCs and use of the total SCC.

MACTEC deleted records for the breakdown SCCs and retained the total all solvents SCC emissions.

3. AL found the SCCs listed below missing from the Base F VISTAS inventory.

SCC	VOC Emissions	SCC Description
2401025000	1139.91	Surface Coatings: Metal Furniture, all coating types
2401030000	425.27	Surface Coatings: Paper, all coating types
2401065000	344.08	Surface Coatings: Electronic and Other Electrical, all coating types
2430000000	504.29	Solvent Utilization, Rubber/Plastics, All Processes, Total: All Solvent Types
2440020000	3043.78	Solvent Utilization, Miscellaneous Industrial, Adhesive (Industrial) Application, Total: All Solvent Types
Total for AL	5457.32	

MACTEC found that the emissions for these SCCs were included in the Base F inventory, but with slightly different total emissions. AL provided an updated county-level emissions file for use in updating the Base G inventory. That file was used to update the NIF records for AL for those SCCs.

4. AL noted that emissions in the Base F inventory were found for SCC 2465000000 and SCCs 2465100000, 2465200000, 2465400000, 2465600000, and 2465800000. These last five SCCs represent a subset of the emissions in the 246500000 SCC resulting in potential double counting of emissions.

MACTEC deleted all emissions associated with the Total SCC 2465000000 and retained the subset SCCs for the Base G inventory.

Florida

Florida provided comments indicating that they felt that emissions from the following sources and counties were too high, especially for CO and PM and were likely zero:

- motor vehicle fire - Palm Beach County
- woodstoves - Miami Dade, Hillsborough, Orange, Polk, Ft Myers, Pasco and Sarasota Counties
- fireplaces - Miami Dade and Hillsborough Counties

Emissions from these sources in the counties specified were set to zero by MACTEC for the Base G inventory.

North Carolina

North Carolina provided corrected emission files for 2002 Base F. A text file with emission values was provided and used to update the Base F emissions to Base G. The updated emissions were applied directly to the Base F NIF file. The file provided was similar to the "EM" NIF table. An update query was used to update the data supplied in the text file to the Access database NIF file. All changes were implemented.

South Carolina

South Carolina had two issues concerning the Base F inventory. These issues related to 1) additional SCCs that were in BASE F 2009 and 2018, but not in 2002 Base F and 2) SCCs that were in the U.S. EPA 2002 NEI inventory, but not in the VISTAS 2002, 2009, or 2018 Base F inventory.

MACTEC investigated the additional SCCs found in 2009 and 2018 Base F and found that the SCCs actually were not missing in the 2002 Base F inventory but only had emissions for PM. Thus the emissions were maintained as they were provided in Base F.

With respect to the SCCs that were found in the U.S. EPA 2002 NEI, MACTEC investigated and found that they were not included in the Base F inventory because they were not included in the 2002 CERR submittal used to produce the Base F updates. The SCCs were apparently added by EPA later in the NEI development process. In addition, MACTEC also evaluated whether or not the SCCs were found in other VISTAS States Base F inventories. MACTEC found that some States included them and some did not, there was no consistency between the States. MACTEC also found that typically emissions for these SCCs were low in emissions, generally with emissions of only a few tons to tens of tons per year. The decision was made with South Carolina concurrence not to add these SCCs to the Base G inventory. These SCCs were: 210205000, 2102011000, 2103007000, 2103011000, 2104007000, 2104011000, 2302002100, 2302002200, 2302003100, 2302003200, 2610000500, 2810001000, and 281001500.

Virginia

Virginia provided an updated 2002 base year emissions file. The data in that file were used to update the Base F inventory emission values to those for Base G. In addition, Virginia provided information on several source categories that required controls for future year projections since the sources were located in counties/cities in northern Virginia and were subject to future year Ozone Transport Commission (OTC) regulations. MACTEC added in the base year control levels to the Base G inventory file for these categories so that they could be estimated correctly in future years. The controls added were for mobile equipment repair/refinishing sources, architectural and industrial maintenance coating sources, consumer products sources, and solvent metal cleaning sources. Minor errors were found in some entries for the initial file provided and VA provided a revised file with corrections and minor additions.

1.2.4 Ammonia and paved road emissions

The final component of the Base F inventory development was estimation of NH_3 emission estimates for livestock and fertilizers and paved road PM emissions. For the NH_3 emission estimates for livestock and fertilizers we used version 3.6 of the CMU NH_3 model (http://www.cmu.edu/ammonia/). Results from this model were used for all VISTAS States. The CMU model version 3.6 was used in large part because it had been just recently been updated to include the latest (2002) Census of Agriculture animal population statistics. Prior to inclusion of the CMU model estimates, MACTEC removed any ammonia records for agricultural livestock or fertilizer emissions from the VISTAS 2002 initial base year inventory. MACTEC also generated emissions from human perspiration and from wildlife using the CMU model and added those emissions for each State.

For the Base G ammonia inventory, MACTEC removed all wildlife and human perspiration emissions. VISTAS decided to remove these emissions from the inventory. Human perspiration was dropped due to a discrepancy in the units used for the emission factor that was not resolved prior to preparing the estimates and wildlife was dropped because VISTAS felt the activity data was too uncertain. Thus all emissions from these two categories were deleted in the Base G 2002 inventory.

For the paved road PM Base F emissions, we used the most recent estimates developed by EPA as part of the NEI development effort (Roy Huntley, U.S. EPA, email communication, 8/30/2004). EPA had developed an improved methodology for estimating paved road emissions for 2002 and had used that method to calculate emissions for that source category. MACTEC obtained those emissions from EPA and those values were substituted directly into the inventory after receiving consensus from all of the VISTAS States to perform the replacement. These files were obtained in March of 2005 in NIF format from the EPA FTP site.

For the Base G emissions, modifications were made to the emissions estimates based on changes suggested by work of the Western Regional Air Partnership and U.S. EPA. Details of these changes are provided below in the section on global changes made as part of the Base G inventory updates.

1.2.5 Global Changes Made for Base G

There were three global changes made between the Base F and the Base G inventory (beyond the removal of wildlife and human perspiration NH_3 emissions). These changes were:

1. Removal of Stage II emissions from the area source inventory and inclusion in the mobile sector of the inventory,
2. Adjustment of fugitive dust $PM_{2.5}$ emissions, and
3. Addition of emissions from portable fuel containers.

As part of the Base F review process, several VISTAS States had expressed surprise that the Stage II refueling emission estimates were in the area source component of the inventory. This decision had been made with SIWG agreement early on in the inventory development process because 1) some States had included it in their CERR submittals and 2) because the non-road and on-road mobile estimates had differing activity factor units and could not be easily combined. However for Base G, the VISTAS States all agreed, especially in light of the different ways in which the emissions were reported in the CERR, to remove the Stage II refueling emissions from the area source inventory and include them in the non-road and on-road sectors. Thus all records related to Stage II refueling were removed from the area source component of the Base G inventory.

$PM_{2.5}$ emissions from several fugitive dust sources were also updated for Base G. The Western Regional Air Partnership (WRAP) and U.S. EPA had been investigating overestimation of the $PM_{2.5}$ / PM_{10} ratio in several fugitive dust categories and U.S. EPA was in the process of making revisions to AP-42 for several categories during preparation of the Base G inventory. Based on data received from U.S. EPA, VISTAS decided to revise the $PM_{2.5}$ emissions from construction, paved roads and unpaved road sources. $PM_{2.5}$ emissions in Base F were multiplied by 0.67, 0.6, and 0.67 for construction, paved roads and unpaved roads respectively to produce the values found in Base G. No changes were made to PM_{10}, only to $PM_{2.5}$.

Finally, as part of Virginia’s comments on the Base F inventory, emissions from portable fuel containers were mentioned as being absent from the inventory. MACTEC was tasked with developing a methodology that could be used to add these emissions to the Base G area source inventory. In investigating options for a method of estimating emissions, MACTEC found that the U.S. EPA had prepared a national inventory of emissions by State for portable fuel containers. Data on emissions from this source prepared by U.S. EPA were presented in, “Estimating Emissions Associated with Portable Fuel Containers (PFCs), Draft Report, Office of Transportation and Air Quality, United States Environmental Protection Agency, Report # EPA420-D-06-003, February 2006”.

State-level emission estimates for 2005 derived from Appendix Table B-2 of the PFCs report were used as the starting point for developing 2002 county-level emissions estimates. State emissions were derived from that table by using all of the emission estimates in that table with the exception of values for vapor displacement and spillage from refueling operations. Those components of the State emissions were left out of the State-level emissions to avoid double counting refueling emissions in the non-road sector. For the purposes of 2002 emission estimates for Base G, the 2005 values were assumed equal to 2002 values.

The 2005 State-level estimates minus the refueling component from Appendix Table B-2 of the report were summed for each State and then allocated to the county-level. The county-level allocation was based on the fuel usage information obtained from the NONROAD 2005 model runs conducted as part of the Base G inventory development effort (see the 2002 base year Base G non-road section below). MACTEC used the spillage file from the NONROAD model (normally located in the DATA\EMSFAC directory in a standard installation of NONROAD) to determine the SCCs that used containers for refueling. The spillage file contains information by SCC and horsepower indicating whether or not the refueling occurs using a container or a pump. All SCC and horsepower classes using containers were extracted from the file and cross-referenced with the fuel usage by county for those SCC/horsepower combinations from the appropriate year model runs (2002, 2009 or 2018). Then the fuel usages by county from the NONROAD 2005 runs prepared for VISTAS were summed for those SCCs by county. The county level fuel use was then divided by the State total fuel use for the same SCCs to determine the fraction of total State fuel usage and that fraction was used to allocate the State-level emissions to the county.

1.2.6 Quality Assurance steps

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, and to ensure that a full and complete inventory was developed for VISTAS. Quality assurance was an important component to the inventory development process and MACTEC performed the following QA steps on the area source component of the 2002 Base F inventory:

1. All CERR and NIF format State supplied data submittals were run through EPA’s Format and Content checking software.
2. SCC level emission summaries were prepared and evaluated to ensure that emissions were consistent and that there were no missing sources.
3. Tier comparisons (by pollutant) were developed between the revised 2002 base year inventory and the previous (version 3.1) base year inventory.

4. Fields were either added or used within each NIF data table to track the sources of data for each emission record.

5. Data product summaries were provided to both the VISTAS Emission Inventory Technical Advisor and to Area Source and Fires SIWG representatives for review and comment. Changes based on these comments were implemented in the files.

6. Version numbering was used for all inventory files developed. The version numbering process used a decimal system to track major and minor changes. For example, a major change would result in a version going from 1.0 to 2.0. A minor change would cause a version number to go from 1.0 to 1.1. Minor changes resulting from largely editorial changes would result in a change from 1.00 to 1.01.

In addition, for the fires inventory, data related to fuel loading and fuel consumption was reviewed and approved by the VISTAS Fire SIWG to ensure that values used for each type of fire and each individual fire were appropriate. Members of the VISTAS Fire SIWG included representatives from most State Divisions of Forestry (or equivalent) as well as U.S. Forest Service and National Park Service personnel.

For Base G, similar QA steps to those outlined above for Base F were undertaken. In addition, all final NIF files were checked using the EPA Format and Content checking software and summary information by State and pollutant were prepared comparing the Base F and Base G inventories.

1.3 Mobile Sources

This section describes the revisions made to the initial 2002 VISTAS Base Year emission inventory on-road mobile source input files. For this work actual emission estimates were not made, rather data files consistent with Mobile Emissions Estimation Model Version 6 (MOBILE6) were developed and provided to the VISTAS modeling contractor. These input data files were then run during the VISTAS modeling to generate on-road mobile source emissions using episodic and meteorological specific conditions configured in the sparse matrix operator Kernel Emissions modeling system (SMOKE) emissions processor.

During initial discussions with the VISTAS Mobile Source SIWG, some States indicated a desire to use CERR mobile source emissions data in place of the VISTAS 2002 inventories generated by E.H. Pechan and Associates, Inc. (the initial VISTAS 2002 Base Year inventory files).

However, the CERR emissions data by itself were not sufficient for an inventory process that includes both base and future year inventories. MACTEC needed to be able to replicate the CERR data rather than simply obtain CERR emissions estimates. The reason for this is that only input files were being prepared to provide revised 2002 estimates during the VISTAS modeling process, rather than the actual emission estimates and that the 2002 input data files would be used as a starting point for the projected emission estimates. This meant that the appropriate vehicle miles traveled (VMT), MOBILE6, and/or NONROAD model input data needed to be provided. If these data were provided with the CERR emissions estimates we used it as the starting point for revision of the 2002 Base Year inventory. However MACTEC did not have access to the on-road mobile CERR submissions from EPA, so re-submittal of these data directly to MACTEC was requested in order to begin compiling the appropriate input file data.

In those cases where States did not provide CERR on-road mobile source input data files, our default approach was to maintain the data input files and VMT estimates for the initial 2002 Base Year inventory prepared by Pechan.

1.3.1 Development of on-road mobile source input files and VMT estimates

Development of the 2002 on-road input files and VMT was a multi-step process depending upon what the State mobile source contacts instructed us to use as their data. Information provided below provides incremental revisions made to on-road mobile source inventories or inputs in series from one inventory version to the next. In general the process involved one of three steps from the original 2002 on-road mobile source data.

Base F Revisions

1. The first step was to evaluate the initial 2002 base year files and make any non-substantive changes (i.e., changes only to confirm that the files posted for 2002 by Pechan were executable and that all the necessary external files needed to run MOBILE6 were present). This approach was taken for AL, FL, GA, MS, SC, and WV. For these States the determination was made that the previous files would be okay to use as originally prepared. For SC, the VMT file was updated, but that did not affect the MOBILE6 input files.

2. For other States, modification to the input files was required. The information below indicates what changes were made for other States in the VISTAS region.

KY – For Kentucky, the Inspection and Maintenance (I/M) records in the input files for Jefferson County were updated in order to better reflect the actual I/M program in the Louisville metropolitan area.

NC - Substantial revisions were implemented to these input files based on input from the State. The modifications necessary to reflect the desires of the State led to complete replacement of the previous input files. Among the changes made were:

- The regrouping of counties (including the movement of some counties from one county group to another and the creation of new input files for previously grouped counties). There were originally 32 input files; after the changes there were 49. The pointer file was corrected to reflect these changes.

- Travel speeds were updated in over 3000 scenarios.
- All I/M records were updated.
- All registration distributions were updated.
- I/M VMT fractions were updated (which only affected the pointer file).
- VMT estimates were updated (which has no direct effect on the MOBILE6 input files but does ultimately affect emissions).

3. VA and TN – For these States, new input files were provided due to substantive changes that the State wanted to make relative to the 2002 initial base year input files. In addition, revised VMT data were developed for each State.

Base G Revisions

For the production of the VISTAS 2002 Base G inventory, VISTAS states reviewed the Base F inputs, and provided corrections, updates and supplemental data.

For all states modeled, the Base G updates include:

Adding Stage II refueling emissions calculations to the SMOKE processing.

Revised the HDD compliance for all states. (REBUILD EFFECTS = .1)

In addition to the global changes, individual VISTAS states made the following updates:

KY – updated VMT and M6 input values for selected counties.

NC – revised VMT and registration distributions.

TN - revised VMT and vehicle registration distributions for selected counties.

VA – revised winter RFG calculations in Mobile 6 inputs.

WV – revised VMT input data.

AL, FL, and GA did not provide updates for Base G and therefore the Base F inputs were used for these States.

1.3.1.1 Emissions from on-road mobile sources

The MOBILE6 module of the Sparse Matrix Operator Kernel Emissions (SMOKE) model was used to develop the on-road mobile source emissions estimates for CO, NO_X, NH_3, SO_2, PM, and

VOC emissions. The MOBILE6 parameters, vehicle fleet descriptions, and VMT estimates are combined with gridded, episode-specific temperature data to calculate the gridded, temporalized emission estimates. The MOBILE6 emissions factors are based on episode-specific temperatures predicted by the meteorological model. Further, the MOBILE6 emissions factors model accounts for the following:

- Hourly and daily minimum/maximum temperatures;
- Facility speeds;
- Locale-specific inspection/maintenance (I/M) control programs, if any;
- Adjustments for running losses;
- Splitting of evaporative and exhaust emissions into separate source categories;
- VMT, fleet turnover, and changes in fuel composition and Reid vapor pressure (RVP).

The primary input to MOBILE6 is the MOBILE shell file. The MOBILE shell contains the various options (e.g. type of inspection and maintenance program in effect, type of oxygenated fuel program in effect, alternative vehicle mix profiles, RVP of in-use fuel, operating mode) that direct the calculation of the MOBILE6 emissions factors. The shells used in these runs were based on VISTAS Base F modeling inputs as noted in the previous section.

For this analysis, the on-road mobile source emissions were produced using selected weeks (seven days) of each month and using these days as representative of the entire month. This selection criterion allows for the representation of day-of-the-week variability in the on-road motor vehicles, and models a representation of the meteorological variability in each month. The modeled weeks were selected from mid-month, avoiding inclusion of major holidays.

The parameters for the SMOKE runs are as follows:

Episodes:
2002 Initial Base Year, and
2009 and 2018 Future years, using 2009/2018 inventories and modeled using the same meteorology and episode days as 2002.

Episode represented by the following weeks per month:
January 15-21
February 12-18
March 12-18
April16-22

May 14-20
June 11-17
July 16-22
August 13-19
September 17-23
October 15-21
November 12-18
December 17-23

Days modeled as holidays for annual run:

New Year's Day - January 1
Good Friday – March 29
Memorial Day – May 27
July 4th
Labor Day – September 2
Thanksgiving Day – November 28, 29
Christmas Eve – December 24
Christmas Day – December 25

Output time zone:

Greenwich Mean Time (zone 0)

Projection:

Lambert Conformal with Alpha=33, Beta=45, Gamma=-97, and center at (-97, 40).

Domain:

36 Kilometer Grid: Origin at (-2736, -2088) kilometers with 148 rows by 112 columns and 36-km square grid cells.
12 Kilometer Grid: Origin at (108, -1620) kilometers with 168 rows by 177 columns and 12-km square grid cells.

CMAQ model species:

The CMAQ configuration was CB-IV with PM. The model species produced were: CO, NO, NO_2, ALD_2, ETH, FORM, ISOP, NR, OLE, PAR, TERPB, TOL, XYL, NH_3, SO_2, SULF, PEC, PMFINE, PNO_3, POA, PSO_4, and PMC.

Meteorology data:

Daily (25-hour). SMOKE requires the following five types of MCIP outputs: (1) Grid cross 2-d, (2) Grid cross 3-d, (3) Met cross 2-d, (4) Met cross 3-d, and (5), Met dot 3-d.

The reconstructed emissions based on the representative week run were calculated by mapping each day of week (Mon, Tue, Wed, etc.) from the modeled month to the same day of week generated in the representative week run. In the case of holidays, these days were mapped to representative week Sundays. An example of this mapping for the January episode is presented in Table 1.3-1 below. Note that although the emissions were generated for individual calendar years (2002, 2009 and 2018) the meteorology is based on 2002.

Table 1.3-1. Representative day mapping for January episode

(Highlighted representative week).

Modeled Date	Representative Day	Modeled Date	Representative Day	Modeled Date	Representative Day
1/1/2002*	1/20/2002	1/11/2002	1/18/2002	1/22/2002	1/15/2002
1/2/2002	1/16/2002	1/12/2002	1/19/2002	1/23/2002	1/16/2002
1/3/2002	1/17/2002	1/13/2002	1/20/2002	1/24/2002	1/17/2002
1/4/2002	1/18/2002	1/14/2002	1/21/2002	1/25/2002	1/18/2002
1/5/2002	1/19/2002	1/15/2002	1/15/2002	1/26/2002	1/19/2002
1/6/2002	1/20/2002	1/16/2002	1/16/2002	1/27/2002	1/20/2002
1/7/2002	1/21/2002	1/17/2002	1/17/2002	1/28/2002	1/21/2002
1/8/2002	1/15/2002	1/18/2002	1/18/2002	1/29/2002	1/15/2002
1/9/2002	1/16/2002	1/19/2002	1/19/2002	1/30/2002	1/16/2002
1/10/2002	1/17/2002	1/20/2002	1/20/2002	1/31/2002	1/17/2002
		1/21/2002	1/21/2002		
* Modeled holiday					

1.3.2 Development of non-road emission estimates

Emissions from non-road sources were estimated in two steps. First, emissions for non-road sources that are included in the NONROAD model were developed. Second, emissions from sources not included in the NONROAD model were estimated. The sections below detail the procedures used for each group of sources.

1.3.2.1 Emissions from NONROAD model sources

An initial 2002 base year emissions inventory for non-road engines and equipment covered by the EPA NONROAD model was prepared for VISTAS in early 2004. The methods and assumptions used to develop the inventory are presented in a February 9, 2004 report "*Development of the VISTAS Draft 2002 Mobile Source Emission Inventory (February 2004 Version)*" as prepared by E.H. Pechan & Associates, Inc. Except as otherwise stated below, all aspects of the preparation methodology documented in that report continue to apply to the revised NONROAD modeling discussed in this section.

Revisions to the initial 2002 NONROAD emissions inventory were implemented to ensure that the latest State and local data were considered, as well as to more accurately reflect gasoline sulfur contents for 2002 and correct other State-specific discrepancies. Those revisions comprise the Base F VISTAS non-road inventory. This section details the specific revisions made to the NONROAD model input files for the Base F and Base G VISTAS base year inventories, and provides insight into some key differences between the versions of the NONROAD model employed for the Base F and Base G inventories and the previous version employed for the initial 2002 base year inventory prepared by Pechan.

Revisions to the initial 2002 emissions inventory prepared by Pechan were actually implemented in two stages. An initial set of revisions was implemented in the fall of 2004. Those revisions resulted in the Base F inventory. These were followed by a second set of revisions in the spring of 2006. Those estimates produced the Base G base year inventory. To accurately document the combined effects of both sets of revisions, each set is discussed separately below. Unless otherwise indicated, all revisions implemented in Base F were carried directly into the Base G revision process without change. Thus, the inventories that resulted from the Base F revisions served as the starting point for the Base G revisions.

For Base F, three VISTAS States provided detailed data revisions for consideration in developing revised model inputs. These States were:

1. North Carolina
2. Tennessee (including a separate submission for Davidson County), and
3. Virginia.

The remaining seven VISTAS States indicated that the initial 2002 VISTAS input files prepared by Pechan continued to reflect the most recent data available. These States were:

1. Alabama,
2. Florida,
3. Georgia,
4. Kentucky,
5. Mississippi,
6. South Carolina, and
7. West Virginia.

However, it should be recognized that the NONROAD input files for *all* ten VISTAS States were updated to reflect gasoline sulfur content revisions for the Base F 2002 base year inventory (as discussed below). The original files prepared by Pechan are available on their FTP site in the /pub/VISTAS/MOB_0104/ directory.

Before presenting the specific implemented revisions, it is important to note that the Base F 2002 base year inventory utilized a newer release of the NONROAD model than was used for the initial 2002 base year inventory (prepared by Pechan). The Base F 2002 base year inventory, as developed in spring 2004, was based on the Draft NONROAD2004 model, which was released by the EPA in May of 2004. This model is no longer available on EPA's website. The initial 2002 base year inventory (prepared by Pechan) was based on the Draft NONROAD2002a version of the model (which is also no longer available on EPA's website). Key differences between the models are as follows:

- Draft NONROAD2004 included the effects of the Tier 4 non-road engine and equipment standards (this did not impact the Base F 2002 inventory estimates, but did affect Base F future year forecasts).
- Draft NONROAD2004 included the *exhaust* emission impacts of the large spark-ignition engine standards; the evaporative impacts of these standards are *not* incorporated (this does not impact 2002 inventory estimates, but does affect future year forecasts).
- Draft NONROAD2004 included revised equipment population estimates.
- The $PM_{2.5}$ fraction for *diesel* equipment in Draft NONROAD2004 had been updated from 0.92 to 0.97.
- Draft NONROAD2004 included revisions to recreational marine activity, useful life, and emission rates.

To the extent that these revisions affect 2002 emissions estimates, they will be reflected as differentials between the initial and Base F 2002 VISTAS base year inventories. It is perhaps important to identify that, at the time of the Base F inventory revisions; the EPA recognized the Draft NONROAD2004 model as an appropriate mechanism for SIP development. Although the model was designated as a draft update, it reflected the latest and most accurate NONROAD planning data at that time, as evidenced by the EPA's use of that version for the Tier 4 Final Rulemaking.

Prior to the Base G inventory revisions implemented in 2006, the EPA released another updated version of the NONROAD model, designated as Final NONROAD2005 (which can be downloaded from: http://www.epa.gov/OMSWWW/nonrdmdl.htm#model). This version ostensibly represents the final version of the model, although certain components of it have been updated since its first release in December 2005. For the Base G inventory developed in the first half of 2006, all updates of the Final NONROAD2005 model through March 2006 are included. Key differences between Final NONROAD2005 and Draft NONROAD2004 are as follows:

- Final NONROAD2005 reflects the latest basic emission rate and deterioration data.

- Final NONROAD2005 includes emission estimates for a range of evaporative emissions categories not included in Draft NONROAD2004 (tank and hose permeation, hot soak, and running loss emissions).
- Final NONROAD2005 includes a revised diurnal emissions algorithm.
- Final NONROAD2005 includes a revised equipment scrappage algorithm.
- Final NONROAD2005 includes revised state and county equipment allocation data.
- Final NONROAD2005 allows separate sulfur content inputs for marine and land-based diesel fuel.
- Final NONROAD2005 includes revised conversion factors for hydrocarbon emissions.
- Final NONROAD2005 includes the evaporative emission impacts of the large spark-ignition engine standards (this does not impact 2002 inventory estimates, but does affect future year forecasts).

Unfortunately, due to the extensive revisions associated with Final NONROAD2005, input files created for use with Draft NONROAD2004 (e.g., Base F input files) and earlier versions of the model cannot be used directly with Final NONROAD2005 (used for Base G). This created a rather significant impact in that the VISTAS NONROAD modeling process involves the consideration of over 200 unique sets of input data. To avoid creating new input files for each of these datasets, a conversion process was undertaken wherein each of the Draft NONROAD2004 (Base F) input data files were converted into the proper format required for proper execution in Final NONROAD2005 (Base G).[1] This process consisted of the following steps:

- Revise the Draft NONROAD2004 (Base F) input files to include the following two line EPA-developed comment at the end of the input file header (this is a nonsubstantive change implemented solely for consistency with input files produced directly using Final NONROAD2005):

```
9/2005 epa: Add growth & tech years to OPTIONS packet
  and Counties & Retrofit files to RUNFILES packet.
```

[1] The necessary conversions where developed by comparing substantively identical input files created using the graphical user interfaces for both Draft NONROAD2004 and Final NONROAD2005. The differences between the input files indicated the specific revisions necessary to convert existing VISTAS input files into Final NONROAD2005 format.

- Revise the Draft NONROAD2004 (Base F) input files to include the following two command lines after the “Weekday or weekend” command in the PERIOD packet:

```
Year of growth calc:
Year of tech sel   :
```

- Revise the Draft NONROAD2004 (Base F) input files to include the following command line after the “Diesel sulfur percent” command in the OPTIONS packet:

```
Marine Dsl sulfur %: 0.2638
```

  Note that the value 0.2638 (2638 parts per million by weight [ppmW]) is applicable only for 2002 modeling and was accordingly revised (as described below) for both the 2009 and 2018 Base G forecast inventories. The 2638 ppmW sulfur value for 2002 marine diesel fuel was taken from the 48-State (excludes Alaska and Hawaii) tabulation presented in the April 27, 2004 EPA document “*Diesel Fuel Sulfur Inputs for the Draft NONROAD2004 Model used in the 2004 Non-road Diesel Engine Final Rule*.” It should also be noted that this value differs by about 5 percent from the 2500 ppmW value previously used for the initial 2002 VISTAS modeling (performed by Pechan). Prior to Final NONROAD2005 (used for Base G), the NONROAD model allowed only a single diesel fuel sulfur input that was applied to both land-based and marine equipment. As documented in the February 9, 2004 report “*Development of the VISTAS Draft 2002 Mobile Source Emission Inventory (February 2004 Version)*” as prepared by E.H. Pechan & Associates, Inc., a value of 2500 ppmW sulfur was used for all 2002 VISTAS NONROAD modeling. Given the ability of Final NONROAD2005 to distinguish a separate sulfur content for marine equipment and the existing EPA guidance document suggesting an appropriate marine sulfur value of 2638 ppmW for 2002, the existing modeling value of 2500 ppmW was modified (for marine equipment only).

- Replace the Draft NONROAD2004 (Base F) input files RUNFILES packet command line:

```
TECHNOLOGY          : c:\non-road\data\tech\tech.dat
```

  with the command lines:

```
EXH TECHNOLOGY      : c:\non-road\data\tech\tech-exh.dat
EVP TECHNOLOGY      : c:\non-road\data\tech\tech-evp.dat
```

- Revise the Draft NONROAD2004 (Base F) input files to include the following two command lines after the “EPS2 AMS” command in the RUNFILES packet:

```
US COUNTIES FIPS   : c:\non-road\data\allocate\fips.dat
RETROFIT           :
```

- Revise the Draft NONROAD2004 (Base F) input files to include the following command line after the “Rec marine outbrd” command in the ALLOC FILES packet:

```
Locomotive NOx     : c:\non-road\data\allocate\XX_rail.alo
```

  Where “XX” varies across input files. For any given file, “XX” is the two digit abbreviation of the state associated with the scenario being modeled (e.g., for Alabama modeling, XX=AL).

- Replace the Draft NONROAD2004 (Base F) input files EMFAC FILES packet command line:

```
Diurnal            : c:\non-road\data\emsfac\diurnal.emf
```

  with the eight command lines:

```
Diurnal            : c:\non-road\data\emsfac\evdiu.emf
TANK PERM          : c:\non-road\data\emsfac\evtank.emf
NON-RM HOSE PERM   : c:\non-road\data\emsfac\evhose.emf
RM FILL NECK PERM  : c:\non-road\data\emsfac\evneck.emf
RM SUPPLY/RETURN   : c:\non-road\data\emsfac\evsupret.emf
RM VENT PERM       : c:\non-road\data\emsfac\evvent.emf
HOT SOAKS          : c:\non-road\data\emsfac\evhotsk.emf
RUNINGLOSS         : c:\non-road\data\emsfac\evrunls.emfEVP
```

- Revise the Draft NONROAD2004 (Base F) input files to include the following command line after the “PM exhaust” command in the DETERIORATE FILES packet:

```
Diurnal            : c:\non-road\data\detfac\evdiu.det
```

Once revised in this format, the VISTAS non-road input files developed for use with Draft NONROAD2004 (Base F) were executable under the Final NONROAD2005 model (Base G).

The only additional revisions implemented to develop a Final NONROAD2005-based inventory (Base G) involved elimination of non-default equipment allocation files for North Carolina and West Virginia. Due to concerns about improper equipment allocation across counties under the Draft NONROAD2004 model (used for Base F), as well as for earlier versions of the NONROAD model, North Carolina had produced alternative allocation data files indicating the number of employees in air transportation by county, the number of wholesale establishments by county, and the number of employees in landscaping services by county. For the same reason, West Virginia had produced alternative equipment allocation files indicating the number of employees in air transportation by county, the tonnage of underground coal production by county, the number of golf courses and country clubs by county, the number of wholesale establishments by county, the number of employees in logging operations by county, the number of employees in landscaping services by county, the number of employees in manufacturing operations by county, the number of employees in oil and gas drilling and extraction operations by county, and the number of recreational vehicle parks and campgrounds by county. These alternative equipment allocation files were used for all VISTAS inventory modeling conducted prior to the release of Final NONROAD2005 (i.e., through Base F). However, both North Carolina and West Virginia determined that the default allocation file revisions associated with the release of Final NONROAD2005 were appropriate to address the concerns that led to the development of the alternative allocation files. As a result, all alternative allocation file commands were removed from VISTAS NONROAD2005 (Base G) input files for North Carolina and West Virginia, so that the entire region under the Base G inventory is now modeled using the default allocation files provided with NONROAD2005.

In addition to the alternative equipment allocation files, North Carolina had previously developed an alternative seasonal adjustment file that was used for the Base F inventory in place of the default file provided with Draft NONROAD2004 (and earlier model versions). The alternative data file implemented a single change, namely reclassifying North Carolina as a southeastern state rather than a mid-Atlantic state (as identified in the default data file). Since Final NONROAD2005 continues to identify North Carolina as a mid-Atlantic state, North Carolina requested that the southeastern reclassification be continued for all NONROAD2005 modeling (Base G). To ensure that any other revisions associated with the seasonal adjustment file released with NONROAD2005 were not overlooked, the previously developed alternative seasonal adjustment file for North Carolina was scrapped and a new alternative file was created from the default seasonal adjustment file provided with Final NONROAD2005 for Base G inventory development. The alternative file, which was used for all North Carolina modeling, reclassifies North Carolina from a mid-Atlantic to a southeastern state. This represents the only non-default data file used for VISTAS NONROAD2005-based (Base G) modeling.

The remainder of this section documents all changes to the originally established VISTAS input file values as documented in the February 9, 2004 report "*Development of the VISTAS Draft 2002 Mobile Source Emission Inventory (February 2004 Version)*" as prepared by E.H. Pechan & Associates, Inc. Unless specifically stated below, all values from that report continue to be used without change in the latest VISTAS modeling.

Base F Revisions:

For the initial 2002 base year inventory (developed by Pechan), all NONROAD modeling runs for VISTAS were performed utilizing a gasoline sulfur content of 339 ppmW and a diesel sulfur content of 2,500 ppmW. Although the EPA-recommended non-road diesel fuel sulfur content for 2002 is 2,283 ppmW, the 2,500 ppmW sulfur content used for the initial 2002 base year VISTAS inventory was designed to remove the effect of lower non-road diesel fuel sulfur limits applicable only in California. (The EPA recommended inputs can be found in "*Diesel Fuel Sulfur Inputs for the Draft NONROAD2004 Model used in the 2004 Non-road Diesel Engine Final Rule*," EPA, April 27, 2004.) This correction is appropriate and was retained for the Base F 2002 inventory. Thus, the Base F inventory continued to assume a diesel fuel sulfur content of 2,500 ppmW across the VISTAS region.

However, 339 ppmW is not the EPA recommended 2002 gasoline sulfur content for either eastern conventional gasoline areas or Federal Reformulated Gasoline (RFG) areas. The recommended sulfur content for eastern conventional gasoline is 279 ppmW year-round, while the recommended sulfur content for RFG areas is 129 ppmW during the summer season and 279 ppmW during the winter season. (Conventional gasoline and RFG sulfur contents for 2002 can be found in "*User's Guide to MOBILE6.1 and MOBILE6.2, Mobile Source Emission Factor Model*," EPA420-R-03-010, U.S. EPA, August 2003 [pages 149-155] (available at link at http://www.epa.gov/otaq/m6.htm) and in the source code for MOBILE6.2 at Block Data BD05.) Given the differences in the EPA-recommended values and the value used to generate the initial 2002 base year inventory, the input files for Base F for *all* VISTAS areas were updated to reflect revised gasoline sulfur content assumptions.

Since the VISTAS NONROAD modeling is performed on a seasonal basis, and since gasoline sulfur content in RFG areas varies with the RFG season, seasonally-specific gasoline sulfur content values were estimated for use in RFG area modeling. In addition, 25 counties in Georgia are subject to a summertime gasoline sulfur limit of 150 ppmW, so that seasonal sulfur content estimates were also estimated for these counties. The initial 2002 base year NONROAD inventory (prepared by Pechan) for these Georgia counties was based on a year-round 339 ppmW gasoline sulfur content, but that oversight was corrected in the Base F 2002 base year inventory. Based on the seasonal definitions employed in the NONROAD model, monthly sulfur contents were averaged to estimate seasonal gasoline sulfur contents as follows:

Month/Season	RFG Areas	Conventional Gasoline Areas	Georgia Gasoline Control Areas
March	279 ppmW	279 ppmW	279 ppmW
April	279 ppmW	279 ppmW	279 ppmW
May	129 ppmW	279 ppmW	150 ppmW
Spring	229 ppmW	279 ppmW	236 ppmW
June	129 ppmW	279 ppmW	150 ppmW
July	129 ppmW	279 ppmW	150 ppmW

August	129 ppmW	279 ppmW	150 ppmW
Summer	129 ppmW	279 ppmW	150 ppmW
September	129 ppmW	279 ppmW	150 ppmW
October	279 ppmW	279 ppmW	279 ppmW
November	279 ppmW	279 ppmW	279 ppmW
Fall	229 ppmW	279 ppmW	236 ppmW
December	279 ppmW	279 ppmW	279 ppmW
January	279 ppmW	279 ppmW	279 ppmW
February	279 ppmW	279 ppmW	279 ppmW
Winter	279 ppmW	279 ppmW	279 ppmW

Note that the seasonal data are based on simple arithmetic averages and do not consider any monthly variation in activity (and fuel sales), and that the transition between summer and winter seasons is also not considered. Additionally, the summer fuel control season is treated as though it applies from May through September, while the summer RFG season actually ends on September 15 and the Georgia fuel control season does not officially begin until June 1. This treatment is consistent with the treatment of both fuel control programs in the VISTAS on-road vehicle modeling. Each of these influences will result in some error in the estimated sulfur content estimates, but it is expected that this error is small relative to the overall correction from a year-round sulfur content estimate of 339 ppmW.

All NONROAD modeling revisions made as part of the Base F inventory preparation process are presented in Table 1.3-2. Due to more involved updates in several areas, the number of NONROAD input files as well as sequence numbers used to represent these files was also updated in a few instances (as compared to the files used to create the initial 2002 VISTAS non-road inventory, as documented in the February 9, 2004 report "*Development of the VISTAS Draft 2002 Mobile Source Emission Inventory (February 2004 Version)*" as prepared by E.H. Pechan & Associates, Inc. These structural revisions are presented in Table 1.3-3, and are provided solely for the benefit of NONROAD modelers as the indicated revisions have no impact on generated emission estimates.

Table 1.3-2. Summary of Base F NONROAD Modeling Revisions

State	Revisions Implemented
AL	(1) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in all counties and all seasons (all are conventional gasoline areas).
FL	(1) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in all counties and all seasons (all are conventional gasoline areas).
GA	(1) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in all seasons for conventional gasoline counties. (2) Gasoline sulfur content changed from 339 ppmW to 150 ppmW in the summer for all gasoline control counties. (3) Gasoline sulfur content changed from 339 ppmW to 236 ppmW in the spring and fall for all gasoline control counties. (4) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in the winter for all gasoline control counties. *Gasoline control counties: Barrow, Bartow, Butts, Carroll, Cherokee (a), Clayton (a), Cobb (a), Coweta (a), Dawson, De Kalb (a), Douglas (a), Fayette (a), Forsyth (a), Fulton (a), Gwinnett (a), Hall, Haralson, Henry (a), Jackson, Newton, Paulding (a), Pickens, Rockdale (a), Spalding, and Walton*
KY	(1) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in all seasons for conventional gasoline counties. (2) Gasoline sulfur content changed from 339 ppmW to 129 ppmW in the summer for all gasoline control counties. (3) Gasoline sulfur content changed from 339 ppmW to 229 ppmW in the spring and fall for all gasoline control counties. (4) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in the winter for all gasoline control counties. *Gasoline control counties: Boone, Bullitt (b), Campbell, Jefferson, Kenton, and Oldham (b)*
MS	(1) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in all counties and all seasons (all are conventional gasoline areas).
NC	(1) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in all counties and all seasons (all are conventional gasoline areas). (2) Utilize revised (i.e., local) allocation files for three equipment categories. (3) Utilize revised (i.e., local) seasonal activity data.
SC	(1) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in all counties and all seasons (all are conventional gasoline areas).
TN	(1) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in all counties and all seasons (all are conventional gasoline areas). (2) Gasoline Reid Vapor Pressure (RVP) values changed in accordance with local recommendations. (3) Temperature data changed in accordance with local recommendations. (4) Counties regrouped in accordance with local recommendations.

- continued -

Table 1.3-2. Summary of Base F NONROAD Modeling Revisions (continued)

State	Revisions Implemented
VA	(1) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in all seasons for conventional gasoline counties. (2) Gasoline sulfur content changed from 339 ppmW to 129 ppmW in the summer for all gasoline control counties. (3) Gasoline sulfur content changed from 339 ppmW to 229 ppmW in the spring and fall for all gasoline control counties. (4) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in the winter for all gasoline control counties. (5) Gasoline RVP values changed in accordance with local recommendations. (6) Counties regrouped in accordance with local recommendations. (7) The control effectiveness for counties subject to Stage II controls revised to 77 percent in accordance with local recommendations. *Gasoline control counties: Arlington Co., Fairfax Co., Loudoun Co., Prince William Co., Stafford Co., Alexandria City, Fairfax City, Falls Church City, Manassas City, Manassas Park City, Chesterfield Co., Hanover Co., Henrico Co., Colonial Heights City, Hopewell City, Richmond City, James City, York Co., Chesapeake City, Hampton City, Newport News City, Norfolk City, Poquoson City, Portsmouth City, Suffolk City, Virginia Beach City, and Williamsburg City (c)*
WV	(1) Gasoline sulfur content changed from 339 ppmW to 279 ppmW in all counties and all seasons (all are conventional gasoline areas). (2) Continue to utilize local allocation files for nine equipment categories.

Notes:

(a) County is subject to local control currently, but is scheduled to join the RFG program in January 2005.
(b) Control area is a portion of the county, but modeling is performed as though the control applies countywide.
(c) The EPA also lists Charles City County as an RFG area, but local planners indicate that Charles City County is a conventional gasoline area and it is modeled as such.

Table 1.3-3. Base F NONROAD Input File Sequence and Structural Revisions

State	Initial 2002 Base Year Inventory Input File Sequence Numbers	Revised 2002 Inventory Input File Sequence Numbers	Reason(s) for Change	Number of Revised 2002 Inventory NONROAD Input Files
AL	01-08	01-08	No Structural Changes	32 (at 8 per season)
FL	09-10	09-10	No Structural Changes	8 (at 2 per season)
GA	11-13	11-13	No Structural Changes	12 (at 3 per season)
KY	14-22	14-22	No Structural Changes	36 (at 9 per season)
MS	48	48	No Structural Changes	4 (at 1 per season)
NC	23-25	23-25	No Structural Changes	12 (at 3 per season)
SC	26-32	26-32	No Structural Changes	28 (at 7 per season)
TN	33-34	33-34, 49-52	Counties Regrouped	24 (at 6 per season)
VA	35-43	35-38, 40-43	Counties Regrouped	32 (at 8 per season)
WV	44-47	44-47	No Structural Changes	16 (at 4 per season)
All	**01-48**	**01-38, 40-52**		**204 (at 51 per season)**

Note: (1) All files include internal revisions to reflect the data changes summarized in Table 1.3-3 above. This table is intended to present structural revisions that are of interest in assembling the NONROAD model input files into a complete VISTAS region inventory. The indicated revisions do not (in and of themselves) result in emission estimate changes.

(2) The NONROAD model imposes an eight digit input file name limit, so all input files for the revised 2002 base year inventory follow a modified naming convention to allow each to be distinguished from the input files for the initial 2002 base year inventory. For the initial 2002 base year inventory, the naming convention was:

ss02aaqq, where: ss = the two character State abbreviation,
aa = a two character season indicator as follows: AU = autumn, WI = winter, SP = spring, and SU = summer, and
qq = the two digit sequence number indicated above.

For the revised 2002 inventory, the naming convention was modified to:

ss02aFqq, where: ss = the two character State abbreviation,
a = a one character season indicator as follows: A = autumn, W = winter, S = spring, and X = summer, and
qq = the two digit sequence number indicated above.

Base G Revisions:

As described above, the primary modeling revision implemented for the Base G 2002 inventory was the use of the Final NONROAD2005 model (in place of the Base F use of Draft NONROAD2004). However, there were other minor revisions implemented for 13 Georgia counties and somewhat more significant revisions implemented for Tennessee. In Georgia, Stage II refueling control was assumed for 13 counties that previously were modeled as having no refueling control under Base F. In addition, to accommodate this Stage II change as well as forecast year changes in gasoline vapor pressure, corresponding changes in the structure and sequence of Georgia NONROAD input files were made. With the exception of the minor Stage II impacts, these structural and sequence changes have no impact on 2002 emission estimates, but allow for consistency between 2002 and forecast year input file structure and sequence. In Tennessee, more significant changes were implemented to gasoline vapor pressure assumptions, as well as similar minor changes in Stage II refueling control assumptions.

In accordance with instructions from Georgia regulators, Stage II refueling control was assumed in the following 13 Georgia counties at a control efficiency value of 81 percent for the Base G inventory:

> Cherokee, Clayton, Cobb, Coweta, DeKalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale.

No Stage II control was assumed in these counties in prior inventories.

Tennessee regulators provided revised monthly values for gasoline vapor pressure. Based on the seasonal definitions employed in the NONROAD model, monthly vapor pressures were averaged to estimate seasonal vapor pressures as follows:

Month/Season	Nashville Area	Memphis Area	Remainder of Tennessee
March	13.5 psi	13.5 psi	13.5 psi
April	13.5 psi	13.5 psi	13.5 psi
May	9.0 psi	9.0 psi	9.0 psi
Spring	12.0 psi	12.0 psi	12.0 psi
June	7.8 psi	7.8 psi	9.0 psi
July	7.8 psi	7.8 psi	9.0 psi
August	7.8 psi	7.8 psi	9.0 psi
Summer	7.8 psi	7.8 psi	9.0 psi
September 1-15	7.8 psi	7.8 psi	9.0 psi
September 16-30	11.5 psi	11.5 psi	11.5 psi
October	13.5 psi	13.5 psi	13.5 psi
November	13.5 psi	13.5 psi	13.5 psi
Fall	12.2 psi	12.2 psi	12.4 psi
December	15.0 psi	15.0 psi	15.0 psi
January	15.0 psi	15.0 psi	15.0 psi
February	13.5 psi	13.5 psi	13.5 psi
Winter	14.5 psi	14.5 psi	14.5 psi

Note: The Nashville area consists of Davidson, Rutherford, Sumner, Williamson and Wilson counties, the Memphis area consists of Shelby County.

As with the Base F revisions, the seasonal data are based on simple arithmetic averages and do not consider any monthly variation in activity (and fuel sales), nor is the transition between summer and winter seasons considered. Additionally, a monthly average of the September 1-15 and September 16-30 data is calculated prior to averaging the September-November data to estimate a fall average vapor pressure, so that the month of September is weighted identically to the months of October and November.

Tennessee regulators also indicated that Stage II vapor recovery was not in effect in Shelby County, so the Base F NONROAD input files for the county (which assumed Stage II was in place) were revised accordingly.

All Base G NONROAD modeling revisions are presented in Table 1.3-4. As indicated above, the differentiation of inputs across previously grouped counties also required revision to the overall number and sequence of VISTAS NONROAD input files (as compared to the files used to create both the initial VISTAS non-road inventory, as documented in the February 9, 2004 report "*Development of the VISTAS Draft 2002 Mobile Source Emission Inventory (February 2004 Version)*" as prepared by E.H. Pechan & Associates, Inc., and the Base F revised inventory as documented above. These structural revisions are presented in Table 1.3-5, and are provided solely for the benefit of NONROAD modelers as the indicated revisions have no impact on generated emission estimates.

Table 1.3-4. Summary of Base G NONROAD Modeling Revisions

State	Revisions Implemented
AL	(1) Marine diesel sulfur content changed from 2500 ppmW to 2638 ppmW in all counties and seasons.
FL	(1) Marine diesel sulfur content changed from 2500 ppmW to 2638 ppmW in all counties and seasons.
GA	(1) Marine diesel sulfur content changed from 2500 ppmW to 2638 ppmW in all counties and seasons. (2) Stage II refueling vapor recovery implemented in 13 counties at an efficiency of 81 percent. (3) Counties regrouped to accommodate base and forecast year data differentiations. *Stage II control counties: Cherokee, Clayton, Cobb, Coweta, De Kalb, Douglas, Fayette, Forsyth, Fulton, Gwinnett, Henry, Paulding, and Rockdale*
KY	(1) Marine diesel sulfur content changed from 2500 ppmW to 2638 ppmW in all counties and seasons.
MS	(1) Marine diesel sulfur content changed from 2500 ppmW to 2638 ppmW in all counties and seasons.
NC	(1) Marine diesel sulfur content changed from 2500 ppmW to 2638 ppmW in all counties and seasons. (2) Revert to default equipment allocation files for all equipment categories. (3) Utilize revised (i.e., local) seasonal activity data.
SC	(1) Marine diesel sulfur content changed from 2500 ppmW to 2638 ppmW in all counties and seasons.
TN	(1) Marine diesel sulfur content changed from 2500 ppmW to 2638 ppmW in all counties and seasons. (2) Gasoline RVP values changed in accordance with local recommendations. (3) Stage II vapor recovery eliminated from Shelby County modeling.
VA	(1) Marine diesel sulfur content changed from 2500 ppmW to 2638 ppmW in all counties and seasons.
WV	(1) Marine diesel sulfur content changed from 2500 ppmW to 2638 ppmW in all counties and seasons. (2) Revert to default equipment allocation files for all equipment categories.

Table 1.3-5. Spring 2006 NONROAD Input File Sequence and Structural Revisions

State	2002 Inventory Input File Sequence Numbers (Fall 2004)	2002 Inventory Input File Sequence Numbers (Spring 2006)	Reason(s) for Change	Number of Final 2002 Inventory NONROAD Input Files
AL	01-08	01-08	No Structural Changes	32 (at 8 per season)
FL	09-10	09-10	No Structural Changes	8 (at 2 per season)
GA	11-13	11-13, 53-54	Counties Regrouped	20 (at 5 per season)
KY	14-22	14-22	No Structural Changes	36 (at 9 per season)
MS	48	48	No Structural Changes	4 (at 1 per season)
NC	23-25	23-25	No Structural Changes	12 (at 3 per season)
SC	26-32	26-32	No Structural Changes	28 (at 7 per season)
TN	33-34, 49-52	33-34, 49-52	No Structural Changes	24 (at 6 per season)
VA	35-38, 40-43	35-38, 40-43	No Structural Changes	32 (at 8 per season)
WV	44-47	44-47	No Structural Changes	16 (at 4 per season)
All	**01-38, 40-52**	**01-38, 40-54**		**212 (at 53 per season)**

Note: (1) All files include internal revisions to reflect the data changes summarized in Table 1.3-5 above. This table is intended to present structural revisions that are of interest in assembling the NONROAD model input files into a complete VISTAS region inventory. The indicated revisions do not (in and of themselves) result in emission estimate changes.

(2) The NONROAD model imposes an eight digit input file name limit, so all input files for the revised 2002 base year inventory follow a modified naming convention to allow each to be distinguished from the input files for the initial 2002 and fall 2004-revised 2002 base year inventory. For the initial 2002 base year inventory, the naming convention was:

ss02aaqq, where: ss = the two character State abbreviation,
aa = a two character season indicator as follows: AU = autumn, WI = winter, SP = spring, and SU = summer, and
qq = the two digit sequence number indicated above.

For the fall 2004-revised 2002 inventory, the naming convention was modified to:

ss02aFqq, where: ss = the two character State abbreviation,
a = a one character season indicator as follows: A = autumn, W = winter, S = spring, and X = summer, and
qq = the two digit sequence number indicated above.

For the spring 2006-revised 2002 inventory, the naming convention was modified to:

ss02aCqq, where: ss = the two character State abbreviation,
a = a one character season indicator as follows: A = autumn, W = winter, S = spring, and X = summer, and
qq = the two digit sequence number indicated above.

1.3.2.2 Emissions from Commercial Marine Vessels, Locomotives, and Airplanes

An initial 2002 base year emissions inventory for aircraft, locomotives, and commercial marine vessels (CMV) was prepared for VISTAS in early 2004. The methods and data used to develop the inventory are presented in a February 9, 2004 report "*Development of the VISTAS Draft 2002 Mobile Source Emission Inventory (February 2004 Version)*" as prepared by E.H. Pechan & Associates, Inc. A summary of the initial 2002 base year emissions inventory is presented in Table 1.3-6. Except as otherwise stated below, all aspects of the preparation methodology continue to apply to the Base F and Base G emission inventories.

Revisions to the initial 2002 emissions inventory (prepared by Pechan) were implemented to ensure that the latest State and local data were incorporated as well as to correct an overestimation of PM emissions from aircraft. Revisions were actually implemented in two stages. An initial set of revisions was implemented in the fall of 2004. Those revisions constitute the Base F inventory. These were followed by a second set of revisions in 2006, which constitute the Base G inventory. To accurately document the combined effects of both sets of revisions, each set is discussed separately below. Unless otherwise indicated, all revisions implemented for Base F were carried directly into the Base G revision process without change. Thus, the inventories that resulted from the Base F revisions served as the starting point for the Base G revisions.

<u>Base F Revisions:</u>

Revisions to the initial 2002 base year emissions inventory were implemented to ensure that the latest State and local data were incorporated as well as to correct an overestimation of PM emissions from aircraft. Seven of the ten VISTAS States provided revised inventory data in the form of emissions reported to the EPA under the CERR. States providing CERR data were Alabama, Georgia, Mississippi, North Carolina, Tennessee (excluding Davidson, Hamilton, Knox, and Shelby Counties), Virginia, and West Virginia.

In many cases, the CERR data were only marginally different than the initial 2002 base year inventory data, but there were several instances where significant updates were evident. The remaining three VISTAS States (Florida, Kentucky, and South Carolina), plus Davidson, Hamilton, Knox, and Shelby counties in Tennessee, indicated that the initial 2002 VISTAS inventory continued to reflect the most recent data available. Florida did provide updated aircraft emissions data for one county (Miami-Dade) and these data were incorporated into the Base F 2002 inventory as described below.

Since several States recommended retaining the initial 2002 base year inventory data for Base F, the initial step toward revising the 2002 inventory consisted of modifying the estimated aircraft PM emissions of the initial inventory. The overestimation of aircraft PM became evident shortly after the release of the initial 2002 base year inventory, when it was determined that VISTAS region airports would constitute the top seven, and 11 of the top 15, PM sources in the nation. Moreover, PM emissions for one airport (Miami International) were a full order of magnitude larger than *all* other modeled elemental carbon PM emission sources. In addition, unexpected relationships across airports were also observed, with emissions for Atlanta's Hartsfield International being substantially less than those of Miami International, even though Atlanta handles over twice as many aircraft operations annually. Given the pervasiveness of this problem, and since the CERR data submitted by States was based on the initial 2002 VISTAS inventory data, aircraft PM emissions for the entire VISTAS region were recalculated.

Table 1.3-6. Initial 2002 Base Year Aircraft, Locomotive, and Non-Recreational Marine Emissions as Reported in February 2004 Pechan Report (annual tons)

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	3,787	175	688	475	17	196
	FL	28,518	11,955	46,352	31,983	1,050	3,703
	GA	3,175	992	3,919	2,704	94	353
	KY	2,666	657	2,597	1,792	63	263
	MS	1,593	140	553	381	13	96
	NC	6,088	1,548	6,115	4,219	148	613
	SC	6,505	515	452	312	88	863
	TN	6,854	2,665	7,986	5,510	225	920
	VA	17,676	5,607	14,476	9,988	234	3,229
	WV	1,178	78	310	214	8	66
	Total	78,040	24,332	83,448	57,578	1,940	10,302
Commercial Marine (2280)	AL	1,195	9,217	917	843	3,337	736
	FL	5,888	44,817	1,936	1,781	6,683	1,409
	GA	1,038	7,874	334	307	1,173	246
	KY	6,607	50,267	2,246	2,066	9,608	1,569
	MS	5,687	43,233	1,903	1,750	7,719	1,351
	NC	599	4,547	193	178	690	142
	SC	1,067	8,100	343	316	1,205	253
	TN	4,129	31,397	1,390	1,278	5,753	980
	VA	1,198	3,426	929	855	3,258	596
	WV	2,094	15,882	668	614	720	497
	Total	29,503	218,760	10,858	9,989	40,146	7,779
Military Marine (2283)	VA	136	387	28	26	30	59
	Total	136	387	28	26	30	59
Locomotives (2285)	AL	3,490	26,339	592	533	1,446	1,354
	FL	1,006	9,969	247	222	605	404
	GA	2,654	26,733	664	598	1,622	1,059
	KY	2,166	21,811	542	488	1,321	867
	MS	2,302	23,267	578	520	1,429	899
	NC	1,638	16,502	410	369	1,001	654
	SC	1,160	11,690	291	261	710	462
	TN	4,530	44,793	1,110	999	2,689	1,805
	VA	1,928	19,334	1,407	1,266	3,443	798
	WV	1,105	11,150	277	249	681	436
	Total	21,980	211,588	6,118	5,505	14,947	8,738
Grand Total		129,659	455,067	100,452	73,099	57,062	26,877

Aircraft do emit PM while operating. However, official EPA inventory procedures for aircraft generally do not include PM emission factors and, therefore, aircraft PM is generally erroneously reported as zero. In an effort to overcome this deficiency, the developers of the initial VISTAS 2002 base year aircraft inventory (Pechan) estimated PM emission rates for aircraft using estimated NO_x emissions and an unreported PM-to-NO_x ratio (i.e., PM = NO_x times a PM-to-NO_x ratio). According to the initial 2002 base year inventory documentation, this approach was applied only to commercial aircraft NO_x, but a review of that inventory indicates that the technique was also applied to military, general aviation, and air taxi aircraft in many, but not all, instances. Although there is nothing inherently incorrect with this approach, the accuracy and inconsistent application of the assumed PM-to-NO_x ratio results in grossly overestimated aircraft PM.

Through examination of the initial 2002 base year aircraft inventory (prepared by E.H. Pechan and Associates, Inc.), it is apparent that the commercial aircraft PM-to-NO_x ratio used to generate PM emission estimates was approximately equal to 3.95 (i.e., PM = NO_x times 3.95). While the majority of observed commercial aircraft PM-to-NO_x ratios in that inventory are equal to 3.95, a few range as low as 3.00. If all aircraft estimates are included (i.e., commercial plus military, general aviation, and air taxi), observed PM-to-NO_x ratios range from 0 to 123.0, and average 3.43 as illustrated in Table 1.3-7

Table 1.3-7 PM-to-NO_x Ratios by Aircraft Type In Initial 2002 Base Year Inventory.

Aircraft Type	Average PM-to-NO_x	Range of PM-to-NO_x	Average $PM_{2.5}$ / PM_{10}	Range of $PM_{2.5}$ / PM_{10}
Undefined (1)	0.046	0-0.062	0.690	0.690-0.690
Military	0.073	0-92.3	0.688	0.333-1.000
Commercial	3.953	3.00-3.953	0.690	0.667-0.696
General Aviation	2.059	0-9.00	0.689	0.500-1.000
Air Taxi	2.734	0-123.0	0.690	0.500-1.000
Aggregate	3.427	0-123.0	0.690	0.333-1.000

Note: (1) Two counties report aircraft emissions as SCC 2275000000 “all aircraft.”

As indicated, the aggregate PM-to-NO_x ratio is similar in magnitude to the ratio for commercial aircraft. This results from the dominant nature of commercial aircraft NO_x emissions relative to NO_x from other aircraft types. It is surmised that ratios that deviate from 3.95 are based on PM emission estimates generated by local planners, which were retained without change in the PM estimation process (although a considerable number of unexplained “zero PM” records also exist in the initial 2002 base year inventory dataset). Regardless, based on previous statistical analyses performed in support of aircraft emissions inventory development outside the VISTAS region, a PM-to-NO_x ratio of 3.95 is too large by over an order of magnitude.

In analyses performed for the Tucson, Arizona planning area, PM-to-NO_x ratios for aircraft over a standard aircraft landing and takeoff (LTO) cycle are shown in Table 1.3-8. Data for this table is taken from "Emissions Inventories for the Tucson Air Planning Area, Volume I., Study Description and Results," prepared for the Pima Association of Governments, Tucson, AZ, November 2001. Pages 4-40 through 4-42 of that report, which document the statistical derivation of these ratios, are included in this report as Appendix E.

Table 1.3-8. Tucson, AZ PM-to-NO_x Ratios by Aircraft Type.

Aircraft Type	PM-to-NO_x
Commercial Aircraft	0.26
Military Aircraft	0.88
Air Taxi Aircraft	0.50
General Aviation Aircraft	1.90

Note:

The PM and NO_x emission estimates presented in the Tucson study are for local aircraft operating mode times. For this work, emission estimates for Tucson were recalculated for a standard LTO cycle, so that the ratios presented are applicable to the standard LTO cycle and not a Tucson-specific cycle. Thus, the ratios presented herein vary somewhat from those associated with the emission estimates presented in the Tucson study report.

In reviewing these data, it should be considered that they apply to a standard (i.e., EPA-defined) commercial aircraft LTO cycle.[2] Aircraft PM-to-NO_x ratios vary with operating mode, so that aircraft at airports with mode times that differ from the standard cycle will exhibit varying ratios. However, conducting an airport-specific analysis for all airports in the VISTAS region was beyond the scope of this work. While local PM-to-NO_x ratios could vary somewhat from the indicated standard cycle ratios, any error due to this variation will be significantly less than the order of magnitude error associated with the 3.95 commercial aircraft ratio used for the initial 2002 base year inventory.

It should be recognized that while the Tucson area is far removed from the VISTAS region, the data analyzed to generate the PM-to-NO_x ratios is standard aircraft emission factor data routinely

[2] As defined in *AP-42, Compilation of Air Pollutant Emission Factors, Volume II, Mobile Sources, a standard commercial aircraft LTO cycle consists of 4 minutes of approach time, 26 minutes of taxi (7 minutes in plus 19 minutes out), 0.7 minutes of takeoff, and 2.2 minutes of climbout time (approach and climbout times being based on a 3000 foot mixing height).*

employed for inventory purposes throughout the United States (as encoded in models such as the Federal Aviation Administration's Emissions Data Management Systems [EDMS]). With the exception of aircraft operating conditions, there are no inherent geographic implications associated with the use of data from the Tucson study. As indicated above, issues associated with local operating conditions have been eliminated by recalculating the Tucson study ratios for a standard LTO cycle.

To implement the revised PM-to-NO_x ratios in the Base F inventory, *all* aircraft PM records were removed from the initial 2002 base year inventory (prepared by Pechan). This includes records for which local planners may have estimated PM emissions. This approach was taken for two reasons. First, there is no way to distinguish which records may have been generated by local planners. Second, the data available to local planners may be no better than that used to generate the presented PM-to-NO_x ratio data, so the consistent application of these data to the entire VISTAS region was determined to be the most appropriate approach to generating consistent inventories throughout the region. In undertaking this removal, it became apparent that there was an imbalance in the aircraft NO_x and PM records in the initial 2002 base year inventory. Whereas there were 1,531 NO_x records in the NIF emission data sets for this source category, there were only 1,212 PM records. The imbalance was distributed between three States, South Carolina, Tennessee, and Virginia as follows:

Table 1.3-9 Non-Corresponding Aircraft Emissions Records

Aircraft NO_x records with no corresponding PM record:			
Aircraft Type	**South Carolina**	**Virginia**	**Total**
Military Aircraft	8	100	108
General Aviation Aircraft	14	94	108
Air Taxi Aircraft	5	99	104
Aggregate	27	293	320
Aircraft PM records with no corresponding NO_x record:			
Aircraft Type	**Tennessee**		**Total**
Air Taxi Aircraft	1		1
Aggregate	1		1

The unmatched PM record was for Hamilton County (Chattanooga), Tennessee and when removed, was not replaced since there was no corresponding NO_x record with which to estimate revised PM emissions. It is unclear how this orphaned record originated, but clearly there can be no air taxi PM emissions without other combustion-related emissions. Thus, the removal of the

PM_{10} and $PM_{2.5}$ records for Hamilton County permanently reduced the overall size of the 2002 initial base year inventory database used as a starting point for Base F by two records.

Of the 320 unmatched NO_x records, 269 were records for which the reported emission rate was zero. Therefore, even though associated PM records were missing, the overall inventory was not affected. However, the 51 missing records for which NO_x emissions were non-zero, did impact PM estimates for the overall inventory.

Replacement PM_{10} records were calculated for all aircraft NO_x records using the PM-to-NO_x ratios presented above. Aircraft type-specific ratios were utilized in all cases, except for two counties where aircraft emissions were reported under the generic aircraft SCC 2275000000. For these counties (Palm Beach County, Florida and Davidson County, Tennessee), the commercial aircraft PM-to-NO_x ratio was applied since both contain commercial airports (Palm Beach International and Nashville International).

Replacement aircraft $PM_{2.5}$ records were also developed. The initial 2002 base year inventory assumed that aircraft $PM_{2.5}$ was 69 percent of aircraft PM_{10}. The origin of this fraction is not clear, but it is very low for combustion related PM. The majority of internal combustion engine related PM is typically 1 micron or smaller ($PM_{1.0}$), so that typical internal combustion engine $PM_{2.5}$ fractions approach 100 percent. For example, the EPA NONROAD model assumes 92 percent for gasoline engine particulate and 97 percent for diesel engine particulate. Based on recent correspondence from the EPA, it appears that the agency is preparing to recommend a $PM_{2.5}$ fraction of 98 percent for aircraft. (August 12, 2004 e-mail correspondence from U.S. EPA to Gregory Stella of Alpine Geophysics.) This is substantially more consistent with expectations based on emissions test data for other internal combustion engine sources and was used as the basis for the recalculated aircraft $PM_{2.5}$ emission estimates in the Base F inventory.

Although a substantial portion of the initial 2002 base year inventory was ultimately replaced with data prepared by State and local planners under CERR requirements in developing the Base F inventory, it was necessary to first revise the initial 2002 base year aircraft inventory as described so that records extracted from the inventory for areas not supplying CERR data for the Base F update would be accurate. Therefore, in *no case* is the aggregated State data reported for the Base F inventory identical to that of the initial 2002 base year inventory. Even areas relying on the initial 2002 base year inventory will reflect updates in Base F due to changes in emissions of PM_{10} and $PM_{2.5}$ from aircraft.

Table 1.3-10 presents the updated initial 2002 base year inventory estimates. These estimates do not reflect any changes related to modifications made to incorporate the CERR data, but instead indicate the impacts associated solely with the recalculation of aircraft PM emissions alone to apply the more appropriate PM to NO_x ratios. Table 1.3-11 presents a summary of the net impacts of these changes, where an over 90 percent reduction in aircraft PM is observed for all VISTAS areas except South Carolina and Virginia. The reasons for the lesser changes in these two States is that the overall aircraft NO_x inventories for both include a large share of military aircraft NO_x to which no (or very low) particulate estimates were assigned in the initial 2002 base year inventory. Since these operations are assigned non-zero PM emissions under the revised approach, the increase in military aircraft PM offsets a portion of the reduction in commercial aircraft PM. In Virginia, zero (or near zero) PM military operations were responsible for about 35 percent of total aircraft NO_x, while the corresponding fraction in South Carolina was almost 70 percent. As indicated, aggregate aircraft, locomotive, and commercial marine vessel PM is 70-75 percent lower in the updated 2002 base year inventory.

Table 1.3-10. Initial 2002 Base Year Aircraft, Locomotive, and Non-Recreational Marine Emissions with Modified Aircraft PM Emission Rates (annual tons)

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	3,787	175	64	62	17	196
	FL	28,518	11,955	3,193	3,129	1,050	3,703
	GA	3,175	992	269	264	94	353
	KY	2,666	657	179	175	63	263
	MS	1,593	140	44	43	13	96
	NC	6,088	1,548	419	411	148	613
	SC	6,505	515	409	401	88	863
	TN	6,854	2,665	707	692	225	920
	VA	17,676	5,607	2,722	2,667	234	3,229
	WV	1,178	78	25	24	8	66
	Total	78,040	24,332	8,030	7,870	1,940	10,302
Commercial Marine (2280)	AL	1,195	9,217	917	843	3,337	736
	FL	5,888	44,817	1,936	1,781	6,683	1,409
	GA	1,038	7,874	334	307	1,173	246
	KY	6,607	50,267	2,246	2,066	9,608	1,569
	MS	5,687	43,233	1,903	1,750	7,719	1,351
	NC	599	4,547	193	178	690	142
	SC	1,067	8,100	343	316	1,205	253
	TN	4,129	31,397	1,390	1,278	5,753	980
	VA	1,198	3,426	929	855	3,258	596
	WV	2,094	15,882	668	614	720	497
	Total	29,503	218,760	10,858	9,989	40,146	7,779
Military Marine (2283)	VA	136	387	28	26	30	59
	Total	136	387	28	26	30	59
Locomotives (2285)	AL	3,490	26,339	592	533	1,446	1,354
	FL	1,006	9,969	247	222	605	404
	GA	2,654	26,733	664	598	1,622	1,059
	KY	2,166	21,811	542	488	1,321	867
	MS	2,302	23,267	578	520	1,429	899
	NC	1,638	16,502	410	369	1,001	654
	SC	1,160	11,690	291	261	710	462
	TN	4,530	44,793	1,110	999	2,689	1,805
	VA	1,928	19,334	1,407	1,266	3,443	798
	WV	1,105	11,150	277	249	681	436
	Total	21,980	211,588	6,118	5,505	14,947	8,738
Grand Total		129,659	455,067	25,034	23,390	57,062	26,877

Table 1.3-11. Change in Initial 2002 Base Year Emissions due to Aircraft PM Emission Rate Modifications.

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	0%	0%	-91%	-87%	0%	0%
	FL	0%	0%	-93%	-90%	0%	0%
	GA	0%	0%	-93%	-90%	0%	0%
	KY	0%	0%	-93%	-90%	0%	0%
	MS	0%	0%	-92%	-89%	0%	0%
	NC	0%	0%	-93%	-90%	0%	0%
	SC	0%	0%	-9%	+29%	0%	0%
	TN	0%	0%	-91%	-87%	0%	0%
	VA	0%	0%	-81%	-73%	0%	0%
	WV	0%	0%	-92%	-89%	0%	0%
	Total	0%	0%	-90%	-86%	0%	0%
Commercial Marine (2280)	AL	0%	0%	0%	0%	0%	0%
	FL	0%	0%	0%	0%	0%	0%
	GA	0%	0%	0%	0%	0%	0%
	KY	0%	0%	0%	0%	0%	0%
	MS	0%	0%	0%	0%	0%	0%
	NC	0%	0%	0%	0%	0%	0%
	SC	0%	0%	0%	0%	0%	0%
	TN	0%	0%	0%	0%	0%	0%
	VA	0%	0%	0%	0%	0%	0%
	WV	0%	0%	0%	0%	0%	0%
	Total	0%	0%	0%	0%	0%	0%
Military Marine (2283)	VA	0%	0%	0%	0%	0%	0%
	Total	0%	0%	0%	0%	0%	0%
Locomotives (2285)	AL	0%	0%	0%	0%	0%	0%
	FL	0%	0%	0%	0%	0%	0%
	GA	0%	0%	0%	0%	0%	0%
	KY	0%	0%	0%	0%	0%	0%
	MS	0%	0%	0%	0%	0%	0%
	NC	0%	0%	0%	0%	0%	0%
	SC	0%	0%	0%	0%	0%	0%
	TN	0%	0%	0%	0%	0%	0%
	VA	0%	0%	0%	0%	0%	0%
	WV	0%	0%	0%	0%	0%	0%
	Total	0%	0%	0%	0%	0%	0%
Grand Total		0%	0%	-75%	-68%	0%	0%

As indicated above, for the Base F 2002 base year inventory, data for all or portions of seven VISTAS States were replaced with corresponding data from recent (as of the fall of 2004) CERR submissions for 2002. Before replacing these data, however, an analysis of the CERR data was performed to ensure consistency with VISTAS inventory methods. It should perhaps also be noted that three of the CERR datasets provided for the Base F 2002 base year inventory (specifically those for Tennessee, Virginia, and West Virginia) included both annual and daily emissions data. Only the annual data were used. Daily values were removed.

Several important observations resulted from this analysis. First, it was clear that all of the CERR data continued to rely on the inaccurate aircraft PM estimation approach employed for the initial 2002 base year inventory. Therefore, an identical aircraft PM replacement procedure as described above for updating the initial 2002 base year inventory was undertaken for CERR supplied data. As a result, the CERR data for *all* VISTAS States has been modified for inclusion in the Base F 2002 VISTAS base year inventory due to PM replacement procedures.

As was the case with the initial VISTAS 2002 base year inventory, there were a substantial number of aircraft NO_x records without corresponding PM records, so that the number of recalculated PM records added to the CERR dataset is greater than the number of PM records removed. The aggregated CERR inventory data, reflecting data for all or parts of seven States, consisted of 13,656 records, of which 1,211 were aircraft NO_x records. However, the number of corresponding aircraft PM records was 662 (662 PM_{10} records and 662 $PM_{2.5}$ records). This imbalance was distributed as follows:

Table 1.3-12 CERR Aircraft NO_x Records with No Corresponding PM Record.

Aircraft Type	Georgia	Tennessee	Virginia	Total
Military Aircraft			136	136
Commercial Aircraft		4	136	140
General Aviation Aircraft	1		136	137
Air Taxi Aircraft			136	136
Aggregate	1	4	544	549

From this tabulation, it is clear that virtually the entire imbalance is associated with the Virginia CERR submission, with minor imbalances in Georgia and Tennessee. Of the 549 unmatched NO_x records, 461 were records for which the reported emission rate was zero. Therefore, even though the associated PM records were missing, the overall inventory was not affected. However, the 88 missing records for which NO_x emissions were non-zero do impact PM emission estimates for the overall inventory.

Replacement aircraft PM records (both PM_{10} and $PM_{2.5}$) were generated for the CERR dataset using procedures identical to those described above for the updated initial 2002 base year inventory.

Further analysis revealed that the CERR data for Virginia included only VOC, CO, and NO_x emissions for all aircraft, locomotives, and non-recreational marine vessels. Since SO_2, PM_{10}, and $PM_{2.5}$ records are included in the 2002 VISTAS inventory, an estimation method was developed for these emission species and applied to the Virginia CERR data. For PM, the developed methodology was only employed for locomotive and marine vessel data since aircraft PM was estimated using the PM-to-NO_x ratio methodology described above.

Consideration was given to simply adding the Virginia SO_2 and non-aircraft PM records from the initial 2002 VISTAS inventory dataset, but it is very unlikely that either the source distribution or associated emission rates are identical across the CERR and initial VISTAS inventories. This was confirmed through a comparative analysis of dataset CO records. Therefore, an estimation methodology was developed using Virginia source-specific SO_2/CO, PM_{10}/CO, and $PM_{2.5}$/PM_{10} ratios from the initial 2002 base year VISTAS inventory. The calculated ratios were then applied to the source-specific CERR CO emission estimates to derive associated source-specific SO_2, PM_{10}, and $PM_{2.5}$ emissions for the Base F inventory.

Initially, the development of the emissions ratios from the initial 2002 base year inventory was performed at the State (i.e., Virginia), county, and SCC level of detail. However, it readily became clear that there were substantial inconsistencies in ratios for identical SCCs across counties. For example, in one county, the SO_2/CO ratio might be 0.2, while in the next county it would be 2.0. Since the sources in question are virtually identical (e.g., diesel locomotives) and since the fueling infrastructure for these large non-road equipment sources is regional as opposed to local in nature, such variations in emission rates are not realistic. Therefore, a more aggregated approach was employed in which SCC-specific emission ratios were developed for the State as a whole. Through this approach county-to-county variation in emission ratios is eliminated, but the underlying variation in CO emissions does continue to influence the resulting aggregate emission estimates. The applied emission ratios are as follows:

Table 1.3-13 Calculated Emission Ratios for VA.

Source	SCC	SO_2/CO	PM_{10}/CO	$PM_{2.5}$/CO	$PM_{2.5}$/PM_{10}
Military Aircraft	2275001000	0.0215	*Emissions estimated using PM-to-NO_x ratios as described previously.*		
Commercial Aircraft	2275020000	0.3292			
General Aviation Aircraft	2275050000	0.0002			
Air Taxi Aircraft	2275060000	0.0015			
Aircraft Refueling	2275900000	0.0000	0.0000	0.0000	
Diesel Commercial Marine	2280002000	0.3697	0.3434	0.3157	0.92
Residual Commercial Marine	2280003000	0.3697	0.3434	0.3157	0.92
Diesel Military Marine	2283002000	0.2422	0.2248	0.2068	0.92
Line Haul Locomotives	2285002005	3.2757	1.2999	1.1696	0.90
Yard Locomotives	2285002010	2.2908	1.2461	1.1205	0.90

It is important to recognize that the inconsistency of emissions ratios across Virginia counties for sources of virtually identical design, which utilize a regional rather than local fueling infrastructure, has potential implications for other VISTAS States. There is no immediately obvious reason to believe that such inconsistencies would be isolated to Virginia.

One final revision to the CERR dataset was undertaken as part of the Base F effort, and that was the removal of two records for unpaved airstrip particulate (SCC 2275085000) in Alabama. Otherwise identical records for these emissions were reported both in terms of filterable and primary particulate. The filterable particulate records were removed as all other particulate emissions in the VISTAS inventories are in terms of primary particulate. It is also perhaps worth noting that a series of aircraft refueling records (SCC 2275900000) for Virginia were left in place, even through typically such emissions would be reported under SCC 2501080XXX in the area source inventory. If additional VISTAS aircraft refueling emissions are reported under SCC 2501080XXX, then it may be desirable to recode these records.

Finally, data for areas of the VISTAS region not represented in the CERR dataset were added to the CERR data by extracting the appropriate records from the initial 2002 base year inventory (with revisions for aircraft PM to NO_x ratios). Specifically, records applicable to the States of Florida, Kentucky, South Carolina, and the Tennessee counties of Davidson, Hamilton, Knox, and Shelby were extracted from the revised initial 2002 inventory and added to the CERR dataset to establish the 2002 Base F inventory.

Following this aggregation, one last dataset revision was implemented to complete the development of the 2002 Base F inventory. As indicated in the introduction of this section, the initial 2002 base year emission estimates for Miami International Airport were determined to be excessive. Although the reason for this inaccuracy was not apparent, revised estimates for aircraft emissions in Miami-Dade County were obtained from Florida planners and used to overwrite the erroneous estimates. (Aircraft emission estimates were provided in an August 10, 2004 e-mail transmittal from Bruce Coward of Miami-Dade County to Martin Costello of the Florida Department of Environmental Protection.)

Table 1.3-14 presents a summary of the resulting Base F VISTAS 2002 base year inventory estimates for aircraft, locomotives, and non-recreational marine vessels. Table 1.3-15 provides a comparison of the Base F 2002 base year inventory estimates to those of the initial 2002 base year inventory. As indicated, total emissions for VOC, CO, NO_x, and SO_2 are generally within 10 percent, but final PM emissions are reduced by 70-80 percent due to the approximate 90 percent reductions in aircraft PM estimates. In addition, the significant changes in Georgia aircraft emissions are due to the CERR correction of Atlanta Hartsfield International Airport emissions, which were significantly underestimated in the initial 2002 base year inventory. The reduction in Florida aircraft emissions due to the correction of Miami International estimates is also apparent.

Lastly, Table 1.3-16 provides a direct comparison of emission estimates from the initial and Base F 2002 base year inventories for all 16 VISTAS region airports with estimated annual aircraft NO_x emissions of 200 tons or greater (as identified at the conclusion of the Base F revisions).[3] The table entries are sorted in order of decreasing NO_x and once again, the dramatic reduction in PM emissions is evident. However, in addition, the appropriate reversal of the relationship between Atlanta's Hartsfield and Miami International Airport is also depicted. As a rough method of quality assurance, Table 1.3-15 also includes a *gross* estimate of expected airport NO_x emissions using detailed NO_x estimates developed for Tucson International Airport in conjunction with the ratio of local to Tucson LTOs. (The Tucson NO_x estimates are revised to reflect a standard LTO cycle rather than the Tucson-specific LTO cycle. This should provide for a more realistic comparison to VISTAS estimates.) This is not meant to serve as anything other than a crude indicator of the propriety of the developed VISTAS estimates, and it is clear that the range of estimated-to-expected NO_x emissions has been substantially narrowed in the Base F 2002 base year inventory. Whereas estimated-to-expected ratios varied from about 0.2 to over 3.5 in the initial 2002 base year inventory, the range of variation is tightened on both ends, from about 0.5 to 1.75 for the Base F 2002 base year inventory. In effect, all estimates are now within a factor of two of the expected estimates, which is quite reasonable given likely variation in local and standard LTO cycles and variations in aircraft fleet mix across airports.

It is perhaps important to note that some shifting in county emissions assignments is evident between the initial and Base F 2002 base year aircraft inventories. For example, for the initial 2002 base year inventory, Atlanta Hartsfield estimates were assigned to Fulton County (FIP 13121), while they are assigned to Clayton County (FIP 13063) for the Base F 2002 base year inventory. Similarly, Dulles International Airport emissions were assigned solely to Fairfax County, Virginia (FIP 51059) in the initial 2002 base year inventory, but are split between Fairfax and Loudoun County (FIP 51107) for Base F. Such shifts reflect local planner decision-making and are not an artifact of the revisions described above.

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[3] Subsequent revisions performed for Base G result in the addition of the Cincinnati/Northern Kentucky International Airport to the group of airports with aircraft operations generating at least 200 tons of NO_x. These revisions are discussed below, including the addition of an appropriately modified version of the aircraft emissions table.

Table 1.3-14. Base F 2002 Base Year Aircraft, Locomotive, and Non-Recreational Marine Emissions (tons/year)

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	3,787	175	226	87	17	196
	FL	25,431	8,891	2,424	2,375	800	3,658
	GA	6,622	5,372	1,475	1,446	451	443
	KY	2,666	657	179	175	63	263
	MS	1,593	140	44	43	13	96
	NC	6,088	1,548	419	411	148	613
	SC	6,505	515	409	401	88	863
	TN	7,251	2,766	734	719	235	943
	VA	9,763	2,756	1,137	1,115	786	2,529
	WV	1,178	78	25	24	8	66
	Total	70,884	22,899	7,072	6,797	2,607	9,670
Commercial Marine (2280)	AL	1,196	9,218	917	844	3,337	737
	FL	5,888	44,817	1,936	1,781	6,683	1,409
	GA	1,038	7,875	334	307	1,173	246
	KY	6,607	50,267	2,246	2,066	9,608	1,569
	MS	5,688	43,233	1,903	1,751	7,719	1,351
	NC	599	4,547	193	178	690	142
	SC	1,067	8,100	343	316	1,205	253
	TN	3,624	27,555	1,217	1,120	4,974	860
	VA	972	2,775	334	307	359	483
	WV	1,528	11,586	487	448	525	362
	Total	28,207	209,972	9,911	9,118	36,275	7,413
Military Marine (2283)	VA	110	313	25	23	27	48
	Total	110	313	25	23	27	48
Locomotives (2285)	AL	3,490	26,339	592	533	1,446	1,354
	FL	1,006	9,969	247	222	605	404
	GA	2,725	27,453	682	614	1,667	1,086
	KY	2,166	21,811	542	488	1,321	867
	MS	2,302	23,267	578	520	1,429	899
	NC	1,638	16,502	410	369	1,001	654
	SC	1,160	11,690	291	261	710	462
	TN	2,626	25,627	633	570	1,439	1,041
	VA	1,186	11,882	1,529	1,375	3,641	492
	WV	1,311	13,224	329	296	808	517
	Total	19,611	187,764	5,833	5,248	14,066	7,777
Grand Total		118,812	420,948	22,841	21,186	52,976	24,908

Table 1.3-15. Change in 2002 Emissions, Base F Inventory Relative to Initial Inventory

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	0%	0%	-67%	-82%	0%	0%
	FL	-11%	-26%	-95%	-93%	-24%	-1%
	GA	+109%	+442%	-62%	-47%	+379%	+26%
	KY	0%	0%	-93%	-90%	0%	0%
	MS	0%	0%	-92%	-89%	0%	0%
	NC	0%	0%	-93%	-90%	0%	0%
	SC	0%	0%	-9%	+29%	0%	0%
	TN	+6%	+4%	-91%	-87%	+4%	+2%
	VA	-45%	-51%	-92%	-89%	+236%	-22%
	WV	0%	0%	-92%	-89%	0%	0%
	Total	-9%	-6%	-92%	-88%	+34%	-6%
Commercial Marine (2280)	AL	+0%	+0%	+0%	+0%	+0%	+0%
	FL	0%	0%	0%	0%	0%	0%
	GA	+0%	+0%	+0%	+0%	+0%	+0%
	KY	0%	0%	0%	0%	0%	0%
	MS	+0%	+0%	+0%	+0%	+0%	+0%
	NC	+0%	+0%	+0%	+0%	+0%	+0%
	SC	0%	0%	0%	0%	0%	0%
	TN	-12%	-12%	-12%	-12%	-14%	-12%
	VA	-19%	-19%	-64%	-64%	-89%	-19%
	WV	-27%	-27%	-27%	-27%	-27%	-27%
	Total	-4%	-4%	-9%	-9%	-10%	-5%
Military Marine (2283)	VA	-19%	-19%	-12%	-12%	-12%	-19%
	Total	-19%	-19%	-12%	-12%	-12%	-19%
Locomotives (2285)	AL	0%	0%	0%	0%	0%	0%
	FL	0%	0%	0%	0%	0%	0%
	GA	+3%	+3%	+3%	+3%	+3%	+3%
	KY	0%	0%	0%	0%	0%	0%
	MS	0%	0%	0%	0%	0%	0%
	NC	0%	0%	0%	0%	0%	0%
	SC	0%	0%	0%	0%	0%	0%
	TN	-42%	-43%	-43%	-43%	-46%	-42%
	VA	-38%	-39%	+9%	+9%	+6%	-38%
	WV	+19%	+19%	+19%	+19%	+19%	+19%
	Total	-11%	-11%	-5%	-5%	-6%	-11%
Grand Total		-8%	-7%	-77%	-71%	-7%	-7%

Table 1.3-16. Base F Comparison of Aircraft Emissions (Airports with Aircraft NO_x > 200 tons per year)

Airport	FIP	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC	Approx. LTOs	Predicted NO_x	VISTAS to Predicted
Initial 2002 Base Year Inventory										
Miami	12086	9,757	5,997	23,706	16,357	525	1,641	150,000	1,680	3.57
Orlando	12095	3,456	2,170	8,578	5,919	204	642	150,000	1,680	1.29
Memphis	47157	3,462	1,934	7,645	5,275	185	603	125,000	1,400	1.38
Reagan	51013	3,892	1,806	7,138	4,925	164	302	100,000	1,120	1.61
Hampton	51650	2,690	1,705	0	0	0	611	Military		
Dulles	51059	2,032	1,330	5,246	3,620	0	272	75,000	840	1.58
Orlando-Sanford	12117	3,615	1,225	4,837	3,337	100	351			
Atlanta	13121	1,457	913	3,608	2,490	86	274	420,000	4,704	0.19
Fort Lauderdale	12011	1,930	809	3,196	2,206	75	257	75,000	840	0.96
Charlotte	37119	1,643	788	3,113	2,148	75	255	150,000	1,680	0.47
Tampa	12057	1,399	785	3,101	2,140	74	240	75,000	840	0.93
Nashville	47037	1,819	653	40	28	33	239	60,000	672	0.97
Raleigh	37183	1,584	592	2,338	1,613	56	204	75,000	840	0.70
Louisville	21111	1,073	468	1,851	1,277	45	155	60,000	672	0.70
Jacksonville	12031	871	325	1,284	886	31	112	30,000	336	0.97
Palm Beach	12099	1,156	226	0	0	1	132	30,000	336	0.67
Aggregate		41,836	21,724	75,682	52,220	1,655	6,290			0.19-3.57
Base F 2002 Base Year Inventory										
Atlanta	13063	4,121	5,288	1,435	1,406	443	337	420,000	4,704	1.12
Miami	12086	6,670	2,933	805	789	274	1,596	150,000	1,680	1.75
Orlando	12095	3,456	2,170	568	556	204	642	150,000	1,680	1.29
Memphis	47157	3,462	1,934	506	495	185	603	125,000	1,400	1.38
Orlando-Sanford	12117	3,615	1,225	338	332	100	351			
Fort Lauderdale	12011	1,930	809	217	212	75	257	75,000	840	0.96
Charlotte	37119	1,643	788	206	202	75	255	150,000	1,680	0.47
Tampa	12057	1,399	785	206	202	74	240	75,000	840	0.93
Nashville	47037	1,819	653	170	166	33	239	60,000	672	0.97
Reagan	51013	1,269	635	171	168	193	97	100,000	1,120	0.57
Dulles 1	51107	1,807	595	164	161	252	153	37,500	420	1.42
Raleigh	37183	1,584	592	156	153	56	204	75,000	840	0.70
Dulles 2	51059	1,095	591	156	153	252	115	37,500	420	1.41
Hampton	51650	858	535	471	461	18	305	Military		
Louisville	21111	1,073	468	123	121	45	155	60,000	672	0.70
Jacksonville	12031	871	325	87	85	31	112	30,000	336	0.97
Palm Beach	12099	1,156	226	59	58	1	132	30,000	336	0.67
Aggregate		37,829	20,550	5,838	5,721	2,312	5,793			0.47-1.75
Net Change		-10%	-5%	-92%	-89%	+40%	-8%			

Note: For the Base F inventory, Dulles International Airport emissions are split between two Virginia counties.
Predicted NO_x is based on the ratio of airport LTOs to test airport (Tucson International Airport) LTOs and NO_x. This is not a rigorous comparison, but rather an approximate indicator of expected magnitude.

Base G Revisions:

Further revisions to the 2002 base year emissions inventory were implemented in response to additional state data submittals in the spring of 2006. The inventories developed through the Base F revision process (as described above) served as the starting point for the 2006 revisions. Thus, unless otherwise indicated below, all documented Base F revisions continue to apply to the Base G-revised 2002 base year inventory.

As part of the Base G review and update process, Virginia regulators provided 443 updated emission records for aircraft. These records reflected revisions to aircraft VOC, CO, and NO_x, and in a few cases SO_2, emissions records that were already in the Base F VISTAS 2002 inventory (as opposed to the addition of previously unreported data). The specific revisions broke down as follows:

Table 1.3-17 Base G VA Aircraft Records Updates

Aircraft Type	VOC	CO	NO_x	SO_2	Total
Military Aircraft	9	9	9	1	28
Commercial Aircraft	12	12	12	17	53
General Aviation Aircraft	65	66	66	0	197
Air Taxi Aircraft	56	56	53	0	165
Aggregate	142	143	140	18	443

Emissions values for each of the 443 records in the Base F 2002 VISTAS inventory were updated for Base G to reflect the revised data. However, as described above for the Base F revisions, all aircraft SO_2, PM_{10}, and $PM_{2.5}$ emissions in Virginia are estimated on the basis of CO (in the case of SO_2) and NO_x emissions (in the cases of PM_{10} and $PM_{2.5}$). Therefore, since Virginia regulators did not provide updated SO_2 emissions for all updated CO emissions records, or updated PM_{10} or $PM_{2.5}$ emissions for all updated NO_x emissions records, it was necessary to re-estimate aircraft SO_2, PM_{10}, and $PM_{2.5}$ emissions in all cases where updated CO or NO_x emissions were provided for Base G (and explicit SO_2 and/or PM_{10} and $PM_{2.5}$ emissions were not).

The procedure used to estimate the SO_2, PM_{10}, and $PM_{2.5}$ emissions revisions was identical to that described above for the Base F inventory revisions, except that revised SO_2-to-CO emissions ratios were calculated for commercial aircraft, where 12 pairs of revised CO and SO_2 emissions estimates were available. Although a single pair of revised CO and SO_2 emissions records was available for military aircraft, this was deemed an insufficient sample with which to replace the military aircraft SO_2-to-CO emissions ratios previously calculated in Base F. However, it is worth noting that the SO_2-to-CO emissions ratio for the revised military aircraft emissions pair was within 16 percent of the previously calculated ratio, so any error associated with retention of the Base F ratio will be minor. Table 1.3-18 presents the emissions ratios.

Table 1.3-18 Calculated Base G Emission Ratios for VA.

Source	SCC	SO_2/CO (fall 2004)	SO_2/CO (spring 2006)	SO_2/CO (used in 2006)	PM_{10}/NO_x	$PM_{2.5}/PM_{10}$
Military Aircraft	2275001000	0.0215	0.0180	0.0215	0.88	0.98
Commercial Aircraft	2275020000	0.3292	0.0696	0.0696	0.26	0.98
General Aviation Aircraft	2275050000	0.00016	n/a	0.00016	1.9	0.98
Air Taxi Aircraft	2275060000	0.0015	n/a	0.0015	0.5	0.98

Application of the SO_2-to-CO emissions ratios to the 130 revised aircraft CO records, for which no corresponding SO_2 emission revisions were provided, resulted in an additional 130 aircraft SO_2 emission records updates for Virginia. Similarly, application of the PM_{10}-to-NO_x emissions ratios to the 140 revised aircraft NO_x records for which no corresponding PM_{10} emission revisions were provided, resulted in an additional 140 aircraft PM_{10} emission records updates for Virginia. Application of the $PM_{2.5}$-to-PM_{10} emissions ratios to the 140 revised aircraft PM_{10} records resulted in an additional 140 aircraft $PM_{2.5}$ emission records updates for Virginia. Thus, in total, 853 (443+130+140+140) Virginia aircraft emissions records were updated for Base G.

Also as part of the Base G review and update process, Alabama regulators provided 178 updated PM emission records for aircraft (89 records for PM_{10} and 89 records for $PM_{2.5}$), 42 additional emissions records for locomotives (14 records for VOC, 14 records for CO, and 14 records for NO_x), and 179 additional emission records for aircraft (30 records for VOC, 30 records for CO, 30 records for NO_x, 29 records for SO_2, 30 records for PM_{10}, and 30 records for $PM_{2.5}$). After review, it was determined that the 178 updated PM emission records for aircraft actually reflected the original (overestimated) aircraft PM data that was replaced universally throughout the VISTAS region for Base F. Implementing these latest revisions would, in effect, “undo” the Base F aircraft PM revisions. Following discussions with Alabama regulators, it was determined that the 178 aircraft PM records would not be updated for the Base G revisions.

The 42 additional emissions records for locomotives were determined to correspond exactly to existing SO_2, PM_{10}, and $PM_{2.5}$ emissions records already in the Base F VISTAS 2002 inventory. It is not clear why these existing records contained no corresponding data for VOC, CO, and NO_x, but those data are now reflected through the additional 42 records that have now been added to the Base G 2002 VISTAS inventory for Alabama.

After examining the 179 additional aircraft emissions records in conjunction with Alabama regulators, it was determined that 17 of the records (commercial aircraft records in Dale, Limestone, and Talladega counties) were erroneous and should be excluded from the update. The remaining 162 records reflected additional general aviation, air taxi, and military aircraft activity in 20 counties and were specifically comprised of 27 records each for VOC, CO, NO_x, SO_2, PM_{10}, and $PM_{2.5}$. There were no further issues with the VOC, CO, NO_x, and SO_2 records and these were added to the Base G 2002 VISTAS inventory without change. It was, however, apparent that the PM_{10} and $PM_{2.5}$ records reflected an overestimation of aircraft PM similar to that which was previously corrected throughout the VISTAS region for Base F (as documented above). To overcome this overestimation, the additional aircraft PM_{10} and $PM_{2.5}$ records provided by Alabama regulators were replaced with revised emission estimates developed on the basis of the PM_{10}-to-NO_x and $PM_{2.5}$-to-PM_{10} ratios documented under the Base F revisions above. So although 27 aircraft PM_{10} records and 27 aircraft $PM_{2.5}$ records were added to the 2002 Alabama inventory, they reflected different emissions values than those provided directly by Alabama regulators.

In total, 204 additional emissions records (42 for locomotives and 162 for aircraft) were added to the Base G 2002 Alabama inventory.

Finally, as part of the Base G review and update process, Kentucky regulators provided 12 updated aircraft emission records for Boone County, to correct previously underestimated aircraft emissions associated with the Cincinnati/Northern Kentucky International Airport. VOC, CO, and NO_x emissions data were provided for military, commercial, general aviation, and air taxi aircraft. No associated updates for SO_2, PM_{10}, or $PM_{2.5}$ emissions were provided. Corresponding PM_{10} emission estimates were developed by applying the PM_{10}-to-NO_x ratios presented in Table 1.3-17 above to the updated NO_x emission estimates. $PM_{2.5}$ emission estimates were developed by applying the $PM_{2.5}$-to-PM_{10} ratios from that same table to the estimated PM_{10} emissions. SO_2 emission estimates were developed by applying the SO_2-to-PM_{10} ratios developed from the older data (i.e., the data being replaced) for Boone County aircraft to the updated PM_{10} emissions. Thus, a total of 24 inventory records for Kentucky were updated (VOC, CO, NO_x, SO_2, PM_{10}, and $PM_{2.5}$ for four aircraft types).

Upon implementation of the universe of updates, 877 existing emission records were revised (853 in Virginia and 24 in Kentucky) and 204 additional emission records (all in Alabama) were added to the 2002 VISTAS inventory. The total number of aircraft, locomotive, and commercial marine inventory records thus changed from 22,838 records in Base F to 23,042 records in Base G.

Table 1.3-19 presents a summary of the resulting Base G VISTAS 2002 base year inventory estimates for aircraft, locomotives, and non-recreational marine vessels. Table 1.3-20 provides a comparison of the Base G 2002 base year inventory estimates to those of the Base F 2002 base year inventory. As indicated, total emissions for VOC, CO, NO_x, and SO_2 are generally within about 5 percent, with changes restricted to the states of Alabama, Kentucky, and Virginia.

Lastly, Table 1.3-21 provides an updated comparison of emission estimates from the Base F and Base G 2002 base year inventories for all 17 VISTAS region airports with estimated annual aircraft NO_x emissions of 200 tons or greater. As compared to Table 1.3-16, the table reflects the Base G addition of the Cincinnati/Northern Kentucky International Airport. Aircraft emission estimates for the other 16 airports are unchanged from their Base F values.

Table 1.3-19. Base G-Revised 2002 Base Year Aircraft, Locomotive, and Non-Recreational Marine Emissions (tons/year)

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	5,595	185	238	99	18	276
	FL	25,431	8,891	2,424	2,375	800	3,658
	GA	6,620	5,372	1,475	1,446	451	443
	KY	5,577	925	251	246	88	397
	MS	1,593	140	44	43	13	96
	NC	6,088	1,548	419	411	148	613
	SC	6,505	515	409	401	88	863
	TN	7,251	2,766	734	719	235	943
	VA	11,873	3,885	2,010	1,970	272	2,825
	WV	1,178	78	25	24	8	66
	Total	77,712	24,305	8,029	7,734	2,121	10,179
Commercial Marine (2280)	AL	1,196	9,218	917	844	3,337	737
	FL	5,888	44,817	1,936	1,781	6,683	1,409
	GA	1,038	7,875	334	307	1,173	246
	KY	6,607	50,267	2,246	2,066	9,608	1,569
	MS	5,688	43,233	1,903	1,751	7,719	1,351
	NC	599	4,547	193	178	690	142
	SC	1,067	8,100	343	316	1,205	253
	TN	3,624	27,555	1,217	1,120	4,974	860
	VA	972	2,775	334	307	359	483
	WV	1,528	11,586	487	448	525	362
	Total	28,207	209,972	9,911	9,118	36,275	7,413
Military Marine (2283)	VA	110	313	25	23	27	48
	Total	110	313	25	23	27	48
Locomotives (2285)	AL	3,518	26,623	592	533	1,446	1,365
	FL	1,006	9,969	247	222	605	404
	GA	2,654	26,733	664	598	1,622	1,059
	KY	2,166	21,811	542	488	1,321	867
	MS	2,302	23,267	578	520	1,429	899
	NC	1,638	16,502	410	369	1,001	654
	SC	1,160	11,690	291	261	710	462
	TN	2,626	25,627	633	570	1,439	1,041
	VA	1,186	11,882	1,529	1,375	3,641	492
	WV	1,311	13,224	329	296	808	517
	Total	19,568	187,328	5,815	5,232	14,022	7,761
Grand Total		125,597	421,918	23,780	22,107	52,444	25,401

Table 1.3-20. Change in 2002 Emissions, Base G Inventory Relative to Base F Inventory

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	+48%	+6%	+5%	+14%	+7%	+41%
	FL	0%	0%	0%	0%	0%	0%
	GA	0%	0%	0%	0%	0%	0%
	KY	+109%	+41%	+40%	+40%	+41%	+51%
	MS	0%	0%	0%	0%	0%	0%
	NC	0%	0%	0%	0%	0%	0%
	SC	0%	0%	0%	0%	0%	0%
	TN	0%	0%	0%	0%	0%	0%
	VA	+22%	+41%	+77%	+77%	-65%	+12%
	WV	0%	0%	0%	0%	0%	0%
	Total	+10%	+6%	+14%	+14%	-19%	+5%
Commercial Marine (2280)	AL	0%	0%	0%	0%	0%	0%
	FL	0%	0%	0%	0%	0%	0%
	GA	0%	0%	0%	0%	0%	0%
	KY	0%	0%	0%	0%	0%	0%
	MS	0%	0%	0%	0%	0%	0%
	NC	0%	0%	0%	0%	0%	0%
	SC	0%	0%	0%	0%	0%	0%
	TN	0%	0%	0%	0%	0%	0%
	VA	0%	0%	0%	0%	0%	0%
	WV	0%	0%	0%	0%	0%	0%
	Total	0%	0%	0%	0%	0%	0%
Military Marine (2283)	VA	0%	0%	0%	0%	0%	0%
	Total	0%	0%	0%	0%	0%	0%
Locomotives (2285)	AL	+1%	+1%	0%	0%	0%	+1%
	FL	0%	0%	0%	0%	0%	0%
	GA	0%	0%	0%	0%	0%	0%
	KY	0%	0%	0%	0%	0%	0%
	MS	0%	0%	0%	0%	0%	0%
	NC	0%	0%	0%	0%	0%	0%
	SC	0%	0%	0%	0%	0%	0%
	TN	0%	0%	0%	0%	0%	0%
	VA	0%	0%	0%	0%	0%	0%
	WV	0%	0%	0%	0%	0%	0%
	Total	+0%	+0%	0%	0%	0%	+0%
Grand Total		+6%	+0%	+4%	+4%	-1%	+2%

Table 1.3-21. Base G Comparison of Aircraft Emissions
(Airports with Aircraft NO_x > 200 tons per year)

Airport	FIP	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC	Approx. LTOs	Predicted NO_x	VISTAS to Predicted
Base F 2002 Base Year Inventory										
Atlanta	13063	4,121	5,288	1,435	1,406	443	337	420,000	4,704	1.12
Miami	12086	6,670	2,933	805	789	274	1,596	150,000	1,680	1.75
Orlando	12095	3,456	2,170	568	556	204	642	150,000	1,680	1.29
Memphis	47157	3,462	1,934	506	495	185	603	125,000	1,400	1.38
Orlando-Sanford	12117	3,615	1,225	338	332	100	351			
Fort Lauderdale	12011	1,930	809	217	212	75	257	75,000	840	0.96
Charlotte	37119	1,643	788	206	202	75	255	150,000	1,680	0.47
Tampa	12057	1,399	785	206	202	74	240	75,000	840	0.93
Nashville	47037	1,819	653	170	166	33	239	60,000	672	0.97
Reagan	51013	1,269	635	171	168	193	97	100,000	1,120	0.57
Dulles 1	51107	1,807	595	164	161	252	153	37,500	420	1.42
Raleigh	37183	1,584	592	156	153	56	204	75,000	840	0.70
Dulles 2	51059	1,095	591	156	153	252	115	37,500	420	1.41
Hampton	51650	858	535	471	461	18	305	Military		
Louisville	21111	1,073	468	123	121	45	155	60,000	672	0.70
Jacksonville	12031	871	325	87	85	31	112	30,000	336	0.97
Palm Beach	12099	1,156	226	59	58	1	132	30,000	336	0.67
Cincinnati	21015	467	144	38	37	14	54	50,000	560	0.26
Aggregate		38,296	20,694	5,876	5,758	2,326	5,847			0.26-1.75
Base G 2002 Base Year Inventory										
Atlanta	13063	4,121	5,288	1,435	1,406	443	337	420,000	4,704	1.12
Miami	12086	6,670	2,933	805	789	274	1,596	150,000	1,680	1.75
Orlando	12095	3,456	2,170	568	556	204	642	150,000	1,680	1.29
Memphis	47157	3,462	1,934	506	495	185	603	125,000	1,400	1.38
Orlando-Sanford	12117	3,615	1,225	338	332	100	351			
Fort Lauderdale	12011	1,930	809	217	212	75	257	75,000	840	0.96
Charlotte	37119	1,643	788	206	202	75	255	150,000	1,680	0.47
Tampa	12057	1,399	785	206	202	74	240	75,000	840	0.93
Nashville	47037	1,819	653	170	166	33	239	60,000	672	0.97
Reagan	51013	1,269	635	171	168	193	97	100,000	1,120	0.57
Dulles 1	51107	1,807	595	164	161	252	153	37,500	420	1.42
Raleigh	37183	1,584	592	156	153	56	204	75,000	840	0.70
Dulles 2	51059	1,095	591	156	153	252	115	37,500	420	1.41
Hampton	51650	858	535	471	461	18	305	Military		
Louisville	21111	1,073	468	123	121	45	155	60,000	672	0.70
Cincinnati	21015	3,378	411	110	107	39	187	50,000	560	0.73
Jacksonville	12031	871	325	87	85	31	112	30,000	336	0.97
Palm Beach	12099	1,156	226	59	58	1	132	30,000	336	0.67
Aggregate		41,207	20,961	5,947	5,828	2,352	5,981			0.47-1.75
Net Change		+8%	+1%	+1%	+1%	+1%	+2%			

Note: For the revised inventory, Dulles International Airport emissions are split between two Virginia counties.
Predicted NO_x is based on the ratio of airport LTOs to test airport (Tucson International Airport) LTOs and NO_x. This is not a rigorous comparison, but rather an approximate indicator of expected magnitude.

1.3.2.3 Emissions from NONROAD Model Sources in Illinois, Indiana, and Ohio

As part of the Base G update process, VISTAS requested that emissions estimates for 2002 be produced for the states of Illinois, Indiana, and Ohio. These estimates were to be produced at the same spatial (i.e., county level by SCC) and temporal resolution as estimates for the VISTAS region.

The requested estimates were produced by extracting a complete set of county-level input data applicable to each of the three states from the latest version of the EPA's NMIM (National Mobile Inventory Model) model. This included appropriate consideration of all non-default NMIM input files generated by the Midwest Regional Planning Organization (MRPO), as described below. These input data were then assembled into appropriate input files for the Final NONROAD2005 model and emission estimates were produced using the same procedure employed for the VISTAS region as part of the Base G updates.

A complete set of monthly input data was developed for each county in Illinois, Indiana, and Ohio by extracting data from the following NMIM database files (using the NMIM MySQL query browser):

> county, countrynrfile, countyyear, countyyearmonth, countyyearmonthhour, gasoline, diesel, and natural gas

The database files:

> countrynrfile, countyyear, countyyearmonth, and gasoline

were non-default database files provided to VISTAS by the MRPO, and are intended to reflect the latest planning data being used by MRPO modelers.

From these files, monthly data for gasoline vapor pressure, gasoline oxygen content, gasoline sulfur content, diesel sulfur content for land-based equipment, diesel sulfur content for marine-based equipment, natural gas sulfur content, minimum daily temperature, maximum daily temperature, and average daily temperature were developed. In addition, the altitude and Stage II refueling control status of each county, as well as the identity of the associated equipment population, activity, growth, allocation, and seasonal distribution files, was determined. These data were then assembled into Final NONROAD2005 input files on a seasonal basis, with monthly data being arithmetically averaged to produce seasonal equivalents as follows:

Winter	=	Average of December, January, and February
Spring	=	Average of March, April, and May
Summer	=	Average of June, July, and August,
Fall	=	Average of September, October, and November

Unlike the VISTAS Base G approach, this approach results in the use of the following non-default data files during the Final NONROAD2005 modeling process:

Table 1.3-22 Non-Default Files Used for MRPO Modeling

Data File	Illinois	Indiana	Ohio
Activity File	1700002.act	1800002.act	3900002.act
Growth File	17000.grw	18000.grw	39000.grw
Population File	17000.pop	18000.pop	39000.pop
Season File	17000.sea	18000.sea	39000.sea
Inboard Marine Allocation File	17000wib.alo	18000wib.alo	39000wib.alo
Outboard Marine Allocation File	17000wob.alo	18000wob.alo	39000wob.alo
Specific Fuel Consumption	MRPO-specific file provided by MRPO modelers (arbitrarily named “mrpoBSFC.emf” for this work)		

One compromise was made relative to the level of resolution that is available through the basic approach described above, that being the treatment of ambient temperature data. Because NMIM offers a unique temperature profile for every U.S. county -- developed by aggregating temperature data from included and surrounding weather stations on the basis of their distances from the county population centroid -- it is not possible to explicitly group counties with otherwise identical input streams. Ungrouped however, there would be 1,128 distinct input streams to be processed (102 Illinois counties plus 92 Indiana counties plus 88 Ohio counties at four seasons each), or over five times the number of files processed for the entire VISTAS region.

To surmount this problem and allow counties with similar temperature profiles to be grouped an approach was employed wherein counties were considered groupable if *all* temperature inputs[4] are within ± 2 ºF of the corresponding group average. This criterion is quite stringent in that it results in less tolerant grouping than that employed for VISTAS modeling, which uses temperature data from the nearest meteorological station as opposed to "unique" meteorological

[4] Non-road temperature inputs used for county grouping are: winter minimum, spring minimum, summer minimum, fall minimum, winter maximum, spring maximum, summer maximum, fall maximum, winter average, spring average, summer average, and fall average.

data for each county. Under this approach, the actual deviation for grouped counties is *much* less that ± 2 ºF for the overwhelming majority of the 12 grouped temperature inputs.

In addition to the required temperature consistency, all other input data for counties to be grouped had to be identical for all four seasons. Using this criterion, Illinois emissions were modeled using 12 county groups, Indiana emissions were modeled using 9 county groups, and Ohio emissions were modeled using 10 county groups. Thus, 31 iterations of NONROAD2002 were required per season, as compared to the 53 iterations per season required for the VISTAS region.

It should be noted that a potential quality assurance issue was noted in assembling the NONROAD2005 input data for a number of Indiana counties. Specifically, the gasoline vapor pressure for most Indiana counties reflects a value of 9.0 psi in *all* spring, summer, fall, and winter months. This is likely to indicate a problem with the accuracy of the NMIM databases for these counties, but these data were used as defined for this work.

1.3.3 Quality Assurance steps

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, and to ensure that a full and complete inventory was developed for VISTAS. Quality assurance was an important component to the inventory development process and MACTEC performed the following QA steps on the area source component of the 2002 base year revised:

1. All CERR and NIF format State supplied data submittals were run through EPA's Format and Content checking software.
2. SCC level emission summaries were prepared and evaluated to ensure that emissions were consistent and that there were no missing sources.
3. Tier comparisons (by pollutant) were developed between the revised 2002 base year inventory and the initial base year inventory.
4. Data product summaries were provided to both the VISTAS Emission Inventory Technical Advisor and to Mobile Source SIWG representatives for review and comment. Changes based on these comments were implemented in the files.
5. Version numbering was used for all inventory files developed. The version numbering process used a decimal system to track major and minor changes. For example, a major change would result in a version going from 1.0 to 2.0. A minor change would cause a version number to go from 1.0 to 1.1. Minor changes resulting from largely editorial changes would result in a change from 1.00 to 1.01.

2.0 Projection Inventory Development

2.1 Point Sources

We used different approaches for different sectors of the point source inventory:

- For the EGUs, VISTAS relied primarily on the Integrated Planning Model® (IPM®) to project future generation as well as to calculate the impact of future emission control programs. The IPM results were adjusted based on S/L agency knowledge of planned emission controls at specific EGUs.
- For non-EGUs, we used recently updated growth and control data consistent with the data used in EPA's CAIR analyses, and supplemented these data with available S/L agency input and updated fuel use forecast data for the U.S. Department of Energy.

For both sectors, we generated 2009 and 2018 inventories for a combined on-the-books (OTB) and on-the-way (OTW) control scenario. The OTB/OTW control scenario accounts for post-2002 emission reductions from promulgated and proposed federal, State, local, and site-specific control programs as of July 1, 2004. Section 2.1.1 discusses the EGU projection inventory development, while Section 2.1.2 discusses the non-EGU projection inventory development.

2.1.1 EGU Emission Projections

The following subsections discuss the following specific aspects of the development of the EGU projections. First, we present a chronology of the EGU development process and discuss key decisions in selecting the final methods for performing the emissions projections. Next, we describe the development of the final set of IPM runs that are included in the VISTAS Base G inventory. Next, we describe the process of transforming the IPM parsed files into NIF format. Fourth, we discuss the process for ensuring that units accounted for in IPM were not double-counted in the non-EGU inventory. Fifth, we describe the QA/QC checks that were made to ensure that the IPM results were properly incorporated into the VISTAS inventory. Sixth, we document the changes to the IPM results that S/L agencies specified they wanted included in the VISTAS inventory based on new information that was not accounted for in the IPM runs. Finally, we present summarize the Base G projected EGU emissions by year, state, and pollutant.

2.1.1.1 Chronology of the Development of EGU Projections

At the beginning of the EGU inventory development process, VISTAS considered three options for developing the VISTAS 2009 and 2018 projection inventories for EGUs:

- Option 1 – Use the results of IPM modeling conducted in support of the proposed Clean Air Interstate Rule (CAIR) base and control case analyses as the starting point and refine the projections with readily available inputs from stakeholders; these IPM runs were conducted for 2010 and 2015, which VISTAS would use to represent projected emissions in 2009 and 2018 respectively.

- Option 2 – Use the VISTAS 2002 typical year as the starting point, apply growth factors from the Energy Information Administration, and refine future emission rates with stakeholder input regarding utilization rates, capacity, retirements, and new unit information.
- Option 3 – Use the results of a new round of IPM modeling sponsored by VISTAS and the Midwest Regional Planning Organization (MRPO). These runs incorporated VISTAS specific unit and regulation modified parameters, and generate results for 2009 and 2018 explicitly.

An additional consideration for each of the three options was the inclusion of emission projections developed by the Southern Company specifically for their units. Southern Company is a super-regional company which owns EGUs in Alabama, Florida, Georgia, and Mississippi and participates in VISTAS as an industry stakeholder. Southern Company used their energy budget forecast to project net generation and heat input for every existing and future Southern Company EGU for the years 2009 and 2018. Further documentation of how Southern Company generated the 2009/2018 inventory for their units can be found in *Developing Southern Company Emissions and Flue Gas Characteristics for VISTAS Regional Haze Modeling (April 2005, presented at 14th International Emission Inventory Conference).*

Each of these three options and the Southern Company projections were discussed in a series of conference calls with the VISTAS EGU Special Interest Work Group (SIWG) during the fall of 2004. During a conference call on December 6, 2004, the VISTAS EGU SIWG approved the use of the latest VISTAS/MRPO sponsored IPM runs (Option 3) to represent the 2009 and 2018 EGU forecasts of emissions for the OTB and OTW cases. During the call, Alabama and Georgia specified that they did not wish to use Southern Company provided emissions forecasts of 2009 and 2018 to represent the sources in their States. Mississippi decided to utilize the Southern Company projections to represent activity at Southern Company facilities in Mississippi. After the call, Florida decided against using Southern Company provided emissions forecasts of 2009 and 2018 to represent the sources in their State. Thus, Southern Company data was used only for Southern Company units in Mississippi for both the Base F and Base G projections.

The Option 3 IPM modeling resulted from a joint agreement by VISTAS and MRPO to work together to develop future year utility emissions based on IPM modeling. The decision to use IPM modeling was based in part on a study of utility forecast methods by E.H. Pechan and Associates, Inc. (Pechan) for MRPO, which recommended IPM as a viable methodology (see *Electricity Generating Unit {EGU} Growth Modeling Method Task 2 Evaluation*, February 11, 2004). Although IPM results were available from EPA's modeling to support their rulemaking for the Clean Air Interstate Rule (CAIR), VISTAS stakeholders felt that certain model inputs needed to be improved. Thus, VISTAS and MRPO decided to hire contractors to conduct new IPM modeling and to post-process the IPM results. Southern Company projections in 2009 were roughly comparable with IPM. For 2018, Southern Company projections were generally less than IPM because of assumptions made by Southern Company on which units would be economical to control and incorrect data in the NEEDS database which feeds IPM.

In August 2004, VISTAS contracted with ICF International, Inc., to run IPM to provide utility forecasts for 2009 and 2018 under two future scenarios – Base Case and CAIR Case. The Base Case represents the current operation of the power system under currently known laws and regulations (as known at the time the run was made), including those that come into force in the study horizon. The CAIR Case is the Base Case with the proposed CAIR rule superimposed. The run results were parsed at the unit level for the 2009 and 2018 run years. Also in August 2004, MRPO contracted with E.H. Pechan to post-process the IPM outputs generated by ICF to provide model-ready emission files. The IPM output files were delivered by ICF to VISTAS in November (*Future Year Electricity Generating Sector Emission Inventory Development Using the Integrated Planning Model (IPM®) in Support of Fine Particulate Mass and Visibility Modeling in the VISTAS and Midwest RPO Regions*, January 2005), and the post-processed data files were delivered by Pechan to the MRPO in December 2004 (*LADCO IPM Model Parsed File Post-Processing Methodology and File Preparation*, February 8, 2005).

On March 10, 2005, EPA issued the final Clean Air Interstate Rule. VISTAS and MRPO, in conjunction with other RPOs, conducted another round of IPM modeling which reflected changes to control assumptions based on the final CAIR as well as additional changes to model inputs based on S/L agency and stakeholder comments. Several conference calls were conducted in the spring of 2005 to discuss and provide comments on IPM assumptions related to six main topics: power system operation, generating resources, emission control technologies, set-up parameters and rule, financial assumptions, and fuel assumptions. Based on these discussions, VISTAS sponsored a new set of IPM runs to reflect the final CAIR requirements as well as certain changes to IPM assumptions that were agreed to by the VISTAS states. This set of IPM runs is documented in *Future Year Electricity Generating Sector Emission Inventory Development Using the Integrated Planning Model (IPM®) in Support of Fine Particulate Mass and Visibility Modeling in the VISTAS and Midwest RPO Regions,* April 2005 (these runs are referred to as the VISTAS Phase I analysis).

Further refinements to the IPM inputs and assumptions were made by the RPOs, and ICF performed the following four runs using IPM during the summer of 2005 (these runs are referred to as the VISTAS/CENRAP Phase II analysis):

Base Case with EPA 2.1.9 coal, gas and oil price assumptions.

- Base Case with EPA 2.1.9 coal and gas supply curves adjusted for AEO 2005 reference case price and volume relationships.
- Strategy Case with EPA 2.1.9 coal, gas and oil price assumptions.
- Strategy Case with EPA 2.1.9 coal and gas supply curves adjusted for AEO 2005 reference case price and volume relationships.

The above runs were parsed for 2009 and 2018 run years. The above four runs were based on VISTAS Phase I and the EPA 2.1.9 assumptions. The changes that were implemented in the above four runs are summarized below:

- Unadjusted AEO 2005 electricity demand projections were incorporated in the above four runs.
- The gas supply curves were adjusted for AEO 2005 reference case price and volume relationships. The EPA 2.1.9 gas supply curves were scaled such that IPM will solve for AEO 2005 gas prices when the power sector gas demand in IPM is consistent with AEO 2005 power sector gas demand projections.
- The coal supply curves used in EPA 2.1.9 were scaled in such a manner that the average mine mouth coal prices that the IPM is solving in aggregated coal supply regions are comparable to AEO 2005. Due to the fact that the coal grades and supply regions between AEO 2005 and the EPA 2.1.9 are not directly comparable, this was an approximate approach and had to be performed in an iterative fashion. The coal transportation matrix was not updated with EIA assumptions due to significant differences between the EPA 2.1.9 and EIA AEO 2005 coal supply and coal demand region configurations.
- The cost and performance of new units were updated to AEO 2005 reference case levels in all of the above four funs.
- The run years 2008, 2009, 2012, 2015, 2018, 2020 and 2026 were modeled.
- The AEO 2005 life extension costs for fossil and nuclear units were incorporated in the above runs.
- The extensive NEEDS comments provided by VISTAS, MRPO, CENRAP and MANE-VU were incorporated into the VISTAS Phase I NEEDS.

- MANE-VU's comments in regards to the state regulations in the northeast were incorporated.
- Renewable Portfolio Standards (RPS) in the northeast was modeled based on the Regional Greenhouse Gas Initiative analysis. A single RPS cap was modeled for MA, RI, NY, NJ, MD and CT. These states could buy credits from NY, PJM and New England model regions.
- The investments required under the Illinois power, Mirant and First Energy NSR settlements were incorporated in the above runs.

For the VISTAS/CENRAP Phase II set of IPM runs, ICF generated two different parsed files. One file includes all fuel burning units (fossil, biomass, landfill gas) as well as non-fuel burning units (hydro, wind, etc.). The second file contains just the fossil-fuel burning units (e.g., emissions from biomass and landfill gas are omitted). The RPOs decided to use the fossil-only file for modeling to be consistent with EPA, since EPA used the fossil only results for CAIR analyses. For the 10 VISTAS states, non-fossil fuels accounted for only 0.13 percent of the NOx emissions and 0.04 percent of the SO_2 emissions in the 2009 IPM runs.

S/L agencies reviewed the results of the VISTAS/CENRAP Phase II set of IPM runs, which were incorporated into the VISTAS Base F inventory. S/L agencies primarily reviewed and commented on the IPM results with respect to IPM decisions on NO_x post-combustion controls and SO_2 scrubbers. S/L agencies provided the latest information on when and where new SO_2 and NO_x controls are planned to come online. S/L agencies also reviewed the IPM results to verify that existing controls and emission rates were properly reflected in the IPM runs. As directed by the S/L agencies, adjustments to the IPM results were made to specific units with any new information they had as part of the permitting process or other contact with the industry that indicates which units will install controls as a result of CAIR and when these new controls will come on-line. Mississippi decided to continue to use the Southern Company projections instead of the IPM projections to represent emissions at Southern Company facilities in Mississippi. The state-specified changes to the VISTAS/CENRAP Phase II set of IPM runs were used to create the Base G projection inventory (and are documented later in Section 2.1.1.6).

2.1.1.2 VISTAS IPM runs for EGU sources

The following general summary of the VISTAS IPM® modeling is based on ICF's documentation *Future Year Electricity Generating Sector Emission Inventory Development Using the IPM® in Support of Fine Particulate Mass and Visibility Modeling in the VISTAS and Midwest RPO Regions*, April 2005. The ICF documentation is to be used as an extension to EPA's proposed CAIR modeling runs documented in *Documentation Supplement for EPA Modeling Applications (V.2.1.6) Using the IPM*, EPA 430/R-03-007, July 2003.

IPM provides "forecasts of least-cost capacity expansion, electricity dispatch, and emission control strategies for meeting energy demand and environmental, transmission, dispatch, and reliability constraints." The underlying database in this modeling is U.S. EPA's National Electric Energy Data System (NEEDS) released with the CAIR Notice of Data Availability (NODA). The NEEDS database contains the existing and planned/committed unit data in EPA modeling applications of IPM. NEEDS includes basic geographic, operating, air emissions, and other data on these generating units. VISTAS States and stakeholders provided changes for:

- NO_x post-combustion control on existing units
- SO_2 scrubbers on existing units
- SO_2 emission limitations
- PM controls on existing units
- Summer net dependable capacity
- Heat rate for existing units
- SO_2 and NO_x control plans based on State rules or enforcement settlements

The years 2009 and 2018 were explicitly modeled.

2.1.1.3 Post-Processing of IPM Parsed Files

The following summary of the VISTAS/Midwest Regional Planning Organization (MRPO) IPM modeling is based on Pechan's documentation *LADCO IPM Model Parsed File Post-Processing Methodology and File Preparation*, February 8, 2005. The essence of the IPM model post-processing methodology is to take an initial IPM model output file and transform it into air quality model input files. ICF via VISTAS/MRPO provides an initial spreadsheet file containing unit-level records of both

(1) "existing" units and

(2) committed or new generic aggregates.

All records have unit and fuel type data; existing, retrofit (for SO_2 and NO_x), and separate NO_x control information; annual SO_2 and NO_x emissions and heat input; summer season (May-September) NO_x and heat input; July day NO_x and heat input; coal heat input by coal type; nameplate capacity megawatt (MW), and State FIPS code. Existing units also have county FIPS code, a unique plant identifier (ORISPL) and unit ID (also called boiler ID) (BLRID); generic units do not have these data. The processing includes estimating various types of emissions and adding in control efficiencies, stack parameters, latitude-longitude coordinates, and State identifiers (plant ID, point ID, stack ID, process ID). Additionally, the generic units are sited in a county and given appropriate IDs. This processing is described in more detail below.

The data are prepared by transforming the generic aggregates into units similar to the existing units in terms of the available data. The generic aggregates are split into smaller generic units based on their unit types and capacity, are provided a dummy ORIS unique plant and boiler ID, and are given a county FIPS code based on an algorithm that sites each generic by assigning a sister plant that is in a county based on its attainment/nonattainment status. Within a State, plants (in county then ORIS plant code order) in attainment counties are used first as sister sites to generic units, followed by plants in PM nonattainment counties, followed by plants in 8-hour ozone nonattainment counties. Note that no LADCO or VISTAS States provided blackout counties that would not be considered when siting generics, so this process is identical to the one used for EPA IPM post-processing.

SCCs were assigned for all units; unit/fuel/firing/bottom type data were used for existing units' assignments, while only unit and fuel type were used for generic units' assignments. Latitude-longitude coordinates were assigned, first using the EPA-provided data files, secondly using the September 17, 2004 Pechan in-house latitude-longitude file, and lastly using county centroids. These data were only used when the data were not provided in the 2002 NIF files. Stack parameters were attached, first using the EPA-provided data files, secondly using a March 9, 2004 Pechan in-house stack parameter file based on previous EIA-767 data, and lastly using an EPA June 2003 SCC-based default stack parameter file. These data were only used when the data were not provided in the 2002 NIF files.

Additional data were required for estimating VOC, CO, filterable primary PM_{10} and PM2.5, PM condensable, and NH_3 emissions for all units. Thus, ash and sulfur contents were assigned by first using 2002 EIA-767 values for existing units or SCC-based defaults; filterable PM10 and PM2.5 efficiencies were obtained from the 2002 EGU NEI that were based on 2002 EIA-767 control data and the PM Calculator program (a default of 99.2 percent is used for coal units if necessary); fuel use was back calculated from the given heat input and a default SCC-based heat content; and emission factors were obtained from an EPA-approved October 7, 2004 Pechan emission factor file based on AP-42 emission factors. Note that this updated file is not the one used for estimating emissions for previous EPA post-processed IPM files. Emissions for 28 temporal-pollutant combinations were estimated since there are seven pollutants (VOC, CO, primary PM_{10} and $PM_{2.5}$, NH_3, SO_2 and NO_x) and four temporal periods (annual, summer season, winter season, July day).

The next step was to match the IPM unit IDs with the identifiers in VISTAS 2002 inventory. A crosswalk file was used to obtain FIPS State and county, plant ID (within State and county), and point ID. If the FIPS State and county, plant ID and point ID are in the 2002 VISTAS NIF tables, then the process ID and stack ID are obtained from the NIF; otherwise, defaults, described above, were used.

Pechan provided the post-processed files in NIF 3.0 format. Two sets of tables were developed : "NIF files" for IPM units that have a crosswalk match and are in the 2002 VISTAS inventory, and "NoNIF files" for IPM units that are not in the 2002 VISTAS inventory (which includes existing units with or without a crosswalk match as well as generic units).

For Base F and Base G projections, VISTAS reviewed the PM and NH_3 emissions from EGUs as provided by Pechan and identified significantly higher emissions in 2009/2018 than in 2002. VISTAS determined that Pechan used a set of PM and NH_3 emission factors that are "the most recent EPA approved uncontrolled emission factors" for estimating 2009/2018 emissions. These factors are most likely not the same emission factors used by States for estimating these emissions in 2002 for EGUs in the VISTAS domain. Thus, the emission increase from 2002 to 2009/2018 was simply an artifact of the change in emission factor, not anything to do with changes in activity or control technology application. Also, VISTAS identified an inconsistent use of SCCs for determining emission factors between the base and future years.

VISTAS resolution of the PM and NH_3 problem is fully documented in *EGU Emission Factors and Emission Factor Assignment,* memorandum from Greg Stella to VISTAS State Point Source Contacts and VISTAS EGU Special Interest Workgroup, June 13, 2005. The first step was the adjustment of the 2002 base year emissions inventory. Using the latest "EPA-approved" uncontrolled emission factors by SCC, Alpine Geophysics utilized CERR or VISTAS reported annual heat input, fuel throughput, heat, ash and sulfur content to estimate annual uncontrolled emissions for units identified as output by IPM. This step was conducted for non-CEM pollutants (CO, VOC, PM, and NH_3) only. For PM emissions, the condensable component of emissions was calculated and added to the resulting PM primary estimations. The resulting emissions were then adjusted by any control efficiency factors reported in the CERR or VISTAS data collection effort. The second adjustment was to the future year inventories. Alpine Geophysics updated the SCCs in the future year inventory to assign the same base year SCC. Using the same methods as described for the 2002 revisions, those non-IPM generated pollutants were estimated using IPM predicted fuel characteristics and base year 2002 SCC assignments.

2.1.1.4 Eliminating Double Counting of EGU Units

The following procedures were used to avoid double counting of EGU emissions in the 2009/2018 point source inventory. The 2002 VISTAS point source emission inventory contains both EGUs and non-EGUs. Since this file contains both EGUs and non-EGU point sources, and EGU emissions are projected using the IPM, it was necessary to split the 2002 point source file into two components. The first component contains those emission units accounted for in the IPM forecasts. The second component contains all other point sources not accounted for in IPM.

As described in the previous section, Pechan developed 2009/2018 NIF files for EGUs from the IPM parsed files. All IPM matched units were initially removed from the 2009/2018 point source inventory to create the non-EGU inventory (which was projected to 2009/2018 using the non-EGU growth and control factors described in Section 2.1.2). This was done on a unit-by-unit basis based on a cross-reference table that matches IPM emission unit identifiers (ORISPL plant code and BLRID emission unit code) to VISTAS NIF emission unit identifiers (FIPSST state code, FIPSCNTY county code, State Plant ID, State Point ID). When there was a match between the IPM ORISPL/BLRID and the VISTAS emission unit ID, the unit was assigned to the EGU inventory; all other emission units were assigned to the non-EGU inventory.

If an emission unit was contained in the NIF files created by Pechan from the IPM output, the corresponding unit was removed from the initial 2009/2018 point source inventory. The NIF 2009/2018 EGU files from the IPM parsed files were then merged with the non-EGU 2009/2018 files to create the 2009/2018 Base F point source files.

Next, we prepared several ad-hoc QA/QC queries to verify that there was no double-counting of emissions in the EGU and non-EGU inventories:

- We reviewed the IPM parsed files {VISTASII_PC_1f_AllUnits_2009 (To Client).xls and VISTASII_PC_1f_AllUnits_2018 (To Client).xls} to identify EGUs accounted for in IPM. We compared this list of emission units to the non-EGU inventory derived from the VISTAS cross-reference table to verify that units accounted for in IPM were not double-counted in the non-EGU inventory. As a result of this comparison, we made a few adjustments in the cross-reference table to add emission units for four plants to ensure these units accounted for in IPM were moved to the EGU inventory.

- We reviewed the non-EGU inventory to identify remaining emission units with an Standard Industrial Classification (SIC) code of “4911 Electrical Services” or Source Classification Code of “1-01-xxx-xx External Combustion Boiler, Electric Generation”. We compared the list of sources meeting these selection criteria to the IPM parsed file to ensure that these units were not double-counted.

S/L agencies also reviewed the 2009/2018 point source inventory to verify whether there was any double counting of EGU emissions. In two instances, S/L agencies provided corrections where an emission unit was double counted.

2.1.1.5 Quality Assurance steps

Quality assurance was an important component to the inventory development process and MACTEC performed the following QA steps on the EGU component of the VISTAS revised 2009/2018 EGU inventory:

1. Provided parsed files (i.e., Excel spreadsheets that provide unit-level results derived from the model plant projections obtained by the IPM) to the VISTAS EGU SIWG for review and comment.

2. Provided facility level emission summaries for 2009/2018 for both the base case and CAIR case to the VISTAS EGU SIWG to ensure that emissions were consistent and that there were no missing sources.

3. Compared, at the State-level, emissions from the IPM parsed files and the post-processed NIF files to verify that the post-processed NIF files were consistent with the IPM parsed file results.

VISTAS requested S/L review of these files – the changes specified by states as a result of this review are documented in the following subsection.

2.1.1.6 S/L Adjustments to IPM Modeling Results for Base G Projections

After S/L agency review of the final set of IPM runs (as incorporated into the Base F inventory), S/L agencies specified a number of changes to the IPM results to better reflect current information on when and where future controls would occur. These changes to the IPM results primarily involved S/L agency addition or subtraction future emission controls based on the best available data from state rules, enforcement agreements, compliance plans, permits, and discussions/commitments from individual companies.

For example, Dominion Virginia Power released their company-wide plan to reduce emission to meet the requirements of CAIR and other programs. This plan varies substantially from the IPM results both in terms current and future controls and timing of these controls. As a result, VA DEQ developed their best estimates of future controls on EGUs in Virginia. Also, Duke Energy and Progress Energy have updated their plans for complying with North Carolina’s Clean Smokestack Act. These plans vary substantially from the IPM results both in terms current and future controls and timing of these controls. As a result, NC DENR replaced the IPM emission projections for 2009 with projections from the Duke Energy and Progress Energy compliance plan. NC DENR elected to use the IPM results for 2018.

Some S/L agencies specified changes to the controls assigned by IPM to reflect their best estimates of emission controls. The changes specified by the S/L agencies are summarized in Table 2.1-1. These changes involved either 1) adding selective catalytic reduction (SCR) or scrubber controls to units where IPM did not predict SCR or scrubber controls, or 2) removing IPM-assigned SCR or scrubber controls at units where the S/L agency indicated their were no firm plans for controls at those units. We used a scrubber control efficiency of 90 percent when adding or removing SO_2 scrubber controls. We used a control efficiency of 90 percent when adding or removing NO_x SCR controls at coal-fired plants, 80 percent when adding or removing

NO_x SCR controls at gas-fired plants, and 35 percent when adding or removing NO_x SNCR controls.

In addition to the changes to the IPM-assigned controls, the S/L agencies also specified other types of changes to the IPM results. These other specific changes to the IPM results are summarized in Table 2.1-2.

S/L agencies provided information and/or comment on changes in stack parameters from the 2002 inventory for 2009/2018 inventory. Changes to stack parameters were also made in cases where new controls are scheduled to be installed. In cases where an emission unit projected to have a SO_2 scrubber in either 2009 or 2018, some states were able to provide revised stack parameters for some units based on design features for the new control system. Other units projected to install scrubbers by 2009 or 2018 are not far enough along in the design process to have specific design details. For those units, the VISTAS EGU SIWG made the following assumptions: 1) the scrubber is a wet scrubber; 2) keep the current stack height the same; 3) keep the current flow rate the same, and 4) change the stack exit temperature to 169 degrees F (this is the virtual temperature derived from a wet temperature of 130 degrees F). VISTAS determined that exit temperature (wet) of 130 degrees F +/- 5 degrees F is representative of different size units and wet scrubber technology.

2.1.1.7 Summary of Base F and Base G 2009/2018 EGU Point Source Inventories

Tables 2.1-3 through 2.1-9 compare the Base G 2002 base year inventory to the Base F4 and Base G 2009/2018 projection inventories. The Base F4 projections rely primarily on the results of the IPM, while the Base G projections include the adjustments to the IPM results specified by the S/L agencies in the previous section.

Table 2.1-1 Adjustments to IPM Control Determinations Specified by S/L Agencies for the Base G 2009/2018 EGU Inventories.

State	Plant Name and ID	Unit	NO_x Emission Controls				SO_2 Emission Controls			
			2009		2018		2009		2018	
			IPM	State	IPM	State	IPM	State	IPM	State
AL	James H. Miller ORISID=6002	1 & 2	SCR during ozone season	SCR probable year round due to CAIR	SCR during ozone season	SCR probable year round due to CAIR	None	None	None	Scrubber
		3 & 4	SCR during ozone season	SCR year round from Consent Decree	SCR during ozone season	SCR year round from Consent Decree	None	None	None	Scrubber
	Barry ORISID=3	1, 2, 3	None	SNCR	SCR	SNCR	None	None	None	None
		4	None	SNCR	SCR	SNCR	None	None	Scrubber	Scrubber
		5	None	None	SCR	SCR	None	None	Scrubber	Scrubber
	E C Gaston ORISID=26	1 - 4	SCR	None	SCR	None	None	None	Scrubber	Scrubber
		5	SCR	SCR	SCR	SCR	Scrubber	None	Scrubber	Scrubber
	Gorgas ORISID=8	6 & 7	None	None	None	None	None	None	None	None
		8 & 9	None	None	None	None	None	Scrubber	None	Scrubber
		10	SCR	SCR	SCR	SCR	None	Scrubber	Scrubber	Scrubber
	Charles R. Lowman ORISID=56	1	None	None	None	None	None	Scrubber	None	Scrubber
		2 & 3	SCR	SCR	SCR	SCR	Scrubber	Scrubber	Scrubber	Scrubber
GA	Bowen ORISID=703	1BLR	SCR	SCR	SCR	SCR	IPM had retrofit scrubbers but little emission reductions	None	Scrubber	Scrubber
		2BLR	SCR	SCR	SCR	SCR		None	Scrubber	Scrubber
		3BLR	SCR	SCR	SCR	SCR		Scrubber	Scrubber	Scrubber
		4BLR	SCR	SCR	SCR	SCR		Scrubber	Scrubber	Scrubber

Table 2.1-1 (continued)

State	Plant Name and ID	Unit	NO_x Emission Controls				SO_2 Emission Controls			
			2009		2018		2009		2018	
			IPM	State	IPM	State	IPM	State	IPM	State
GA	Wansley ORISID=6052	1	SCR	SCR	SCR	SCR	IPM had retrofit scrubbers but little emission reductions	Scrubber	Scrubber	Scrubber
		2	SCR	SCR	SCR	SCR		None	Scrubber	Scrubber
	Kraft ORISID=733	1, 2	None	None	None	None	None	None	None	None
		3	None	None	SCR	None	None	None	None	None
	McIntosh ORISID=6124	1	None	None	SCR	None	None	None	None	None
	Yates ORISID=728	1	None	None	None	None	Scrubber	Scrubber	Scrubber	Scrubber
		2, 3	None	None	None	None	None	None	None	None
		4 – 7	None	None	SCR	SCR	None	None	Scrubber	None
	Hammond ORISID=708	1	None	None	SCR	SCR	None	Scrubber	Scrubber	Scrubber
		2	None	None	SCR	SCR	None	Scrubber	Scrubber	Scrubber
		3	None	None	SCR	SCR	None	Scrubber	Scrubber	Scrubber
		4	SCR	SCR	SCR	SCR	Scrubber	Scrubber	Scrubber	Scrubber
KY	Ghent ORISID=1356	1	None	SCR	SCR	SCR	Scrubber	Scrubber	Scrubber	Scrubber
		2	None	None	SCR	SCR	None	Scrubber	Scrubber	Scrubber
		3, 4	None	SCR	SCR	SCR	None	Scrubber	Scrubber	Scrubber
	Coleman ORISID=1381	C1	None	None	SCR	SCR	None	Scrubber	Scrubber	Scrubber
		C2	None	None	SCR	SCR	None	Scrubber	Scrubber	Scrubber
		C3	None	None	SCR	SCR	None	Scrubber	Scrubber	Scrubber
	HMP&L Station 2	H1	SCR	SCR	SCR	SCR	Scrubber	Scrubber	Scrubber	Scrubber
		H2	None	SCR	SCR	SCR	Scrubber	Scrubber	Scrubber	Scrubber

Table 2.1-1 (continued)

State	Plant Name and ID	Unit	NO_x Emission Controls				SO_2 Emission Controls			
			2009		2018		2009		2018	
			IPM	State	IPM	State	IPM	State	IPM	State
KY	E W Brown ORISID=1355	1	None	None	None	None	None	Scrubber	None	Scrubber
		2	None	None	SCR	SCR	None	Scrubber	Scrubber	Scrubber
		3	None	None	SCR	SCR	None	Scrubber	Scrubber	Scrubber
SC	Jeffries ORISID=3319	3	SCR	None	SCR	None	None	None	None	None
		4	None	None	None	None	None	None	None	None
	Wateree ORISID=3297	WAT1	SCR	SCR	SCR	SCR	None	Scrubber	None	Scrubber
		WAT2	SCR	SCR	SCR	SCR	None	Scrubber	Scrubber	Scrubber
	Canadys ORISID=3280	CAN1	None	None	None	None	None	None	None	None
		CAN2	None	None	None	None	None	None	None	None
		CAN3	None	None	None	None	None	Scrubber	None	Scrubber
	Rainey ORISID=7834	CT1A	None	SCR	None	SCR	None	None	None	None
		CT1B	None	SCR	None	SCR	None	None	None	None
TN	Kingston ORISID=3407	1 – 8	SCR	SCR	SCR	SCR	None	None	Scrubber	Scrubber
		9	None	SCR	SCR	SCR	None	None	Scrubber	Scrubber
	Johnsonville ORISID=3406	1 – 10	SCR	None	SCR	SCR	None	None	None	None
WV	Willow Island ORISID=3946	2	SCR	None	SCR	SCR	Scrubber	None	Scrubber	Scrubber
	Kammer ORISID=3947	1 -3	SCR	None	SCR	SCR	Scrubber	None	Scrubber	Scrubber

Table 2.1-2. Other Adjustments to IPM Results Specified by S/L Agencies for the Base G 2009/2018 EGU Inventories.

State	Plant Name and ID	Unit	Nature of Update/Correction
FL	Central Power and Lime ORISID= 10333	GEN1	Central Power and Lime (ORIS10333) is a duplicate entry. This is point 18 in Florida Crushed Stone (12-053-0530021). Removed IPM emissions for Central Power and Lime.
	Cedar Bay Generating ORISID=10672	GEN1	FLDEP disagrees with IPM projections - no knowledge of expansion of this facility and the cogeneration facility should not grow faster than the underlying industry. Cedar Bay is connected to Stone Container (12-031-0310067). Replaced IPM emissions with 2002 emissions for Cedar Bay (12-031-0310337) times the growth factors for Stone Container.
	Indiantown Cogeneration ORISID=50976	GEN1	FLDEP disagrees with IPM projections - no knowledge of expansion of this facility and the cogeneration facility should not grow faster than the underlying industry. Indiantown is connected to Louis Dreyfus Citrus (12-085-0850002). Replaced IPM emissions with 2002 emissions for Indiantown (12-085-0850102) times the growth factors for Louis Drefus Citrus.
GA	Bowen ORISID=703	1BLR 2BLR 3BLR 4BLR	IPM indicated retrofit scrubbers on all 4 units in 2009, but the IPM emissions showed little reductions from 2002 levels. Changed emissions to reflect scrubbers on 3BLR and 4BLR by 2009.
	Wansley ORISID=6052	1, 2	IPM indicated retrofit scrubbers on both units in 2009, but the IPM emissions showed little reductions from 2002 levels. Changed emissions to reflect one scrubber on Unit 1 by 2009.
	Riverside ORISID=734	4	All of plant Riverside was retired from service June 1, 2005; emissions set to zero in 2009 and 2018.
	McIntosh ORISID=727	CT10A CT10B CT11A CT11B	The McIntosh Combined Cycle facility became commercial June 1, 2005. Added 346 tons of NO_x and 121 tons of SO_2 per unit to the 2009 and 2018 inventories.
	Longleaf Energy Station	1, 2	Longleaf Energy Station is being proposed by LS Power Development, Inc. GA specified that the emissions from this proposed plant be included in the 2018 projections. Boilers 1 and 2 added 1,882 tons of NO_x and 3,227 tons of SO_2 per unit to the 2018 inventory.
	Duke Murray (55382)	1	Corrected coordinates to 34.7189 and -84.9353
MS	R D Morrow ORISID=6061	1, 2	Revised the 2018 emissions to reflect controls not indicated by IPM. The SO_2 emissions are much lower than IPM, but their expected NO_x emissions are actually higher than IPM. The controls will be coming online 2009 or 2010, so the 2009 inventory did not change.
	Jack Watson (2049) Victor J Daniel (6073) Chevron Oil (2047)	All	MS DEQ specified that the emission projections provided by the Southern Company for their units in Mississippi were to be used instead of the IPM results.

Table 2.1-2 (continued)

State	Plant Name and ID	Unit	Nature of Update/Correction
NC	G G Allen (2718) Belews Creek (8042)1 Buck (2720) Cliffside (2721) Dan River (2723) Marshall (2727) Riverbend (2732)	All	Replaced all IPM 2009 results with emission projections from Duke Power's NC Clean Air Compliance Plan for 2006. Used IPM results for 2018
	Asheville (2706) Cape Fear (2708) Lee (2709) Mayo (6250) Roxboro (2712) Sutton (2713) Weatherspoon (2716)	All	Replaced all IPM 2009 results with emission projections from Progress Energy's NC Clean Smokestacks Act Calendar Year 2005 Progress Report. Used IPM results for 2018
	Dwayne Collier Battle Cogeneration Facility ORISID=10384	GEN1 GEN2	Dwayne Collier Battle is a duplicate entry. This is Cogentrix of Rocky Mount (37-065-3706500146, stacks G-26 and G-27). Duplicate entries were removed both the 2009 and 2018 inventories.
	Kannapolis Energy Partners ORISID=10626	GEN2 GEN3	Kannapolis Energy emissions are being used as credits for another facility. IPM emissions from this facility (37-025-ORIS10626) were removed from the EGU inventory for 2009 and 2018. Emissions from Kannapolis Energy (37-025-3702500113) were carried forward in the 2009/2018 inventory.
SC	Cross ORISID=130	1, 2	Unit 1: upgrade scrubber from 82 percent to 95 percent removal efficiency by June 30, 2006. Recalculate emissions based on upgrade in control efficiency. Unit 2: upgrade scrubber from 70 percent to 87 percent removal efficiency by June 30, 2006. Recalculate emissions based on upgrade in control efficiency.
	Winyah ORISID=6249	1 – 4	Unit 1: Install scrubber that meets 95 percent removal efficiency by Dec. 31, 2008; Upgrade ESP from 0.38 to 0.03 lb/mmBTU by Dec. 31, 2008 Unit 2: Replace scrubber with one that meets 95 percent removal efficiency from 45 percent by Dec. 31, 2008; Upgrade ESP from 0.10 to 0.03 lb/mmBTU by Dec. 31, 2008 Unit 3: Upgrade scrubber from 70 percent to 90 percent removal efficiency by Dec. 31, 2012; Upgrade ESP from 0.10 to 0.03 lb/mmBTU by Dec. 31, 2012 Unit 4: Upgrade scrubber from 70 percent to 90 percent removal efficiency by Dec. 31, 2007; Upgrade ESP from 0.10 to 0.03 lb/mmBTU by Dec. 31, 2007 Recalculated SO_2 and PM emissions based on upgrade in control efficiencies.

Table 2.1-2 (continued)

State	Plant Name and ID	Unit	Nature of Update/Correction
SC	Dolphus Grainger ORISID=3317	1, 2	Unit 1: Upgrade ESP from 0.60 to 0.03 lb/mmBTU by Dec. 31, 2012. Reduced PM_{10} and PM25 emissions in 2018 by 95 percent based on change in allowable emission rate Unit 2: Install low NO_x burners that meet 0.46 lb/mmBTU from 0.9 by May 1, 2004. Recalculated NO_x emissions using 0.46/lbs/mmBtu and IPM heat input Unit 2: Upgrade ESP from 0.60 to 0.03 lb/mmBTU by Dec. 31, 2012. Reduced PM_{10} and PM25 emissions in 2018 by 95 percent based on change in allowable emission rate
SC	Jeffries ORISID=3319	3, 4	Unit 3: Upgrade ESP from 0.54 to 0.03 lb/mmBTU by Dec. 31, 2012. Reduced PM_{10} and PM25 emissions in 2018 by 94.44 percent based on change in allowable emission rate Unit 4: Upgrade ESP from 0.54 to 0.03 lb/mmBTU by Dec. 31, 2012. Reduced PM_{10} and PM25 emissions in 2018 by 94.44 percent based on change in allowable emission rate
	W S Lee ORISID=3264	1, 2	IPM does not indicate that these units are installing SOFA NO_x control technology by April 30, 2006 to meet 0.27 lb/mmBTU, down from 0.45 lb/mmBtu. Calculated NO_x emissions using IPM heat input and 0.27 lbs/mmBtu
	Generic Unit ORISID=900545	All	All predictions for generic units appear reasonable with the exception of Plant ID ORIS900545 Point ID GSC45 which was modeled in Georgetown County. It will be very difficult to add new generation this close to the Cape Romain Class I area. Santee Cooper has no plans for future generation in Georgetown County, but does have plans for new future generation in Florence County. This unit was moved to coordinates specified in Florence County.
VA	AEP Clinch River ORISID=3775	1, 2, 3	Used IPM results for 2009; replaced all 2018 IPM results with VADEQ's growth and control estimates (no SCR or scrubbers).
	AEP Glen Lyn ORISID=3776	51, 52, 6	Used 2009/2018 IPM results for units 51 and 52; used 2009 IPM for unit 6; replaced 2018 IPM for unit 6 with VADEQ's growth and control estimates (nor SCR or scrubber).
	Dominion Clover ORISID=7213	1, 2	Used 2009/2018 IPM results.
	Dominion Bremo ORISID=3796	3, 4	Used 2009/2018 IPM results.
	Dominion Chesterfield ORISID=3797	3, 4, 5, 6	Replaced all 2009/2018 IPM results using VADEQ's growth and control estimates.
	Dominion Yorktown ORISID=3809	1, 2, 3	Units 1, 2: Used 2009/2018 IPM results for NOx and used VADEQ's growth and control estimates for SO2. Unit 3: IPM predicts zero heat input for this 880 MW #6 oil fired unit. Dominion plans to continue to operate Unit 3. Replaced all 2009/2018 IPM results using VADEQ's growth and control estimates.

Table 2.1-2 (continued)

State	Plant Name and ID	Unit	Nature of Update/Correction
VA	Dominion Chesapeake ORISID=3803	1 – 4	Unit 1: Used 2009/2018 IPM for NOx; used 2009 IPM for SO2; used VADEQ's growth and control estimates for SO2 (added scrubber that IPM did not have) Unit 2: Used 2009/2018 IPM for NOx; used 2009 IPM for SO2; used VADEQ's growth and control estimates for SO2 (added scrubber that IPM did not have) Unit 3: Used VA DEQ's growth and control estimates for 2009 NOx (added SCR that IPM did not have); used IPM result for 2018 NOx; Used 2009/2018 IPM for SO2. Unit 4: Used VA DEQ's growth and control estimates for 2009 NOx (added SCR that IPM did not have); used IPM result for 2018 NOx; Used 2009/2018 IPM for SO2.
	Dominion Possum Point ORISID=3804	3 & 4 5 6	Unit 3&4: IPM had 137 tons of NO_x for these units in 2009 and 111 tons in 2018. VA DEQ specified that the permitted emission rates should be used, which equates to 3,066 tons in 2009 and 2018. Unit 5: IPM had zero heat input. Replaced all 2009/2018 IPM results using VADEQ's growth and control estimates. Unit 6: Replaced all 2009/2018 IPM results using VADEQ's growth and control estimates.
	Potomac River ORISID=3788	1 - 5	Units 1&2: IPM retired these units. Mirant has no plans at this time to retire any units. Replaced all 2009/2018 IPM results using VADEQ's growth and control estimates. Units 3, 4, 5: Replaced all 2009/2018 IPM results using VADEQ's growth and control estimates.
WV	Albright ORISID=3942	1, 2	IPM predicted early retirement for these units. AEP indicated there are no plans for early retirement. For 2009, used 2002 actual emissions as these units are not likely to retire by 2009. For 2018, used IPM prediction of retirement.
	Rivesville ORISID=3945	7, 8	IPM predicted early retirement for these units. AEP indicated there are no plans for early retirement. For 2009, used 2002 actual emissions as these units are not likely to retire by 2009. For 2018, used IPM prediction of retirement.
	Willow Island ORISID=3946	1, 2	Unit 1: IPM predicted early retirement for these units. AEP indicated there are no plans for early retirement. For 2009, used 2002 emissions as these units are not likely to retire by 2009. For 2018, used IPM prediction of retirement. Unit 2: IPM predicted SCR and scrubber for 2009. These controls will not be in place by 2009.
	North Branch Power Station ORISID=7537	1A, 1B	SO_2 Permit Rate was corrected from 2.7 to 0.678 lb/MMBtu. Used SO_2 Permit Rate of 0.678 lb/MMBtu and IPM predicted total fuel used to calculate SO_2 emissions in 2009 and 2018
	Mt. Storm ORISID=3954	1, 2, 3	SO_2 Permit Rate was corrected from 2.7 to 0.15 lb/MMBtu. Used SO_2 Permit Rate of 0.15 lb/MMBtu and IPM predicted total fuel used to calculate SO_2 emissions in 2009 and 2018

Table 2.1-3 EGU Point Source SO_2 Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	2002 VISTAS BaseG	Base F4 IPM Based	Base G IPM Based with S/L Adjustments	Base F4 IPM Based	Base G IPM Based with S/L Adjustments
AL	447,828	340,194	378,052	190,099	305,262
FL	453,631	195,790	186,055	141,551	132,177
GA	514,952	534,469	417,449	180,178	230,856
KY	484,057	371,944	290,193	229,603	226,062
MS	67,429	85,629	76,579	27,230	15,146
NC	477,990	205,018	242,286	110,382	108,492
SC	206,399	171,206	124,608	121,694	93,274
TN	334,151	255,400	255,410	112,662	112,672
VA	241,204	169,714	225,653	90,935	140,233
WV	516,084	226,127	277,489	124,466	115,324
Total	**3,743,725**	**2,555,491**	**2,473,774**	**1,328,800**	**1,479,498**

Note: Emission summaries above are based on SCCs 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-4 EGU Point Source NO_x Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	2002 VISTAS BaseG	Base F4 IPM Based	Base G IPM Based with S/L Adjustments	Base F4 IPM Based	Base G IPM Based with S/L Adjustments
AL	161,038	70,852	82,305	42,769	64,358
FL	257,677	89,610	86,165	77,080	73,125
GA	147,517	97,146	98,497	58,095	75,717
KY	198,817	107,890	92,021	64,378	64,378
MS	43,135	11,475	36,011	8,945	10,271
NC	151,854	66,431	66,522	60,914	62,353
SC	88,241	43,817	46,915	48,346	51,456
TN	157,307	41,767	66,405	31,725	31,715
VA	86,886	63,220	66,219	49,420	75,594
WV	230,977	63,510	86,328	51,241	51,241
Total	**1,523,449**	**655,718**	**727,388**	**492,913**	**560,208**

Note: Emission summaries above are based on SCCs 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-5 EGU Point Source VOC Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	2002 VISTAS BaseG	Base F4 IPM Based	Base G IPM Based with S/L Adjustments	Base F4 IPM Based	Base G IPM Based with S/L Adjustments
AL	2,295	2,441	2,473	2,952	2,952
FL	2,524	1,867	1,910	2,324	2,376
GA	1,244	1,571	2,314	1,903	2,841
KY	1,487	1,369	1,369	1,426	1,426
MS	648	406	404	1,124	1,114
NC	988	974	954	1,272	1,345
SC	470	660	660	906	906
TN	926	932	932	977	976
VA	754	685	778	903	996
WV	1,180	1,342	1,361	1,387	1,387
Total	**12,516**	**12,247**	**13,155**	**15,174**	**16,319**

Note: Emission summaries above are based on SCCs 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-6 EGU Point Source CO Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	2002 VISTAS BaseG	Base F4 IPM Based	Base G IPM Based with S/L Adjustments	Base F4 IPM Based	Base G IPM Based with S/L Adjustments
AL	11,279	14,948	14,986	24,342	24,342
FL	57,113	45,391	35,928	63,673	53,772
GA	9,712	20,066	23,721	32,744	44,476
KY	12,619	15,812	15,812	17,144	17,144
MS	5,303	5,078	5,051	15,364	15,282
NC	13,885	15,141	14,942	19,612	20,223
SC	6,990	11,135	11,135	14,786	14,786
TN	7,084	7,221	7,213	7,733	7,723
VA	6,892	11,869	12,509	14,755	15,420
WV	10,341	11,328	11,493	11,961	11,961
Total	**141,218**	**157,989**	**152,790**	**222,114**	**225,129**

Note: Emission summaries above are based on SCCs 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-7 EGU Point Source PM_{10}-PRI Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	2002 VISTAS BaseG	Base F4 IPM Based	Base G IPM Based with S/L Adjustments	Base F4 IPM Based	Base G IPM Based with S/L Adjustments
AL	7,646	6,959	6,969	7,822	7,822
FL	21,387	9,384	9,007	10,310	9,953
GA	11,224	17,088	17,891	18,329	20,909
KY	4,701	6,463	6,463	6,694	6,694
MS	1,633	5,487	4,957	7,624	7,187
NC	22,754	22,888	22,152	33,742	37,376
SC	21,400	28,650	19,395	37,864	28,826
TN	14,640	15,608	15,608	15,941	15,941
VA	3,960	4,479	5,508	12,744	13,775
WV	4,573	5,471	5,657	6,349	6,349
Total	**113,918**	**122,477**	**113,607**	**157,419**	**154,832**

Note: Emission summaries above are based on SCCs 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-8 EGU Point Source $PM_{2.5}$ -PRI Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	2002 VISTAS BaseG	Base F4 IPM Based	Base G IPM Based with S/L Adjustments	Base F4 IPM Based	Base G IPM Based with S/L Adjustments
AL	4,113	3,916	3,921	4,768	4,768
FL	15,643	6,250	5,910	7,171	6,843
GA	4,939	10,104	10,907	11,403	13,983
KY	2,802	4,279	4,279	4,434	4,434
MS	1,138	5,310	4,777	7,469	7,033
NC	16,498	16,514	15,949	26,966	29,792
SC	17,154	23,366	16,042	32,180	25,032
TN	12,166	13,092	13,092	13,387	13,387
VA	2,606	3,194	4,067	11,101	11,976
WV	2,210	2,850	2,940	3,648	3,648
Total	**79,269**	**88,875**	**81,884**	**122,527**	**120,896**

Note: Emission summaries above are based on SCCs 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-9 EGU Point Source NH_3 Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	2002 VISTAS BaseG	Base F4 IPM Based	Base G IPM Based with S/L Adjustments	Base F4 IPM Based	Base G IPM Based with S/L Adjustments
AL	317	359	359	1,072	1,072
FL	234	1,659	1,631	3,004	2,976
GA	83	686	686	1,677	1,677
KY	326	400	400	476	476
MS	190	333	333	827	827
NC	54	423	445	691	663
SC	142	343	343	617	617
TN	204	227	227	241	241
VA	127	632	694	558	622
WV	121	330	330	180	180
Total	**1,798**	**5,392**	**5,448**	**9,343**	**9,351**

Note: Emission summaries above are based on SCCs 1-01-xxx-xx and 2-01-xxx-xx.

2.1.2 Non-EGU Emission Projections

The general approach for assembling future year data was to use growth and control data consistent with the data used in EPA's Clean Air Interstate Rule analyses, supplement these data with available stakeholder input, and provide the results for stakeholder review to ensure credibility. We used the revised 2002 VISTAS base year inventory, based on the 2002 CERR submittals as the starting point for the non-EGU projection inventories. As described in Section 2.1.1.4, we split the point source inventory into EGU and non-EGU components. MACTEC performed the following activities to apply growth and control factors to the 2002 inventory to generate the 2009 and 2018 projection inventories:

- Obtained, reviewed, and applied the most current growth factors developed by EPA, based on forecasts from an updated Regional Economic Models, Inc. (REMI) model (version 5.5) and the latest *Annual Energy Outlook* published by the Department of Energy (DOE);
- Obtained, reviewed, and applied any State-specific or sector-specific growth factors submitted by stakeholders;
- Obtained and incorporated information regarding sources that have shut down after 2002 and set the emissions to zero in the projection inventories;
- Obtained, reviewed, and applied control assumptions for programs "on-the-books" and "on-the-way";
- Provided data files in NIF3.0 format and emission summaries in EXCEL format for review and comment; and
- Updated the database with corrections or new information from S/L agencies based on their review of the Base F 2009/2018 inventories.

The following sections discuss each of these steps.

2.1.2.1 Growth assumptions for non-EGU sources

This section describes the growth factor data used in developing the Base F inventory for 2009 and 2018, as well as the changes to the growth factor data made for the Base G inventory.

The growth factor data used in developing the Base F inventory were consistent with EPA's analyses for the CAIR rulemaking. These growth factors are fully documented in the reports entitled *Development of Growth Factors for Future Year Modeling Inventories* (dated April 30, 2004) and *CAIR Emission Inventory Overview* (dated July 23, 2004). Three sources of data were used in developing the growth factors for the Base F inventory:

- State-specific growth rates from the Regional Economic Model, Inc. (REMI) Policy Insight® model, version 5.5 (being used in the development of the EGAS Version 5.0). The REMI socioeconomic data (output by industry sector, population, farm sector value added, and gasoline and oil expenditures) are available by 4-digit SIC code at the State level.

- Energy consumption data from the DOE's Energy Information Administration's (EIA) *Annual Energy Outlook 2004, with Projections through 2025* for use in generating growth factors for non-EGU fuel combustion sources. These data include regional or national fuel-use forecast data that were mapped to specific SCCs for the non-EGU fuel use sectors (e.g., commercial coal, industrial natural gas). Growth factors for the residential natural gas combustion category, for example, are based on residential natural gas consumption forecasts that are reported at the Census division level. These Census divisions represent a group of States (e.g., the South Atlantic division includes eight southeastern States and the District of Columbia). Although one would expect different growth rates in each of these States due to unique demographic and socioeconomic trends, EIA's projects all States within each division using the same growth rate.

- Specific changes for sectors (e.g., plastics, synthetic rubber, carbon black, cement manufacturing, primary metals, fabricated metals, motor vehicles and equipment) where the REMI-based rates were unrealistic or highly uncertain. Growth projections for these sectors were based on industry group forecasts, Bureau of Labor Statistics (BLS) projections and Bureau of Economic Analysis (BEA) historical growth from 1987-2002.

In addition to the growth data described above, we received two sets of growth projections from VISTAS stakeholders.

The American Forest and Paper Association (AF&PA) supplied growth projections for the pulp and paper sector, which were applied to SIC 26xx Paper and Allied Products. The AF&PA projection factors are for the U.S. industry and apply to all States equally. The numbers come from the 15-year forecast for world pulp and recovered paper prepared by Resource Information Systems Inc. (RISI).

SIC Code	Sector	AF&PA Growth Factor	
		2002 to 2009	2002 to 2018
2611	Pulp Mills	1.067	1.169
2621	Paper Mills	1.067	1.169
2631	Paperboard Mills	1.067	1.169

For both the Base F and Base G inventories, we used the above AF&PA growth factors by SIC instead of the factors obtained from EPA's CAIR analysis.

For the Base F inventory, the NCDENR supplied recent projections for three key sectors in North Carolina where declining production was anticipated – SIC 22xx Textile Mill Products, 23xx Apparel and Other Fabrics, and 25xx Furniture and Fixtures. For the Base G inventory, NCDENR decided to use a growth factor of 1.0 for these SIC codes for both 2009 and 2018. Although NCDENR has data that shows a steady decline in these industries in NC, NCDENR wanted to maintain the emission levels at 2002 levels so the future emission reduction credits were available in the event that they are needed for nonattainment areas. The specific growth factors for these industrial sectors in North Carolina were:

NCDENR Growth Factors for Specific Industrial Sectors					
SIC Code	Industrial Sector	2009		2018	
		Base F	Base G	Base F	Base G
22xx	Textile Mill Products	0.6239	1.00	0.2792	1.00
23xx	Apparel and Other Fabrics	0.5867	1.00	0.2247	1.00
25xx	Furniture and Fixtures	0.8970	1.00	0.7647	1.00

For the Base G inventory, we made one additional change to the growth factors. The Base F inventory relied on DOE's AEO2004 forecasts for projecting emissions for fuel-burning SCCs (applies mainly to ICI boilers 1-02-xxx-xx and 1-03-xxx-xx, as well as in-process fuel use). We replaced the AEO2004 data with the more recent AEO2006 forecasts (released in February 2006) to reflect changes in the energy market and to improve the emissions growth factors produced. We obtained the corresponding AEO2006 projection tables from DOE's web site located at http://www.eia.doe.gov/oiaf/aeo/supplement/supref.html. We developed tables comparing the growth factors based on AEO2004 and AEO2006. These comparison tables were reviewed by the S/L agencies. Based on this review, VISTAS decided to use the AEO2006 growth factors for fuel burning SCCs.

We used the EPA's EGAS model and updated the corresponding AEO2006 projection tables to create growth factors by SCC. We applied the updated growth factors to 2002 actual emissions and replaced the 2009 and 2018 emissions in NIF EM tables for the affected SCCs.

2.1.2.2 Source Shutdowns

A few states indicated that significant source shutdowns have occurred since 2002 and that emissions from these sources should not be included in the future year inventories. These sources are identified in Table 2.1-10.

Table 2.1-10. Summary of Source Shutdowns Incorporated in Base G Inventory.

State	Description of Source Shutdowns
AL	None specified.
FL	The following facilities are shutdown and projected emissions were set to zero in 2009/2018. 0570075 CORONET INDUSTRIES, INC. 1050050 U S AGRI-CHEMICALS CORP. 1050051 U.S. AGRI-CHEMICALS CORPORATION These facilities emitted 2,417 tons of SO_2 and 113 tons of NO_x in 2002.
GA	Georgia indicated that the former Blue Circle (now LaFarge) facility in downtown Atlanta will likely shut down before 2009. The facility has two cement kilns, one of which is already shut down. The second kiln will continue to operate until the new facility in Alabama has enough milling capacity, after which the entire Atlanta facility will be completely closed down. This facility emitted 1,617 tons of SO_2 and 587 tons of NO_x in 2002.
KY	None specified.
MS	AF&PA indicated that the International Paper Natchez Mill (28-001-2800100010) has shut down. This facility emitted 1,398 tons of SO_2 and 1,773 tons of NO_x in 2002.
	The Magnolia Resources - Pachuta Harmony Gas Plant (28-023-00031) is out of business and no longer holds an air permit. This facility emitted 2,257 tons of $SO_2$and 134 tons of NO_x in 2002.
NC	In Base F, two paper mills were identified as being shut down in the 2018 inventory. NCDENR indicated that these mills are not expected to close. The two facilities are Ecusta Business Development (37-175-3717500056) and International Paper (37-083-00007). Their emissions were added back into the Base G 2018 inventory.
	BASF Corporation (37-021-724) in Buncombe County is currently operating but has plans to shut down in 2007. This facility emitted 461 tons of SO_2 and 266 tons of NO_x in 2002.
SC	South Carolina provided a list of facilities that were identified as closing down on or after Jan. 1, 2003. The emissions for these facilities were set to zero in the 2009 and 2018 projection inventories. Emissions from these plants in 2002 were: 6,195 tons of SO_2, 2,994 tons of NO_x, and 2,836 tons of VOC. Most of the emissions were from one facility – Celanese Acetate (45-091-2440-0010) in York County.
TN	Davidson County (Nashville) indicated that significant source shutdowns have occurred since data were submitted for the 2002 CERR. Source number 47-037-00002 (Dupont) shut down a portion of their facility, which was permanently taken out of service. Source 47-037-00050 (Nashville Thermal Transfer Corp.) shut down their municipal waste combustors and replaced them with natural gas fired boilers with propane stand by.
	Weyerhaeuser (AKA Willamette) Power Boiler 7 (47-163-0022, EU ID = 017) is being shut down. This emission unit emitted 4,297 tons of SO_2 and 1,443 tons of NO_x in 2002.
	Liberty Fibers (47-063-0197) in Hamblen County has recently shut down. This facility emitted 5,377 tons of SO_2; 2,057 tons of NO_x; and 9,059 tons of VOC in 2002.
VA	Rock-Tenn (51-680-00097) received a permit dated 9/13/2003 which required the shutdown of units 1 and 2 by 2/27/2004. This permit was part of a netting exercise that allowed the installation of a new NG/DO boiler. These two units emitted 507 tons of SO_2 and 276 tons of NO_x in 2002.
WV	None specified.

2.1.2.3 Control Programs applied to non-EGU sources

We used the same control programs for both the 2009 and 2018 non-EGU point inventory. Two control scenarios were developed: on-the-books (OTB) controls and on-the-way (OTW) controls. The OTB control scenario accounts for post-2002 emission reductions from promulgated federal, State, local, and site-specific control programs. The OTW control scenario accounts for proposed (but not final) control programs that are reasonably anticipated to result in post-2002 emission reductions. The methodologies used to account for the emission reductions associated with these emission control programs are discussed in the following sections.

Table 2.1-11. Non-EGU Point Source Control Programs Included in 2009/2018 Projection Inventories.

On-the-Books (Cut-off of July 1, 2004 for Base 1 adoption)

- Atlanta / Northern Kentucky / Birmingham 1-hr SIPs
- Industrial Boiler/Process Heater/RICE MACT
- NO_x RACT in 1-hr NAA SIPs
- NO_x SIP Call (Phase I- except where States have adopted II already e.g. NC)
- Petroleum Refinery Initiative (October 1, 2003 notice; MS & WV)
- RFP 3 percent Plans where in place for one hour plans
- VOC 2-, 4-, 7-, and 10-year maximum achievable control technology (MACT0 Standards
- Combustion Turbine MACT

On-the-Way

- NO_x SIP Call (Phase II – remaining States & IC engines)

2.1.2.3.1 OTB - NO_x SIP Call (Phase I)

Phase I of the NO_x SIP call applies to certain large non-EGUs, including large industrial boilers and turbines, and cement kilns. States in the VISTAS region affected by the NO_x SIP call have developed rules for the control of NO_x emissions that have been approved by EPA. We reviewed the available State rules and guidance documents to determine the affected sources and ozone season allowances. We also obtained and reviewed information in the EPA's CAMD NO_x Allowance Tracking System – Allowances Held Report. Since these controls are to be in effect by the year 2007, we capped the emissions for NO_x SIP call affected sources at 2007 levels and carried forward the capped levels for the 2009/2018 future year inventories. Since the NO_x SIP call allowances are given in terms of tons per ozone season (5 month period from May to September), we calculated annual emissions by multiplying the 5-month allowances by a factor of 12 divided by 5.

2.1.2.3.2 OTB - Industrial Boiler/Process Heater MACT

EPA anticipates reductions in PM and SO_2 as a result of the Industrial Boiler/Process Heater MACT standard. The methods used to account for these reductions are the same as those used for the CAIR analysis. Reductions were included for existing units firing solid fuel (coal, wood, waste, biomass) which had a design capacity greater than 10 mmBtu/hr. EPA prepared a list of SCCs for solid fuel industrial and commercial/ institutional boilers and process heaters. We identified boilers greater than 10 mmBtu/hr using either the boiler capacity from the VISTAS 2002 inventory, or if the boiler capacity was missing, a default capacity based on a methodology developed by EPA for assigning default capacities based on SCC. The applied MACT control efficiencies were 4 percent for SO_2 and 40 for percent for PM_{10} and PM2.5 to account for the co-benefit from installation of acid gas scrubbers and other control equipment to reduce HAPs.

2.1.2.3.3 OTB - 2, 4, 7, and 10-year MACT Standards

Maximum achievable control technology (MACT) requirements were also applied, as documented in the report entitled *Control Packet Development and Data Sources,* dated July 14, 2004. The point source MACTs and associated emission reductions were designed from Federal Register (FR) notices and discussions with EPA's Emission Standards Division (ESD) staff. We did not apply reductions for MACT standards with an initial compliance date of 2001 or earlier, assuming that the effects of these controls are already accounted for in the 2002 inventories supplied by the States. Emission reductions were applied only for MACT standards with an initial compliance date of 2002 or greater.

2.1.2.3.4 OTB Combustion Turbine MACT

The projection inventories do not include the NO_x co-benefit effects of the MACT regulations for Gas Turbines or stationary Reciprocating Internal Combustion Engines, which EPA estimates to be small compared to the overall inventory.

2.1.2.3.5 OTB - Petroleum Refinery Initiative (MS and WV)

Three refineries in the VISTAS region are affected by two October 2003 Clean Air Act settlements under the EPA Petroleum Refinery Initiative. The refineries are: (1) the Chevron refinery in Pascagoula, MS; (2) the Ergon refinery in Vicksburg, MS; and (3) the Ergon refinery in Newell, WV.

The first consent decree pertained to Chevron refineries in Richmond and El Segundo, CA; Pascagoula, MS; Salt Lake City, UT; and Kapolei, HI. Actions required under the Consent Decree will reduce annual emissions of NO_x by 3,300 tons and SO_2 by 6,300 tons. The consent decree requires a program to reduce NO_x emissions from refinery heaters and boilers through the installation of NO_x controls that meet at least an SNCR level of control. The refineries are to eliminate fuel oil burning in any combustion unit. The consent decree also requires reductions of NO_x and SO_2 from the fluid catalytic cracking unit and control of acid gas flaring incidents. The consent decree does not provide sufficient information to calculate emission reductions for the FCCU or flaring at the Pascagoula refinery. Therefore, we calculated a general percent reduction for NO_x and SO_2 by dividing the expected emission reductions at the five Chevron refineries by the total emissions from these five refineries (as reported in the 1999 NEI). This resulted in applying percent reductions of 45 percent for SO_2 and 28 percent for NO_x to FCCU and flaring emissions at the Chevron Pascagoula refinery.

The second consent decree pertained to the Ergon-West Virginia refinery in Newell, WV; and the Ergon Refining facility in Vicksburg, MS. The consent decree requires the two facilities to implement a 6-year program to reduce NO_x emission from all heaters and boilers greater than 40 mmBtu/hr, and to eliminate fuel oil burning in any combustion unit (except during periods of natural gas curtailment). Specifically, ultra low NO_x burners are required on Boilers A and B at Newell, a low NO_x-equivalent level of control for heater H-101 at Newell and heaters H-1 and H-3 at Vicksburg, and an ultra low NO_x burner level of control for heater H-451 at Vicksburg.

2.1.2.3.6 OTW - NO_x SIP Call (Phase II)

The final Phase II NO_x SIP call rule was finalized on April 21, 2004. States had until April 21, 2005, to submit SIPs meeting the Phase II NO_x budget requirements. The Phase II rule applies to large IC engines, which are primarily used in pipeline transmission service at compressor stations. We identified affected units using the same methodology as was used by EPA in the proposed Phase II rule (i.e., a large IC engine is one that emitted, on average, more than 1 ton per day during 2002). The final rule reflects a control level of 82 percent for natural gas-fired IC engines and 90 percent for diesel or dual fuel categories. As shown later in Table 2.1-12, several S/L agencies provided move specific information on the anticipated controls at the compressor stations. This information was used in the Base G inventory instead of the default approach used by EPA in the proposed Phase II rule.

2.1.2.3.7 Clean Air Interstate Rule

CAIR does not require or assume additional emission reductions from non-EGU boilers and turbines.

2.1.2.4 Quality Assurance steps

Final QA checks were run on the revised projection inventory data set to ensure that all corrections provided by the S/L agencies and stakeholders were correctly incorporated into the S/L inventories and that there were no remaining QA issues that could be addressed during the duration of the project. After exporting the inventory to ASCII text files in NIF 3.0, the EPA QA program was run on the ASCII files and the QA output was reviewed to verify that all QA issues that could be addressed were resolved

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, and to ensure that a full and complete inventory was developed for VISTAS. Quality assurance was an important component to the inventory development process and MACTEC performed the following QA steps on the point source component of the VISTAS revised 2002 base year inventory:

1. Facility level emission summaries were prepared and evaluated to ensure that emissions were consistent and reasonable. The summaries included base year 2002 emissions, 2009/2018 projected emissions accounting only for growth, 2009/2018 projected emissions accounting for both growth and emission reductions from OTB and OTW controls.
2. State-level non-EGU comparisons (by pollutant) were developed for the base year 2002 emissions, 2009/2018 projected emissions accounting only for growth, 2009/2018 projected emissions accounting for both growth and emission reductions from OTB and OTW controls.
3. Data product summaries and raw NIF 3.0 data files were provided to the VISTAS Emission Inventory Technical Advisor and to the Point Source, EGU, and non-EGU Special Interest Work Group representatives for review and comment. Changes based on these comments were reviewed and approved by the S/L point source contact prior to implementing the changes in the files.
4. Version numbering was used for all inventory files developed. The version numbering process used a decimal system to track major and minor changes. For example, a major change would result in a version going from Base F1 to Base F2.

2.1.2.5 Additional Base G Updates and Corrections

Table 2.1-12 summarizes the updates and corrections to the Base F inventory that were requested by S/L agencies and incorporated into the Base G 2009/2018 inventories.

2.1.2.6 Summary of Revised 2009/2018 non-EGU Point Source Inventories

Tables 2.1-13 through 2.1-19 summarize the revised 2009/2018 non-EGU point source inventories. The “growth only” column does not include the shutdowns (section 2.1.2.2) or control factors (section 2.1.2.3), only the growth factors described in section 2.1.2.1.

Table 2.1-12. Summary of Updates and Corrections to the Base F 2009/2018 Inventories Incorporated into the Base G 2009/2018 Inventories.

State	Nature of Update/Correction
AL	Corrected the latitude and longitude for two facilities: Ergon Terminalling (Site ID: 01-073-010730167) and Southern Power Franklin (Site ID: 01-081-0036).
AL	Corrections to stack parameters at 10 facilities for stacks with parameters that do not appear to fall into the ranges typically termed "acceptable" for AQ modeling.
FL	Corrected 2009/2018 emission values for the Miami Dade RRF facility (Site ID: 12-086-0250348) based on revised 2002 emissions and application of growth control factors for 2009/2018.
GA	Hercules Incorporated (12-051-05100005) had an erroneous process id (#3) within emission unit id SB9 and was deleted. This removes about 6,000 tons of SO_2 from the 2009/2018 inventories.
	Provided a revised file of location coordinates at the stack level that was used to replace the location coordinated in the ER file.
	There are several sources that have updated their emissions from their BART eligible units. most of these changes were for fairly small (<50 tpy) sources.
NC	Made several changes to Base F inventory to correct the following errors: 1. Corrected emissions at Hooker Furniture (Site ID: 37-081-3708100910), release point G-29, to use the corrected values in 2002 and carry those same numbers through to 2009 and 2018 since NCDENR assumes zero growth for furniture industry. 2. Identified many stack parameters in the ER file that were unrealistic. Several have zero for height, diameter, gas velocity, and flow rate. NC used the procedures outlined in Section 8 of the document ""National Emission Inventory QA and Augmentation Report" to correct unrealistic stack parameters. 3. Identified truncated latitude and longitude values in Base F inventory. NC updated all Title V facility latitude and longitude that was submitted to EPA for those facilities in 2004. Smaller facilities with only two decimal places were not corrected. 4. Corrected 2018 VOC emissions for International Paper (3709700045) Emission Unit ID, G-12, to reflect changes to the 2002 inventory.
	There are three Transcontinental Natural Gas Pipeline facilities in NC that are subject to the NO_x SIP call. NCDENR took 2004 emissions and grew them to 2009 & 2018 and capped those units that are subject to the NO_x SIP Call Rule. These facility IDs are 37-057-3705700300, 37-097-3709700225, and 37-157-3715700131.
	NCDENR applied NO_x RACT to a two facilities located in the Charlotte nonattainment area. NCDENR provided 2009 & 2018 emissions for Philip Morris USA (37-025-3702500048) and Norandal USA (37-159-3715900057).
SC	Corrected PM species emission values. SC DHEC's initial CERR submittal reported particulate matter emissions using the PM-FIL, PM_{10}-FIL, and $PM_{2.5}$ -FIL pollutant codes. In August 2005, SC DHEC indicated that data reported using the PM-FIL, PM_{10}-FIL, and $PM_{2.5}$ -FIL pollutant codes should actually have been reported using the PM-PRI, PM_{10}-PRI, and $PM_{2.5}$ _PRI codes. MACTEC performed a subsequent PM augmentation in April 2006 using the revised pollutant codes. These changes were reflected in the Base G 2009/2018 emission inventory.
	Specified that the Bowater Inc. facility (45-091-2440-0005) in York County conducted an expansion in 2003/2004 and plans a future expansion. SC provided updated emissions for 2009 and 2018 for this facility.

Table 2.1-12. Continued.

State	Nature of Update/Correction
TN	Updated 2009/2018 emissions for Eastman Chemical (47-163-0003) based on final (Feb. 2005) BART rule.
	Updated 2009/2018 emission inventory for the Bowater facility (47-107-0012) based on the facility's updated 2002 emission inventory update.
	Replaced 2009/2018 data from Hamilton County, Tennessee, using data from Hamilton County's CERR submittal as contained in EPA's 2002 NEI (in Base F, the inventory for Hamilton County was based on the draft VISTAS 2002 inventory, which in turn was based on the 1999 NEI); applied growth and control factors to revised 2002 inventory to generate emission projections for 2009/2018.
	Updated 2009/2018 emissions for PCS Nitrogen Fertilizer LP (Site ID: 47-157-00146) based on the facility's updated 2002 emission inventory update.
	The 2002 NEI correctly reports the actual emissions for CEMEX (47-093-0008) after the NO_x SIP call. There is no reason to suspect that that rate would change in 2008, 2009, or 2018. Emissions for 2009/2018 were set equal to 2002 emissions.
	In the Base F 2009/2018 inventories, NO_x controls were applied for two units at Columbia Gulf Transmission (47-111-0004). There are no plans for controls at these units, EO3 and EO4. The assumed control efficiency of 82 percent was backed out in the 2009/2018 inventories.
VA	VADEQ provided 2009/2018 NO_x emission estimates for NO_x Phase II gas transmission sources at three Transco facilities (51-011-00011, 51-137-00027, 51-143-00120) which were used to replace the default NO_x Phase II control assumptions for these facilities.
	VADEQ provided updated 2009/2018 NO_x and SO_2 emissions based on new controls required by a November 2005 permit modification and netting exercise. The entire power plant facility is limited to 213 tons of NO_x and 107 tons of SO_2 per year. The permit also allowed the installation of 3 new boilers, also under the 213 tons of NO_x /year cap.
WV	Updated 2009/2018 emissions for Steel of West Virginia (Site ID: 54-011-0009) based on the facility's updated 2002 emission inventory update.
	Made changes to several Site ID names due to changes in ownership
	Base F emissions were much too high for Weirton Steel (54-021-0029). WV believes that the source is very unlikely to emit the NO_x SIP Call budgeted amounts in 2009 or 2018. WV provided revised emission estimates based on EGAS for 2009/2018.
	Made corrections to latitude/longitude and stack parameters at a few facilities for stacks with parameters that do not appear to fall into the ranges typically termed "acceptable" for AQ modeling.

Table 2.1-13 Non-EGU Point Source SO_2 Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	**Base G**	**Base F4**	**Base G**	**Base F4**	**Base G**
AL	96,481	100,744	101,246	112,703	113,224
FL	65,090	68,549	65,511	79,015	75,047
GA	53,778	61,535	53,987	68,409	59,349
KY	34,029	35,470	36,418	38,806	40,682
MS	35,960	27,488	25,564	40,195	39,221
NC	44,123	48,751	42,536	50,415	46,314
SC	53,518	55,975	48,324	56,968	53,577
TN	79,604	89,149	70,678	96,606	77,247
VA	63,903	63,075	62,560	69,776	68,909
WV	54,070	54,698	55,973	60,137	62,193
Total	**580,556**	**605,434**	**562,797**	**673,030**	**635,763**

Note: Emission summaries above include all SCCs except 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-14 Non-EGU Point Source NO_x Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	**BaseG**	**Base F4**	**Base G**	**Base F4**	**BaseG**
AL	83,310	69,676	69,409	79,101	78,318
FL	45,156	44,859	46,020	50,635	51,902
GA	49,251	51,556	50,353	57,323	55,824
KY	38,392	36,526	37,758	40,363	41,034
MS	61,526	55,877	56,397	62,132	61,533
NC	44,928	44,877	34,767	47,200	37,801
SC	42,153	42,501	40,019	44,480	44,021
TN	64,344	63,431	57,883	70,313	63,453
VA	60,415	51,335	51,046	56,876	55,945
WV	46,612	40,433	38,031	44,902	43,359
Total	**536,087**	**501,071**	**481,683**	**553,325**	**533,190**

Note: Emission summaries above include all SCCs except 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-15 Non-EGU Point Source VOC Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	**Base G**	**Base F4**	**Base G**	**Base F4**	**Base G**
AL	47,037	46,660	46,644	54,268	54,291
FL	38,471	36,675	36,880	42,787	42,811
GA	33,709	34,082	34,116	40,267	40,282
KY	44,834	47,648	47,785	55,564	55,861
MS	43,204	37,921	37,747	45,769	45,338
NC	61,182	70,464	61,925	76,027	70,875
SC	38,458	38,273	35,665	44,545	43,656
TN	84,328	89,380	74,089	111,608	93,266
VA	43,152	43,620	43,726	53,065	53,186
WV	14,595	14,012	13,810	16,632	16,565
Total	**448,970**	**458,735**	**432,387**	**540,532**	**516,131**

Note: Emission summaries above include all SCCs except 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-16 Non-EGU Point Source CO Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	**Base G**	**Base F4**	**Base G**	**Base F4**	**Base G**
AL	174,271	176,899	180,369	194,280	201,794
FL	81,933	83,937	87,037	96,642	96,819
GA	130,850	147,362	147,427	168,570	167,904
KY	109,936	121,727	122,024	139,121	139,437
MS	54,568	58,023	57,748	67,764	66,858
NC	50,576	53,955	53,744	61,127	62,197
SC	56,315	62,144	60,473	71,318	68,988
TN	115,264	123,844	119,665	146,407	140,942
VA	63,796	67,046	68,346	74,364	76,998
WV	89,879	100,248	100,045	119,318	119,332
Total	**927,388**	**995,185**	**996,878**	**1,138,911**	**1,141,269**

Note: Emission summaries above include all SCCs except 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-17 Non-EGU Point Source PM_{10}-PRI Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	**Base G**	**Base F4**	**Base G**	**Base F4**	**Base G**
AL	25,240	25,450	25,421	29,973	29,924
FL	35,857	39,363	39,872	46,573	46,456
GA	21,610	23,509	23,103	27,781	27,273
KY	16,626	17,164	17,174	20,142	20,153
MS	19,472	19,200	19,245	22,952	22,859
NC	13,838	14,738	13,910	15,816	15,737
SC	14,142	17,631	13,370	20,197	15,139
TN	35,174	37,040	34,833	45,168	42,280
VA	13,252	13,043	13,048	15,150	15,112
WV	17,503	17,723	17,090	21,699	21,735
Total	**212,714**	**224,861**	**217,066**	**265,451**	**256,668**

Note: Emission summaries above include all SCCs except 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-18 Non-EGU Point Source PM25-PRI Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	**Base G**	**Base F4**	**Base G**	**Base F4**	**Base G**
AL	19,178	19,256	19,230	22,628	22,598
FL	30,504	33,387	33,946	39,436	39,430
GA	17,462	19,361	18,982	22,882	22,416
KY	11,372	11,680	11,686	13,734	13,739
MS	9,906	9,144	9,199	10,768	10,739
NC	10,500	11,192	10,458	11,927	11,825
SC	10,245	13,101	9,390	14,947	11,086
TN	27,807	29,302	27,577	35,750	33,532
VA	10,165	9,980	9,988	11,604	11,594
WV	13,313	13,364	12,769	16,474	16,516
Total	**160,452**	**169,767**	**163,225**	**200,150**	**193,475**

Note: Emission summaries above include all SCCs except 1-01-xxx-xx and 2-01-xxx-xx.

Table 2.1-19 Non-EGU Point Source NH_3 Emission Comparison for 2002/2009/2018.

	2002	2009		2018	
State	**Base G**	**Base F4**	**Base G**	**Base F4**	**Base G**
AL	1,883	2,132	2,132	2,464	2,464
FL	1,423	1,544	1,544	1,829	1,829
GA	3,613	3,963	3,963	4,799	4,797
KY	674	733	760	839	901
MS	1,169	667	668	761	764
NC	1,180	1,288	1,285	1,422	1,466
SC	1,411	1,578	1,578	1,779	1,779
TN	1,613	1,861	1,841	2,240	2,214
VA	3,104	3,050	3,049	3,613	3,604
WV	332	341	341	416	413
Total	**16,402**	**17,157**	**17,161**	**20,162**	**20,231**

Note: Emission summaries above include all SCCs except 1-01-xxx-xx and 2-01-xxx-xx.

2.2 Area Sources

This section describes the methodology used to develop the 2009 and 2018 projection Base F and Base G projection inventories. This section describes two approaches to these projections. Separate methods for projecting emissions were used for non-agricultural (stationary area) and agricultural area sources (predominantly NH_3 emissions). The two methods used for these sectors are described in the sections that follow.

2.2.1 Stationary area sources

The general approach used to calculate Base F projected emissions for stationary area sources was as follows:

1. Use the VISTAS Base F 2002 base year inventory as the starting point for projections.

2. MACTEC then worked with the VISTAS States (via the Stationary Area Source SIWG) to obtain any State specific growth factors and/or future controls from the States to use in developing the projections.

3. MACTEC then back calculated uncontrolled emissions from the Base F 2002 base year inventory based on existing controls reported in the 2002 Base F base year inventory.

4. Controls (including control efficiency, rule effectiveness and rule penetration) provided by the States or originally developed for use in estimating projected emissions for U.S. EPA’s Heavy Duty Diesel (HDD) rulemaking emission projections and used in the Clean

Air Interstate Rule (CAIR) projections were then used to calculate controlled emissions. State submitted controls had precedence over the U.S. EPA developed controls.

5. Growth factors supplied from the States or the U.S. EPA's CAIR emission projections were then applied to project the controlled emissions to the appropriate year. In some cases EGAS Version 5 growth factors were used if no growth factor was available from either the States or the CAIR growth factor files. The use of EGAS Version 5 growth factors was on a case-by-case basis wherever State-supplied or CAIR factors were not available for SCCs found in the 2002 Base F inventory. Use of the EGAS factors was necessitated due to the CERR submittals used in constructing the Base F 2002 inventory. Use of the CERR data resulted in SCCs that were not found in the CAIR inventory and if no State-supplied growth factor was provided required the use of an EGAS growth factor.
6. MACTEC then provided the final draft Base F projection inventory for review and comment by the VISTAS States.

For Base F stationary area sources, no State-supplied growth or control factors were provided. Thus for all of the sources in this sector of the inventory, growth and controls for Base F were applied based on controls initially identified for the CAIR and growth factors identified for the CAIR projections.

For the Base G projections, the Base G 2002 base year inventory (see section 1.2.3) was used as a starting point. States provided some updated future controls but growth factors used were identical to those used for Base F. The revised controls for Base G were largely for new sources added as part of the 2002 Base F comments. The calculation of Base G projections was identical to the six steps outlined above with the exception of revisions made to prescribed fire for 2009 and 2018 and for the State of North Carolina. North Carolina provided 2009 and 2018 updated emission files used to update the emissions for each year for several source categories. However not all sources in the inventory were included in these NC updates. As a consequence, the final Base G 2009 and 2018 inventory for NC included emissions updated using the NC supplied files and emissions developed using growth and control factors as outlined above.

In a few cases, additional growth factors had to be added for source categories that had not initially been included in the Base F inventory. These growth factors were obtained from EGAS 5.0. Finally updates to growth factors from EGAS 5.0 were made for fuel fired emission sources. The updated growth factors reflected the most recent data from the Department of Energy's Annual Energy Outlook (AEO). These data were used to reflect changes in energy efficiency resulting from new or updated fuel firing technologies.

2.2.1.1 Stationary area source controls

The controls obtained by MACTEC for the HDD rulemaking were controls for the years 2007, 2020, and 2030. Since MACTEC was preparing 2009 and 2018 projections, control values for intermediate years were prepared using a straight line interpolation of control level between 2007 and 2020. The equation used to calculate the control level was as follows:

CE = (((2020 CE – 2007 CE)/13)*YRS) + 2007 CE

Where:

CE	=	Control Efficiency for either 2009 or 2018
2020 CE	=	HDD Control Efficiency value for 2020
2007 CE	=	HDD Control Efficiency value for 2007
13	=	Number of years between 2020 and 2007
YRS	=	Number of years beyond 2007 to VISTAS Projection year

For 2009 the value of YRS would be two (2) and for 2018 the value would be eleven (11). Control efficiency values were determined for VOC, CO and PM. Rule penetration values for each year in the HDD controls tables obtained by MACTEC were always 100 percent so those values were maintained for the VISTAS projections.

Prior to performing the linear interpolation of the controls, MACTEC evaluated controls from the CAIR projections (NOTE: Initially the controls came from the IAQTR projections, however the controls used in CAIR were virtually identical to those in IAQTR). Those controls appeared to be identical to those used for the HDD rulemaking. In addition, MACTEC received some additional information on some controls for area source solvents (email from Jim Wilson, E.H. Pechan and Associates, Inc. to Gregory Stella, VISTAS Emission Inventory Technical Advisor, 3/5/04) that were used to check against the controls in the HDD rulemaking files. Where those controls proved to be more stringent than the HDD values, MACTEC updated the control file with those values (which were then used in the interpolation to develop 2009 and 2018 values). Finally, for VOC the HDD controls were initially provided at the State-county-SCC level. However, upon direction from the VISTAS Emission Inventory Technical advisor, the VOC controls were consolidated at the SCC level and applied across all counties within the VISTAS region (email from Gregory Stella, Alpine Geophysics, 3/3/2004) to ensure that no controls were missed due to changes in county FIPS codes and/or SCC designations between the time the HDD controls were developed and 2002.

The equation below indicates how VOC emissions were projected for stationary area sources.

$$VOC_{2018} = VOC_{2002} \; x \left(1 - \left(\frac{VOC\_CE_{2018}}{100} \right) \left(\frac{VOC\_RE_{2018}}{100} \right) \left(\frac{VOC\_RP_{2018}}{100} \right) \right)$$

Where:

VOC_{2018} = VOC emissions for 2018

VOC_{2002} = Uncontrolled VOC emissions for 2002

VOC_CE_{2018} = Control Efficiency for VOC (in this example for 2018)

VOC_RE_{2018} = Rule Effectiveness for VOC (in this example for 2018)

VOC_RP_{2018} = Rule Penetration for VOC (in this example for 2018)

A similar equation could be constructed for either PM or CO. It should be noted that the control efficiencies calculated based on the HDD rulemaking were only applied if they were greater than any existing 2002 base year controls. No controls were found for SO_2 or NO_x area sources.

In the pre-Base F 2018 emission estimates, an energy efficiency factor was applied to energy related stationary area sources. The energy efficiency factor was applied along with the growth factor to account for both growth and changes in energy efficiency. That factor was not applied to the Base F projections since information supplied by U.S. EPA related to the CAIR growth factors indicated that growth values for those categories were derived from U.S. Department of Energy (DOE) and were felt to account for changes in growth and projected energy efficiency. For the Base G inventory, these energy efficiency factors were re-instituted and used in conjunction with EGAS 5.0 growth factors in a manner identical to that used for the pre-Base F inventories. The energy efficiency factors were derived from U.S. DOE’s Annual Energy Outlook report.

One significant difference between the Base F and Base G control factors was for counties and independent cities in northern Virginia. Several counties and independent cities in northern Virginia are subject to Ozone Transport Commission rules. For these counties and independent cities, controls for portable fuel containers, mobile equipment repair/refinishing, consumer products, solvent metal cleaning, and the architectural and industrial maintenance rules were added. The counties/independent cities (FIPS code) included in the changes for Base G were: Alexandria City (51510), Arlington (51013), Fairfax City (51600), Fairfax (51059), Falls Church City (51610), Fredericksburg City (51630), Loudoun (51107), Manassas City (51683), Manassas Park City (51685), Prince William County (51153), Spotsylvania (51177), and Stafford (51179). Not all OTC rules applied to all counties/cities.

2.2.1.2 Stationary area source growth

As indicated above, growth factors for the Base F and Base G 2009 and 2018 inventories were obtained from the U.S. EPA and are linear interpolations of the growth factors used for the Clean Air Interstate Rule (CAIR) projections. The growth factors for the CAIR obtained by MACTEC were developed using a base year of 2001 and provided growth factors for 2010 and 2015. MACTEC used the TREND function in Microsoft Excel™ to calculate 2002, 2009 and 2018 values from the 2001, 2010 and 2015 values. The TREND function provides a linear interpolation of intermediate values from a known series of data points (in this case the 2001, 2010 and 2015 values) based on the equation for a straight line. These values were calculated at the State and SCC level with the exception of paved road emissions (SCC = 2294000000). The growth factors for paved roads were available in the CAIR data set at the State, county and SCC level so they were applied at that level.

Prior to utilizing the growth factors from the CAIR projections, MACTEC confirmed that all SCCs found in the VISTAS 2002 base year inventory were in the CAIR file (for Base F the starting point was the version 3.1 2002 base year inventory, for Base G the starting point was the Base F 2002 base year inventory). Some SCCs were not found in the CAIR file. For those SCCs, the growth factors used were derived in one of five ways. First where possible, they were taken from a beta version of EGAS 5.0. In other cases, the growth factor was set to one (i.e., no growth). In other cases, a similar SCC that had a CAIR growth factor was used. In a few cases a growth factor based on an average CAIR growth at the 6 digit SCC level was calculated. Finally a number of records used population as the growth surrogate. For the Base G inventory, CAIR growth factors for fuel fired area sources were replaced with EGAS 5.0 growth factors (used in conjunction with AEO fuel efficiency factors). A comment field in the growth factor file was used to mark those records that were not taken directly from the CAIR projection growth factors.

2.2.1.3 Differences between 2009/2018

Methodologically, there was no difference in the way that 2009 and 2018 emissions were calculated for stationary area sources. The individual control and growth factors were different (due to the linear interpolation used to calculate the values) but the calculation methods were identical. This applies to both Base F and Base G.

The only exception to this is for the State of North Carolina for Base G. North Carolina provided an emissions update file used to override calculated projections for a number of area source categories. The values in these files (provided for both 2009 and 2018) were used to overwrite the calculated projected emissions in the final NIF file.

2.2.2 Agricultural area sources

The general approach used to calculate projected emissions for agricultural area sources (predominantly NH_3 emission sources) was as follows:

1. MACTEC used the version 3.1 2002 base year inventory data (which was based on the CMU ammonia model version 3.6).
2. MACTEC worked with the VISTAS States (via the Agricultural Sources SIWG) to obtain any State specific growth and/or future controls from the States for agricultural sources.
3. Since the base year emissions were uncontrolled, and no future controls for these sources were identified, MACTEC projected the agricultural emissions using State-specific growth if available, otherwise the U.S. EPA's Interstate Air Quality Transport Rule (IAQTR)/Ammonia inventory was used to develop the growth factors used to project the revised 2002 base year inventory to 2009 or 2018. Since the IAQTR inventory was only used to construct growth factors rather than using the emissions directly, no updated growth factors were prepared from the CAIR inventory values.
4. MACTEC then provided the final draft inventory for review and comment by the VISTAS States.

No change in the agricultural area source emission projections were made between Base F and Base G other than the removal of wild animal and human perspiration as a result of their removal from the 2002 base year file for Base G.

2.2.2.1 Control assumptions for agricultural area sources

No controls were identified either by the individual VISTAS States or in the information provided in the EPA's IAQTR or CAIR Ammonia inventory documents. Thus all projected emissions for agricultural area sources represent simple growth with no controls.

2.2.2.2 Growth assumptions for agricultural area sources

Growth for several agricultural area source livestock categories was developed using the actual emission estimates developed by the EPA as part of the NEI. That work included projections for the years 2002, 2010, 2015, 2020, and 2030. The actual emissions themselves were not used other than to develop growth factors since the 2002 NEI upon which the growth projections were based was prepared prior to the release of the 2002 Census of Agriculture data which was included in the CMU model (version 3.6) used to develop the Base F 2002 VISTAS base year inventory. Thus VISTAS Agricultural Sources SIWG decided to use the NEI ammonia inventory projected emissions to develop the 2009 and revised 2018 growth factors used to project emission for VISTAS. Details on the NEI inventory and projections can be found at:

http://www.epa.gov/ttn/chief/ap42/ch09/related/nh3inventorydraft_jan2004.pdf. The actual data files for the projected emissions can be found at:

http://www.epa.gov/ttn/chief/ap42/ch09/related/nh3output01_23_04.zip.

In order to use the NEI projected emissions as growth factors, several steps were required. These steps were as follows:

1. NEI projected emissions were only available for the years 2002, 2010, 2015, 2020, and 2030, thus the first task was to calculate intermediate year emissions for 2009 and 2018. These values were calculated based on linear interpolation of the existing data.

2. Once the intermediate emissions were calculated, MACTEC developed emission ratios to provide growth factors for 2009 and 2018. Ratios of emissions were established relative to the 2002 NEI emissions.

3. Once the growth factors were established, MACTEC then evaluated whether or not all agricultural SCCs within the revised 2002 base year inventory had corresponding growth factors. MACTEC established that not all SCCs within the base year inventory had growth factors. These SCCs fell into one of two categories:

    a. SCCs that had multiple entries in the NEI but only a single SCC in the 2002 VISTAS base year inventory. The NEI was established using a process model and for some categories of animals, emissions were calculated for several aspects of the process. The CMU model version 3.6 which was the basis for the VISTAS 2002 Base F inventory did not use a process model. As a consequence a mapping of SCCs in the NEI projections and corresponding SCCs in the CMU inventory was made and for those SCCs an average growth factor was calculated from the NEI projections for use with the corresponding SCC in the CMU based 2002 Base F inventory.

    b. There were also State, county, SCC trios in the 2002 VISTAS Base F inventory which had no corresponding emissions in the NEI files. For these instances, MACTEC first developed State level average growth factors from the NEI projections for use in growing these records. Even after developing State level average growth factors there were still some State/SCC pairs that did not have matching growth. For these records, MACTEC developed VISTAS regional average growth factors at the SCC level from the NEI data.

4. Once all of the growth factors were developed, they were used to project the emissions to 2009 and 2018. Growth factors were first applied at the State, county and SCC level. Then remaining records were grown with the State/SCC specific growth factors. Finally, any remaining ungrown records were projected at the SCC level using the VISTAS regional growth factor.

For the livestock categories, the NEI emission projections only had data for beef and dairy cattle, poultry and swine. Thus for other livestock categories and for fertilizers alternative growth factors were required.

The growth factors for other livestock categories and fertilizers were obtained from growth factors used for the IAQTR projections made by the U.S. EPA. The methodology for these categories was identical to that used for dairy, beef, poultry and swine with the exception that State/SCC and VISTAS/SCC growth factors were not required for these categories since the IAQTR data contained State, county and SCC level growth factors. The IAQTR data provided growth factors for 1996, 2007, 2010, 2015 and 2020. Linear interpolation was used to develop the growth factors for the intermediate years 2009 and 2018 required for the VISTAS projections.

There were a few exceptions to the methods used for projecting agricultural sources for the VISTAS projections. These exceptions were:

1. All swine emissions for North Carolina were maintained at 2002 levels for each projection year to capture a moratorium on swine production in that State.

2. Ammonia growth factors for a few categories (mainly feedlots) were assigned to be the same as growth factors for PM emissions from the NEI projections. This assignment was made because the CMU model showed emissions from these categories but the NEI projections did not show ammonia emissions but did show PM emissions.

3. No growth factors were found for horse and pony emissions. These emissions were held constant at 2002 levels.

There was no change in this method between Base F and Base G. Thus Base F and Base G agricultural emissions are the same in each inventory. Future efforts on the agricultural emissions category should look at any changes made to the CMU model to reflect the model farm approach used by EPA in their inventory plus any updated growth factors that may be more recent than the EPA inventory used to develop growth estimates for Base F/G.

2.2.2.2.1 Differences between 2009/2018

Methodologically, there was no difference in the way that 2009 and 2018 emissions were calculated for agricultural area sources. The growth factors were different (due to the linear interpolation used to calculate the values) but the calculation methods were identical. In addition there was no difference between Base F and Base G for this category. Thus Base F and Base G agricultural emissions are the same in each inventory.

Tables 2.2-1 show the differences between Base F and Base G emissions for all area sources (including agricultural sources but excluding fires) for the 2002 base year and 2009 and 2018 by State and pollutant.

Table 2.2-1 2002 Base Year Emissions and Percentage Difference for Base F and Base G (based on actual emissions).

Actual Area 2002 - Base G							
State	**CO**	**NH3**	**NOX**	**PM10-PRI**	**PM25-PRI**	**SO2**	**VOC**
AL	83,958	58,318	23,444	393,588	56,654	52,253	182,674
FL	71,079	37,446	28,872	443,346	58,878	40,491	404,302
GA	108,083	80,913	36,142	695,414	103,794	57,559	299,679
KY	66,752	51,135	39,507	233,559	45,453	41,805	95,375
MS	37,905	58,721	4,200	343,377	50,401	771	131,808
NC	345,315	161,860	36,550	280,379	64,052	5,412	237,926
SC	113,714	28,166	19,332	260,858	40,291	12,900	161,000
TN	89,828	34,393	17,844	212,554	42,566	29,917	153,307
VA	155,873	43,905	51,418	237,577	43,989	105,890	174,116
WV	39,546	9,963	12,687	115,346	21,049	11,667	60,443
Base F							
AL	83,958	59,486	23,444	393,093	73,352	47,074	196,538
FL	105,849	44,902	29,477	446,821	81,341	40,537	439,019
GA	107,889	84,230	36,105	695,320	133,542	57,555	309,411
KY	66,752	51,097	39,507	233,559	52,765	41,805	100,174
MS	37,905	59,262	4,200	343,377	63,135	771	135,106
NC	373,585	164,467	48,730	303,492	69,663	7,096	346,060
SC	113,714	29,447	19,332	260,858	51,413	12,900	187,466
TN	89,235	35,571	17,829	211,903	49,131	29,897	161,069
VA	155,873	46,221	51,418	237,577	52,271	9,510	129,792
WV	39,546	10,779	12,687	115,346	25,850	11,667	61,490
Percentage Difference (negative values means Base G increased from Base F)							
AL	0.00%	1.96%	0.00%	-0.13%	22.76%	-11.00%	7.05%
FL	32.85%	16.61%	2.05%	0.78%	27.62%	0.12%	7.91%
GA	-0.18%	3.94%	-0.10%	-0.01%	22.28%	-0.01%	3.15%
KY	0.00%	-0.07%	0.00%	0.00%	13.86%	0.00%	4.79%
MS	0.00%	0.91%	0.00%	0.00%	20.17%	0.00%	2.44%
NC	7.57%	1.59%	24.99%	7.62%	8.05%	23.74%	31.25%
SC	0.00%	4.35%	0.00%	0.00%	21.63%	0.00%	14.12%
TN	-0.67%	3.31%	-0.09%	-0.31%	13.36%	-0.07%	4.82%
VA	0.00%	5.01%	0.00%	0.00%	15.84%	-1013.45%	-34.15%
WV	0.00%	7.57%	0.00%	0.00%	18.57%	0.00%	1.70%

Table 2.2-2 2009 Projection Year Emissions and Percentage Difference for Base F and Base G (based on actual emissions).

Actual Area 2009 - Base G							
State	**CO**	**NH3**	**NOX**	**PM10-PRI**	**PM25-PRI**	**SO2**	**VOC**
AL	66,654	64,268	23,930	413,020	58,699	48,228	143,454
FL	57,011	38,616	28,187	503,230	64,589	36,699	420,172
GA	94,130	89,212	37,729	776,411	112,001	57,696	272,315
KY	57,887	53,005	42,088	242,177	46,243	43,087	94,042
MS	27,184	63,708	4,249	356,324	51,661	753	124,977
NC	301,163	170,314	39,954	292,443	69,457	5,751	187,769
SC	90,390	30,555	19,360	278,299	41,613	13,051	146,107
TN	74,189	35,253	18,499	226,098	44,124	30,577	154,377
VA	128,132	46,639	52,618	252,488	44,514	105,984	147,034
WV	31,640	10,625	13,439	115,089	20,664	12,284	55,288
Base F							
AL	68,882	65,441	26,482	411,614	76,248	17,818	157,405
FL	101,356	46,950	31,821	507,515	90,487	52,390	462,198
GA	103,579	92,838	38,876	776,935	146,691	57,377	294,204
KY	64,806	53,023	42,122	242,345	54,397	40,779	94,253
MS	37,161	64,289	4,789	356,516	65,321	637	125,382
NC	332,443	173,187	53,550	317,847	75,570	7,607	252,553
SC	95,826	31,966	20,852	278,852	54,230	12,945	176,104
TN	82,196	36,578	19,148	225,650	51,753	29,787	160,265
VA	133,738	49,173	53,344	252,924	54,587	10,619	120,022
WV	37,704	11,461	13,816	115,410	25,835	12,156	57,082
Percentage Difference (negative values means Base G increased from Base F)							
AL	3.24%	1.79%	9.64%	-0.34%	23.02%	-170.67%	8.86%
FL	43.75%	17.75%	11.42%	0.84%	28.62%	29.95%	9.09%
GA	9.12%	3.91%	2.95%	0.07%	23.65%	-0.56%	7.44%
KY	10.68%	0.03%	0.08%	0.07%	14.99%	-5.66%	0.22%
MS	26.85%	0.90%	11.27%	0.05%	20.91%	-18.10%	0.32%
NC	9.41%	1.66%	25.39%	7.99%	8.09%	24.41%	25.65%
SC	5.67%	4.41%	7.16%	0.20%	23.27%	-0.82%	17.03%
TN	9.74%	3.62%	3.39%	-0.20%	14.74%	-2.65%	3.67%
VA	4.19%	5.15%	1.36%	0.17%	18.45%	-898.09%	-22.51%
WV	16.08%	7.29%	2.73%	0.28%	20.02%	-1.06%	3.14%

Table 2.2-3 2018 Projection Year Emissions and Percentage Difference for Base F and Base G (based on actual emissions).

State	CO	NH3	NOX	PM10-PRI	PM25-PRI	SO2	VOC
Actual Area 2018 - Base G							
AL	59,626	71,915	25,028	445,256	62,323	50,264	153,577
FL	53,903	40,432	30,708	578,516	72,454	38,317	489,975
GA	93,827	99,885	41,332	880,199	123,704	59,729	319,328
KY	54,865	55,211	44,346	256,052	47,645	44,186	103,490
MS	22,099	69,910	4,483	375,495	53,222	746	140,134
NC	290,809	180,866	43,865	315,294	71,262	6,085	189,591
SC	83,167	33,496	20,592	304,251	44,319	13,457	161,228
TN	68,809	36,291	19,597	246,252	46,692	31,962	182,222
VA	121,690	50,175	56,158	275,351	46,697	109,380	150,919
WV	28,773	11,504	14,828	121,549	21,490	12,849	60,747
Base F							
AL	63,773	73,346	28,754	445,168	82,449	49,975	168,507
FL	100,952	49,889	35,047	582,832	101,872	59,413	533,141
GA	105,059	103,911	42,260	880,800	163,925	61,155	342,661
KY	65,297	55,356	45,597	256,544	57,110	42,326	102,117
MS	36,425	70,565	5,230	375,931	68,338	831	139,419
NC	327,871	184,167	60,073	345,275	85,018	8,273	234,207
SC	89,343	35,082	22,467	304,940	58,441	13,517	196,946
TN	81,242	37,812	20,928	245,893	55,712	31,047	188,977
VA	129,037	53,023	56,668	275,790	58,141	11,479	128,160
WV	36,809	12,390	15,079	121,964	27,088	13,450	62,164
Percentage Difference (negative values means Base G increased from Base F)							
AL	6.50%	1.95%	12.96%	-0.02%	24.41%	-0.58%	8.86%
FL	46.61%	18.96%	12.38%	0.74%	28.88%	35.51%	8.10%
GA	10.69%	3.87%	2.20%	0.07%	24.54%	2.33%	6.81%
KY	15.98%	0.26%	2.74%	0.19%	16.57%	-4.40%	-1.34%
MS	39.33%	0.93%	14.28%	0.12%	22.12%	10.19%	-0.51%
NC	11.30%	1.79%	26.98%	8.68%	16.18%	26.45%	19.05%
SC	6.91%	4.52%	8.34%	0.23%	24.16%	0.44%	18.14%
TN	15.30%	4.02%	6.36%	-0.15%	16.19%	-2.95%	3.57%
VA	5.69%	5.37%	0.90%	0.16%	19.68%	-852.83%	-17.76%
WV	21.83%	7.15%	1.66%	0.34%	20.66%	4.46%	2.28%

2.2.3 Changes to Prescribed Fire for 2009/2018 Base G

Just prior to release of version 3.1 of the VISTAS inventory. several Federal agencies indicated that they had plans for increased prescribed fire burning in future years and that the “typical” fire inventory would likely not adequately capture those increases (memo from Bill Jackson and Cindy Huber, August 13, 2004). However data were not readily available to incorporate those changes up through the Base F inventory. As a consequence MACTEC worked with Federal Land Managers to acquire the data necessary to provide 2009 and 2018 specific projections for the prescribed fire component of the Base G fire inventory. The 2009 and 2018 projections developed using the method described below are being used by VISTAS as the 2009 and 2018 base case inventories for all States except FL. For FL the supplied data from the FLMs is not being used as FL felt that their data adequately reflected current and future prescribed burning practices. The “typical” fire projection is the 2002 base prescribed fire projection.

One of the biggest issues in preparing the projection was how best to incorporate the data. Two agencies submitted data: Fish and Wildlife Service (FWS) and Forest Service (FS). FWS submitted annual acreage data by National Wildlife Refuge (NWR) and county with estimates of acres burned per day for each NWR. FS provided fire-by-fire acreage estimates based on mapping projected burning acreage to current 2002 modeling days. However, FWS did not submit data for VISTAS original base year preparation process, thus there was no known FWS data in the 2002 actual or typical inventories. Thus MACTEC had to develop a method that could use the county level data submitted by FWS.

In addition, despite the fact that the FS submitted fire-by-fire data for the 2002 actual inventory and had mapped the projections to current burn days in the 2002 actual inventory, MACTEC could not do a simple replacement of those records with the 2009/2018 projections. This situation was created because several VISTAS States run a prescribed fire permitting program. To avoid double counting, only State data was used in those States for the 2002 actual inventory. Thus there were no Federal data in those States since the Federal data could have potentially duplicated State-supplied prescribed fire data. In VISTAS States without permit programs, the FS supplied data for 2002 was used and those records were marked in database. Thus for those States, the FS supplied 2009/2018 data could be directly substituted for the 2002 data.

The method used by MACTEC to include the FS data applied a county level data approach for FS data where a State had a prescribed fire permitting program and a fire-by-fire replacement for FS data in States without permit programs. MACTEC used a county level approach for all of the FWS data. The approach used for each data set is discussed below.

For the FWS data MACTEC summed the annual acres burned supplied by the FWS across all NWRs in a county. We then subtracted out 2002 acreage for that county from the FWS projected acreage annual total to avoid double counting. The remaining acreage was then multiplied by 0.8 to account for blackened acres instead of the total perimeter acres that were reported. The revised total additional FWS acreage was then added to the total county “typical” acreage to determine future acreage burned for either 2009 or 2018. MACTEC then allocated the increased acreage to current modeling days. The average daily acres burned data provided by FWS per NWR/county was used to allocate the acreage to the correct number of days required to burn all of the acres. Guidance supplied by FWS indicated that up to three times the average daily acres burned could potentially be allocated to any one day. Thus if the estimated acreage per day were 100 acres then up to 300 acres could actually be allocated to a particular day. This approach (use of up to three times the average daily acres burned) was used if there were an insufficient number of 2002 modeling days available to account for all of the acreage increase. MACTEC used an incremental approach to using the increase above the base average daily acres. First we used twice the average daily acreage if that was sufficient to completely allocate the increased acreage over the total number of days available. If that wasn't sufficient then we used three times the average daily acres burned to allocate the acreage. We applied the highest increases to days in the database that already had the highest acreage burned since we felt those days were most likely to represent days with representative conditions for conducting prescribed burns.

The approach used by MACTEC for the FS was slightly different. For States that had permit programs, we used similar approach to the FWS county level approach. First we summed the FS data at county level, we then added that value to the typical acreage and then we allocated the acres to current modeling days. The mapping to current modeling days was performed by Bill Jackson of the USFS and provided to MACTEC. For States that do not have a prescribed fire permit program, MACTEC simply replaced the current fire-by-fire records in the database with fire-by-fire records from the FS and recalculated emissions based on fuel model and fuel loading. We also applied the same 0.8 correction for blackened acres applied to all FS supplied acreage as the supplied values represented perimeter acres.

An additional problem with developing year-specific prescribed fire projections was how to adequately capture the temporal profile for those fires. In the 2002 actual fire inventory, fires occur on same days as state/FLM records. In the 2002 "typical" year inventory, fire acreage increased or decreased from acreage on the same fire days as were in the 2002 actual inventory, since the acres were simply increased for each day based on a multiplier used to convert from actual to typical.

When prescribed fires acreage was added to a future year, MACTEC added acreage to individual fire days proportional to the annual increase (if acreage on a day is 10 percent of annual, add 10 percent of projected increase to that same day).

The table below shows how the FWS data for Okefenokee NWR were allocated for 2009 for Clinch County (Okefenokee NWR is located in four different counties). You can see that the total additional acres for the Clinch County portion of Okefenokee NWR was 1,956 acres. Two hundred eighty (280) acres were the estimated average daily acres burned for that NWR/county combination. Thus to allocate the entire 1,956 acres would require almost 7 burn days (1,956 divided by 280). However only 5 burn days were found for Clinch County in the 2002 actual fire database. Thus we allocated twice the average acreage to the burn day with the most acres burned in the 2002 actual fire database (since our method allowed us to increase the average daily acres burned up to three times the recommended level). Thus the first burn day received 560 acres and all others received 280 except the final day which received 276 to make the total equal to the required 1,956 acres. The table also indicates that the increased acres burned provided increases of from 10-48 percent in the acres burned on the individual burn days and an average of approximately 14 percent for the year as a whole.

CLINCH COUNTY	3/1/2002	4/1/2002	2/1/2002	1/1/2002	11/1/2002	12/1/2002	Total Annual
Acres (typical)	3,757	2,612	1,996	1,801	616	472	11,764
Add on FWS Projection	560	280	280	280	280	276	1,956
Total	4,316	2,891	2,276	2,080	895	747	13,720
Percent Increase	14.9%	10.7%	14.0%	15.6%	45.5%	58.5%	14.3%

The figure below shows the increases for prescribed burning in the four counties that comprise the Okefenokee NWR area (which also includes FS land). In this figure you can see the additional acreage added for the burn days from FWS and the individual day increases caused by projected increases in prescribed burning based on FS data. It should be noted that while the emissions represent 2009, all fire event dates listed are for 2002 to match up with the base year meteorology used in modeling exercises.

Table 2.2-4 shows the percentage difference between the 2009 and 2018 projections developed for Base F and Base G. Base G includes the revised prescribed burning estimates described above. Values are calculated using Base F as the basis for change, thus negative values imply an increase in emissions for Base G.

Figure 2.2-1 Prescribed Fire Projection for Okeefenokee NWR for 2009

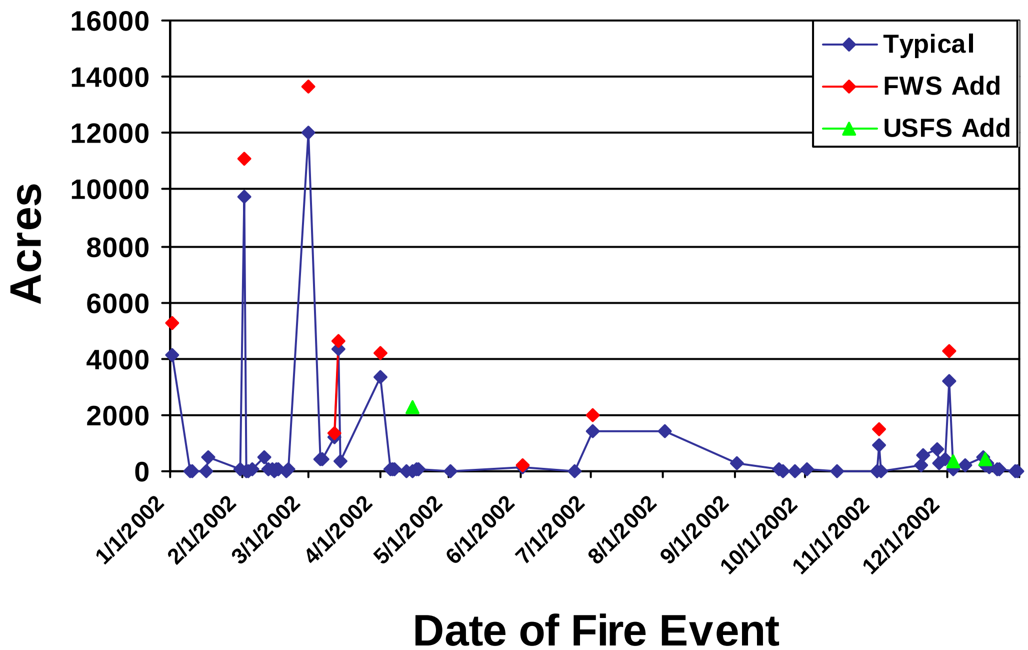

Table 2.2-4 Percentage Difference Between Base F and Base G Fire Emissions by State

State	CO	NH3	NOX	PM10-PRI	PM25-PRI	SO2	VOC	CO	NH3	NOX	PM10-PRI	PM25-PRI	SO2	VOC
2009 Fires Base G								**2018 Fires Base G**						
AL	534,873	2,050	11,901	52,851	46,543	2,681	27,502	535,658	2,054	11,918	52,927	46,608	2,686	27,539
FL	923,310	3,157	19,791	98,470	88,756	4,129	51,527	923,310	3,157	19,791	98,470	88,756	4,129	51,527
GA	637,177	2,229	14,243	63,973	57,116	2,914	34,710	637,177	2,229	14,243	63,973	57,116	2,914	34,710
KY	31,810	143	682	3,093	2,653	187	1,497	33,296	150	714	3,237	2,777	196	1,567
MS	48,160	217	1,033	4,683	4,016	283	2,266	50,037	225	1,073	4,865	4,173	294	2,355
NC	96,258	433	2,065	9,359	8,027	566	4,530	111,266	501	2,387	10,819	9,279	655	5,236
SC	282,307	1,039	5,899	29,153	25,955	1,359	16,045	282,307	1,039	5,899	29,153	25,955	1,359	16,045
TN	17,372	78	373	1,689	1,449	102	817	18,860	85	405	1,834	1,573	111	888
VA	21,130	95	453	2,054	1,762	124	994	26,923	121	578	2,618	2,245	158	1,267
WV	3,949	18	85	384	329	23	186	5,013	23	108	487	418	29	236
2009 Fires Base F								**2018 Fires Base F**						
AL	514,120	1,957	11,456	50,833	44,812	2,559	26,526	514,120	1,957	11,456	50,833	44,812	2,559	26,526
FL	923,310	3,157	19,791	98,470	88,756	4,129	51,527	923,310	3,157	19,791	98,470	88,756	4,129	51,527
GA	620,342	2,153	13,882	62,336	55,712	2,815	33,918	620,342	2,153	13,882	62,336	55,712	2,815	33,918
KY	56,686	110	1,460	6,667	6,310	136	3,338	56,686	110	1,460	6,667	6,310	136	3,338
MS	128,471	177	3,328	14,693	13,680	100	13,625	128,471	177	3,328	14,693	13,680	100	13,625
NC	200,564	324	5,005	20,488	19,491	423	12,499	200,564	324	5,005	20,488	19,491	423	12,499
SC	253,005	908	5,270	26,304	23,511	1,187	14,666	253,005	908	5,270	26,304	23,511	1,187	14,666
TN	78,370	46	2,232	8,875	8,730	59	5,153	78,370	46	2,232	8,875	8,730	59	5,153
VA	19,159	159	978	18,160	17,361	99	912	19,159	159	978	18,160	17,361	99	912
WV	32,656	12	944	3,276	3,239	16	2,184	32,656	12	944	3,276	3,239	16	2,184
Percentage Difference (negative number means an increase in Base G emissions)														
AL	-4.04%	-4.77%	-3.89%	-3.97%	-3.86%	-4.77%	-3.68%	-4.19%	-4.95%	-4.03%	-4.12%	-4.01%	-4.95%	-3.82%
FL	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
GA	-2.71%	-3.52%	-2.60%	-2.63%	-2.52%	-3.52%	-2.34%	-2.71%	-3.52%	-2.60%	-2.63%	-2.52%	-3.52%	-2.34%
KY	43.88%	-29.52%	53.25%	53.61%	57.96%	-37.90%	55.15%	41.26%	-35.57%	51.07%	51.44%	56.00%	-44.34%	53.06%
MS	62.51%	-22.07%	68.95%	68.13%	70.64%	-183.85%	83.37%	61.05%	-26.83%	67.74%	66.89%	69.50%	-194.91%	82.72%
NC	52.01%	-33.75%	58.74%	54.32%	58.82%	-33.75%	63.76%	44.52%	-54.60%	52.31%	47.19%	52.40%	-54.60%	58.11%
SC	-11.58%	-14.52%	-11.93%	-10.83%	-10.39%	-14.52%	-9.40%	-11.58%	-14.52%	-11.93%	-10.83%	-10.39%	-14.52%	-9.40%
TN	77.83%	-69.40%	83.30%	80.97%	83.41%	-74.42%	84.14%	75.93%	-83.92%	81.87%	79.34%	81.98%	-89.36%	82.78%
VA	-10.29%	40.36%	53.67%	88.69%	89.85%	-25.40%	-9.03%	-40.53%	24.00%	40.97%	85.59%	87.07%	-59.79%	-38.93%
WV	87.91%	-48.65%	91.03%	88.28%	89.83%	-49.46%	91.49%	84.65%	-88.70%	88.61%	85.12%	87.09%	-89.73%	89.20%

2.2.4 Quality Assurance steps

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, to ensure that a full and complete inventory was developed for VISTAS, and to make sure that projection calculations were working correctly. Quality assurance was an important component to the inventory development process and MACTEC performed the following QA steps on the stationary and agricultural area source components of the 2009 and revised 2018 projection inventories:

1. All final files were run through EPA's Format and Content checking software.
2. SCC level emission summaries were prepared and evaluated to ensure that emissions were consistent and that there were no missing sources.
3. Tier comparisons (by pollutant) were developed between the 2002 base year inventory and the 2009 and 2018 projection inventories. In addition, total VISTAS pollutant summaries were prepared to compare total emissions by pollutant between versions of the inventory (e.g., between Base F and Base G).
4. Data product summaries were provided to both the VISTAS Emission Inventory Technical Advisor and to the SIWG representatives for review and comment. Changes based on these comments were implemented in the files.
5. Version numbering was used for all inventory files developed. The version numbering process used a decimal system to track major and minor changes. For example, a major change would result in a version going from 1.0 to 2.0. A minor change would cause a version number to go from 1.0 to 1.1. Minor changes resulting from largely editorial changes would result in a change from 1.00 to 1.01.

2.3 Mobile Sources

Our general approach for assembling data was to use as much existing data from the pre-Base F preliminary projections as possible for these inventories, supplement these data with easily available stakeholder input, and provide the results for stakeholder review to ensure credibility. To develop the "base case" projections, MACTEC originally assembled data to develop two 2009 and 2018 base case inventories: 1) an inventory that included all "on-the-books" control programs and 2) an "on-the-way" inventory that included controls that were likely to be "on-the-way". For the Base F and Base G emission forecasts to the mobile source sector, "on-the-books" and "on-the-way" are defined with the same strategies and therefore only a single projection scenario was developed for each forecast year.

To ensure consistency across evaluation years, the 2009 and 2018 base case inventories were developed, to the maximum extent practical, using methodologies identical to those employed in developing the 2002 on-road portion of the revised 2002 VISTAS base year inventory. All modifications to the 2002 inventory methods were developed in consultation with the Mobile Source Special Interest Workgroup (MSSIWG). Generally, modifications were only made to properly account for actual changes expected in the intervening period (i.e., between 2002 and 2009 and between 2002 and 2018), but the underlying inventory development methodology was identical, except to the extent requested by VISTAS or the MSSIWG.

MACTEC developed a preliminary 2018 inventory in early 2004. That inventory was designed to 1) be used for modeling sensitivity evaluations and 2) help establish the methods that would be used for the final 2018 inventory and the initial 2009 inventory. Since that work took place prior to the revision of the 2002 base year inventory data files, MACTEC provided a review of the data and methods used to develop on-road mobile source input files for the initial 2002 base year inventory prior to developing the preliminary 2018 inventory. Through this review, MACTEC determined the following:

- On-road VMT. Most States provided local data for 2002 (or a neighboring year that was converted to 2002 using appropriate VMT growth surrogates such as population). Since these data were not applicable to 2018 due to intervening growth, input for 2018 was solicited from the MSSIWG. At the same time we researched county-specific growth rate data utilized for recent national rulemakings as a backstop approach to State supplied VMT projections.

- Modeling Temperatures. Actual 2002 temperatures were used for the initial 2002 base year inventory.

- Vehicle Registration Mix (age fractions by type of vehicle). A mix of State, local, and MOBILE6 default data were used for the 2002 initial base year inventory. Forecast data were solicited from the States, with a fallback position that we hold the fractions constant at their 2002 values.

- Vehicle Speed by Roadway Type. For the 2002 initial base year inventory, speeds varying by vehicle and road type were used.

- VMT Mixes (fraction of VMT by vehicle type). A mix of State, local, and quasi MOBILE6 default (i.e., MOBILE6 defaults normalized to better reflect local conditions) data were used for the 2002 initial base year inventory. Forecast data were solicited from the States.

- Diesel Sales Fractions. As with the VMT mix data, the diesel sales fraction data employed for the 2002 initial base year inventory represents a mix of State, local, and quasi MOBILE6 default data. The issues related to updating these data to 2018 are also similar, but are complicated by the fact that MOBILE6 treats diesel sales fraction on a model year, rather than age specific basis. Therefore, diesel sales fractions generally cannot be held constant across time. Once again, we solicited any local projections, with a fallback position that we would keep the data for 2002 and earlier model years constant for the forecast inventory, supplemented with MOBILE6 default data for 2003 and newer model years.

- State/Local Fuel Standards. For the 2002 initial base year inventory, these data were based on appropriate local requirements and updated data for 2018 was only required if changes were expected between 2002 and 2018. There are some national changes in required fuel quality for both on-road and non-road fuels that are expected to occur between 2002 and 2018 and these would be reflected in the 2018 inventory in the absence of more stringent local fuel controls. Expected changes in local fuel control programs were solicited.

- Vehicle Standards. The 2002 initial base year inventory assumed NLEV applicability. This was altered to reflect Tier 2 for 2018, unless a State indicated a specific plan to adopt the California LEV II program. If so, we made the required changes to implement those plans for the preliminary 2018 inventory.

- Other Local Controls. This includes vehicle emissions inspection (i.e., I/M) programs, Stage II vapor recovery programs, anti tampering programs, etc. By nature, the assumptions used for the 2002 initial base year inventory vary across the VISTAS region, but our presumption is that these data accurately reflected each State's situation as it existed in 2002. If a State had no plans to change program requirements between 2002 and 2018, we proposed to maintain the 2002 program descriptions without change. However, if a State planned changes, we requested information on those plans. In the final implementation of the Base F and earlier inventories, Stage II controls were exercised in the area source component of the inventory, since the units used to develop Stage II refueling estimates are different between MOBILE6 and the NONROAD models. However, in the Base G inventories, Stage II refueling was moved to the on-road and non-road sectors.

Once the preliminary 2018 (pre-Base F) base case projection inventory data were compiled, MACTEC applied the data and methods selected and proceeded to develop the preliminary (pre-base F) base case 2018 projection inventories. The resulting inventories were provided to the MSSIWG in a user-friendly format for review. After stakeholder review and comment, the final preliminary 2018 base case inventories and input files were provided to VISTAS in formats identified by the VISTAS Technical Advisor (in this case, MOBILE input files and VMT, NONROAD input files and annual inventory files for NONROAD in NIF 3.0 format). Annual inventory files for MOBILE were not developed as part of this work, only input files and VMT forecasts. MOBILE emissions were calculated by VISTAS air quality modeling contractor using the provided files.

2.3.1 Development of on-road mobile source input files

As indicated above, MACTEC prepared a preliminary version of the 2018 base case mobile inventory input data files. These files were then updated to provide a final set of 2018 base case inventory input data files as well as a set of input files for 2009. The information below describes the updates performed on the preliminary 2018 files and the development of the 2009 input data files for Base F emission estimation.

Our default approach to preparing the revised 2018 and initial 2009 projection inventories for on-road mobile sources was to estimate the emissions by using either:

1. the revised 2002 data provided by each State coupled with the projection methods employed for the preliminary 2018 inventory, or
2. the same data and methods used to generate the preliminary 2018 inventory.

We also investigated whether or not there was more recent VMT forecasting data available (e.g., from the CAIR and if appropriate revised the default VMT growth rates accordingly. This did not affect any State that provided local VMT forecasting data, but would alter the VMT estimates used for other areas.

Since no preliminary 2009 inventory was developed there did not exist an option (2) above for 2009. As a consequence, MACTEC crafted the 2009 initial inventory for on-road mobile sources using methods identical to those employed for the 2018 preliminary inventories coupled with any changes/revisions provided by the States during the review of the revised 2002 base year and the 2018 preliminary inventories. Therefore, as was the case for 2018, we obtained from the States any input data revisions, methodological revisions, and local control program specifications (to the extent that they differed from 2002/2018).

2.3.1.1 Preparation of revised 2018 input data files

Preparation of the revised 2018 inventories required the following updates:

1. The evaluation year was updated to 2018 in all files.
2. The diesel fuel sulfur content was revised from 500 ppm to 11 ppm, consistent with EPA data for 2018 in all files.
3. Since the input data is model year, rather than age, specific for diesel sales fractions (with data for the newest 25 model years required), we updated all files that included

diesel sales fractions. In the revised 2002 base year files, the data included applied to model years 1978-2002. For 2018, the data included would reflect model years 1994-2018. To forecast the 2002 data, MACTEC took the data for 1994-2002 from the 2002 files and added data for 2003-2018. To estimate the data for these years, we employed the assumption employed by "default" in MOBILE6 -- namely that diesel sales fractions for 1996 and later are constant. Therefore, we set the diesel sales fractions for 2003-2018 at the same value as 2002.

4. VMT mix fractions must be updated to reflect expected changes in sales patterns between 2002 and 2018. If explicit VMT mix fractions are not provided, these changes are handled internally by MOBILE6 or externally through absolute VMT distributions. However, files that include explicit VMT mix fractions override the default MOBILE6 update and may or may not be consistent with external VMT distributions. MACTEC updated the VMT mix in such files as follows:

   First, we calculated the VMT fractions for LDV, LDT1, LDT2, HDV, and MC from the external VMT files for 2018. This calculation was performed in accordance with section 5.3.2 of the MOBILE6 Users Guide which indicates:

   LDV = LDGV + LDDV

   LDT1 = LDGT1 + LDDT

   LDT2 = LDGT2

   HDV = HDGV + HDDV

   MC = MC

   The resulting five VMT fractions were then split into the 16 fractions required by MOBILE6 using the distributions for 2018 provided in Appendix D of the MOBILE6 Users Guide. This approach ensures that explicit input file VMT fractions are consistent with the absolute VMT distributions prepared by MACTEC. These changes were made to all files that included VMT mixes.

5. All other input data were retained at 2002 values, except as otherwise instructed by the States. This includes all control program descriptions (I/M, Anti-Tampering Program [ATP], Stage II, etc.), all other fuel qualities (RVP, oxy content, etc.), all other vehicle descriptive data (registrations age distributions, etc.), and all scenario descriptive data. The State-specific updates performed are described below.

<u>Kentucky:</u>

MACTEC revised the 2018 input files for the Louisville, Kentucky area (Louisville Air Pollution Control District [APCD]) based on comments received relative to several components of

MOBILE input data. Based on these comments, the input files for Jefferson County, Kentucky were updated accordingly as follows:

a) I/M and tampering program definitions were removed since the program was discontinued at the end of 2003.

b) The "Speed VMT", "Facility VMT" and "Registration Age Distribution" file pointers were updated to reflect revised 2002 files provided by the Louisville APCD.

c) The "VMT Mix" data, which was previously based on the default approach of "growing" 2002 data, was replaced by 2018-specific data provided by the Louisville APCD.

North Carolina:

North Carolina provided a wide range of revised input data, including complete MOBILE6 input files for July modeling. MACTEC did not use the provided input files directly as they did not match the 2002 NC input files for critical elements such as temperature distributions and gasoline RVP (while they were close, they were slightly different). To maintain continuity between 2002 and 2018 modeling, MACTEC instead elected to revise the 2002 input files to reflect all control program and vehicle-related changes implied by the new 2018 files, while retaining the basic temperature and gasoline RVP assumptions at their 2002 values. Under this approach, the following changes were made:

a) NC provided a county cross reference file specific to 2018 that differed from that used for 2002. We removed files that were referenced in the 2002 input data and replaced those files with those referenced in the 2018 data. In addition, since NC only provided 2018 input files for July, we estimated the basic data for these new files for the other months by cross referencing the target files for 2002 by county against the target files for 2018 by county.

b) We then revised the 2002 version of each input file to reflect the 2018 "header" data included in the NC-provided 2018 files. These data are exclusively limited to I/M and ATP program descriptions, so that the 2002 I/M and ATP data were replaced with 2018 I/M and ATP data.

c) We retained the registration age fractions at their 2002 "values" (external file pointers) as per NC instructions.

d) We retained all scenario-specific data (i.e., temperatures, RVP, etc.) at 2002 values, which (as indicated above), were slightly different in most cases from data included in the 2018 files provided by NC. We believe these differences were due to small deviations between the data assembled to support VISTAS 2002 and the process used to generate the 2018 files provided by NC, and that revising the VISTAS 2002 data to reflect these variations was not appropriate given the resulting inconsistencies that would be reflected between VISTAS 2002 and VISTAS 2018.

e) NC also provided non-I/M versions of the 2018 input files that would generally be used to model the non-I/M portion of VMT. While these files were retained they were not used for the 2018 input data preparation.

Finally, NC also provided a speed profile file and a speed profile cross reference file for 2018. We did not use these in our updates as they have no bearing on the MOBILE6 input files, but they were maintained in case they needed to be included in SMOKE control files for a future year control strategy scenario.

Virginia:

In accordance with instructions from VA, the input files that referenced an external I/M descriptive program file (VAIM02.IM) were revised to reference an alternative external file (VAIM05.IM). This change was to make the I/M program more relevant to the year 2018.

One additional important difference was made with respect to the revised 2018 and initial 2009 on-road mobile source input data files for all States. MACTEC developed updated SMOKE ready input files rather than MOBILE6 files so that the input data could be used directly by the VISTAS modeling contractor to estimate on-road mobile source emissions during modeling runs.

2.3.1.2 Preparation of initial 2009 input data files

The methodology used to develop the 2009 on-road input files was based on forecasting the previously developed revised 2002 base year input files and is identical to that previously described for the revised 2018 methodology except as follows:

1. The evaluation year was updated to 2009.
2. Diesel fuel sulfur content was revised from 500 ppm to 29 ppm. The 29 ppm value was derived from an EPA report entitled "Summary and Analysis of the Highway Diesel Fuel 2003 Pre-compliance Reports" (EPA420-R-03-013, October 2003), which includes the Agency's estimates for the year-to-year fuel volumes associated with the transition from 500 ppm to 15 ppm diesel fuel. According to Table 2 of the report, there will be 2,922,284 barrels per day of 15 ppm diesel distributed in 2009 along with 110,488 barrels per day of 500 ppm diesel. Treating the 15 ppm diesel as 11 ppm on average (consistent with EPA assumptions and assumptions employed for the 2018 input files) and sales weighting the two sulfur content fuels results in an average 2009 diesel fuel sulfur content estimate of 29 ppm.

3. Diesel sales fractions were updated identically to 2018 except that the diesel sales fractions for 2003-2009 were set at the same value as those for 2002 (rather than 2003-2018).
4. VMT mix fractions were updated to 2009 using an identical method to that described for 2018.
5. All other input data were retained at 2002 values, except as otherwise instructed by individual States (see below). This includes all control program descriptions (I/M, ATP, Stage II, etc.), all other fuel qualities (RVP, oxy content, etc.), all other vehicle descriptive data (registration age distributions, etc.), and all scenario descriptive data.

In addition to the updates described above that were applied to all VISTAS-region inputs, the following additional State-specific updates were performed:

KY – Identical changes to those made for 2018 (but specific to 2009) were made for the 2009 input files.

NC – Identical changes to those made for 2018 (but specific to 2009) were made for the 2009 input files.

VA – Identical changes to those made for 2018 were made for 2009.

2.3.2 VMT Data

The basic methodology used to generate the 2009 and 2018 VMT for use in estimating on-road mobile source emissions was as follows:

1. All estimates start from the final VMT estimates used for the 2002 revised base year inventory.
2. Initial 2009 and 2018 VMT estimates were based on linear growth rates for each State, county, and vehicle type as derived from the VMT data assembled by the U.S. EPA for their most recent HDD (heavy duty diesel) rulemaking. The methodology used to derive the growth factors is identical to that employed for the preliminary 2018 VMT estimates (which is described in the next section).
3. For States that provided no independent forecast data, the estimates derived in step 2 are also the final estimates. These States are: Alabama, Florida, Georgia, Kentucky, Mississippi, and West Virginia. For States that provided forecast data, the provided data were used to either replace or augment the forecast data based on the HDD rule. These States, and the specific approaches employed, are detailed following the growth method description.

The steps involved in performing the growth estimates for VMT were as follows:

1. Linear growth estimates were used (although MACTEC investigated the potential use of nonlinear factors and presented that information to the MSSIWG, the decision was made to use linear growth factors instead of nonlinear).
2. Estimates were developed at the vehicle class (i.e., LDGV, LDGT1, LDGT2, etc.) level of detail since the base year 2002 estimates were presented at that level of resolution. In effect, the county and vehicle class specific growth factors were applied to the 2002 VMT estimates for each vehicle and road class.
3. Overall county-specific VMT estimates for each year (developed by summing the vehicle and road class specific forecasts) were then compared to overall county-specific growth. Since overall county growth is a more appropriate controlling factor as it includes the combined impacts of all vehicle classes, the initial year-specific vehicle and road class VMT forecasts were normalized so that they matched the overall county VMT growth. Mathematically, this process is as follows:

(Est_rv_f) = (Est_rv_i) * (C_20XX / Sum(Est_rv_i))

where:

Est_rv_f = the final road/vehicle class-specific estimates,

Est_rv_i = the initial road/vehicle class-specific estimates, and

C_20XX = the county-specific growth target for year 20XX.

Table 2.3-1 presents a basic summary of the forecasts for the preliminary 2018 inventory for illustrative purposes:

Table 2.3-1 2002 versus 2018 VMT (million miles per year)

State	2002	2018	Growth Factor
Alabama	55,723	72,966	1.309
Florida	178,681	258,191	1.445
Georgia	106,785	148,269	1.388
Kentucky	51,020	66,300	1.299
Mississippi	36,278	46,996	1.295
North Carolina	80,166	110,365	1.377
South Carolina	47,074	63,880	1.357
Tennessee	68,316	91,647	1.342
Virginia	76,566	102,971	1.345
West Virginia	19,544	24,891	1.274

The following States provided some types of forecast data for VMT. The information presented below indicates how those data were processed by MACTEC for use in the VISTAS projection inventories.

Kentucky:

Revised 2009 and 2018 VMT mix data were provided by the Louisville APCD. Therefore, the distribution of Jefferson County VMT by vehicle type within the KY VMT file was revised to reflect the provided mix. This did not affect the total forecasted VMT for either Jefferson County or the State, but does alter the fraction of that VMT accumulated by each of the eight vehicle types reflected in the VMT file. The following procedure was employed to make the VMT estimates consistent with the provided 2009/2018 VMT mix:

a) The 16 MOBILE6 VMT mix fractions were aggregated into the following five vehicle types: LDV, LDT1, LDT2, HDV, and MC.

b) The 8 VMT mileage classes were aggregated into the same five vehicle types (across all roadway types) and converted to fractions by normalizing against the total Jefferson County VMT.

c) The ratio of the "desired" VMT fraction (i.e., that provided in the Louisville APCD VMT mix) to the "forecasted" VMT fraction (i.e., that calculated on the basis of the forecasted VMT data) was calculated for each of the five vehicle classes.

d) All forecasted VMT data for Jefferson County were multiplied by the applicable ratio from step c as follows:

new LDGV = old LDGV * LDV ratio
new LDGT1 = old LDGT1 * LDT1 ratio
new LDGT2 = old LDGT2 * LDT2 ratio
new HDGV = old HDGV * HDV ratio
new LDDV = old LDDV * LDV ratio
new LDDT = old LDDT * LDT1 ratio
new HDDV = old HDDV * HDV ratio
new MC = old MC * MC ratio

The total forecasted VMT for Jefferson County was then checked to ensure that it was unchanged.

North Carolina:

North Carolina provided both VMT and VMT mix data by county and roadway type for 2018. Therefore, these data replaced the data developed for North Carolina using HDD rule growth rates in their entirety. Similar data were submitted for 2009. Table 2.3-2 presents the resulting VMT estimates which differ from the "default" HDD rule estimates as follows:

Table 2.3-2 VMT and HDD Rule Estimates for North Carolina (million miles per year)

North Carolina		
2002	106,795	
	State Data	**HDD Data**
2009	123,396	124,626
2018	129,552	146,989

As indicated, there are substantial reductions in the State-provided forecast data relative to that derived from the HDD rule. The growth rates for both 2009 and 2018 are only about half that implied by the HDD data (1.15 versus 1.17 for 2009 and 1.21 versus 1.38 for 2018). The resulting growth rates are the lowest in the VISTAS region.

NC did not provide VMT mix data for 2009. Therefore, the VMT mix fractions estimated using the "default" HDD rule growth rates were applied to the State-provided VMT estimates to generate vehicle-specific VMT. Essentially, the default HDD methodology produces VMT estimates at the county-road type-vehicle type level of detail, and these data can be converted into VMT fractions at that same level of detail. Note that these are not HDD VMT fractions, but VMT fractions developed from 2002 NC data using HDD vehicle-specific growth rates. In effect, they are 2002 NC VMT fractions "grown" to 2009.

The default VMT mix fraction was applied to the State-provided VMT data at the county and road type level of detail to generate VMT data at the county-road type-vehicle type level of detail. The one exception was for county 063, road 110, for which no VMT data were included in the HDD rule. For this single county/road combination, State-aggregate VMT mix fractions (using the HDD growth methodology) were applied to the county/road VMT data. The difference between road 110 VMT fractions across all NC counties is minimal, so there is no effective difference in utilizing this more aggregate approach vis-à-vis the more resolved county/road approach.

South Carolina:

South Carolina provided county and roadway type-specific VMT data for several future years. Data for 2018 was included and was used directly. Data for 2009 was not included, but was linearly interpolated from data provided for 2007 and 2010. The data were disaggregated into vehicle type-specific VMT using the VMT mixes developed for South Carolina using the HDD rule VMT growth rates. Table 2.3-3 presents the resulting VMT estimates which differ from the "default" HDD rule estimates as follows:

Table 2.3-3 VMT and HDD Rule Estimates for South Carolina (million miles per year)

South Carolina		
2002	**47,074**	
	State Data	**HDD Data**
2009	55,147	54,543
2018	65,133	63,880

Tennessee:

In general, Tennessee estimates are based on the HDD rule growth rate as described in step two. However, Knox County provided independent VMT estimates for 2018 and these were used in place of the HDD rule-derived estimates. The Knox County estimates were total county VMT data only, so these were disaggregated into roadway and vehicle-type VMT using the distributions developed for Knox County in step two using the HDD rule VMT growth rates. No data for Knox County were provided for 2009, so the estimates derived using the HDD rule growth factors were adjusted by the ratio of "Knox County provided 2018 VMT" to "Knox County HDD Rule-derived 2018 VMT." Table 2.3-4 presents the resulting VMT estimates which differ from the "default" HDD rule estimates as follows:

Table 2.3-4 VMT and HDD Rule Estimates for Tennessee (million miles per year)

Tennessee		
2002	68,316	
	State Data	**HDD Data**
2009	78,615	78,813
2018	91,417	91,647

Virginia:

Virginia provided county and roadway type-specific annual VMT growth rates and these data were applied to Virginia -provided VMT data for 2002 to estimate VMT in both 2009 and 2018. Virginia provided VMT mix data for 2002, but not 2009 or 2018. Therefore, the estimated VMT data for both 2009 and 2018 were disaggregated into vehicle type-specific VMT using the VMT mixes developed for VA using the HDD rule VMT growth rates. Table 2.3-5 presents the resulting VMT estimates which differ from the "default" HDD rule estimates as follows:

Table 2.3-5 VMT and HDD Rule Estimates for Virginia (million miles per year)

Virginia		
2002	77,472	
	State Data	**HDD Data**
2009	88,419	89,196
2018	104,944	104,164

2.3.3 Base G Revisions

For the development of the VISTAS 2009 and 2018 Base G inventories and input files, VISTAS states reviewed the Base F inputs, and provided corrections, updates and supplemental data as noted below.

For all states modeled, the Base G updates include:

- Adding Stage II refueling emissions calculations to the SMOKE processing.
- Revised the HDD compliance. (REBUILD EFFECTS = .1)
- Revised Diesel sulfur values in 2009 to 43 ppm and 2018 to 11 ppm

In addition to the global changes, individual VISTAS states made the following updates:

KY – updated VMT and M6 input values for selected counties

NC – revised VMT estimates, speeds and vehicle distributions and updated registration distributions for Mobile 6.

TN - revised VMT and vehicle registration distributions for selected counties.

WV – revised VMT input data

AL, FL, and GA and VA did not provide updates for 2009/2018 Base G, and the Base F inputs were used for these States.

2.3.4 Development of non-road emission estimates

The sections that follow describe the projection process used to develop 2009 and 2018 non-road projection estimates, as revised through the spring of 2006, for sources found in the NONROAD model and those sources estimated outside of the model (locomotives, airplanes and commercial marine vessels).

2.3.4.1 NONROAD model sources

NONROAD model input files were prepared in both the fall of 2004 (Base F) and the spring of 2006 (Base G) based on the corresponding 2002 base year inventory input files available at the time the forecasts were developed, with appropriate updates for the projection years. Generally, this means that the Base F 2002 base year input files (as updated through the fall of 2004) were used as the basis for Base F projection year input file development and Base G 2002 base year input files as updated through the spring of 2006 were used as the basis for Base G projection year input file development. Thus, all base year revisions are inherently incorporated into the associated projection year revisions. Other specific updates for the projection years for NONROAD model sources consist of:

1. Revise the emission inventory year in the model (as well as various output file naming commands) to be reflective of the projection year.
2. Revise the fuel sulfur content for gasoline and diesel powered equipment.
3. Implement a limited number of local control program charges (national control program changes are handled internally within the NONROAD model, so explicit input file changes are not required).

All equipment population growth and fleet turnover impacts are also handled internally within the NONROAD model, so that explicit changes input file changes are not required.

Base F Input File Changes:

To correctly account for diesel fuel sulfur content differences between the base and projection years, two sets of input and output files were prepared for each forecast year, one set for land-based equipment and one set for marine equipment. This two-step projection process was required for Base F, because diesel fuel sulfur contents varied between land-based and marine-based non-road equipment and the Draft NONROAD2004 used for Base F allowed only a single diesel fuel sulfur input. Thus, the model was executed separately for land-based and marine-based equipment for Base F, and the associated outputs subsequently combined. The specific diesel fuel sulfur contents modeled were as follows:

Diesel S (ppm)	2002	2009	2018
Land-Based	2500	348	11
Marine-Based	2500	408	56

As indicated, the Draft NONROAD2004 model was run with both sets of input files and the output file results were then combined to produce a single NONROAD output set.

To correctly account for the national reduction in gasoline sulfur content (a national control not explicitly handled by the NONROAD model), all NONROAD input files for both 2009 and 2018 were revised to reflect a gasoline fuel sulfur content of 30 ppmW.

Base G Input File Changes:

With the release of Final NONROAD2005 that was used for the Base G projection year inventory development, the NONROAD model is capable of handling separate diesel fuel sulfur inputs for land-based and marine-based non-road equipment in a single model execution. Therefore, the two step modeling process described above for Base F updates was no longer required. Instead, the differential diesel fuel sulfur values are assembled into a single NONROAD input file as follows:

Diesel S (ppm)	2002	2009	2018
Land-Based	2500	348	11
Marine-Based	2638	408	56

Additionally, revised gasoline vapor pressure data were provided by Georgia regulators for 20 counties[5] where reduced volatility requirements were established in 2003. Since this requirement began after the 2002 base year, the vapor pressure values in the base year input files for these counties are not correct for either the 2009 or 2018 forecast years. Therefore, to correctly forecast emissions in these counties, the forecast year gasoline vapor pressure inputs were revised to:

Gasoline RVP (psi)	2002	2009	2018
Spring	9.87	9.2	9.2
Summer	9.0	7.0	7.0
Fall	9.87	9.2	9.2
Winter	12.5	12.5	12.5

The summer vapor pressure was simply set equal to the 2003 control value, while the spring and fall vapor pressures were adjusted to reflect a single month of the reduced volatility limit. The winter volatility was assumed to be unaffected by the summertime control requirement.

2.3.4.1.1 Differences between 2009/2018

Other than diesel fuel sulfur content and the year of the projections, there are no differences in the methodology used to estimate emissions from NONROAD model sources. As indicated above, however the Base F 2009/2018 projections were developed using Draft NONROAD2004, while the Base G 2009/2018 projections were made using Final NONROAD2005.

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5 The specific counties are: Banks, Chattooga, Clarke, Floyd, Gordon, Heard, Jasper, Jones, Lamar, Lumpkin, Madison, Meriwether, Monroe, Morgan, Oconee, Pike, Polk, Putnam, Troup, and Upson.

2.3.4.2 Non-NONROAD model sources

Using the 2002 base year emissions inventory for aircraft, locomotives, and commercial marine vessels (CMV) prepared as described earlier in this document, corresponding emission projections for 2009 and 2018 were developed in both the fall of 2004 (Base F) and the spring of 2006 (Base G). This section describes the procedures employed in developing those inventories. The information presented is intended to build off of that presented in the section describing the 2002 Base F base year inventory. It should be recognized that for both the Base F and Base G inventories, the base year inventory used to develop the emission forecasts was the latest available at the time of forecast development. Generally, this means that the 2002 base year inventory as updated through the fall of 2004 was used as the basis for the Base F projection year inventory development, and the Base F 2002 base year inventory was used as the basis for Base G projection year inventory development. Thus, all base year revisions (as described earlier in this document) are inherently incorporated into the associated projection year revisions.

Base F Revisions:

Table 2.3-6 shows the 2002 base year emissions for each State in the VISTAS region for aircraft, locomotives and CMV (as they existed prior to Base F development).

Table 2.3-6. Pre-Base F 2002 Aircraft, Locomotive, and Non-Recreational Marine Emissions (annual tons, as of the fall of 2004)

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	3,787	175	226	87	17	196
	FL	25,431	8,891	2,424	2,375	800	3,658
	GA	6,620	5,372	1,475	1,446	451	443
	KY	2,666	657	179	175	63	263
	MS	1,593	140	44	43	13	96
	NC	6,088	1,548	419	411	148	613
	SC	6,505	515	409	401	88	863
	TN	7,251	2,766	734	719	235	943
	VA	9,763	2,756	1,137	1,115	786	2,529
	WV	1,178	78	25	24	8	66
	Total	**70,882**	**22,899**	**7,072**	**6,797**	**2,607**	**9,670**
Commercial Marine (2280)	AL	1,196	9,218	917	844	3,337	737
	FL	5,888	44,817	1,936	1,781	6,683	1,409
	GA	1,038	7,875	334	307	1,173	246
	KY	6,607	50,267	2,246	2,066	9,608	1,569
	MS	5,688	43,233	1,903	1,751	7,719	1,351
	NC	599	4,547	193	178	690	142
	SC	1,067	8,100	343	316	1,205	253
	TN	3,624	27,555	1,217	1,120	4,974	860
	VA	972	2,775	334	307	359	483
	WV	1,528	11,586	487	448	525	362
	Total	**28,207**	**209,972**	**9,911**	**9,118**	**36,275**	**7,413**
Military Marine (2283)	VA	110	313	25	23	27	48
	Total	**110**	**313**	**25**	**23**	**27**	**48**
Locomotives (2285)	AL	3,490	26,339	592	533	1,446	1,354
	FL	1,006	9,969	247	222	605	404
	GA	2,654	26,733	664	598	1,622	1,059
	KY	2,166	21,811	542	488	1,321	867
	MS	2,302	23,267	578	520	1,429	899
	NC	1,638	16,502	410	369	1,001	654
	SC	1,160	11,690	291	261	710	462
	TN	2,626	25,627	633	570	1,439	1,041
	VA	1,186	11,882	1,529	1,375	3,641	492
	WV	1,311	13,224	329	296	808	517
	Total	**19,540**	**187,044**	**5,815**	**5,232**	**14,022**	**7,750**
Grand Total		**118,739**	**420,228**	**22,823**	**21,170**	**52,931**	**24,881**

Although some of the data utilized was updated, the methodology used to develop the Base F 2009 and 2018 emissions forecasts for aircraft, locomotives, and CMV is identical to that used earlier to develop preliminary 2018 Base 1 (“On the Books”) and 2018 Base 2 (“On the Way”) inventories. Briefly, the methodology relies on growth and control factors developed from inventories used in support of recent EPA rulemakings, and consists of the following steps:

(a) Begin with the 2002 base year emission estimates for aircraft, locomotive, and CMV as described above (at the State-county-SCC-pollutant level of detail).

(b) Detailed inventory data (both before and after controls) for these same emission sources for 1996, 2010, 2015, and 2020 were obtained from the EPA's Clean Air Interstate Rule (CAIR) Technical Support Document (which can be found at http://www.epa.gov/cair/pdfs/finaltech01.pdf). Using these data, combined growth and control factors for the period 2002-2009 and 2002-2018 were estimated using straight line interpolation between 1996 and 2010 (for 2009) and 2015 and 2020 (for 2018). This is done at the State-county-SCC-pollutant level of detail.

(c) The EPA growth and control data are matched against the 2002 VISTAS base year data using State-county-SCC-pollutant as the match key. Ideally, there would be a one-to-one match and the process would end at this point. Unfortunately, actual match results were not always ideal, so additional matching criteria were required. For subsequent reference, this initial (highest resolution) matching criterion is denoted as the “CAIR-Primary” criterion.

(d) A second matching criterion is applied that utilizes a similar, but higher-level SCC (lower resolution) matching approach. For example, SCC 2275020000 (commercial aircraft) in the 2002 base year inventory data would be matched with SCC 2275000000 (all aircraft) in the CAIR data. This criterion is applied to records in the 2002 base year emissions file that are not matched using the “CAIR-Primary” criterion, and is also performed at the State-county-SCC-pollutant level of detail. For subsequent reference, this is denoted as the “CAIR-Secondary” criterion. At the end of this process, a number of unmatched records remained, so a third level matching criterion was required.

(e) In the third matching step, the most frequently used SCC in the EPA CAIR files for each of the aircraft, locomotive, and commercial marine sectors was averaged at the State level to produce a “default” State and pollutant-specific growth and control factor for the sector. The resulting factor is used as a “default” growth factor for all unmatched county-SCC-pollutant level data in each State. In effect, State-specific growth data are applied to county level data for which an explicit match between the VISTAS 2002 base year data and EPA CAIR data could not be developed. The default growth and control

SCCs are 2275020000 (commercial aircraft) for the aircraft sector, 2280002000 (commercial marine diesel total) for the CMV sector, and 2285002000 (railroad equipment diesel total) for the locomotive sector. Matches made using this criterion are denoted as "CAIR-Tertiary" matches.

(f) According to EPA documentation, the CAIR baseline emissions include the impacts of the (then proposed) Tier 4 (T4) non-road diesel rulemaking, which implements a low sulfur fuel requirement that affects both future CMV and locomotive emissions. However, the impacts of this rule were originally intended to be excluded from the initial VISTAS 2018 forecast, which was to include only "on-the-books" controls. (The T4 rule was finalized subsequent to the development of the preliminary 2018 inventory in March of 2004.) Given its final status, T4 impacts were moved into the "on the books" inventory for non-road equipment. In addition, since there are no other proposed rules affecting the non-road sector between 2002 and 2018, there is no difference between the 2018 "on the books" and 2018 "on the way" inventories for the sector; so that only a single forecast inventory (for each evaluation year) was developed. Nevertheless, since the algorithms developed to produce the VISTAS forecasts were developed when there was a distinction between the "on the books" and "on the way" inventories, the distinct algorithms used to produce the two inventories have been maintained even though the conceptual distinctions have been lost. This approach was taken for two reasons. First, it allowed the previously developed algorithms to be utilized without change. Second, it allowed for separate treatment of the T4 emissions impact which was important as those impacts changed between the proposed and final T4 rules. Thus, previous EPA inventories that include the proposed T4 impacts would not be accurate. Therefore, the procedural discussion continues to reflect the distinctions between non-T4 and T4 emissions, as these distinctions continue to be intrinsically important to the forecasting process. Therefore, a second set of EPA CAIR files that excluded the Tier 4 diesel impacts was obtained and the same matching exercise described above in steps (b) through (e) was performed using these "No T4" files. It is important to note that the matching exercise described in steps (b) through (e) cannot simply be replaced because the "No T4" files obtained from the EPA include only those SCCs specifically affected by the T4 rule (i.e., diesel CMV and locomotives). So in effect, the matching exercise was augmented (rather than replaced) with an additional three criteria analogous to those described in steps (c) through (e), and these are denoted as the "No T4-Primary," "No T4-Secondary," and "No T4-Tertiary" criteria. Because they exclude the impacts of the proposed T4 rule, matches using the "No T4" criteria supersede matches made using the basic CAIR criteria (as described in steps (c) through (e) above).

(g) The CAIR matching criteria were overridden for any record for which States provided local growth data. Only North Carolina provided these forecasts, as that State has provided specific growth factors for airport emissions in four counties. Because the provided data were based on forecasted changes in landings and takeoffs at major North Carolina airports, the factors were applied only to commercial (SCC 2275020000) and air taxi (SCC 2275060000) emissions. Emissions forecasts for military and general aviation aircraft operations, as well as all aircraft operations in counties other than the four identified in the North Carolina growth factor submission, continued to utilize the growth factors developed according to steps (b) through (f) above. Table 2.3-7 presents the locally generated growth factors applied in North Carolina.

Table 2.3-7 Locally Generated Growth Factors for North Carolina

FIP	2009 Factor	2018 Factor
37067	0.71	0.84
37081	0.97	0.89
37119	1.15	1.01
37183	0.88	0.81

Note:

Growth factor = Year Emissions/2002 Emissions.
Under CAIR approach, 2009 = 1.16 to 1.17 for all 4 counties.
Under CAIR approach, 2018 = 1.36 to 1.37 for all 4 counties.

(h) Using this approach, each State-county-SCC-pollutant was assigned a combined growth and control factor using the EPA CAIR forecast or locally provided data. The 22,838 data records for aircraft, locomotives, and CMV in the 2002 revised base year emissions file were assigned growth factors in accordance with the following breakdown:

48 records matched State-provided growth factors,
4,179 records matched using the CAIR-Primary criterion,
240 records matched using the CAIR-Secondary criterion,
7,463 records matched using the CAIR-Tertiary criterion,
720 records matched using the No T4-Primary criterion,
3,858 records matched using the No T4-Secondary criterion, and
6,330 records matched using the No T4-Tertiary criterion.

(i) Finally, the impacts of the T4 rule as adopted were applied to the grown “non T4” emission estimates. The actual T4 emission standards do not affect aircraft, locomotive, or CMV directly, but associated diesel fuel sulfur requirements do affect locomotives and CMV. Lower fuel sulfur content affects both SO_2 and PM emissions. Expected fuel sulfur contents were obtained for each evaluation year from the EPA technical support document for the final T4 rule (*Final Regulatory Analysis: Control of Emissions from Non-road Diesel Engines*, EPA420-R-04-007, May 2004). According to that document, the average diesel fuel sulfur content for locomotives and CMV is expected to be 408 ppmW in 2009 and 56 ppmW in 2018. These compare to expected non-T4 fuel sulfur levels of 2599 ppmW in 2009 and 2336 ppmW in 2018. Table 2.3-8 uses calculated emissions estimates for base and T4 control scenarios to estimate emission reduction impacts.

Table 2.3-8 Estimated Emission Reduction Impacts based on T-4 Rule

				2009	2018
CMV SO_2	=	Non-T4 SO_2	×	0.1569	0.0241
Locomotive SO_2	=	Non-T4 SO_2	×	0.1569	0.0241
CMV PM	=	Non-T4 PM	×	0.8962	0.8762
Locomotive PM	=	Non-T4 PM	×	0.8117	0.7734

However, since the diesel fuel sulfur content assumed for the 2002 VISTAS base year inventory, upon which both the 2009 and 2018 inventories were based, is 2500 ppmW, a small adjustment to the emission reduction multipliers calculated from the T4 rule is appropriate since they are measured relative to modestly different sulfur contents (2599 ppmW for 2009 and 2336 ppmW for 2018). Correcting for these modest differences produces the emission reduction impact estimates relative to forecasts based on the VISTAS 2002 inventory shown in Table 2.3-9.

Table 2.3-9 Estimated Emission Reduction Impacts Relative to VISTAS 2002 Base Year Values

				2009	2018
CMV SO_2	=	Non-T4 SO_2	×	0.1632	0.0225
Locomotive SO_2	=	Non-T4 SO_2	×	0.1632	0.0225
CMV PM	=	Non-T4 PM	×	0.9004	0.8685
Locomotive PM	=	Non-T4 PM	×	0.8187	0.7610

These factors were applied directly to the non-T4 emission forecasts to produce the final VISTAS 2009 and 2018 emissions inventories for aircraft, locomotive, and CMV.

The only exception is for Palm Beach County, Florida, where CMV emissions are reported as “all fuels” rather than separately by residual and diesel fuel components. To estimate T4 impacts in Palm Beach County, the ratio of diesel CMV emissions to total

CMV emissions in the remainder of Florida was calculated and the T4 impact estimates for Palm Beach County were adjusted to reflect that ratio. Table 2.3-10 shows the calculated diesel CMV ratios.

Table 2.3-10 Diesel CMV Adjustment Ratios for Palm Beach County, FL

GROWTH BASIS	SO_2	PM
2009 (1996, 2020 Growth Basis)	0.2410	0.7861
2009 (1996, 2010, 2015, and 2020 Growth Basis)	0.1279	0.7875
2018 (1996, 2020 Growth Basis)	0.2432	0.7925
2018 (1996, 2010, 2015, and 2020 Growth Basis)	0.2624	0.7918

The differences between the growth bases are discussed in detail below.

Combining these ratios with the T4 impact estimates for diesel engines, as presented above, yields the following impact adjustment factors for Palm Beach County:

Table 2.3-11 Overall Adjustment Factors for Palm Beach County, FL

GROWTH BASIS		
2009 SO_2 (19, 20 Growth Basis)	0.7894	[0.1632×0.2410+(1-0.2410)]
2009 SO_2 (96, 10, 15, and 20 Growth Basis)	0.8930	[0.1632×0.1279+(1-0.1279)]
2018 SO_2 (96, 20 Growth Basis)	0.7623	[0.0225×0.2432+(1-0.2432)]
2018 SO_2 (96, 10, 15, and 20 Growth Basis)	0.7436	[0.0225×0.2624+(1-0.2624)]
2009 PM (19, 20 Growth Basis)	0.9217	[0.9004×0.7861+(1-0.7861)]
2009 PM (96, 10, 15, and 20 Growth Basis)	0.9216	[0.9004×0.7875+(1-0.7875)]
2018 PM (96, 20 Growth Basis)	0.8958	[0.8685×0.7925+(1-0.7925)]
2018 PM (96, 10, 15, and 20 Growth Basis)	0.8959	[0.8685×0.7918+(1-0.7918)]

The differences between the growth bases are discussed in detail below.

Utilizing this approach, emission inventory forecasts for both 2009 and 2018 were developed. As indicated in step (b) above, basic growth factors were developed using EPA CAIR inventory data for 1996, 2010, 2015, and 2020. From these data, equivalent EPA CAIR inventories for 2002 and 2009 were developed through linear interpolation of the 1996 and 2010 inventories, while an equivalent CAIR inventory for 2018 was developed through linear interpolation of the 2015 and 2020 inventories. Growth factors for 2009 and 2018 were then estimated as the ratios of the CAIR 2009 and 2018 inventories to the CAIR 2002 inventory.

During the development of the preliminary 2018 VISTAS inventory in March 2004, this process yielded reasonable results and exhibited no particular systematic concerns. However, when the 2009 Base F inventory was developed, significant concerns related to SO_2 and PM were encountered. Essentially, what was revealed by the Base F 2009 forecast was a series of apparent inconsistencies in the CAIR 2010 and 2015 emission inventories (as compared to the 1996 and 2020 CAIR inventories) that were masked during the construction of the “longer-term” 2018 inventory.

The apparent inconsistencies are best illustrated by looking at the actual data extracted from the CAIR inventory files. Note that although a limited example is being presented, the same general issue applies throughout the CAIR files. For FIP 01001 (Autauga County, Alabama) and SCC 2285002000 (Diesel Rail), the CAIR inventories indicate SO_2 emission estimates as shown in Table 2.3-12.

Table 2.3-12 SO_2 Emissions for Diesel Rail in Autauga County, AL from the CAIR Projections

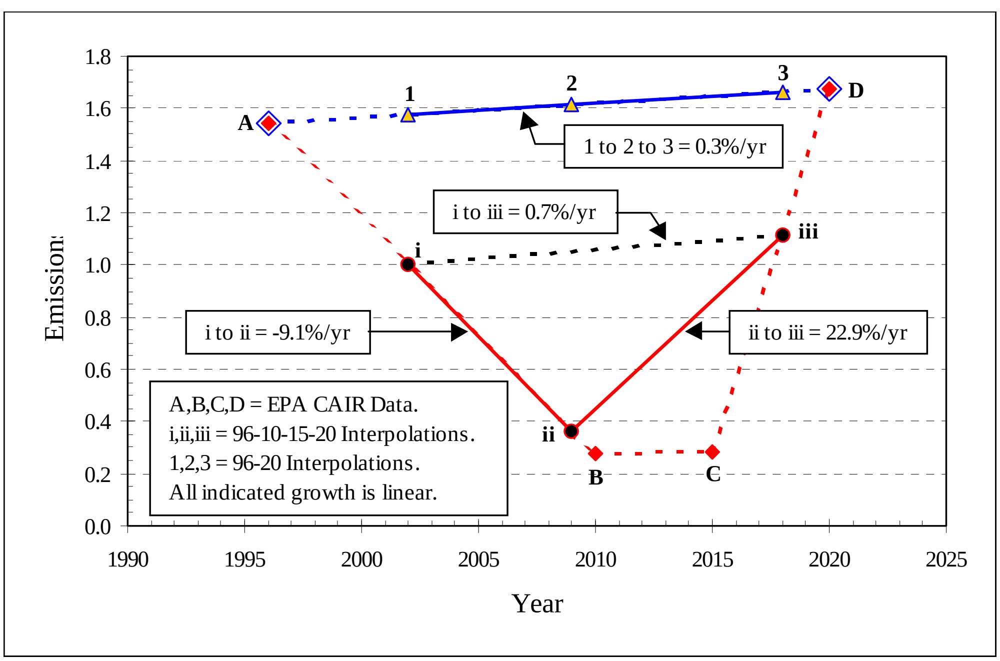
YEAR	TONS
1996:	15.3445
2010:	2.7271
2015:	2.8178
2020:	16.6232

Clearly, there is a major drop in emissions between 1996 and 2010, followed by a major increase in emissions between 2015 and 2020. Several observations regarding these changes are important. First, the CAIR data were reported to exclude the T4 rule, so that the drop in emissions should be related to something other than simply a change in diesel fuel sulfur content. Second, if the T4 rule impacts were “accidentally” included in the estimates, there should be a resultant 90 percent drop in diesel sulfur between 2010 and 2015; so such inclusion is unlikely. Third, the rate of growth between 2015 and 2020 (43 percent *per year* compound or 97 percent *per year* linear) is well beyond any reasonable expectations for rail service; and fuel sulfur content during this period is constant both with and without T4. In short, there appeared to be no rational explanation for the data, yet the same basic relations are observed for thousands of CAIR inventory records.

For the most part, the issue seems to be centered on SO_2 and PM records, which are those records primarily affected by the T4 rule. But, as noted above, there does not seem to be any pattern of consistency that would indicate that either inclusion or exclusion of T4 rule impacts is the underlying cause. Moreover, where they occur, the observed growth extremes generally affect both SO_2 and PM equally, while one would expect PM effects to be buffered if the T4 rule was the underlying cause, since changes in diesel fuel sulfur content will only affect a fraction of PM (i.e., sulfate), while directly reducing SO_2.

The data presented in Figure 2.3-1 illustrates what this meant to the VISTAS forecasting process. Figure 2.3-1 depicts the same data presented above for Autauga County, Alabama, but normalized so that the interpolated 2002 CAIR emissions estimate equals unity. The “raw” CAIR data is depicted by the markers labeled A, B, C, and D. Interpolated data for 2002 and 2009, based on 1996 and 2010 CAIR data, is depicted by the markers labeled “i” and “ii.” Interpolated data for 2018, based on 2015 and 2020 CAIR data is depicted by the marker labeled “iii.” The relationship between marker “iii” and marker “i” is exactly the relationship used to construct the preliminary (e.g., pre-Base F) 2018 VISTAS inventory (i.e., a linear growth rate equal to 0.7 percent per year). Thus, it is easy to see that although there is a major “dip and rise” between 2002 and 2018, it is essentially masked unless data for intervening years are examined. Since no intervening year was examined for the preliminary 2018 inventory, the “dip and rise” was not discovered. However, upon the development of the 2009 inventory forecast, the issue became obvious, as the marker labeled “ii” readily illustrates. In effect, the 2009 inventory reflected very low negative “growth rates” for some SCCs and pollutants relative to the 2002 inventory, while the 2018 inventory reflected very high and positive growth rates for those same SCCs and pollutants. In effect, the path between 2002 and 2018 that previously looked like the dotted line connecting markers “i” and “iii,” now looks like the solid line connecting markers “i”, “ii,” and “iii.” For reference purposes, this path is hereafter referred to as the 1996, 2010, 2015, and 2020 growth basis, since all interpolated data is based on CAIR data for those four years.

Figure 2.3-1. Impacts of the Apparent CAIR Inventory Discrepancy



In light of the apparent discrepancies inherent in the 1996, 2010, 2015, and 2020 growth basis data and the inconsistencies its use would impart into the 2009 and 2018 VISTAS inventories, a secondary forecasting method was developed. This second method relies on the apparent consistency between the 1996 and 2020 non-T4 CAIR inventories, interpolating equivalent 2002, 2009, and 2018 inventories solely from these two inventories. In effect, the CAIR inventories for 2010 and 2015 are ignored. In Figure 2.3-1, this secondary approach is depicted by the data points that lie along the lines connecting markers A and D. Markers A and D represent the 1996 and 2020 CAIR inventories, and the markers labeled 1, 2, and 3 represent the interpolated 2002, 2009, and 2018 CAIR equivalent inventories. The growth rate between 2009 and 2002 is then equal to the ratio of the 2009 and 2002 CAIR inventories, while that between 2018 and 2002 is equal to the ratio of the 2018 and 2002 CAIR inventories. For the example data, the resulting linear growth estimate is 0.3 percent per year. For reference purposes, this path is hereafter referred to as the 1996-2020 growth basis, since all interpolated data are based on CAIR data for only those two years.

It is perhaps worth noting that the only elements of Figure 2.3-1 that have any bearing on the VISTAS inventories are the growth rates. The absolute CAIR data are of importance only in determining those rates, as all VISTAS inventories were developed on the basis of the VISTAS 2002 base year inventory, not any of the CAIR inventories. So referring to Figure 2.3-1, the two growth options are summarized in Table 2.3-13.

Table 2.3-13 Growth Options based on CAIR Data

GROWTH BASIS	PERCENT PER YEAR
1996, 2010, 2015, 2020 Growth Basis:	-9.1% per year (linear) between 2002 and 2009
1996-2020 Growth Basis:	+0.3% per year (linear) between 2002 and 2009
1996, 2010, 2015, 2020 Growth Basis:	+22.9% per year (linear) between 2009 and 2018
1996-2020 Growth Basis:	+0.3% per year (linear) between 2009 and 2018
1996, 2010, 2015, 2020 Growth Basis:	+0.7% per year (linear) between 2002 and 2018
1996-2020 Growth Basis:	+0.3% per year (linear) between 2002 and 2018

Of course, these specific rates are applicable only to the example case (i.e., diesel rail SO_2 in Autauga County, Alabama), but there are thousands of additional CAIR records that are virtually identical from a growth viewpoint.

While forecast inventories for aircraft, locomotives, and CMV were developed for 2009 and 2018 using both growth methods, it was ultimately decided to utilize the 1996-2020 growth basis for Base F since it provided more reasonable growth rates for 2009. Tables 2.3-14 and 2.3-15 present a summary of each Base F inventory, while Tables 2.3-16 and 2.3-17 present the associated change in emissions for each Base F forecast inventory relative to the Base F 2002 base year VISTAS inventory. The larger reduction in CMV SO_2 emissions in 2009 and 2018 (relative to 2002) for Virginia and West Virginia is notable relative to the other VISTAS States, but this has been checked and is attributable to a high diesel contribution to total CMV SO_2 in the 2002 inventories for these two States.

Figures 2.3-2 through 2.3-13 graphically depict the relationships between the various Base F inventories and preliminary 2002 and 2018 projections prepared prior to Base F. There are two figures for each pollutant, the first of which presents a comparison of total VISTAS regional emission estimates for aircraft, locomotives, and CMV, and the second of which presents total VISTAS region emission estimates for locomotives only. This two figure approach is intended to provide a more robust illustration of the differences between the various inventories, as some of the differences are less distinct when viewed through overall aggregate emissions totals. All of the figures include the following emissions estimates:

- The 2002 Base F base year VISTAS emissions inventory (labeled as “2002”),
- The 2002 pre-Base F base year VISTAS emissions inventory (labeled as “2002 Prelim”),
- The Base F 2009 VISTAS emissions inventory developed using growth rates derived from 1996 and 2020 EPA CAIR data (labeled as “2009”),
- The Base F 2018 VISTAS emissions inventory developed using growth rates derived from 1996 and 2020 EPA CAIR data (labeled as “2018”), and
- The pre-Base F 2018 VISTAS emissions inventory estimates as developed using growth rates derived from 1996, 2010, 2015, and 2020 EPA CAIR data (labeled as “2018 Prelim”).

All 12 figures generally illustrate a reduction in emissions estimates between the 2002 pre-Base F emission estimates published in February 2004 (the initial 2002 VISTAS inventory) and the 2002 Base F emission estimates. This reduction generally results from emission updates reflected in the State 2002 CERR submittals used to develop the Base F 2002 base year inventory, although the major differences in aggregate PM emission estimates are driven to a greater extent by modifications in the methodology used to estimate aircraft PM in the Base F 2002 base year inventory (as documented under the base year inventory section of this report).

Table 2.3-14. Base F 2009 Aircraft, Locomotive, and Non-Recreational Marine Emissions (annual tons) -- Based on Growth Using 1996 and 2020 EPA Inventories

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	4,178	202	278	102	19	217
	FL	29,258	10,316	2,812	2,756	928	4,235
	GA	7,635	6,233	1,712	1,678	523	512
	KY	3,075	762	207	203	73	304
	MS	1,765	162	51	50	16	108
	NC	6,551	1,601	436	427	153	644
	SC	7,372	559	446	437	98	975
	TN	8,020	3,096	824	807	268	1,050
	VA	10,994	3,094	1,239	1,214	907	2,892
	WV	1,312	91	28	28	9	74
	Total	**80,159**	**26,116**	**8,033**	**7,704**	**2,993**	**11,011**
Commercial Marine (2280)	AL	1,280	8,888	872	802	2,753	768
	FL	6,236	43,198	1,838	1,691	5,864	1,467
	GA	1,097	7,599	317	291	974	256
	KY	7,087	48,039	2,158	1,985	8,350	1,649
	MS	6,074	41,437	1,821	1,676	6,587	1,415
	NC	634	4,386	184	169	584	148
	SC	1,133	7,796	326	300	1,012	264
	TN	3,887	26,333	1,168	1,074	4,512	904
	VA	1,042	2,662	312	286	61	506
	WV	1,638	11,073	455	419	89	381
	Total	**30,109**	**201,412**	**9,450**	**8,693**	**30,786**	**7,759**
Military Marine (2283)	VA	118	299	23	21	5	50
	Total	**118**	**299**	**23**	**21**	**5**	**50**
Locomotives (2285)	AL	3,648	23,529	452	406	242	1,279
	FL	1,052	8,905	189	170	101	382
	GA	2,769	24,398	507	456	271	1,003
	KY	2,264	19,597	415	374	221	819
	MS	2,406	20,785	441	397	239	849
	NC	1,712	14,741	313	282	167	618
	SC	1,213	10,443	222	200	119	437
	TN	2,745	23,924	483	435	240	984
	VA	1,236	11,134	1,167	1,050	608	467
	WV	1,369	12,177	251	226	135	489
	Total	**20,412**	**169,635**	**4,440**	**3,995**	**2,343**	**7,328**
Grand Total		**130,798**	**397,462**	**21,946**	**20,413**	**36,126**	**26,148**

Table 2.3-15. Base F 2018 Aircraft, Locomotive, and Non-Recreational Marine Emissions (annual tons) -- Based on Growth Using 1996 and 2020 EPA Inventories

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	4,681	236	345	122	23	245
	FL	34,178	12,147	3,312	3,246	1,093	4,976
	GA	8,939	7,340	2,016	1,976	616	601
	KY	3,602	898	244	239	86	357
	MS	1,986	190	60	58	18	122
	NC	6,728	1,454	400	392	139	615
	SC	8,487	616	493	484	112	1,119
	TN	9,009	3,519	939	921	309	1,187
	VA	12,578	3,528	1,370	1,342	1,063	3,358
	WV	1,484	106	33	33	10	85
	Total	**91,670**	**30,035**	**9,213**	**8,814**	**3,468**	**12,666**
Commercial Marine (2280)	AL	1,388	8,464	880	809	2,715	809
	FL	6,684	41,117	1,853	1,705	6,248	1,543
	GA	1,174	7,246	319	293	976	269
	KY	7,703	45,174	2,199	2,023	8,383	1,752
	MS	6,571	39,129	1,850	1,702	6,556	1,498
	NC	679	4,179	185	170	596	155
	SC	1,217	7,406	329	303	1,027	278
	TN	4,225	24,763	1,190	1,095	4,808	960
	VA	1,133	2,517	314	289	9	537
	WV	1,781	10,412	459	422	13	404
	Total	**32,554**	**190,407**	**9,578**	**8,811**	**31,330**	**8,205**
Military Marine (2283)	VA	128	282	23	21	1	53
	Total	**128**	**282**	**23**	**21**	**1**	**53**
Locomotives (2285)	AL	3,850	19,917	381	343	34	1,183
	FL	1,110	7,538	159	143	14	353
	GA	2,917	21,395	427	385	38	932
	KY	2,389	16,751	352	317	31	757
	MS	2,540	17,594	372	335	34	785
	NC	1,807	12,478	264	237	24	571
	SC	1,280	8,840	187	168	17	404
	TN	2,897	21,735	407	367	34	910
	VA	1,300	10,173	983	885	86	436
	WV	1,444	10,831	212	190	19	453
	Total	**21,534**	**147,252**	**3,744**	**3,368**	**333**	**6,785**
Grand Total		**145,885**	**367,975**	**22,557**	**21,015**	**35,132**	**27,709**

Table 2.3-16. Change in Emissions between 2009 and 2002 Base F Inventories (Based on Growth Using 1996 and 2020 EPA Inventories)

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	+10%	+15%	+23%	+18%	+16%	+11%
	FL	+15%	+16%	+16%	+16%	+16%	+16%
	GA	+15%	+16%	+16%	+16%	+16%	+16%
	KY	+15%	+16%	+16%	+16%	+16%	+16%
	MS	+11%	+16%	+15%	+15%	+16%	+12%
	NC	+8%	+3%	+4%	+4%	+3%	+5%
	SC	+13%	+9%	+9%	+9%	+12%	+13%
	TN	+11%	+12%	+12%	+12%	+14%	+11%
	VA	+13%	+12%	+9%	+9%	+15%	+14%
	WV	+11%	+16%	+15%	+15%	+16%	+12%
	Total	**+13%**	**+14%**	**+14%**	**+13%**	**+15%**	**+14%**
Commercial Marine (2280)	AL	+7%	-4%	-5%	-5%	-18%	+4%
	FL	+6%	-4%	-5%	-5%	-12%	+4%
	GA	+6%	-3%	-5%	-5%	-17%	+4%
	KY	+7%	-4%	-4%	-4%	-13%	+5%
	MS	+7%	-4%	-4%	-4%	-15%	+5%
	NC	+6%	-4%	-5%	-5%	-15%	+4%
	SC	+6%	-4%	-5%	-5%	-16%	+4%
	TN	+7%	-4%	-4%	-4%	-9%	+5%
	VA	+7%	-4%	-7%	-7%	-83%	+5%
	WV	+7%	-4%	-7%	-7%	-83%	+5%
	Total	**+7%**	**-4%**	**-5%**	**-5%**	**-15%**	**+5%**
Military Marine (2283)	VA	+7%	-4%	-7%	-7%	-83%	+5%
	Total	**+7%**	**-4%**	**-7%**	**-7%**	**-83%**	**+5%**
Locomotives (2285)	AL	+5%	-11%	-24%	-24%	-83%	-6%
	FL	+5%	-11%	-24%	-24%	-83%	-6%
	GA	+4%	-9%	-24%	-24%	-83%	-5%
	KY	+5%	-10%	-23%	-23%	-83%	-6%
	MS	+5%	-11%	-24%	-24%	-83%	-6%
	NC	+5%	-11%	-24%	-24%	-83%	-6%
	SC	+5%	-11%	-24%	-24%	-83%	-6%
	TN	+5%	-7%	-24%	-24%	-83%	-6%
	VA	+4%	-6%	-24%	-24%	-83%	-5%
	WV	+4%	-8%	-24%	-24%	-83%	-5%
	Total	**+4%**	**-9%**	**-24%**	**-24%**	**-83%**	**-5%**
Grand Total		**+10%**	**-5%**	**-4%**	**-4%**	**-32%**	**+5%**

Table 2.3-17. Change in Emissions between 2018 and 2002 Base F Inventories (Based on Growth Using 1996 and 2020 EPA Inventories)

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	+24%	+35%	+53%	+41%	+36%	+25%
	FL	+34%	+37%	+37%	+37%	+37%	+36%
	GA	+35%	+37%	+37%	+37%	+37%	+36%
	KY	+35%	+37%	+37%	+37%	+37%	+36%
	MS	+25%	+36%	+35%	+35%	+36%	+27%
	NC	+10%	-6%	-5%	-5%	-6%	0%
	SC	+30%	+20%	+21%	+21%	+27%	+30%
	TN	+24%	+27%	+28%	+28%	+31%	+26%
	VA	+29%	+28%	+20%	+20%	+35%	+33%
	WV	+26%	+36%	+35%	+35%	+36%	+28%
	Total	**+29%**	**+31%**	**+30%**	**+30%**	**+33%**	**+31%**
Commercial Marine (2280)	AL	+16%	-8%	-4%	-4%	-19%	+10%
	FL	+14%	-8%	-4%	-4%	-7%	+9%
	GA	+13%	-8%	-5%	-5%	-17%	+9%
	KY	+17%	-10%	-2%	-2%	-13%	+12%
	MS	+16%	-9%	-3%	-3%	-15%	+11%
	NC	+13%	-8%	-4%	-4%	-14%	+9%
	SC	+14%	-9%	-4%	-4%	-15%	+10%
	TN	+17%	-10%	-2%	-2%	-3%	+12%
	VA	+17%	-9%	-6%	-6%	-98%	+11%
	WV	+17%	-10%	-6%	-6%	-98%	+12%
	Total	**+15%**	**-9%**	**-3%**	**-3%**	**-14%**	**+11%**
Military Marine (2283)	VA	+17%	-10%	-6%	-6%	-98%	+12%
	Total	**+17%**	**-10%**	**-6%**	**-6%**	**-98%**	**+12%**
Locomotives (2285)	AL	+10%	-24%	-36%	-36%	-98%	-13%
	FL	+10%	-24%	-36%	-36%	-98%	-13%
	GA	+10%	-20%	-36%	-36%	-98%	-12%
	KY	+10%	-23%	-35%	-35%	-98%	-13%
	MS	+10%	-24%	-36%	-36%	-98%	-13%
	NC	+10%	-24%	-36%	-36%	-98%	-13%
	SC	+10%	-24%	-36%	-36%	-98%	-13%
	TN	+10%	-15%	-36%	-36%	-98%	-13%
	VA	+10%	-14%	-36%	-36%	-98%	-11%
	WV	+10%	-18%	-36%	-36%	-98%	-12%
	Total	**+10%**	**-21%**	**-36%**	**-36%**	**-98%**	**-12%**
Grand Total		**+23%**	**-12%**	**-1%**	**-1%**	**-34%**	**+11%**

Figure 2.3-2. Total Aircraft, Locomotive, and CMV CO Emissions (Base F)

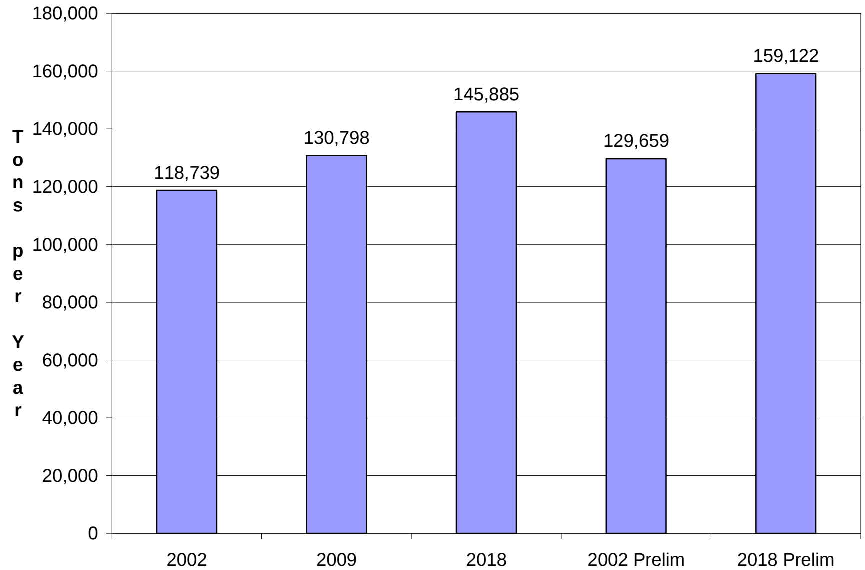


Figure 2.3-3. Locomotive CO Emissions (Base F)

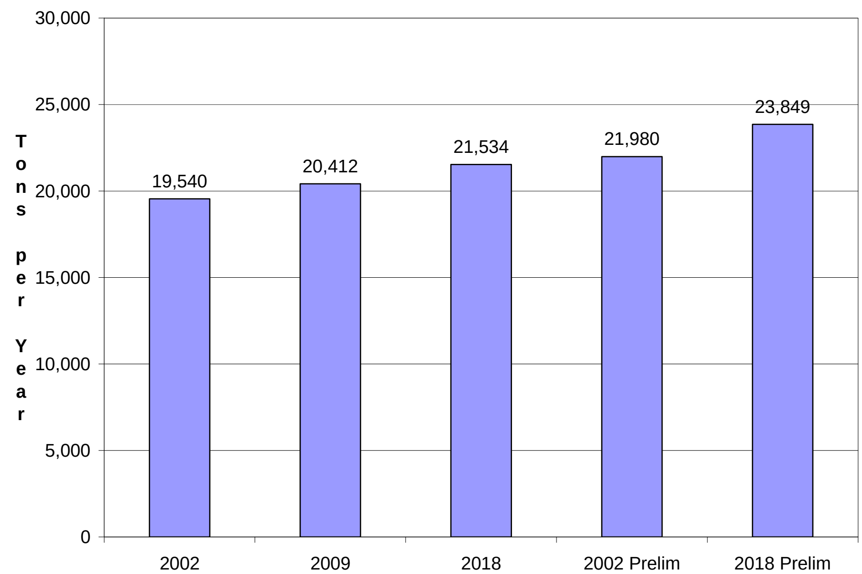


Figure 2.3-4. Total Aircraft, Locomotive, and CMV NO_x Emissions (Base F)

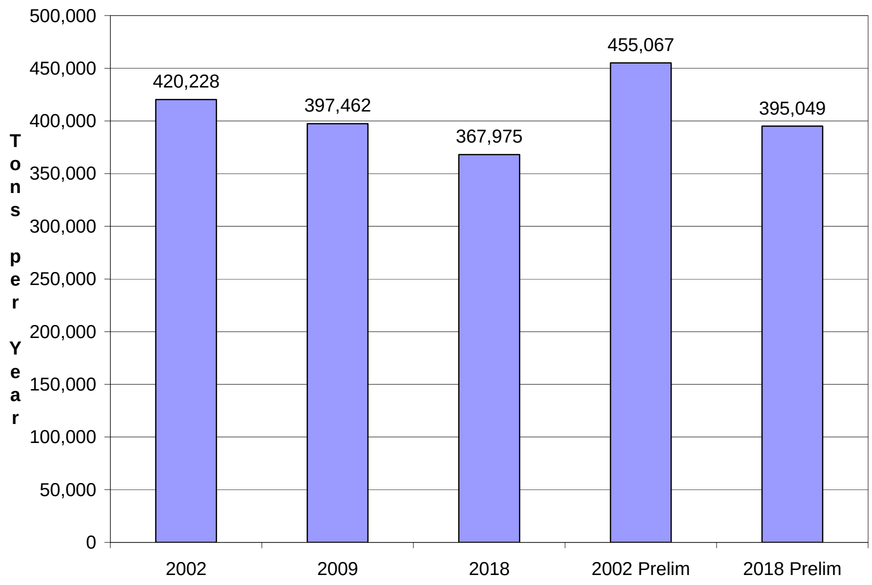


Figure 2.3-5. Locomotive NO_x Emissions (Base F)

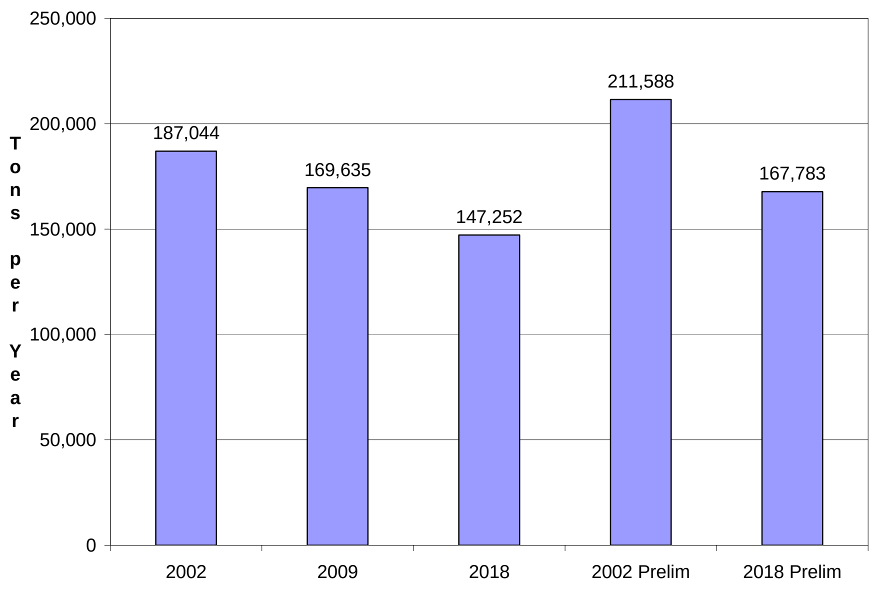


Figure 2.3-6. Total Aircraft, Locomotive, and CMV PM_{10} Emissions (Base F)

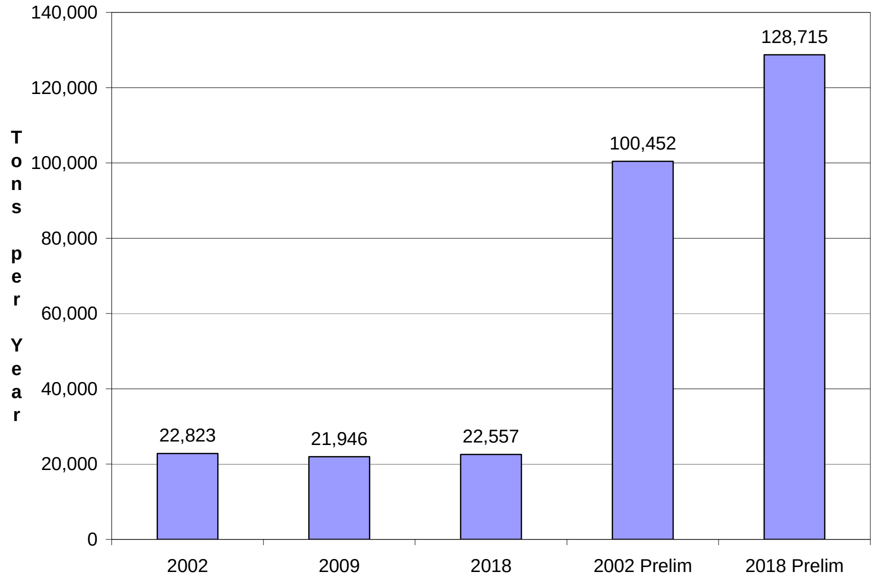


Figure 2.3-7. Locomotive PM_{10} Emissions (Base F)

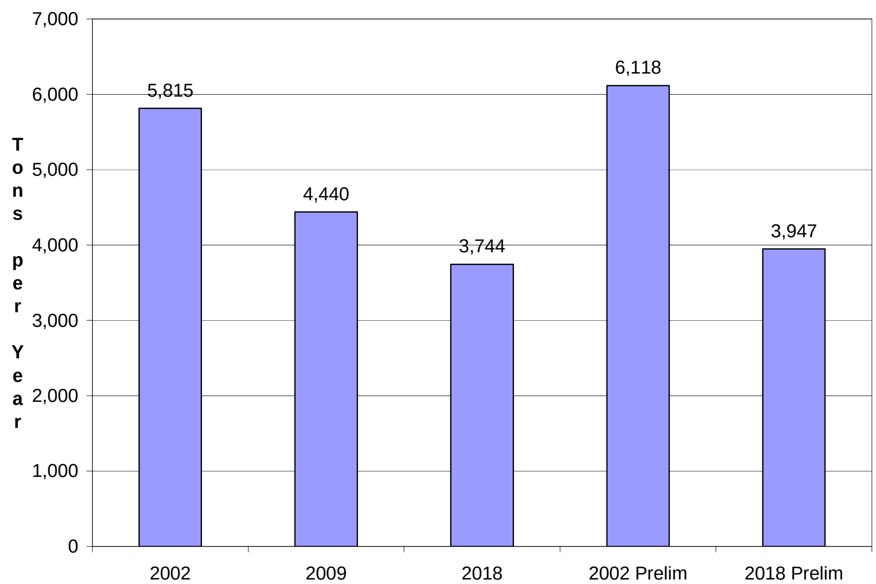


Figure 2.3-8. Total Aircraft, Locomotive, and CMV $PM_{2.5}$ Emissions (Base F)

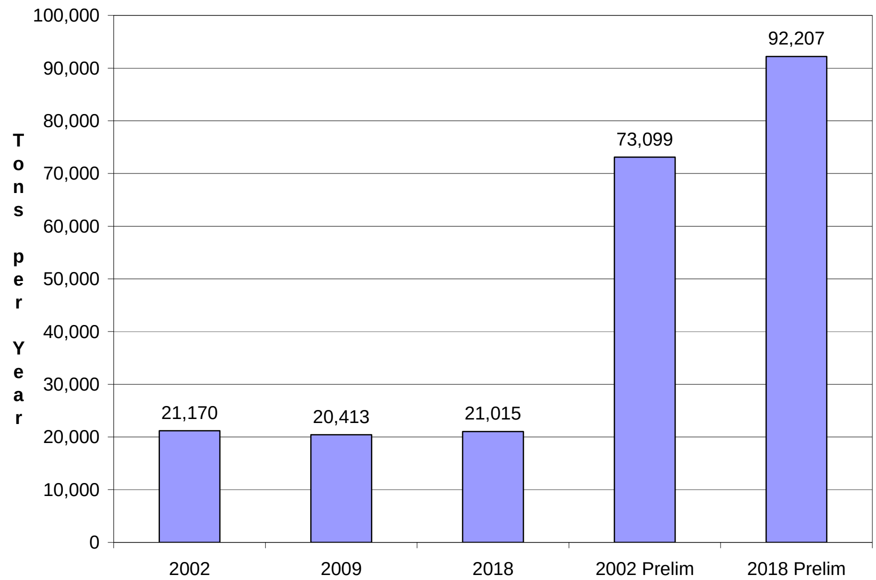


Figure 2.3-9. Locomotive $PM_{2.5}$ Emissions (Base F)

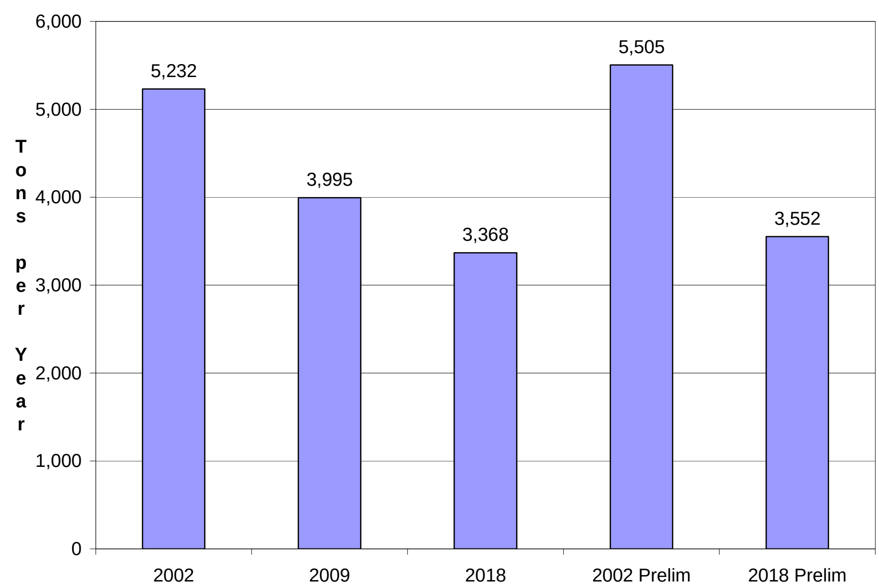


Figure 2.3-10. Total Aircraft, Locomotive, and CMV SO_2 Emissions (Base F)

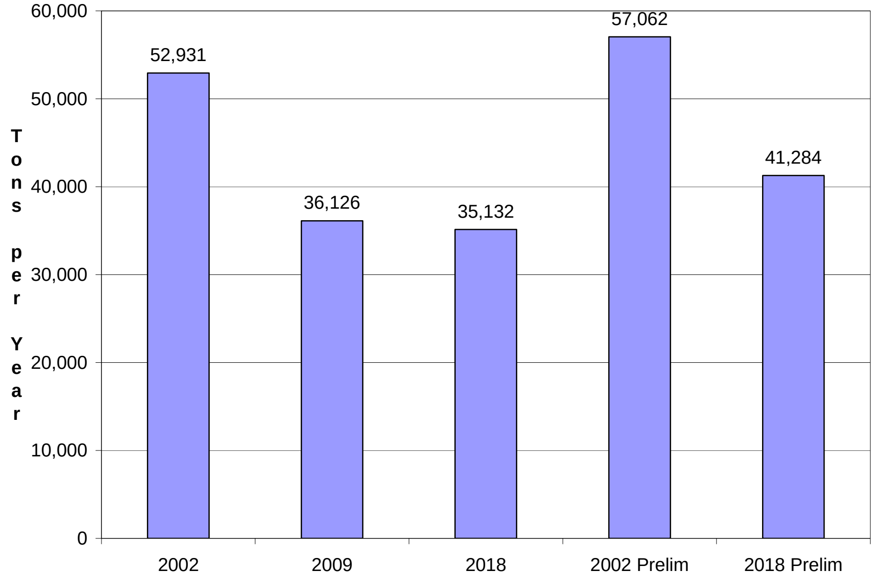


Figure 2.3-11. Locomotive SO_2 Emissions (Base F)

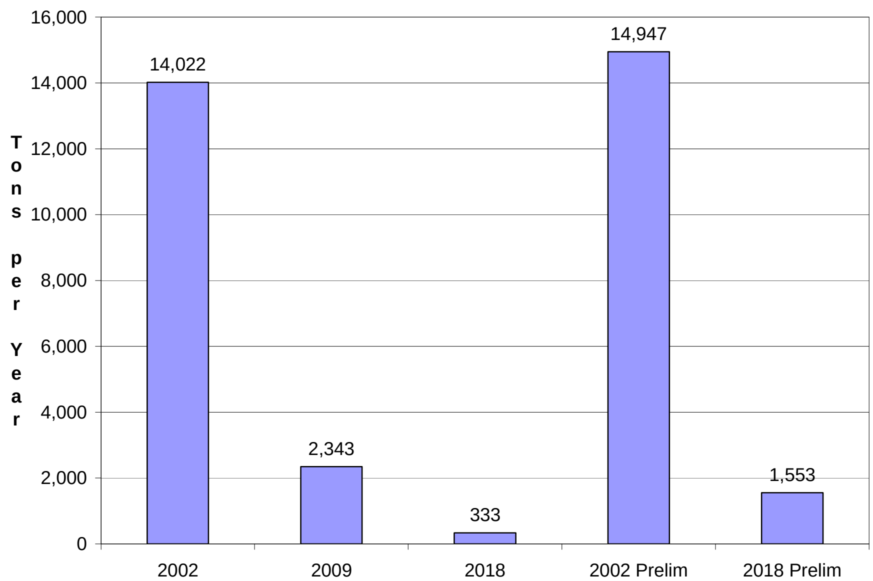


Figure 2.3-12. Total Aircraft, Locomotive, and CMV VOC Emissions (Base F)

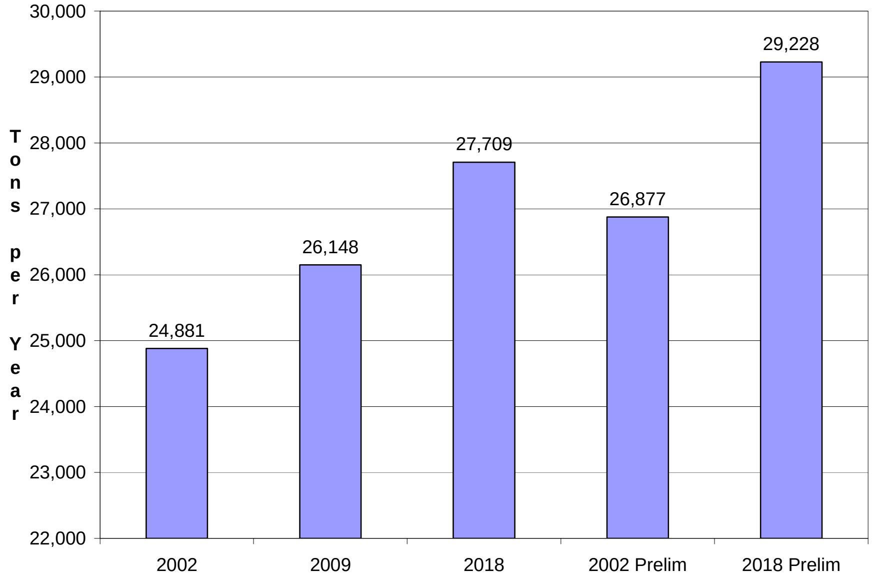
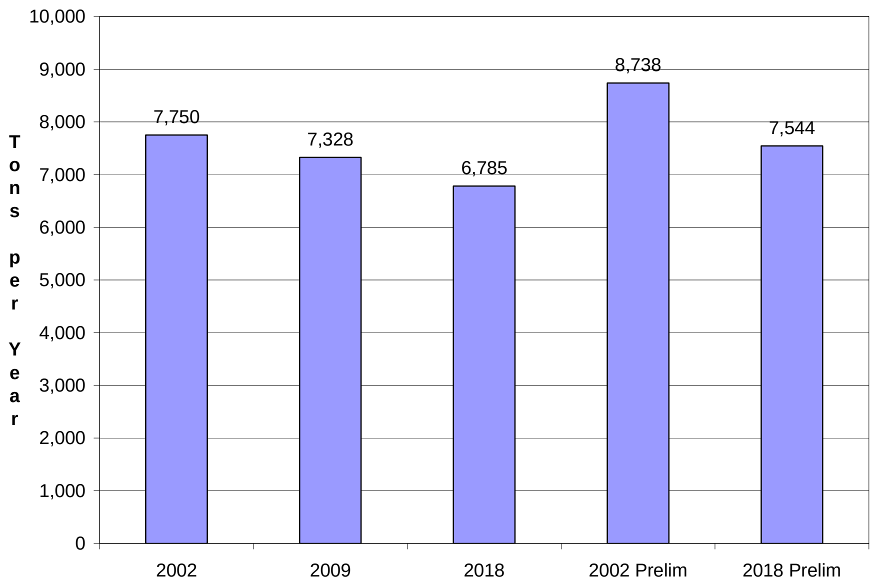


Figure 2.3-13. Locomotive VOC Emissions (Base F)



Base G Revisions:

Table 2.3-18 shows the Base G 2002 base year emissions for each State in the VISTAS region for aircraft, locomotives and CMV. Although some of these data are updated relative to those used as the basis of the Base F emissions forecasts, the methodology used to develop 2009 and 2018 emissions forecasts for aircraft, locomotives, and CMV for Base G is identical to that used for Base F (as documented above). The only exceptions are as follows:

(a) As indicated in the discussion of the Base F forecasts, the CAIR (growth rate) matching criteria were overridden for any record for which States provided local growth data. For Base F, only North Carolina provided such data. However, for Base G, Kentucky regulators provided growth data for aircraft emissions associated with Cincinnati/Northern Kentucky International Airport (located in Boone County, Kentucky). These data were applied to all pollutants and all aircraft types (i.e., military aircraft (SCC 2275001000), commercial aircraft (SCC 2275020000), general aviation aircraft (SCC 2275050000), and air taxi aircraft (SCC 2275060000)). Emissions forecasts for all aircraft operations in counties other than Boone continued to utilize the growth factors developed according to the CAIR matching criteria. Table 2.3-19 presents the locally generated growth factors applied in Kentucky. It should be recognized that although the locally provided growth factors presented in the table are significantly greater than those that would apply under the CAIR matching criteria, this is to be expected as local regulators noted a very significant decline in activity at the Cincinnati/Northern Kentucky International Airport in 2002 (relative to activity in preceding years). Moreover, this downward spike seems to have been alleviated since 2002, so that the provided growth factors represent not only "routine" growth expected between 2002 and the two forecast years, but growth required to offset the temporary decline observed in 2002.

Table 2.3-18. Base G 2002 Aircraft, Locomotive, and Non-Recreational Marine Emissions (annual tons)

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	5,595	185	238	99	18	276
	FL	25,431	8,891	2,424	2,375	800	3,658
	GA	6,620	5,372	1,475	1,446	451	443
	KY	5,577	925	251	246	88	397
	MS	1,593	140	44	43	13	96
	NC	6,088	1,548	419	411	148	613
	SC	6,505	515	409	401	88	863
	TN	7,251	2,766	734	719	235	943
	VA	11,873	3,885	2,010	1,970	272	2,825
	WV	1,178	78	25	24	8	66
	Total	**77,712**	**24,305**	**8,029**	**7,734**	**2,121**	**10,179**
Commercial Marine (2280)	AL	1,196	9,218	917	844	3,337	737
	FL	5,888	44,817	1,936	1,781	6,683	1,409
	GA	1,038	7,875	334	307	1,173	246
	KY	6,607	50,267	2,246	2,066	9,608	1,569
	MS	5,688	43,233	1,903	1,751	7,719	1,351
	NC	599	4,547	193	178	690	142
	SC	1,067	8,100	343	316	1,205	253
	TN	3,624	27,555	1,217	1,120	4,974	860
	VA	972	2,775	334	307	359	483
	WV	1,528	11,586	487	448	525	362
	Total	**28,207**	**209,972**	**9,911**	**9,118**	**36,275**	**7,413**
Military Marine (2283)	VA	110	313	25	23	27	48
	Total	**110**	**313**	**25**	**23**	**27**	**48**
Locomotives (2285)	AL	3,518	26,623	592	533	1,446	1,365
	FL	1,006	9,969	247	222	605	404
	GA	2,654	26,733	664	598	1,622	1,059
	KY	2,166	21,811	542	488	1,321	867
	MS	2,302	23,267	578	520	1,429	899
	NC	1,638	16,502	410	369	1,001	654
	SC	1,160	11,690	291	261	710	462
	TN	2,626	25,627	633	570	1,439	1,041
	VA	1,186	11,882	1,529	1,375	3,641	492
	WV	1,311	13,224	329	296	808	517
	Total	**19,568**	**187,328**	**5,815**	**5,232**	**14,022**	**7,761**
Grand Total		**125,597**	**421,918**	**23,780**	**22,107**	**52,444**	**25,401**

Table 2.3-19 Locally Generated Growth Factors for Kentucky

FIP	2009 Factor	2018 Factor
21015	1.31	1.81

Note:

Growth factor = Year Emissions/2002 Emissions.
Under CAIR approach, 2009 = 0.99 to 1.17.
Under CAIR approach, 2018 = 0.97 to 1.40.

(b) Because of the additional emissions records added in Alabama, as discussed in the Base G 2002 base year inventory section of this report, the total number of emissions records in the Base G 2009 and 2018 forecasts increased to 23,042 (as compared to 22,838 for Base F). The 23,042 data records for aircraft, locomotives, and CMV were assigned growth factors in accordance with the following breakdown:

72 records matched State-provided growth factors,
4,287 records matched using the CAIR-Primary criterion,
240 records matched using the CAIR-Secondary criterion,
7,511 records matched using the CAIR-Tertiary criterion,
720 records matched using the No T4-Primary criterion,
3,858 records matched using the No T4-Secondary criterion, and
6,354 records matched using the No T4-Tertiary criterion.

Tables 2.3-20 and 2.3-21 present a summary of the resulting Base G 2009 and 2018 inventories, while Tables 2.3-22 and 2.3-23 present the associated change in emissions for each forecast inventory relative to the Base G 2002 base year VISTAS. As was the case with Base F, the larger reduction in CMV SO_2 emissions in 2009 and 2018 (relative to 2002) for Virginia and West Virginia is notable relative to the other VISTAS States, but is attributable to a high diesel contribution to total CMV SO_2 in the 2002 inventories for these two States.

Figures 2.3-14 through 2.3-25 graphically depict the relationships between the various inventories, as revised through Base G. There are two figures for each pollutant, the first of which presents a comparison of total VISTAS regional emission estimates for aircraft, locomotives, and CMV, and the second of which presents total VISTAS region emission estimates for locomotives only. This two figure approach is intended to provide a more robust illustration of the differences between the various inventories, as some of the differences are less distinct when viewed through overall aggregate emissions totals. All of the figures include the following emissions estimates:

- The Base G 2002 base year VISTAS emissions inventory (labeled as “2002”),
- The pre-Base F 2002 base year VISTAS emissions inventory (labeled as “2002 Prelim”),
- The Base G 2009 VISTAS emissions inventory developed using growth rates derived from 1996 and 2020 EPA CAIR data (labeled as “2009”),
- The Base G 2018 VISTAS emissions inventory developed using growth rates derived from 1996 and 2020 EPA CAIR data (labeled as “2018”), and
- The pre-Base F 2018 VISTAS emissions inventory estimates developed using growth rates derived from 1996, 2010, 2015, and 2020 EPA CAIR data (labeled as “2018 Prelim”).

All 12 figures generally illustrate a reduction in emissions estimates between the pre-Base F 2002 emission estimates published in February 2004 and the Base G 2002 base year emission estimates. This reduction generally results from emission updates reflected in the Base F State CERR submittals, although the major differences in aggregate PM emission estimates are driven to a greater extent by modifications in the methodology used to estimate aircraft PM in the Base F revisions to the 2002 Base F base year inventory (as documented under the base year inventory section of this report).

Table 2.3-20. Base G 2009 Aircraft, Locomotive, and Non-Recreational Marine Emissions (annual tons) -- Based on Growth Using 1996 and 2020 EPA Inventories

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	6,265	213	292	116	21	309
	FL	29,258	10,316	2,812	2,756	928	4,235
	GA	7,635	6,233	1,712	1,678	523	512
	KY	6,959	1,135	307	301	108	487
	MS	1,765	162	51	50	16	108
	NC	6,991	1,795	486	477	171	709
	SC	7,372	559	446	437	98	975
	TN	8,020	3,096	824	807	268	1,050
	VA	13,141	4,244	2,124	2,082	306	3,153
	WV	1,312	91	28	28	9	74
	Total	**88,716**	**27,844**	**9,083**	**8,732**	**2,447**	**11,612**
Commercial Marine (2280)	AL	1,280	8,888	872	802	2,753	768
	FL	6,236	43,198	1,838	1,691	5,864	1,467
	GA	1,097	7,599	317	291	974	256
	KY	7,087	48,039	2,158	1,985	8,350	1,649
	MS	6,074	41,437	1,821	1,676	6,587	1,415
	NC	634	4,386	184	169	584	148
	SC	1,133	7,796	326	300	1,012	264
	TN	3,887	26,333	1,168	1,074	4,512	904
	VA	1,042	2,662	312	286	61	506
	WV	1,638	11,073	455	419	89	381
	Total	**30,108**	**201,412**	**9,450**	**8,693**	**30,786**	**7,759**
Military Marine (2283)	VA	118	299	23	21	5	50
	Total	**118**	**299**	**23**	**21**	**5**	**50**
Locomotives (2285)	AL	3,677	23,783	452	406	242	1,289
	FL	1,052	8,905	189	170	101	382
	GA	2,769	24,398	507	456	271	1,003
	KY	2,264	19,597	415	374	221	819
	MS	2,406	20,785	441	397	239	849
	NC	1,690	14,662	311	279	165	613
	SC	1,213	10,443	222	200	119	437
	TN	2,745	23,924	483	435	240	984
	VA	1,236	11,134	1,167	1,050	608	467
	WV	1,369	12,177	251	226	135	489
	Total	**20,420**	**169,808**	**4,437**	**3,993**	**2,341**	**7,333**
Grand Total		**139,362**	**399,364**	**22,994**	**21,440**	**35,578**	**26,754**

Table 2.3-21. Base G 2018 Aircraft, Locomotive, and Non-Recreational Marine Emissions (annual tons) -- Based on Growth Using 1996 and 2020 EPA Inventories

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	7,126	249	361	139	24	352
	FL	34,178	12,147	3,312	3,246	1,093	4,976
	GA	8,939	7,340	2,016	1,976	616	601
	KY	9,078	1,446	391	383	138	623
	MS	1,986	190	60	58	18	122
	NC	8,150	2,114	572	561	202	831
	SC	8,487	616	493	484	112	1,119
	TN	9,009	3,519	939	921	309	1,187
	VA	14,770	4,706	2,271	2,226	349	3,574
	WV	1,484	106	33	33	10	85
	Total	**103,206**	**32,435**	**10,450**	**10,027**	**2,871**	**13,472**
Commercial Marine (2280)	AL	1,388	8,464	880	809	2,715	809
	FL	6,684	41,117	1,853	1,705	6,248	1,543
	GA	1,174	7,246	319	293	976	269
	KY	7,703	45,174	2,199	2,023	8,383	1,752
	MS	6,571	39,129	1,850	1,702	6,556	1,498
	NC	678	4,179	185	170	596	155
	SC	1,217	7,406	329	303	1,027	278
	TN	4,225	24,763	1,190	1,095	4,808	960
	VA	1,133	2,517	314	289	9	537
	WV	1,781	10,412	459	422	13	404
	Total	**32,554**	**190,407**	**9,578**	**8,811**	**31,330**	**8,205**
Military Marine (2283)	VA	128	282	23	21	1	53
	Total	**128**	**282**	**23**	**21**	**1**	**53**
Locomotives (2285)	AL	3,881	20,131	381	343	34	1,192
	FL	1,110	7,538	159	143	14	353
	GA	2,917	21,395	427	385	38	932
	KY	2,389	16,751	352	317	31	757
	MS	2,540	17,594	372	335	34	785
	NC	1,782	12,539	263	237	23	570
	SC	1,280	8,840	187	168	17	404
	TN	2,897	21,735	407	367	34	910
	VA	1,300	10,173	983	885	86	436
	WV	1,444	10,831	212	190	19	453
	Total	**21,539**	**147,527**	**3,743**	**3,368**	**332**	**6,792**
Grand Total		**157,427**	**370,651**	**23,794**	**22,227**	**34,534**	**28,522**

Table 2.3-22. Change in Emissions between 2009 Base G and 2002 Base F Inventories (Based on Growth Using 1996 and 2020 EPA Inventories)

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	+12%	+15%	+23%	+18%	+16%	+12%
	FL	+15%	+16%	+16%	+16%	+16%	+16%
	GA	+15%	+16%	+16%	+16%	+16%	+16%
	KY	+25%	+23%	+23%	+23%	+23%	+23%
	MS	+11%	+16%	+15%	+15%	+16%	+12%
	NC	+15%	+16%	+16%	+16%	+16%	+16%
	SC	+13%	+9%	+9%	+9%	+12%	+13%
	TN	+11%	+12%	+12%	+12%	+14%	+11%
	VA	+11%	+9%	+6%	+6%	+12%	+12%
	WV	+11%	+16%	+15%	+15%	+16%	+12%
	Total	**+14%**	**+15%**	**+13%**	**+13%**	**+15%**	**+14%**
Commercial Marine (2280)	AL	+7%	-4%	-5%	-5%	-18%	+4%
	FL	+6%	-4%	-5%	-5%	-12%	+4%
	GA	+6%	-3%	-5%	-5%	-17%	+4%
	KY	+7%	-4%	-4%	-4%	-13%	+5%
	MS	+7%	-4%	-4%	-4%	-15%	+5%
	NC	+6%	-4%	-5%	-5%	-15%	+4%
	SC	+6%	-4%	-5%	-5%	-16%	+4%
	TN	+7%	-4%	-4%	-4%	-9%	+5%
	VA	+7%	-4%	-7%	-7%	-83%	+5%
	WV	+7%	-4%	-7%	-7%	-83%	+5%
	Total	**+7%**	**-4%**	**-5%**	**-5%**	**-15%**	**+5%**
Military Marine (2283)	VA	+7%	-4%	-7%	-7%	-83%	+5%
	Total	**+7%**	**-4%**	**-7%**	**-7%**	**-83%**	**+5%**
Locomotives (2285)	AL	+5%	-11%	-24%	-24%	-83%	-6%
	FL	+5%	-11%	-24%	-24%	-83%	-6%
	GA	+4%	-9%	-24%	-24%	-83%	-5%
	KY	+5%	-10%	-23%	-23%	-83%	-6%
	MS	+5%	-11%	-24%	-24%	-83%	-6%
	NC	+3%	-11%	-24%	-24%	-83%	-6%
	SC	+5%	-11%	-24%	-24%	-83%	-6%
	TN	+5%	-7%	-24%	-24%	-83%	-6%
	VA	+4%	-6%	-24%	-24%	-83%	-5%
	WV	+4%	-8%	-24%	-24%	-83%	-5%
	Total	**+4%**	**-9%**	**-24%**	**-24%**	**-83%**	**-6%**
Grand Total		**+11%**	**-5%**	**-3%**	**-3%**	**-32%**	**+5%**

Table 2.3-23. Change in Emissions between 2018 Base G and 2002 Base F Inventories (Based on Growth Using 1996 and 2020 EPA Inventories)

Source	State	CO	NO_x	PM_{10}	$PM_{2.5}$	SO_2	VOC
Aircraft (2275)	AL	+27%	+35%	+52%	+41%	+36%	+28%
	FL	+34%	+37%	+37%	+37%	+37%	+36%
	GA	+35%	+37%	+37%	+37%	+37%	+36%
	KY	+63%	+56%	+56%	+56%	+56%	+57%
	MS	+25%	+36%	+35%	+35%	+36%	+27%
	NC	+34%	+37%	+36%	+36%	+37%	+36%
	SC	+30%	+20%	+21%	+21%	+27%	+30%
	TN	+24%	+27%	+28%	+28%	+31%	+26%
	VA	+24%	+21%	+13%	+13%	+28%	+27%
	WV	+26%	+36%	+35%	+35%	+36%	+28%
	Total	**+33%**	**+33%**	**+30%**	**+30%**	**+35%**	**+32%**
Commercial Marine (2280)	AL	+16%	-8%	-4%	-4%	-19%	+10%
	FL	+14%	-8%	-4%	-4%	-7%	+9%
	GA	+13%	-8%	-5%	-5%	-17%	+9%
	KY	+17%	-10%	-2%	-2%	-13%	+12%
	MS	+16%	-9%	-3%	-3%	-15%	+11%
	NC	+13%	-8%	-4%	-4%	-14%	+9%
	SC	+14%	-9%	-4%	-4%	-15%	+10%
	TN	+17%	-10%	-2%	-2%	-3%	+12%
	VA	+17%	-9%	-6%	-6%	-98%	+11%
	WV	+17%	-10%	-6%	-6%	-98%	+12%
	Total	**+15%**	**-9%**	**-3%**	**-3%**	**-14%**	**+11%**
Military Marine (2283)	VA	+17%	-10%	-6%	-6%	-98%	+12%
	Total	**+17%**	**-10%**	**-6%**	**-6%**	**-98%**	**+12%**
Locomotives (2285)	AL	+10%	-24%	-36%	-36%	-98%	-13%
	FL	+10%	-24%	-36%	-36%	-98%	-13%
	GA	+10%	-20%	-36%	-36%	-98%	-12%
	KY	+10%	-23%	-35%	-35%	-98%	-13%
	MS	+10%	-24%	-36%	-36%	-98%	-13%
	NC	+9%	-24%	-36%	-36%	-98%	-13%
	SC	+10%	-24%	-36%	-36%	-98%	-13%
	TN	+10%	-15%	-36%	-36%	-98%	-13%
	VA	+10%	-14%	-36%	-36%	-98%	-11%
	WV	+10%	-18%	-36%	-36%	-98%	-12%
	Total	**+10%**	**-21%**	**-36%**	**-36%**	**-98%**	**-12%**
Grand Total		**+25%**	**-12%**	**+0%**	**+1%**	**-34%**	**+12%**

Figure 2.3-14. Total Aircraft, Locomotive, and CMV CO Emissions (Base G)

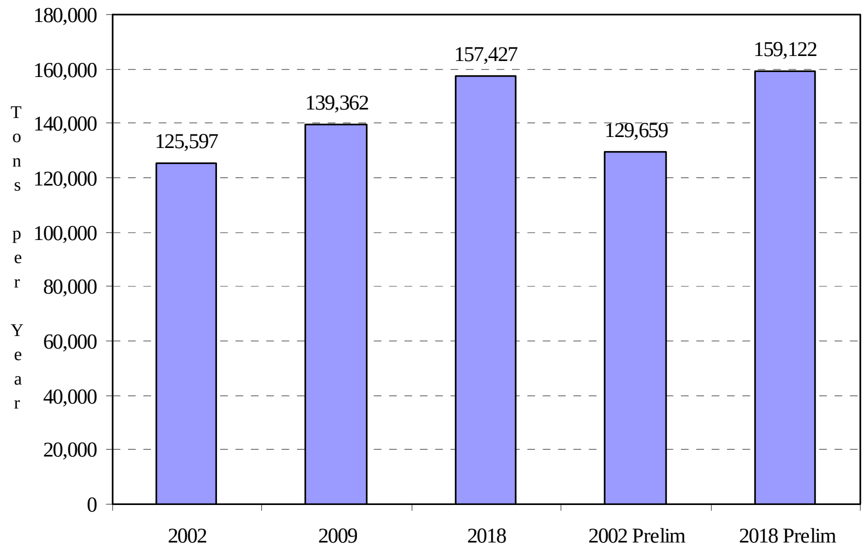


Figure 2.3-15. Locomotive CO Emissions (Base G)

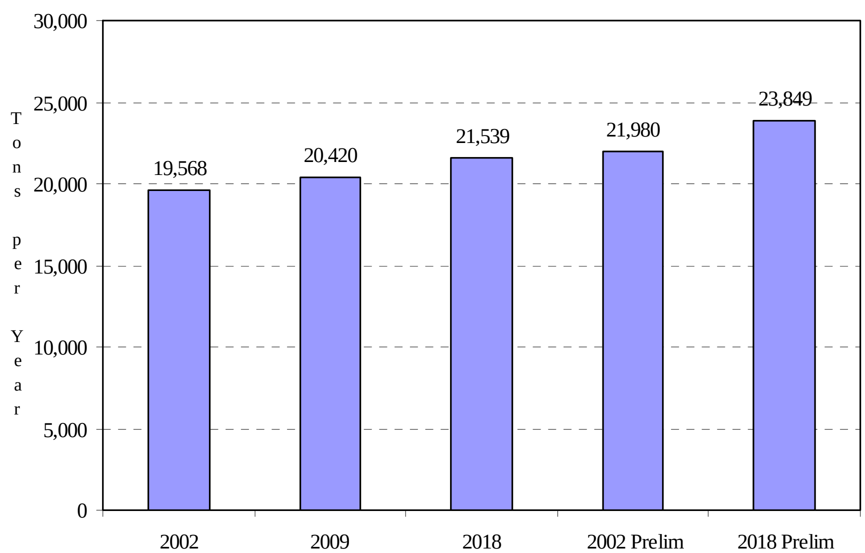


Figure 2.3-16. Total Aircraft, Locomotive, and CMV NO_x Emissions (Base G)

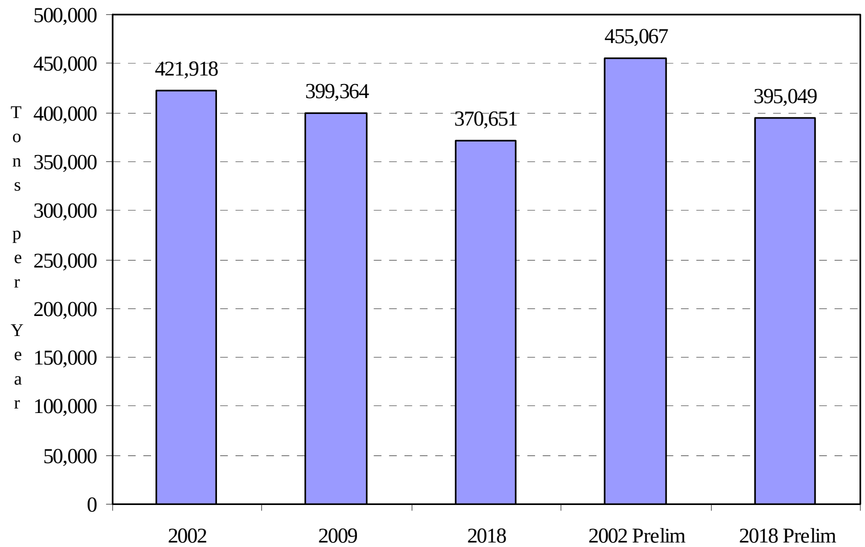


Figure 2.3-17. Locomotive NO_x Emissions (Base G)

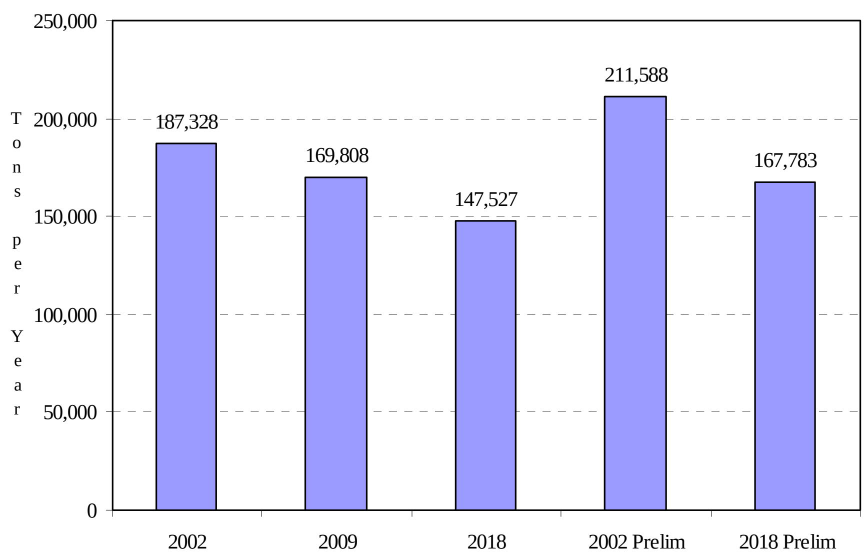


Figure 2.3-18. Total Aircraft, Locomotive, and CMV PM_{10} Emissions (Base G)

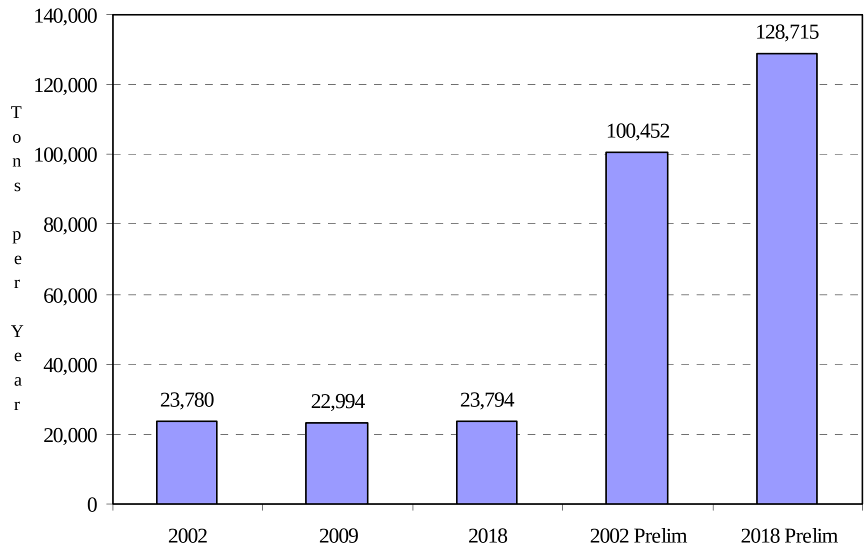


Figure 2.3-19. Locomotive PM_{10} Emissions (Base G)

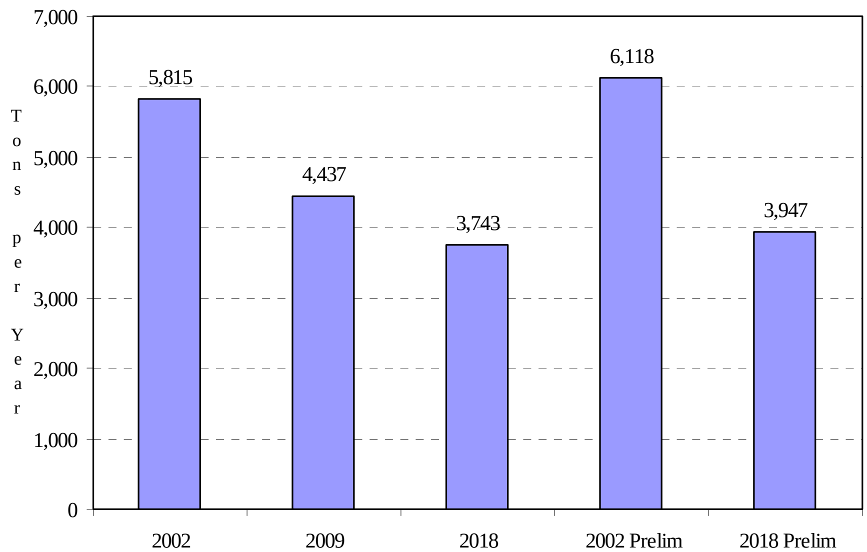


Figure 2.3-20. Total Aircraft, Locomotive, and CMV $PM_{2.5}$ Emissions (Base G)

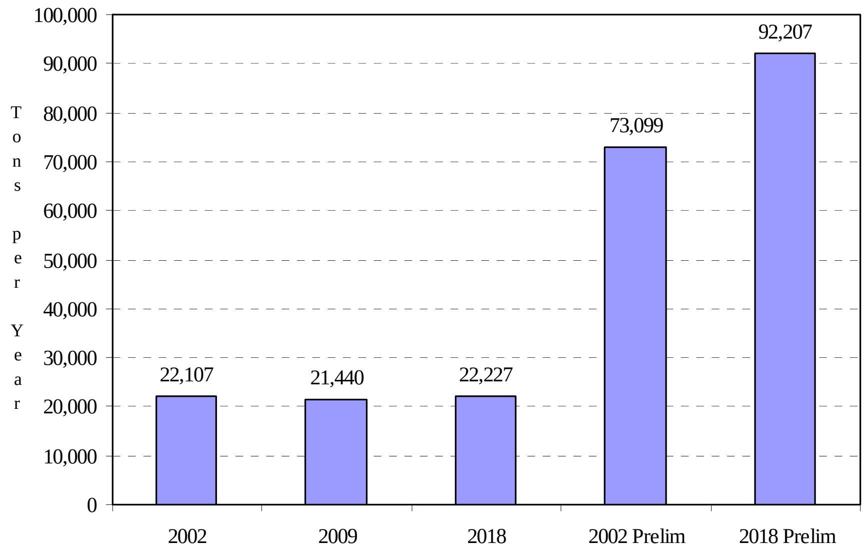


Figure 2.3-21. Locomotive $PM_{2.5}$ Emissions (Base G)

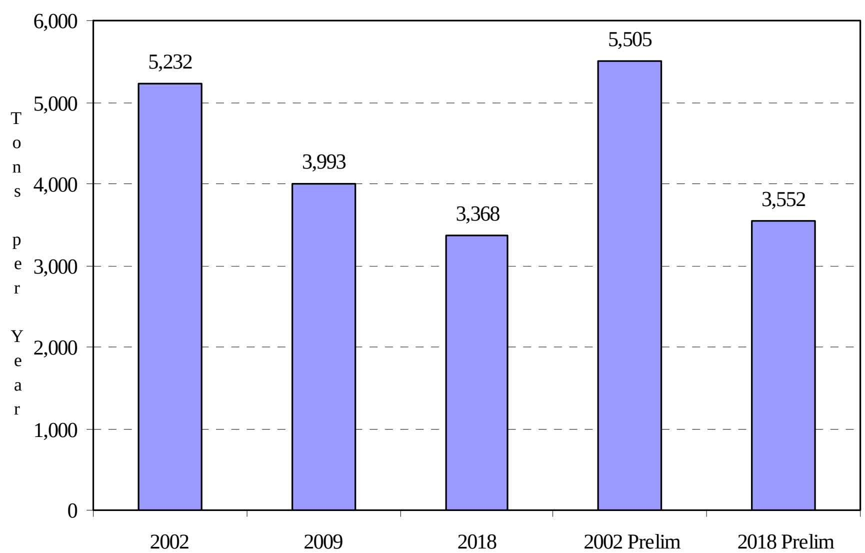


Figure 2.3-22. Total Aircraft, Locomotive, and CMV SO_2 Emissions (Base G)

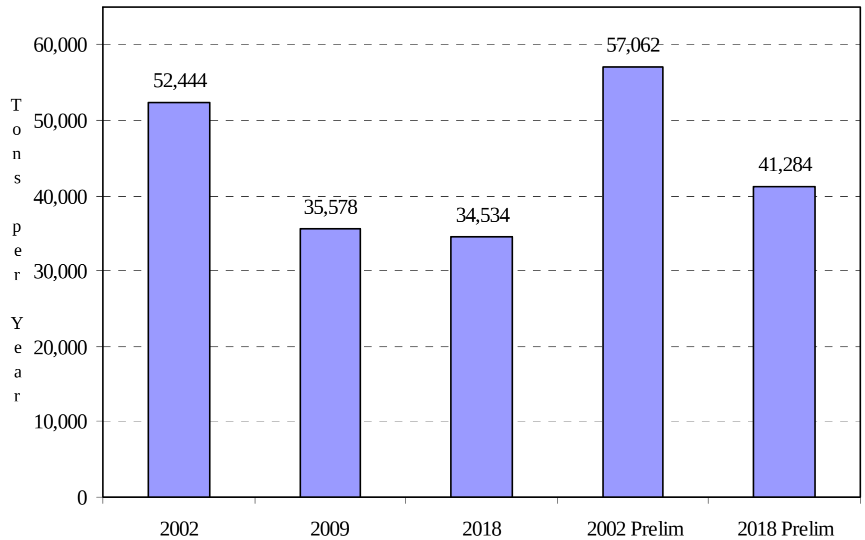


Figure 2.3-23. Locomotive SO_2 Emissions (Base G)

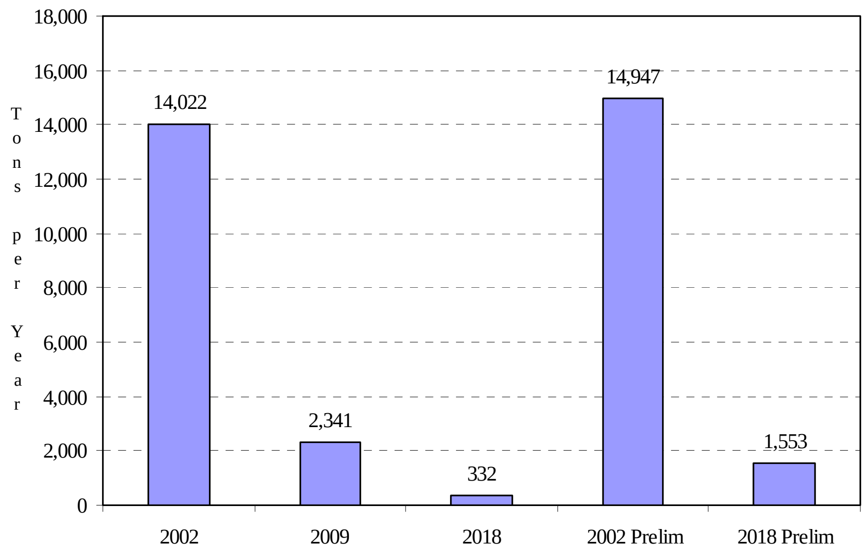


Figure 2.3-24. Total Aircraft, Locomotive, and CMV VOC Emissions (Base G)

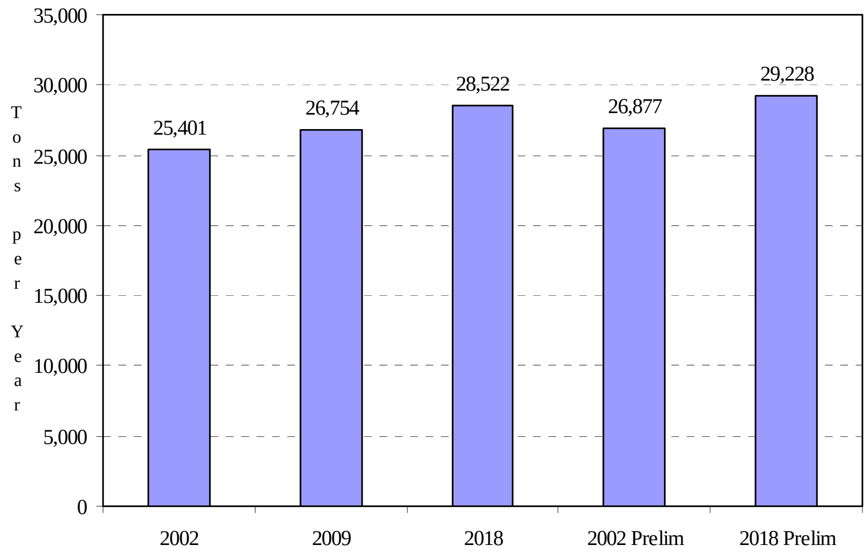
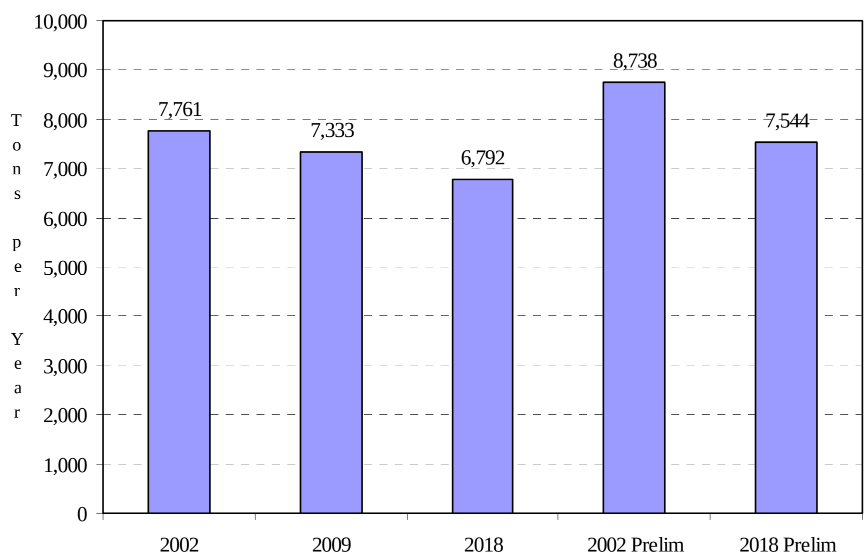


Figure 2.3-25. Locomotive VOC Emissions (Base G)



2.3.4.3 Emissions from NONROAD Model Sources in Illinois, Indiana, and Ohio

Base G projection inventories for 2009 and 2018 for NONROAD model sources in the states of Illinois, Indiana, and Ohio were produced using a methodology identical to that employed to develop a Base G 2002 base year inventory for the same states (as documented earlier in this report). This method consists of the extraction of a complete set of county-level input data applicable to each of the three states (in each of the two projection years) from the latest version of the EPA's NMIM model. This includes appropriate consideration of all non-default NMIM input files generated by the Midwest Regional Planning Organization as documented earlier in the discussion of the Base G 2002 base year inventory. These input data were then assembled into appropriate input files for the Final NONROAD2005 model and emission estimates were produced using the same procedure employed for the VISTAS region.

Changes noted between the base year (2002) and forecast year (2009 and 2018) input data extracted from NMIM include differences in gasoline vapor pressure, gasoline sulfur content, and diesel sulfur content in most counties. All temperature data (minimum, maximum, and average daily temperatures) was constant across years.

As described in the discussion of the Base G 2002 base year inventory, counties in the three states were grouped for modeling purposes using a temperature aggregation scheme that allowed for county-specific temperature variations of no more that 2 ºF from group average temperatures (for all temperature inputs). The same grouping scheme was applied to projection year modeling, so that Illinois emissions were modeled using 12 county groups, Indiana emissions were modeled using 9 county groups, and Ohio emissions were modeled using 10 county groups. Thus, 31 iterations of NONROAD2002 were required per season per projection year, as compared to the 53 iterations per season per projection year required for the VISTAS region.

As was also described in the discussion of the Base G 2002 base year inventory, several non-default equipment population, growth, activity, seasonal distribution, and county allocation files are assigned by NMIM model inputs for these counties. As was the case for the base year inventory development, these same non-default assignments were retained for both projection inventories.

2.3.4.4 Differences between 2009/2018

Methodologically, there was no difference in the way that 2009 and 2018 emissions were calculated for non-road mobile sources. The actual value of the growth factors were different for each type of mobile source considered, but the calculation methods were identical.

2.3.5 Quality Assurance steps

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, to ensure that a full and complete inventory was developed for VISTAS, and to make sure that projection calculations were working correctly. Quality assurance was an important component to the inventory development process and MACTEC performed the following QA steps on mobile source components of the 2009 and revised 2018 projection inventories:

1. All final files (NONROAD only) were run through EPA's Format and Content checking software. Input data files for MOBILE and VMT growth estimates were reviewed by the corresponding SIWG and by the VISTAS Emission Inventory Technical Advisor.

2. SCC level emission summaries were prepared and evaluated to ensure that emissions were consistent and that there were no missing sources (NONROAD only).

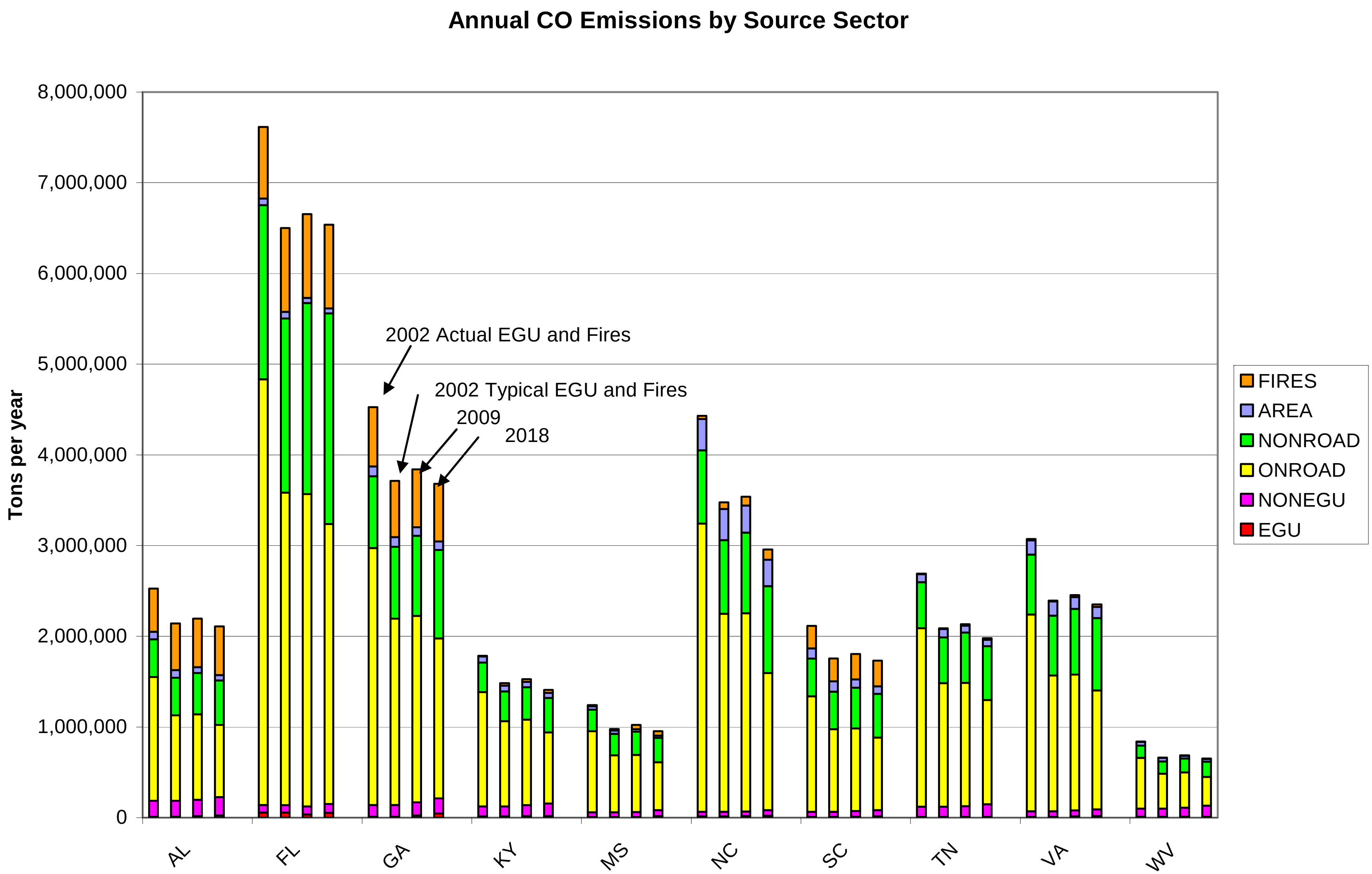
3. Tier comparisons (by pollutant) were developed between the 2002 base year inventory and the 2009 and 2018 projection inventories (NONROAD only). Total VISTAS level summaries by pollutant were developed for these sources to compare Base F and Base G emission levels.

4. Data product summaries were provided to both the VISTAS Emission Inventory Technical Advisor and to the SIWG representatives for review and comment. Changes based on these comments were implemented in the files.

5. Version numbering was used for all inventory files developed. The version numbering process used a decimal system to track major and minor changes. For example, a major change would result in a version going from 1.0 to 2.0. A minor change would cause a version number to go from 1.0 to 1.1. Minor changes resulting from largely editorial changes would result in a change from 1.00 to 1.01.

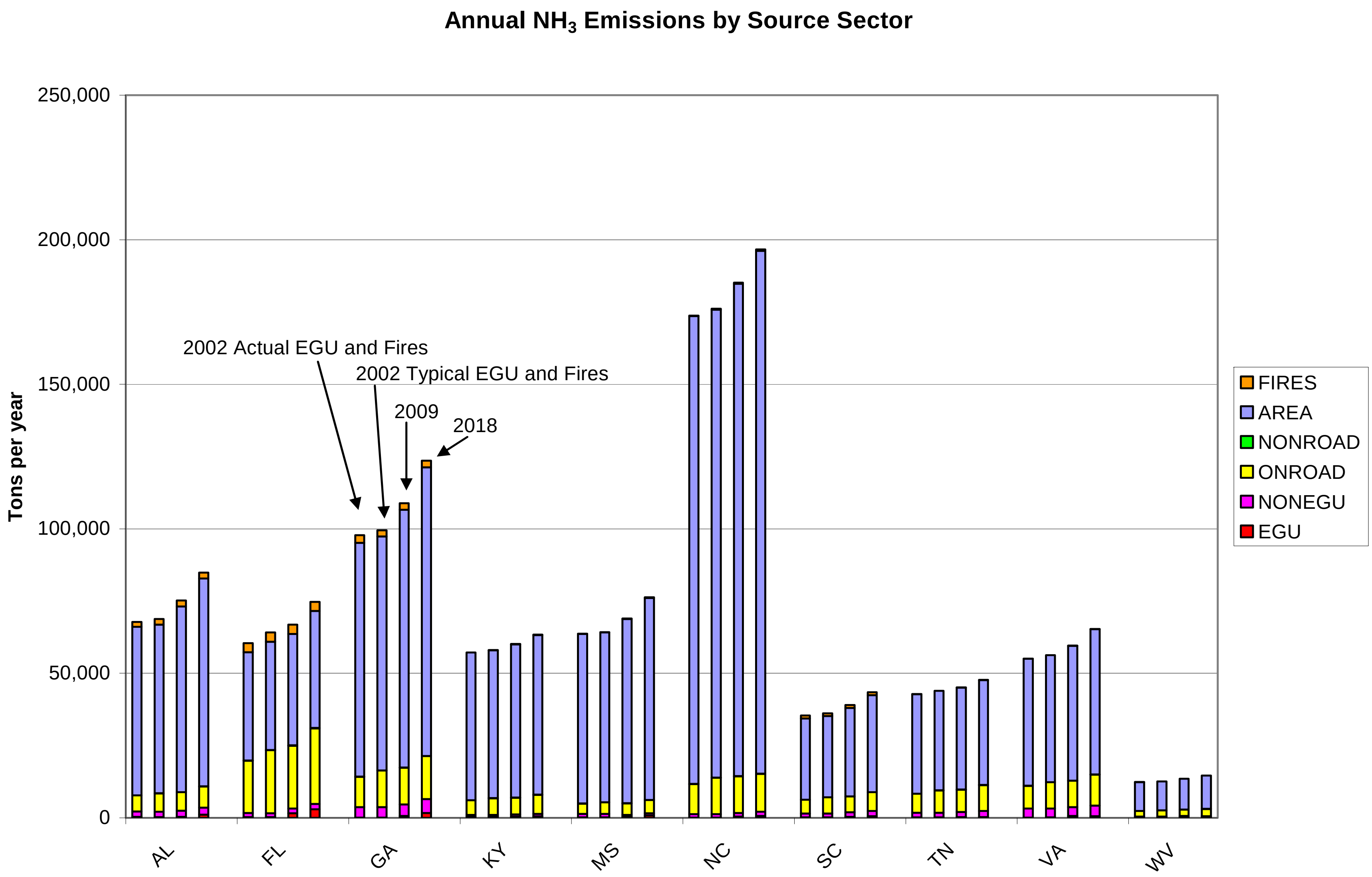
APPENDIX A:

STATE EMISSION TOTALS BY POLLUTANT AND SECTOR


Annual CO Emissions by Source Sector
Tons per year
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
2002 Actual EGU and Fires
2002 Typical EGU and Fires
2009
2018
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV

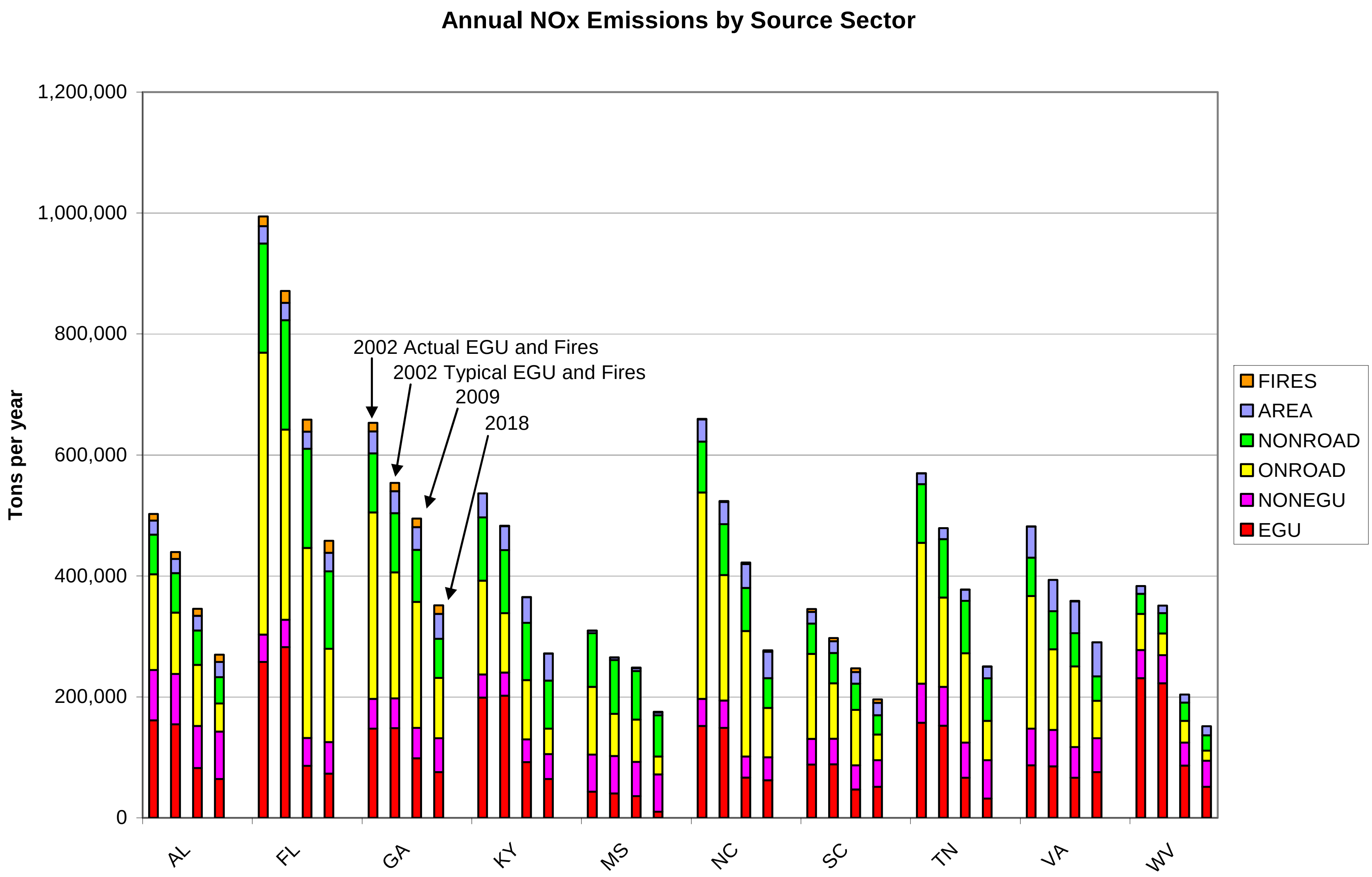
Annual CO Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR
	11,279	174,271	1,366,056	414,385	83,958	474,959	2002 Actual
	11,460	174,260	942,793	414,385	83,958	514,120	2002 Typical
AL	14,986	180,369	942,793	454,686	66,654	534,873	2009
	24,342	201,794	797,966	488,924	59,626	535,658	2018
	57,113	81,933	4,693,893	1,920,729	71,079	790,620	2002 Actual
	55,899	81,928	3,446,095	1,920,729	71,079	923,310	2002 Typical
FL	35,928	87,037	3,446,095	2,104,920	57,011	923,310	2009
	53,772	96,819	3,086,330	2,323,327	53,903	923,310	2018
	9,712	130,656	2,833,468	791,158	108,083	654,411	2002 Actual
	9,650	130,656	2,053,694	791,158	108,083	620,342	2002 Typical
GA	23,721	147,215	2,053,694	882,970	94,130	637,177	2009
	44,476	167,644	1,765,020	973,872	93,827	637,177	2018
	12,619	109,936	1,260,682	325,993	66,752	8,703	2002 Actual
	12,607	109,937	942,350	325,993	66,752	24,900	2002 Typical
KY	15,812	122,024	942,350	357,800	57,887	31,810	2009
	17,144	139,437	782,423	381,215	54,865	33,296	2018
	5,303	54,568	894,639	236,752	37,905	13,209	2002 Actual
	5,219	54,567	628,151	236,752	37,905	14,353	2002 Typical
MS	5,051	57,748	628,151	257,453	27,184	48,160	2009
	15,282	66,858	528,898	270,726	22,099	50,037	2018
	13,885	50,531	3,176,811	808,231	345,315	34,515	2002 Actual
	14,074	50,531	2,184,901	808,231	345,315	71,970	2002 Typical
NC	14,942	53,696	2,184,901	887,605	301,163	96,258	2009
	20,223	62,145	1,510,848	960,709	290,809	111,266	2018
	6,990	56,315	1,275,161	413,964	113,714	248,341	2002 Actual
	6,969	56,315	912,280	413,964	113,714	253,005	2002 Typical
SC	11,135	60,473	912,280	448,625	90,390	282,307	2009
	14,786	68,988	800,619	481,332	83,167	282,307	2018
	7,084	114,681	1,967,658	505,163	89,828	4,302	2002 Actual
	6,787	114,681	1,361,408	505,163	89,828	10,124	2002 Typical
TN	7,214	119,039	1,361,408	554,121	74,189	17,372	2009
	7,723	140,138	1,150,516	593,100	68,809	18,860	2018
	6,892	63,796	2,170,508	660,105	155,873	15,625	2002 Actual
	6,797	63,784	1,495,771	660,105	155,873	12,611	2002 Typical
VA	12,509	68,346	1,495,771	726,815	128,132	21,130	2009
	15,420	76,998	1,310,698	797,683	121,690	26,923	2018
	10,341	89,879	560,717	133,113	39,546	6,738	2002 Actual
	10,117	89,878	385,994	133,113	39,546	2,652	2002 Typical
WV	11,493	100,045	385,994	152,862	31,640	3,949	2009
	11,961	119,332	319,030	167,424	28,773	5,013	2018


Annual NH_3 Emissions by Source Sector
Tons per year
250,000
200,000
150,000
100,000
50,000
0
2002 Actual EGU and Fires
2002 Typical EGU and Fires
2009
2018
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV

Annual NH_3 Emissions by Source Sector

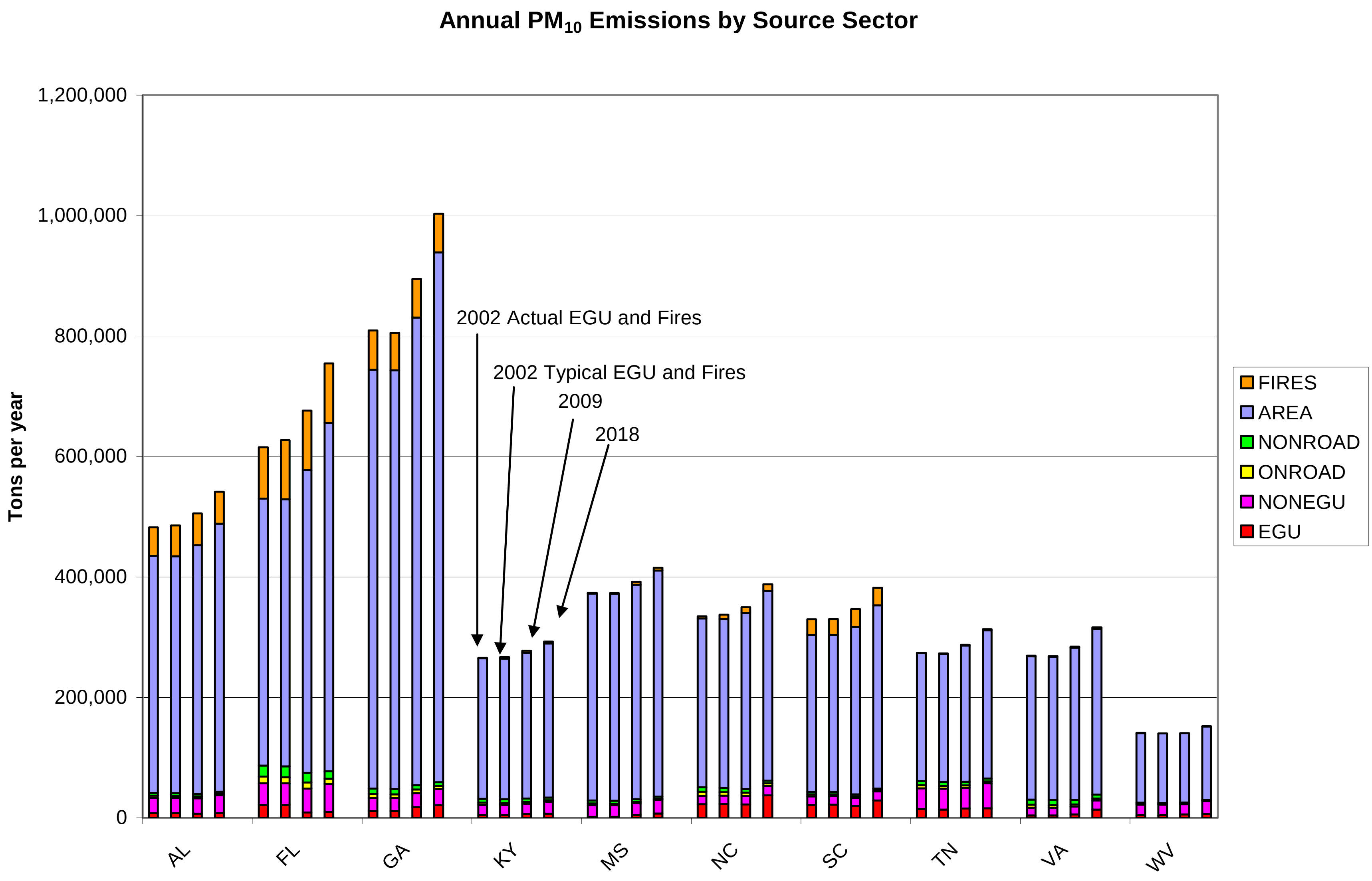
Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR
	317	1,883	5,576	33	58,318	1,689	2002 Actual
	239	1,883	6,350	33	58,318	1,957	2002 Typical
AL	359	2,132	6,350	36	64,268	2,050	2009
	1,072	2,464	7,296	42	71,915	2,054	2018
	234	1,423	18,078	134	37,446	3,102	2002 Actual
	222	1,423	21,737	134	37,446	3,157	2002 Typical
FL	1,631	1,544	21,737	148	38,616	3,157	2009
	2,976	1,829	26,154	171	40,432	3,157	2018
	83	3,613	10,524	60	80,913	2,578	2002 Actual
	86	3,613	12,660	60	80,913	2,153	2002 Typical
GA	686	3,963	12,660	68	89,212	2,229	2009
	1,677	4,797	14,871	79	99,885	2,229	2018
	326	674	5,044	31	51,135	39	2002 Actual
	321	674	5,795	31	51,135	112	2002 Typical
KY	400	760	5,795	34	53,005	143	2009
	476	901	6,584	40	55,211	150	2018
	190	1,169	3,577	23	58,721	59	2002 Actual
	198	1,169	4,026	23	58,721	65	2002 Typical
MS	334	668	4,026	25	63,708	217	2009
	827	764	4,565	29	69,910	225	2018
	54	1,179	10,455	65	161,860	155	2002 Actual
	55	1,179	12,637	65	161,860	324	2002 Typical
NC	445	1,285	12,637	72	170,314	433	2009
	663	1,465	13,077	83	180,866	501	2018
	142	1,411	4,684	33	28,166	980	2002 Actual
	141	1,411	5,510	33	28,166	908	2002 Typical
SC	343	1,578	5,510	36	30,555	1,039	2009
	617	1,779	6,472	41	33,496	1,039	2018
	204	1,542	6,616	43	34,393	19	2002 Actual
	197	1,542	7,738	43	34,393	46	2002 Typical
TN	227	1,764	7,738	48	35,253	78	2009
	241	2,115	8,962	55	36,291	85	2018
	127	3,104	7,837	48	43,905	70	2002 Actual
	130	3,104	9,066	48	43,905	57	2002 Typical
VA	694	3,049	9,066	53	46,639	95	2009
	622	3,604	10,757	61	50,175	121	2018
	121	332	1,933	9	9,963	30	2002 Actual
	121	332	2,183	9	9,963	12	2002 Typical
WV	330	341	2,183	11	10,625	18	2009
	180	413	2,484	13	11,504	23	2018



Annual NOx Emissions by Source Sector
Tons per year
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
2002 Actual EGU and Fires
2002 Typical EGU and Fires
2009
2018
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU

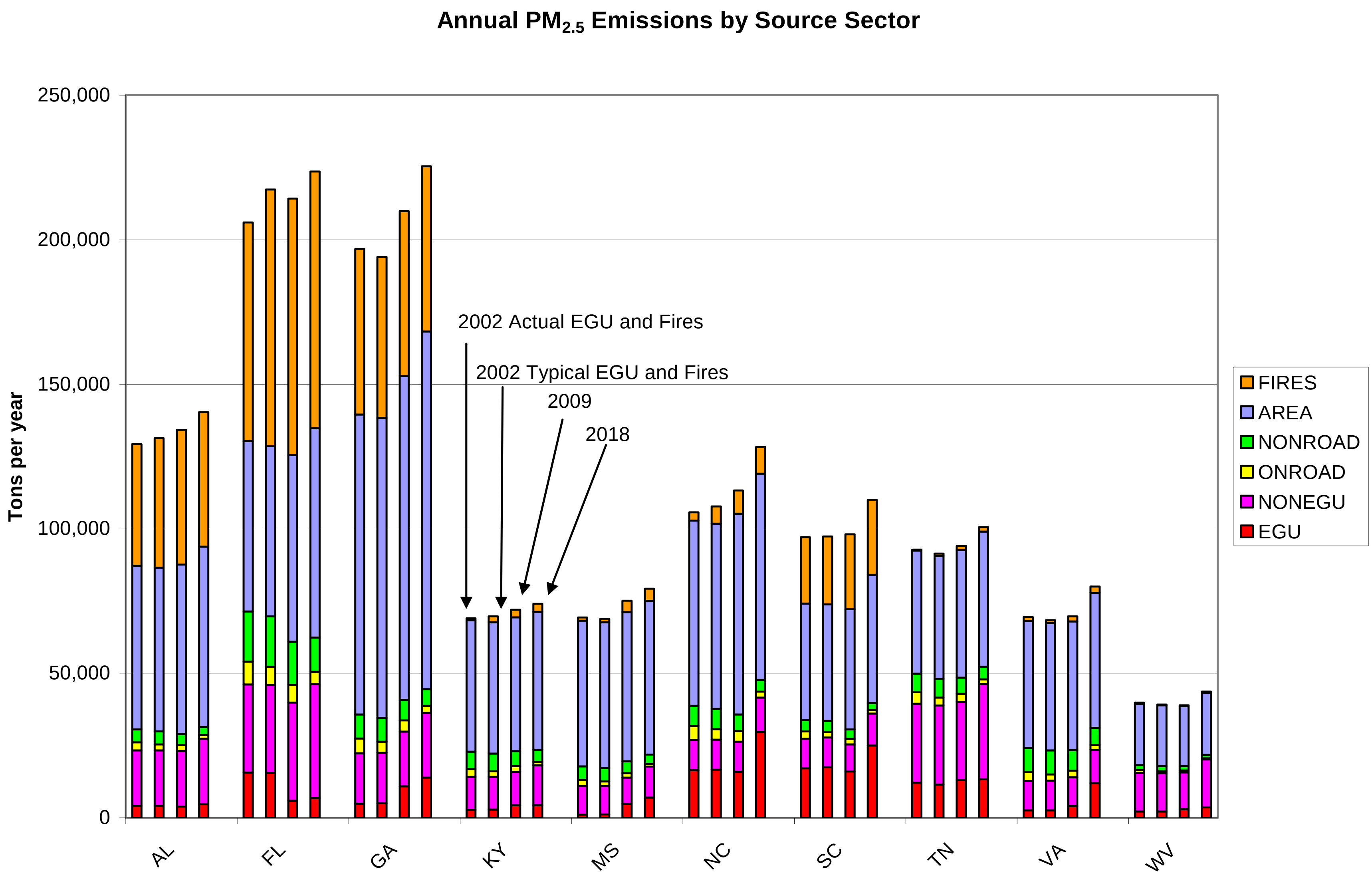
Annual NO_x Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR
	161,038	83,310	158,423	65,366	23,444	10,728	2002 Actual
	154,704	83,302	101,323	65,366	23,444	11,456	2002 Typical
AL	82,305	69,409	101,323	56,862	23,930	11,901	2009
	64,358	78,318	46,222	43,799	25,028	11,918	2018
	257,677	45,156	466,098	180,627	28,872	15,942	2002 Actual
	282,507	45,150	314,307	180,627	28,872	19,791	2002 Typical
FL	86,165	46,020	314,307	163,794	28,187	19,791	2009
	73,125	51,902	154,611	127,885	30,708	19,791	2018
	147,517	49,214	308,013	97,961	36,142	14,203	2002 Actual
	148,126	49,214	208,393	97,961	36,142	13,882	2002 Typical
GA	98,497	50,312	208,393	85,733	37,729	14,243	2009
	75,717	55,775	99,821	64,579	41,332	14,243	2018
	198,817	38,392	154,899	104,571	39,507	187	2002 Actual
	201,928	38,434	97,912	104,571	39,507	534	2002 Typical
KY	92,021	37,758	97,912	94,752	42,088	682	2009
	64,378	41,034	42,104	79,392	44,346	714	2018
	43,135	61,526	111,791	88,787	4,200	283	2002 Actual
	40,433	61,553	69,949	88,787	4,200	308	2002 Typical
MS	36,011	56,398	69,949	80,567	4,249	1,033	2009
	10,271	61,533	29,717	68,252	4,483	1,073	2018
	151,850	44,881	341,198	84,284	36,550	740	2002 Actual
	148,809	44,881	207,648	84,284	36,550	1,544	2002 Typical
NC	66,517	34,719	207,648	70,997	39,954	2,065	2009
	62,346	37,750	81,706	49,046	43,865	2,387	2018
	88,241	42,153	140,428	50,249	19,332	4,932	2002 Actual
	88,528	42,153	91,696	50,249	19,332	5,270	2002 Typical
SC	46,915	40,019	91,696	43,235	19,360	5,899	2009
	51,456	44,021	42,354	31,758	20,592	5,899	2018
	157,307	64,331	233,324	96,827	17,844	92	2002 Actual
	152,137	64,331	147,757	96,827	17,844	217	2002 Typical
TN	66,405	57,869	147,757	86,641	18,499	373	2009
	31,715	63,435	65,242	70,226	19,597	405	2018
	86,886	60,415	219,602	63,219	51,418	335	2002 Actual
	85,081	60,390	133,170	63,219	51,418	271	2002 Typical
VA	66,219	51,046	133,170	54,993	52,618	453	2009
	75,594	55,945	61,881	40,393	56,158	578	2018
	230,977	46,612	59,612	33,239	12,687	145	2002 Actual
	222,437	46,618	36,049	33,239	12,687	57	2002 Typical
WV	86,328	38,031	36,049	30,133	13,439	85	2009
	51,241	43,359	16,274	25,710	14,828	108	2018


Annual PM_{10} Emissions by Source Sector
Tons per year
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
2002 Actual EGU and Fires
2002 Typical EGU and Fires
2009
2018
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU

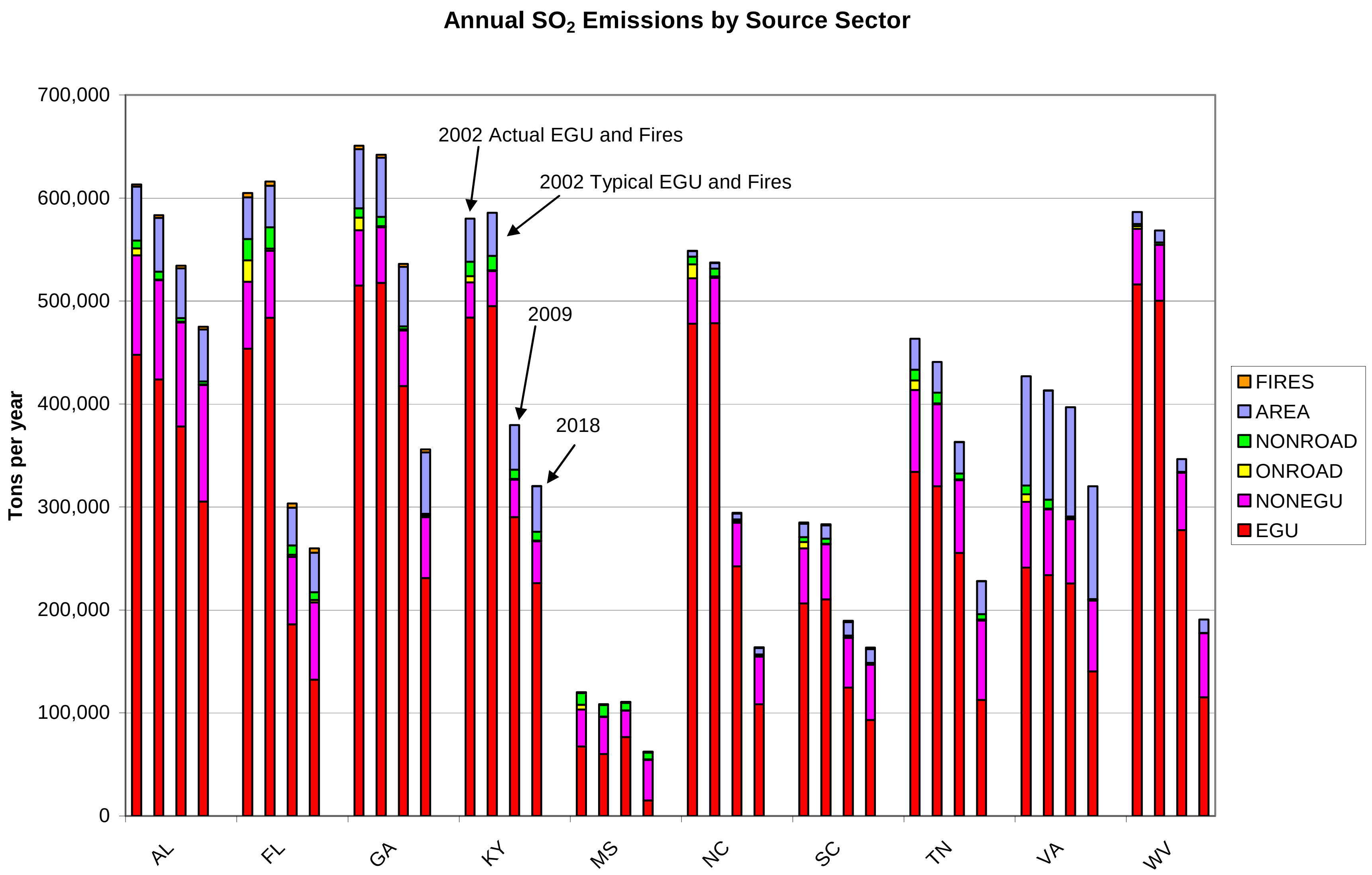
Annual PM_{10} Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR
	7,646	25,240	3,898	4,787	393,588	47,237	2002 Actual
	7,845	25,239	3,188	4,787	393,588	50,833	2002 Typical
AL	6,969	25,421	3,188	4,027	413,020	52,851	2009
	7,822	29,924	2,488	3,041	445,256	52,927	2018
	21,387	35,857	11,253	18,281	443,346	85,263	2002 Actual
	21,391	35,856	9,953	18,281	443,346	98,470	2002 Typical
FL	9,007	39,872	9,953	15,613	503,230	98,470	2009
	9,953	46,456	8,489	12,497	578,516	98,470	2018
	11,224	21,516	7,236	8,618	695,414	65,227	2002 Actual
	11,467	21,516	6,103	8,618	695,414	62,336	2002 Typical
GA	17,891	22,997	6,103	7,521	776,411	63,973	2009
	20,909	27,143	4,995	6,015	880,199	63,973	2018
	4,701	16,626	3,720	6,425	233,559	846	2002 Actual
	4,795	16,626	3,002	6,425	233,559	2,421	2002 Typical
KY	6,463	17,174	3,002	5,544	242,177	3,093	2009
	6,694	20,153	2,283	4,556	256,052	3,237	2018
	1,633	19,472	2,856	5,010	343,377	1,284	2002 Actual
	1,706	19,469	2,290	5,010	343,377	1,396	2002 Typical
MS	4,957	19,245	2,290	4,270	356,324	4,683	2009
	7,187	22,859	1,688	3,452	375,495	4,865	2018
	22,754	13,785	6,905	7,348	280,379	3,356	2002 Actual
	22,994	13,785	5,861	7,348	280,379	6,998	2002 Typical
NC	22,152	13,855	5,861	6,055	292,443	9,359	2009
	37,376	15,678	4,299	4,298	315,294	10,819	2018
	21,400	14,142	3,446	4,152	260,858	25,968	2002 Actual
	21,827	14,142	2,878	4,152	260,858	26,304	2002 Typical
SC	19,395	13,370	2,878	3,471	278,299	29,153	2009
	28,826	15,139	2,258	2,617	304,251	29,153	2018
	14,640	34,534	5,338	6,819	212,554	418	2002 Actual
	13,866	34,534	4,238	6,819	212,554	984	2002 Typical
TN	15,608	34,145	4,238	5,877	226,098	1,689	2009
	15,941	41,397	3,199	4,672	246,252	1,834	2018
	3,960	13,252	4,537	8,728	237,577	1,519	2002 Actual
	3,892	13,252	3,760	8,728	237,577	1,226	2002 Typical
VA	5,508	13,048	3,760	7,510	252,488	2,054	2009
	13,775	15,112	3,343	6,208	275,351	2,618	2018
	4,573	17,503	1,395	1,850	115,346	655	2002 Actual
	4,472	17,503	1,096	1,850	115,346	258	2002 Typical
WV	5,657	17,090	1,096	1,640	115,089	384	2009
	6,349	21,735	844	1,292	121,549	487	2018


Annual PM2.5 Emissions by Source Sector
Tons per year
250,000
200,000
150,000
100,000
50,000
0
2002 Actual EGU and Fires
2002 Typical EGU and Fires
2009
2018
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU

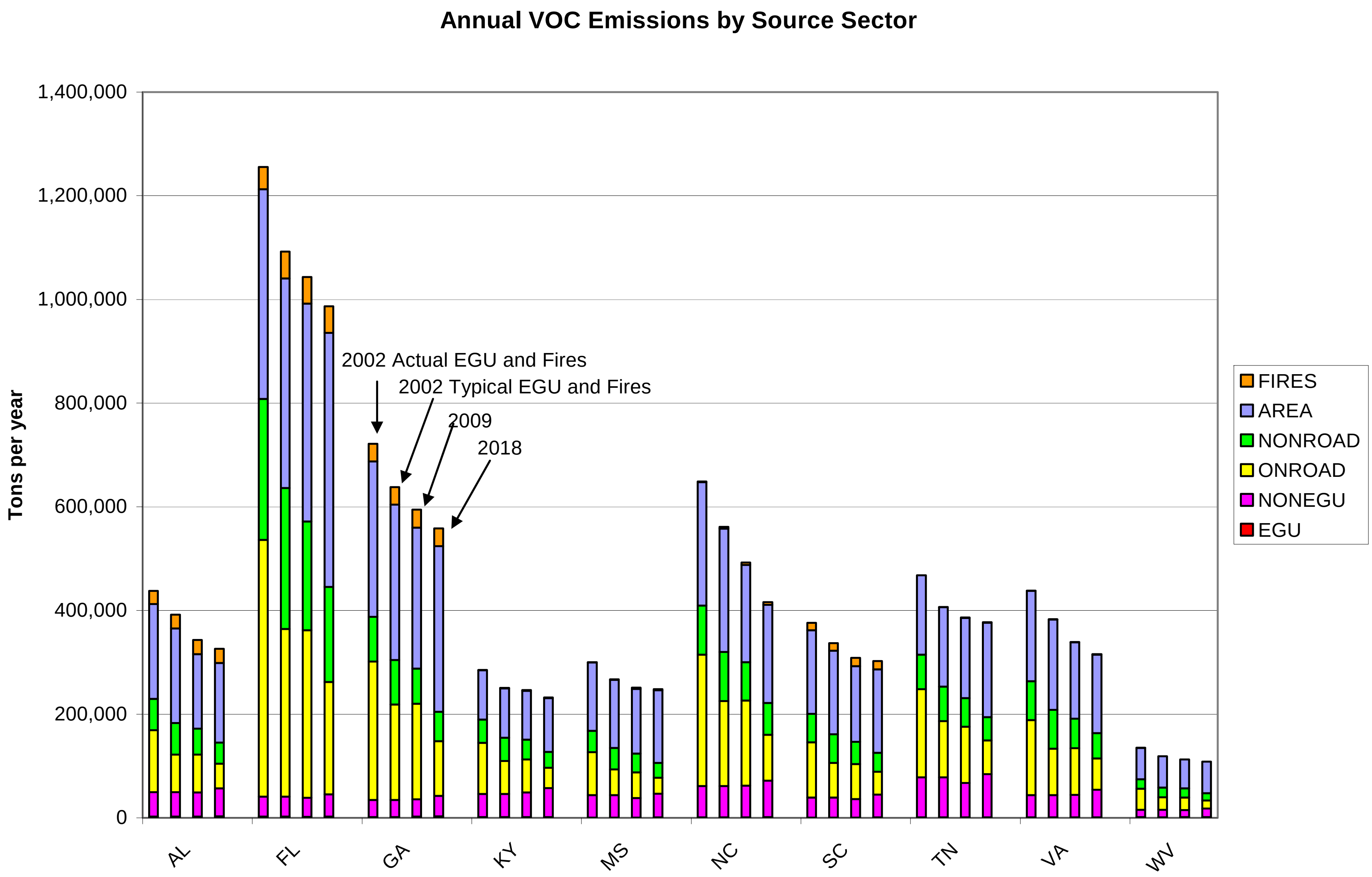
Annual $PM_{2.5}$ Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR
	4,113	19,178	2,794	4,502	56,654	42,041	2002 Actual
	4,176	19,177	2,049	4,502	56,654	44,812	2002 Typical
AL	3,921	19,230	2,049	3,776	58,699	46,543	2009
	4,768	22,598	1,262	2,835	62,323	46,608	2018
	15,643	30,504	7,852	17,415	58,878	75,717	2002 Actual
	15,575	30,504	6,216	17,415	58,878	88,756	2002 Typical
FL	5,910	33,946	6,216	14,866	64,589	88,756	2009
	6,843	39,430	4,242	11,868	72,454	88,756	2018
	4,939	17,394	5,158	8,226	103,794	57,293	2002 Actual
	5,070	17,394	3,869	8,226	103,794	55,712	2002 Typical
GA	10,907	18,906	3,869	7,175	112,001	57,116	2009
	13,983	22,323	2,517	5,730	123,704	57,116	2018
	2,802	11,372	2,693	6,046	45,453	726	2002 Actual
	2,847	11,372	1,941	6,046	45,453	2,076	2002 Typical
KY	4,279	11,686	1,941	5,203	46,243	2,653	2009
	4,434	13,739	1,160	4,256	47,645	2,777	2018
	1,138	9,906	2,109	4,690	50,401	1,102	2002 Actual
	1,147	9,902	1,522	4,690	50,401	1,197	2002 Typical
MS	4,777	9,199	1,522	3,985	51,661	4,016	2009
	7,033	10,739	876	3,203	53,222	4,173	2018
	16,498	10,455	4,816	7,005	64,052	2,878	2002 Actual
	16,623	10,455	3,643	7,005	64,052	6,002	2002 Typical
NC	15,949	10,411	3,643	5,760	69,457	8,027	2009
	29,791	11,775	2,158	4,069	71,262	9,279	2018
	17,154	10,245	2,496	3,945	40,291	22,953	2002 Actual
	17,521	10,245	1,870	3,945	40,291	23,511	2002 Typical
SC	16,042	9,390	1,870	3,294	41,613	25,955	2009
	25,032	11,086	1,154	2,474	44,319	25,955	2018
	12,166	27,345	3,919	6,458	42,566	359	2002 Actual
	11,491	27,345	2,782	6,458	42,566	844	2002 Typical
TN	13,092	27,079	2,782	5,557	44,124	1,449	2009
	13,387	32,893	1,643	4,403	46,692	1,573	2018
	2,606	10,165	3,090	8,288	43,989	1,303	2002 Actual
	2,650	10,165	2,254	8,288	43,989	1,052	2002 Typical
VA	4,067	9,988	2,254	7,136	44,514	1,762	'2009
	11,976	11,594	1,641	5,891	46,697	2,245	2018
	2,210	13,313	1,003	1,728	21,049	562	2002 Actual
	2,163	13,313	703	1,728	21,049	221	2002 Typical
WV	2,940	12,769	703	1,528	20,664	329	2009
	3,648	16,516	428	1,198	21,490	418	2018


Annual SO_2 Emissions by Source Sector
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Tons per year
2002 Actual EGU and Fires
2002 Typical EGU and Fires
2009
2018
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU

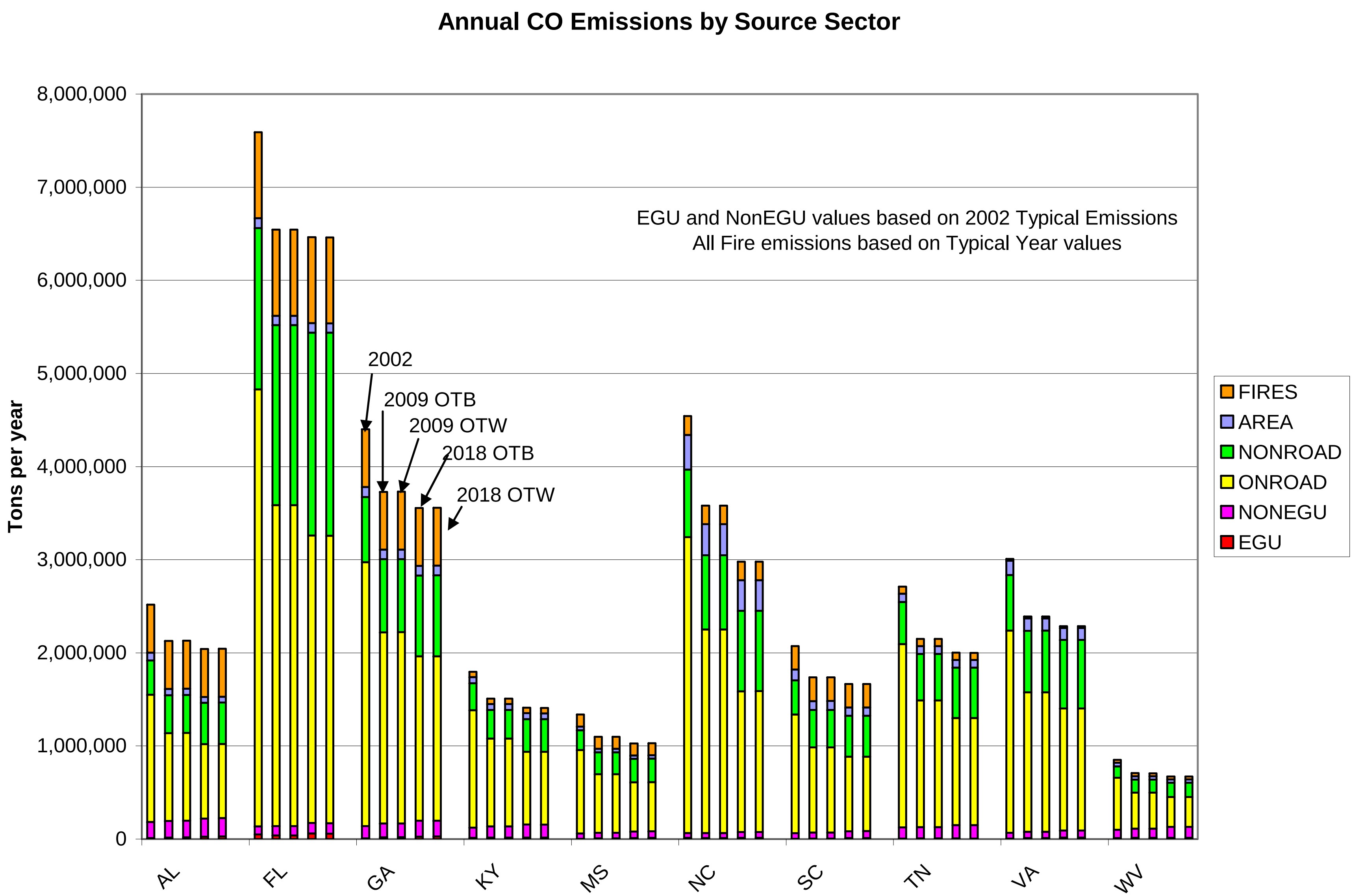
Annual SO_2 Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR
	447,828	96,481	6,885	7,584	52,253	2,208	2002 Actual
	423,736	96,481	635	7,584	52,253	2,559	2002 Typical
AL	378,052	101,246	635	3,471	48,228	2,681	2009
	305,262	113,224	720	2,818	50,264	2,686	2018
	453,631	65,090	20,872	20,614	40,491	4,057	2002 Actual
	483,590	65,090	2,120	20,614	40,491	4,129	2002 Typical
FL	186,055	65,511	2,120	8,967	36,699	4,129	2009
	132,177	75,047	2,533	7,536	38,317	4,129	2018
	514,952	53,774	12,155	9,005	57,559	3,372	2002 Actual
	517,633	53,774	1,254	9,005	57,559	2,815	2002 Typical
GA	417,449	53,983	1,254	2,725	57,696	2,914	2009
	230,856	59,343	1,458	1,709	59,729	2,914	2018
	484,057	34,029	5,974	14,043	41,805	51	2002 Actual
	495,153	34,029	585	14,043	41,805	146	2002 Typical
KY	290,193	36,418	585	9,180	43,087	187	2009
	226,062	40,682	651	8,592	44,186	196	2018
	67,429	35,960	4,604	11,315	771	78	2002 Actual
	60,086	35,954	397	11,315	771	84	2002 Typical
MS	76,579	25,564	397	7,191	753	283	2009
	15,146	39,221	441	6,638	746	294	2018
	477,990	44,103	13,343	7,693	5,412	203	2002 Actual
	478,488	44,103	1,311	7,693	5,412	423	2002 Typical
NC	242,286	42,516	1,311	1,892	5,751	566	2009
	108,492	46,292	1,323	905	6,085	655	2018
	206,399	53,518	5,958	4,866	12,900	1,281	2002 Actual
	210,272	53,518	556	4,866	12,900	1,187	2002 Typical
SC	124,608	48,325	556	1,701	13,051	1,359	2009
	93,274	53,577	643	1,198	13,457	1,359	2018
	334,151	79,584	9,184	10,441	29,917	25	2002 Actual
	320,146	79,584	831	10,441	29,917	60	2002 Typical
TN	255,410	70,657	831	5,651	30,577	102	2009
	112,672	77,219	944	5,207	31,962	111	2018
	241,204	63,903	7,218	8,663	105,890	92	2002 Actual
	233,691	63,900	900	8,663	105,890	74	2002 Typical
VA	225,653	62,560	900	1,707	105,984	124	2009
	140,233	68,909	1,059	507	109,380	158	2018
	516,084	54,070	2,489	2,112	11,667	40	2002 Actual
	500,381	54,077	227	2,112	11,667	16	2002 Typical
WV	277,489	55,973	227	359	12,284	23	2009
	115,324	62,193	255	56	12,849	29	2018


Annual VOC Emissions by Source Sector
Tons per year
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
2002 Actual EGU and Fires
2002 Typical EGU and Fires
2009
2018
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU

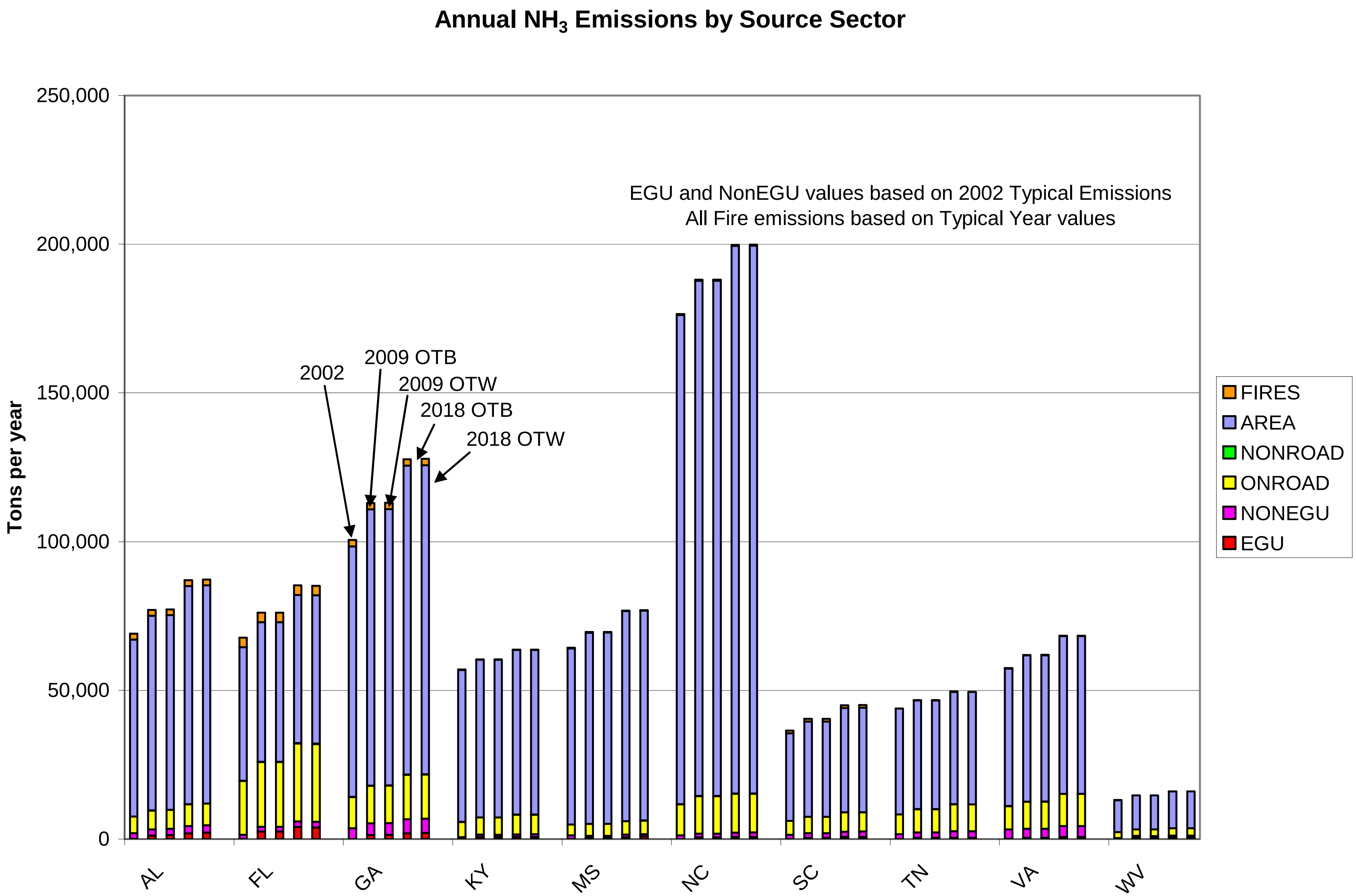
Annual VOC Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR
	2,295	47,037	119,790	60,487	182,674	25,278	2002 Actual
	2,288	47,035	72,848	60,487	182,674	26,526	2002 Typical
AL	2,473	46,644	72,848	50,249	143,454	27,502	2009
	2,952	54,291	47,296	40,407	153,577	27,539	2018
	2,524	38,471	495,225	272,072	404,302	42,724	2002 Actual
	2,531	38,471	323,290	272,072	404,302	51,527	2002 Typical
FL	1,910	36,880	323,290	209,543	420,172	51,527	2009
	2,376	42,811	216,620	183,452	489,975	51,527	2018
	1,244	33,157	267,378	85,965	299,679	33,979	2002 Actual
	1,256	33,157	184,239	85,965	299,679	33,918	2002 Typical
GA	2,314	33,444	184,239	67,686	272,315	34,710	2009
	2,841	39,485	105,507	56,761	319,328	34,710	2018
	1,487	44,834	98,311	44,805	95,375	410	2002 Actual
	1,481	44,834	63,258	44,805	95,375	1,172	2002 Typical
KY	1,369	47,786	63,258	38,558	94,042	1,497	2009
	1,426	55,861	39,084	30,920	103,490	1,567	2018
	648	43,204	82,810	41,081	131,808	622	2002 Actual
	629	43,203	49,670	41,081	131,808	675	2002 Typical
MS	404	37,747	49,670	36,197	124,977	2,266	2009
	1,114	45,338	30,734	28,842	140,134	2,355	2018
	988	60,496	253,374	94,480	237,926	1,624	2002 Actual
	986	60,496	163,803	94,480	237,926	3,387	2002 Typical
NC	954	61,207	163,803	74,056	187,769	4,530	2009
	1,345	70,100	88,620	61,327	189,591	5,236	2018
	470	38,458	106,792	55,016	161,000	14,202	2002 Actual
	470	38,458	67,281	55,016	161,000	14,666	2002 Typical
SC	660	35,665	67,281	43,061	146,107	16,045	2009
	906	43,656	44,700	36,131	161,228	16,045	2018
	926	77,304	169,914	66,450	153,307	202	2002 Actual
	890	77,304	108,200	66,450	153,307	476	2002 Typical
TN	932	66,538	108,200	55,358	154,377	817	2009
	976	83,573	64,665	45,084	182,222	888	2018
	754	43,152	144,684	74,866	174,116	735	2002 Actual
	747	43,152	89,678	74,866	174,116	593	2002 Typical
VA	778	43,726	89,678	57,009	147,034	994	2009
	997	53,186	60,454	49,052	150,919	1,267	2018
	1,180	14,595	40,066	18,566	60,443	317	2002 Actual
	1,140	14,595	23,907	18,566	60,443	125	2002 Typical
WV	1,361	13,810	23,907	18,069	55,288	186	2009
	1,387	16,565	15,463	14,086	60,747	236	2018


Annual CO Emissions by Source Sector
EGU and NonEGU values based on 2002 Typical Emissions
All Fire emissions based on Typical Year values
Tons per year
8,000,000
7,000,000
6,000,000
5,000,000
4,000,000
3,000,000
2,000,000
1,000,000
0
2002
2009 OTB
2009 OTW
2018 OTB
2018 OTW
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU

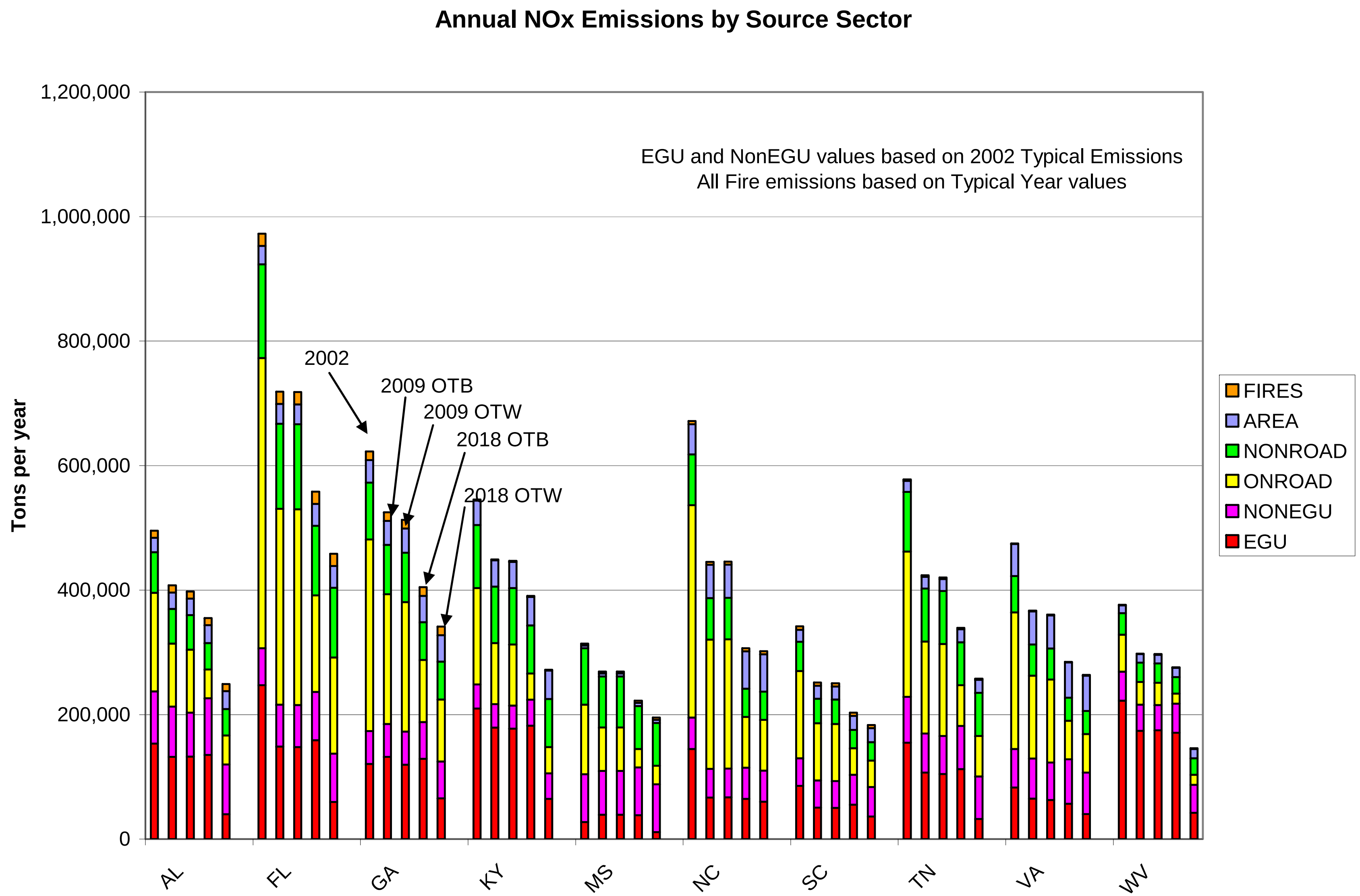
Annual CO Emissions by Source Sector

Name	AREA	EGU	FIRES	NONEGU	NONROAD	ONROAD	YEAR	Basis
	83,958	10,812	514,120	174,306	367,038	1,366,056	2002	OTB - Typical 2002
	68,882	16,494	514,120	177,145	408,424	942,793	2009	OTB - Typical 2002
AL	68,882	19,205	514,120	177,145	408,424	942,793	2009	OTW - Typical 2002
	63,773	26,600	514,120	194,801	443,100	797,966	2018	OTB - Typical 2002
	63,773	29,893	514,120	194,801	443,100	797,966	2018	OTW - Typical 2002
	105,849	51,165	923,310	84,920	1,731,519	4,693,893	2002	OTB - Typical 2002
	101,356	40,642	923,310	98,325	1,934,550	3,446,095	2009	OTB - Typical 2002
FL	101,356	40,641	923,310	98,325	1,934,550	3,446,095	2009	OTW - Typical 2002
	100,952	59,793	923,310	113,923	2,179,296	3,086,330	2018	OTB - Typical 2002
	100,952	57,759	923,310	113,923	2,179,296	3,086,330	2018	OTW - Typical 2002
	107,889	8,098	620,342	131,417	700,427	2,833,468	2002	OTB - Typical 2002
	103,579	19,170	620,342	147,835	783,990	2,053,694	2009	OTB - Typical 2002
GA	103,579	20,024	620,342	147,835	783,990	2,053,694	2009	OTW - Typical 2002
	105,059	27,152	620,342	169,156	868,018	1,765,020	2018	OTB - Typical 2002
	105,059	28,895	620,342	169,156	868,018	1,765,020	2018	OTW - Typical 2002
	66,752	12,888	56,686	110,141	289,967	1,260,682	2002	OTB - Typical 2002
	64,806	15,273	56,686	121,981	306,884	942,350	2009	OTB - Typical 2002
KY	64,806	15,119	56,686	121,981	306,884	942,350	2009	OTW - Typical 2002
	65,297	16,974	56,686	139,395	349,285	782,423	2018	OTB - Typical 2002
	65,297	14,954	56,686	139,395	349,285	782,423	2018	OTW - Typical 2002
	37,905	3,831	128,471	57,711	213,779	894,639	2002	OTB - Typical 2002
	37,161	6,714	128,471	60,709	237,297	628,151	2009	OTB - Typical 2002
MS	37,161	6,954	128,471	60,709	237,297	628,151	2009	OTW - Typical 2002
	36,425	10,553	128,471	70,454	252,658	528,898	2018	OTB - Typical 2002
	36,425	12,928	128,471	70,454	252,658	528,898	2018	OTW - Typical 2002
	373,585	12,027	200,564	52,542	725,734	3,176,811	2002	OTB - Typical 2002
	332,443	11,091	200,564	54,791	797,360	2,184,901	2009	OTB - Typical 2002
NC	332,443	11,170	200,564	54,791	797,360	2,184,901	2009	OTW - Typical 2002
	327,871	13,482	200,564	63,699	863,536	1,510,848	2018	OTB - Typical 2002
	327,871	13,777	200,564	63,699	863,536	1,510,848	2018	OTW - Typical 2002
	113,714	3,675	253,005	59,605	367,575	1,275,161	2002	OTB - Typical 2002
	95,826	6,316	253,005	65,612	402,871	912,280	2009	OTB - Typical 2002
SC	95,826	6,526	253,005	65,612	402,871	912,280	2009	OTW - Typical 2002
	89,343	10,175	253,005	75,209	438,027	800,619	2018	OTB - Typical 2002
	89,343	10,671	253,005	75,209	438,027	800,619	2018	OTW - Typical 2002
	89,235	6,339	78,370	119,405	451,480	1,967,658	2002	OTB - Typical 2002
	82,196	6,750	78,370	121,420	500,186	1,361,408	2009	OTB - Typical 2002
TN	82,196	6,651	78,370	121,420	500,186	1,361,408	2009	OTW - Typical 2002
	81,242	7,074	78,370	143,845	540,143	1,150,516	2018	OTB - Typical 2002
	81,242	6,509	78,370	143,845	540,143	1,150,516	2018	OTW - Typical 2002
	155,873	5,958	19,159	62,534	595,311	2,170,508	2002	OTB - Typical 2002
	133,738	9,811	19,159	69,822	661,295	1,495,771	2009	OTB - Typical 2002
VA	133,738	10,245	19,159	69,822	661,295	1,495,771	2009	OTW - Typical 2002
	129,037	14,788	19,159	77,590	734,294	1,310,698	2018	OTB - Typical 2002
	129,037	14,839	19,159	77,590	734,294	1,310,698	2018	OTW - Typical 2002
	39,546	9,927	32,656	89,928	119,089	560,717	2002	OTB - Typical 2002
	37,704	12,622	32,656	100,292	138,999	385,994	2009	OTB - Typical 2002
WV	37,704	12,328	32,656	100,292	138,999	385,994	2009	OTW - Typical 2002
	36,809	13,064	32,656	119,367	152,932	319,030	2018	OTB - Typical 2002
	36,809	12,992	32,656	119,367	152,932	319,030	2018	OTW - Typical 2002


Annual NH_3 Emissions by Source Sector
Tons per year
250,000
200,000
150,000
100,000
50,000
0
EGU and NonEGU values based on 2002 Typical Emissions
All Fire emissions based on Typical Year values
2002
2009 OTB
2009 OTW
2018 OTB
2018 OTW
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV

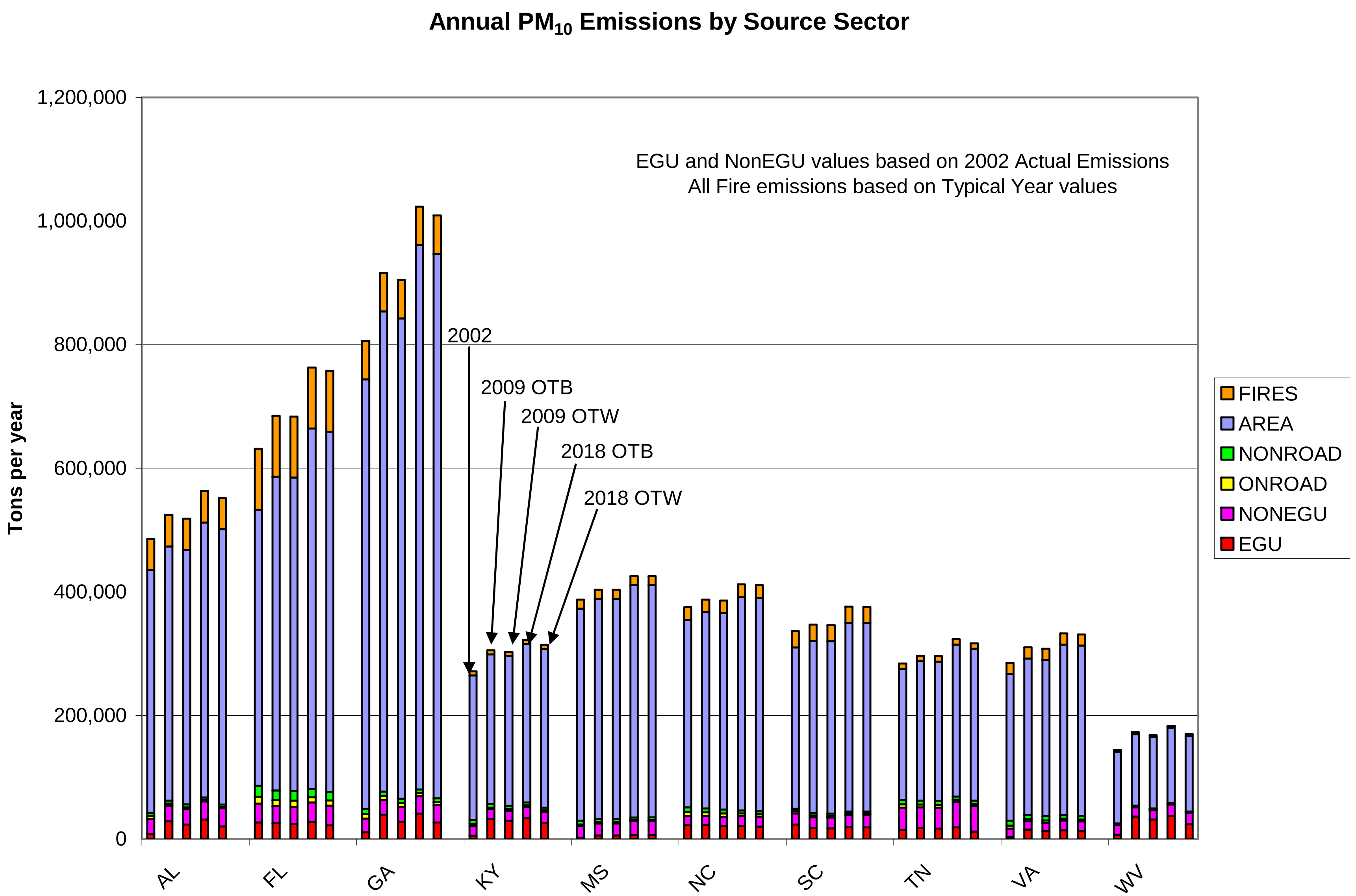
Annual NH_3 Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR	Basis
	89	1,883	5,576	32	59,486	1,957	2002	OTB - Typical 2002
	1,128	2,112	6,350	35	65,441	1,957	2009	OTB - Typical 2002
AL	1,344	2,112	6,350	35	65,441	1,957	2009	OTW - Typical 2002
	1,909	2,456	7,296	40	73,346	1,957	2018	OTB - Typical 2002
	2,173	2,456	7,296	40	73,346	1,957	2018	OTW - Typical 2002
	53	1,383	18,078	108	44,902	3,157	2002	OTB - Typical 2002
	2,524	1,605	21,737	119	46,950	3,157	2009	OTB - Typical 2002
FL	2,524	1,605	21,737	119	46,950	3,157	2009	OTW - Typical 2002
	4,022	1,905	26,154	138	49,889	3,157	2018	OTB - Typical 2002
	3,865	1,905	26,154	138	49,889	3,157	2018	OTW - Typical 2002
	5	3,613	10,524	54	84,230	2,153	2002	OTB - Typical 2002
	1,305	3,963	12,660	60	92,838	2,153	2009	OTB - Typical 2002
GA	1,376	3,963	12,660	60	92,838	2,153	2009	OTW - Typical 2002
	1,912	4,799	14,871	71	103,911	2,153	2018	OTB - Typical 2002
	2,057	4,799	14,871	71	103,911	2,153	2018	OTW - Typical 2002
	0	674	5,044	28	51,097	110	2002	OTB - Typical 2002
	717	733	5,795	30	53,023	110	2009	OTB - Typical 2002
KY	710	733	5,795	30	53,023	110	2009	OTW - Typical 2002
	763	839	6,584	36	55,356	110	2018	OTB - Typical 2002
	771	839	6,584	36	55,356	110	2018	OTW - Typical 2002
	97	1,169	3,577	23	59,262	177	2002	OTB - Typical 2002
	388	667	4,026	26	64,289	177	2009	OTB - Typical 2002
MS	407	667	4,026	26	64,289	177	2009	OTW - Typical 2002
	686	761	4,565	30	70,565	177	2018	OTB - Typical 2002
	872	761	4,565	30	70,565	177	2018	OTW - Typical 2002
	35	1,171	10,455	61	164,467	324	2002	OTB - Typical 2002
	577	1,255	12,637	68	173,187	324	2009	OTB - Typical 2002
NC	574	1,255	12,637	68	173,187	324	2009	OTW - Typical 2002
	740	1,412	13,077	79	184,167	324	2018	OTB - Typical 2002
	781	1,412	13,077	79	184,167	324	2018	OTW - Typical 2002
	0	1,411	4,684	29	29,447	908	2002	OTB - Typical 2002
	409	1,578	5,510	32	31,966	908	2009	OTB - Typical 2002
SC	422	1,578	5,510	32	31,966	908	2009	OTW - Typical 2002
	702	1,779	6,472	37	35,082	908	2018	OTB - Typical 2002
	742	1,779	6,472	37	35,082	908	2018	OTW - Typical 2002
	0	1,620	6,616	41	35,571	46	2002	OTB - Typical 2002
	406	1,861	7,738	45	36,578	46	2009	OTB - Typical 2002
TN	400	1,861	7,738	45	36,578	46	2009	OTW - Typical 2002
	427	2,240	8,962	53	37,812	46	2018	OTB - Typical 2002
	394	2,240	8,962	53	37,812	46	2018	OTW - Typical 2002
	122	3,097	7,837	44	46,221	159	2002	OTB - Typical 2002
	396	3,057	9,066	48	49,173	159	2009	OTB - Typical 2002
VA	439	3,057	9,066	48	49,173	159	2009	OTW - Typical 2002
	759	3,620	10,757	57	53,023	159	2018	OTB - Typical 2002
	783	3,620	10,757	57	53,023	159	2018	OTW - Typical 2002
	12	331	1,933	10	10,779	12	2002	OTB - Typical 2002
	691	342	2,183	11	11,461	12	2009	OTB - Typical 2002
WV	673	342	2,183	11	11,461	12	2009	OTW - Typical 2002
	722	416	2,484	13	12,390	12	2018	OTB - Typical 2002
	719	416	2,484	13	12,390	12	2018	OTW - Typical 2002


Annual NOx Emissions by Source Sector
EGU and NonEGU values based on 2002 Typical Emissions
All Fire emissions based on Typical Year values
Tons per year
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
2002
2009 OTB
2009 OTW
2018 OTB
2018 OTW
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU

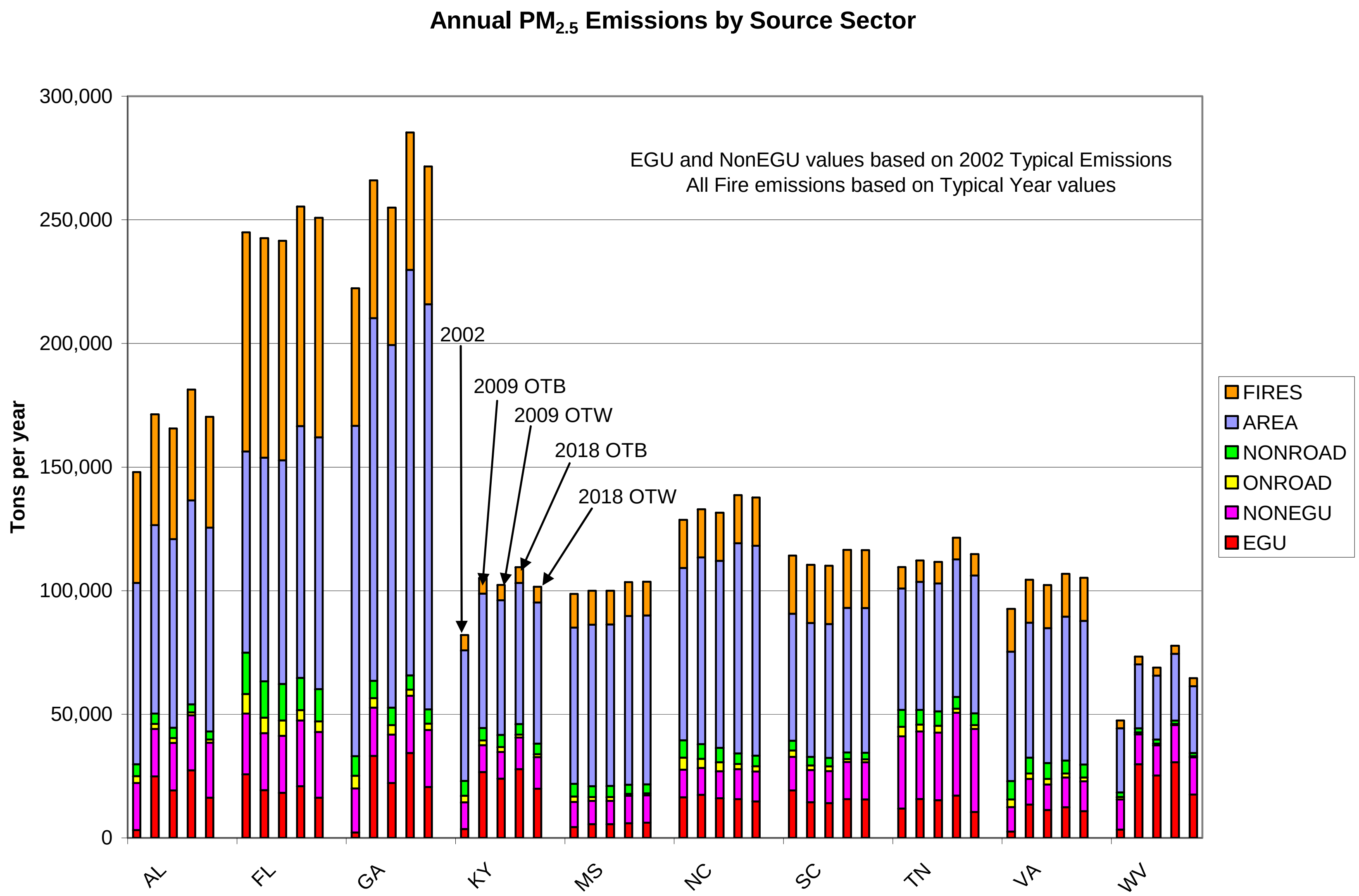
Annual NO_x Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR	Basis
	153,349	83,868	158,423	64,891	23,444	11,456	2002	OTB - Typical 2002
	131,988	80,738	101,323	55,494	26,482	11,456	2009	OTB - Typical 2002
AL	132,323	70,644	101,323	55,494	26,482	11,456	2009	OTW - Typical 2002
	135,010	91,052	46,222	42,573	28,754	11,456	2018	OTB - Typical 2002
	39,942	80,031	46,222	42,573	28,754	11,456	2018	OTW - Typical 2002
	247,099	59,517	466,098	150,519	29,477	19,791	2002	OTB - Typical 2002
	148,522	67,533	314,307	136,851	31,821	19,791	2009	OTB - Typical 2002
FL	147,801	67,533	314,307	136,851	31,821	19,791	2009	OTW - Typical 2002
	159,004	77,551	154,611	111,959	35,047	19,791	2018	OTB - Typical 2002
	59,446	77,551	154,611	111,959	35,047	19,791	2018	OTW - Typical 2002
	120,785	52,425	308,013	91,386	36,105	13,882	2002	OTB - Typical 2002
	131,901	53,008	208,393	79,049	38,876	13,882	2009	OTB - Typical 2002
GA	119,425	53,008	208,393	79,049	38,876	13,882	2009	OTW - Typical 2002
	128,938	59,005	99,821	60,650	42,260	13,882	2018	OTB - Typical 2002
	65,559	59,005	99,821	60,650	42,260	13,882	2018	OTW - Typical 2002
	209,802	38,460	154,899	101,261	39,507	1,460	2002	OTB - Typical 2002
	178,930	37,960	97,912	90,803	42,122	1,460	2009	OTB - Typical 2002
KY	177,272	37,201	97,912	90,803	42,122	1,460	2009	OTW - Typical 2002
	182,192	41,776	42,104	77,295	45,597	1,460	2018	OTB - Typical 2002
	64,674	40,948	42,104	77,295	45,597	1,460	2018	OTW - Typical 2002
	27,254	76,906	111,791	90,686	4,200	3,328	2002	OTB - Typical 2002
	38,911	70,463	69,949	81,780	4,789	3,328	2009	OTB - Typical 2002
MS	38,978	70,463	69,949	81,780	4,789	3,328	2009	OTW - Typical 2002
	38,355	76,738	29,717	68,781	5,230	3,328	2018	OTB - Typical 2002
	11,206	76,738	29,717	68,781	5,230	3,328	2018	OTW - Typical 2002
	144,730	50,393	341,198	81,448	48,730	5,005	2002	OTB - Typical 2002
	66,598	46,242	207,648	66,382	53,550	5,005	2009	OTB - Typical 2002
NC	67,051	46,242	207,648	66,382	53,550	5,005	2009	OTW - Typical 2002
	64,537	50,044	81,706	45,146	60,073	5,005	2018	OTB - Typical 2002
	59,917	50,044	81,706	45,146	60,073	5,005	2018	OTW - Typical 2002
	85,555	44,123	140,428	46,789	19,332	5,270	2002	OTB - Typical 2002
	50,433	43,799	91,696	39,544	20,852	5,270	2009	OTB - Typical 2002
SC	50,128	42,944	91,696	39,544	20,852	5,270	2009	OTW - Typical 2002
	55,103	48,314	42,354	29,512	22,467	5,270	2018	OTB - Typical 2002
	36,264	47,403	42,354	29,512	22,467	5,270	2018	OTW - Typical 2002
	155,028	73,384	233,324	95,968	17,829	2,232	2002	OTB - Typical 2002
	106,979	62,435	147,757	85,084	19,148	2,232	2009	OTB - Typical 2002
TN	104,528	61,176	147,757	85,084	19,148	2,232	2009	OTW - Typical 2002
	112,411	69,374	65,242	69,093	20,928	2,232	2018	OTB - Typical 2002
	32,411	67,999	65,242	69,093	20,928	2,232	2018	OTW - Typical 2002
	82,911	61,528	219,602	58,524	51,418	978	2002	OTB - Typical 2002
	64,950	64,298	133,170	50,120	53,344	978	2009	OTB - Typical 2002
VA	62,810	60,027	133,170	50,120	53,344	978	2009	OTW - Typical 2002
	56,716	71,480	61,881	36,970	56,668	978	2018	OTB - Typical 2002
	40,045	66,931	61,881	36,970	56,668	978	2018	OTW - Typical 2002
	222,090	46,715	59,612	34,442	12,687	944	2002	OTB - Typical 2002
	173,977	42,140	36,049	31,148	13,816	944	2009	OTB - Typical 2002
WV	174,572	40,469	36,049	31,148	13,816	944	2009	OTW - Typical 2002
	170,522	46,846	16,274	26,279	15,079	944	2018	OTB - Typical 2002
	42,227	44,944	16,274	26,279	15,079	944	2018	OTW - Typical 2002


Annual PM_{10} Emissions by Source Sector
EGU and NonEGU values based on 2002 Actual Emissions
All Fire emissions based on Typical Year values
Tons per year
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
2002
2009 OTB
2009 OTW
2018 OTB
2018 OTW
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU

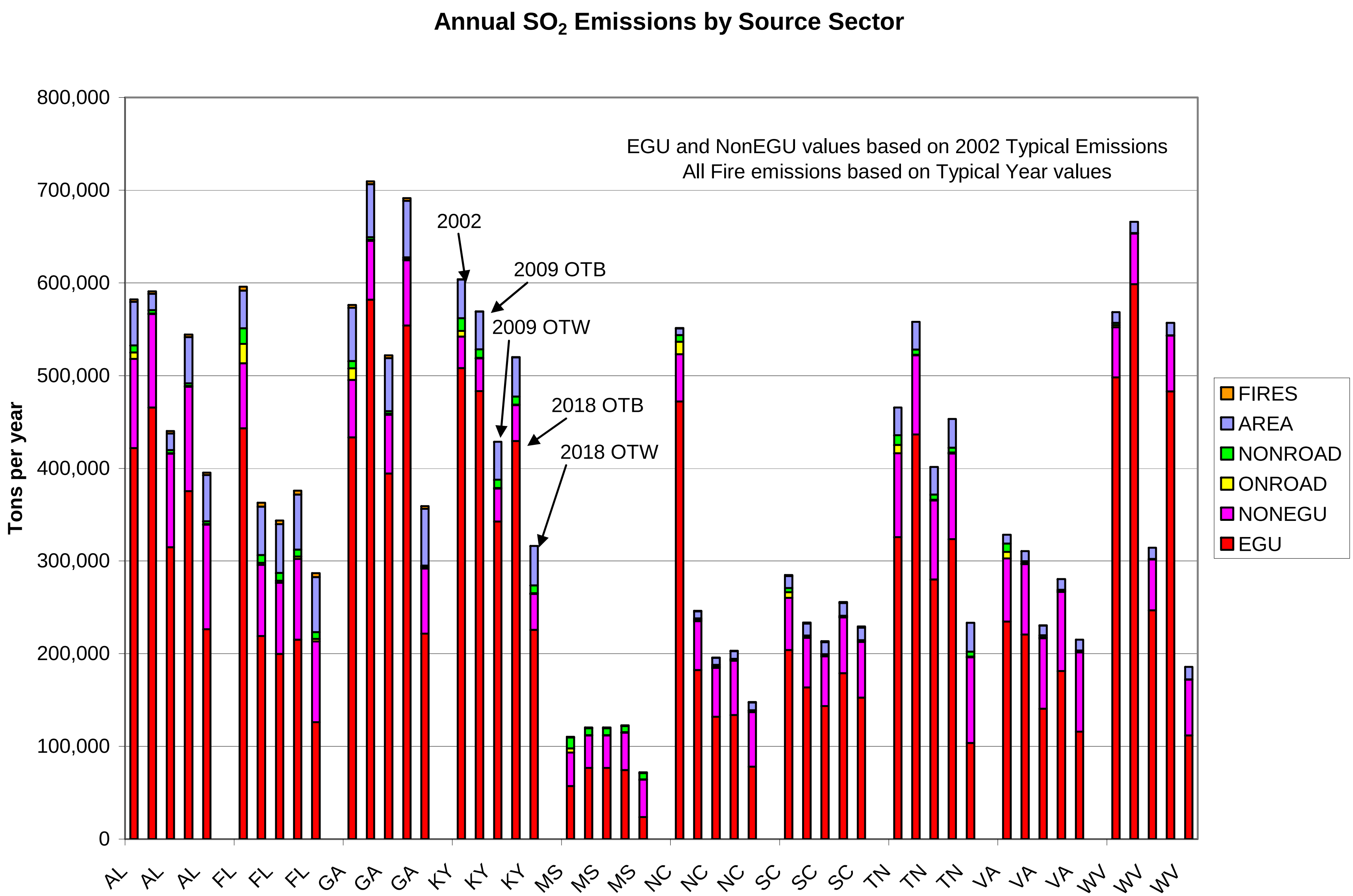
Annual PM_{10} Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR	Basis
	5,737	24,957	3,898	5,331	393,093	50,833	2002	OTB - Typical 2002
	29,053	25,161	3,188	4,597	411,614	50,833	2009	OTB - Typical 2002
AL	23,250	25,161	3,188	4,597	411,614	50,833	2009	OTW - Typical 2002
	31,815	29,278	2,488	3,690	445,168	50,833	2018	OTB - Typical 2002
	20,450	29,278	2,488	3,690	445,168	50,833	2018	OTW - Typical 2002
	33,182	28,882	11,253	17,692	446,821	98,470	2002	OTB - Typical 2002
	25,779	27,531	9,953	15,630	507,515	98,470	2009	OTB - Typical 2002
FL	24,493	27,531	9,953	15,630	507,515	98,470	2009	OTW - Typical 2002
	27,320	31,890	8,489	13,827	582,832	98,470	2018	OTB - Typical 2002
	22,204	31,890	8,489	13,827	582,832	98,470	2018	OTW - Typical 2002
	5,447	22,058	7,236	8,295	695,320	62,336	2002	OTB - Typical 2002
	39,580	23,861	6,103	7,368	776,935	62,336	2009	OTB - Typical 2002
GA	28,118	23,861	6,103	7,368	776,935	62,336	2009	OTW - Typical 2002
	41,221	28,177	4,995	6,068	880,800	62,336	2018	OTB - Typical 2002
	26,905	28,177	4,995	6,068	880,800	62,336	2018	OTW - Typical 2002
	6,000	15,613	3,720	6,389	233,559	6,667	2002	OTB - Typical 2002
	32,406	15,858	3,002	5,312	242,345	6,667	2009	OTB - Typical 2002
KY	29,606	15,858	3,002	5,312	242,345	6,667	2009	OTW - Typical 2002
	33,784	18,587	2,283	4,602	256,544	6,667	2018	OTB - Typical 2002
	25,733	18,587	2,283	4,602	256,544	6,667	2018	OTW - Typical 2002
	4,783	19,680	2,856	5,551	343,377	14,693	2002	OTB - Typical 2002
	5,864	19,439	2,290	4,754	356,516	14,693	2009	OTB - Typical 2002
MS	5,883	19,439	2,290	4,754	356,516	14,693	2009	OTW - Typical 2002
	6,268	23,145	1,688	3,873	375,931	14,693	2018	OTB - Typical 2002
	6,459	23,145	1,688	3,873	375,931	14,693	2018	OTW - Typical 2002
	22,689	14,507	6,905	7,449	303,492	20,488	2002	OTB - Typical 2002
	23,028	14,301	5,861	6,210	317,847	20,488	2009	OTB - Typical 2002
NC	21,459	14,301	5,861	6,210	317,847	20,488	2009	OTW - Typical 2002
	21,417	16,002	4,299	4,474	345,275	20,488	2018	OTB - Typical 2002
	20,258	16,002	4,299	4,474	345,275	20,488	2018	OTW - Typical 2002
	23,492	18,149	3,446	4,211	260,858	26,304	2002	OTB - Typical 2002
	18,023	17,368	2,878	3,593	278,852	26,304	2009	OTB - Typical 2002
SC	17,493	17,368	2,878	3,593	278,852	26,304	2009	OTW - Typical 2002
	19,290	20,272	2,258	2,889	304,940	26,304	2018	OTB - Typical 2002
	19,182	20,272	2,258	2,889	304,940	26,304	2018	OTW - Typical 2002
	14,537	35,982	5,338	7,145	211,903	8,875	2002	OTB - Typical 2002
	17,735	33,838	4,238	6,218	225,650	8,875	2009	OTB - Typical 2002
TN	17,159	33,838	4,238	6,218	225,650	8,875	2009	OTW - Typical 2002
	19,103	41,466	3,199	5,019	245,893	8,875	2018	OTB - Typical 2002
	12,432	41,466	3,199	5,019	245,893	8,875	2018	OTW - Typical 2002
	3,790	12,799	4,537	7,928	237,577	18,160	2002	OTB - Typical 2002
	15,343	13,470	3,760	6,763	252,924	18,160	2009	OTB - Typical 2002
VA	12,804	13,470	3,760	6,763	252,924	18,160	2009	OTW - Typical 2002
	14,390	15,661	3,343	5,564	275,790	18,160	2018	OTB - Typical 2002
	12,653	15,661	3,343	5,564	275,790	18,160	2018	OTW - Typical 2002
	7,145	14,866	1,395	2,072	115,346	3,276	2002	OTB - Typical 2002
	36,442	14,926	1,096	1,819	115,410	3,276	2009	OTB - Typical 2002
WV	31,780	14,926	1,096	1,819	115,410	3,276	2009	OTW - Typical 2002
	37,425	18,433	844	1,381	121,964	3,276	2018	OTB - Typical 2002
	24,253	18,433	844	1,381	121,964	3,276	2018	OTW - Typical 2002


Annual $PM_{2.5}$ Emissions by Source Sector
EGU and NonEGU values based on 2002 Typical Emissions
All Fire emissions based on Typical Year values
Tons per year
300,000
250,000
200,000
150,000
100,000
50,000
0
2002
2009 OTB
2009 OTW
2018 OTB
2018 OTW
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU

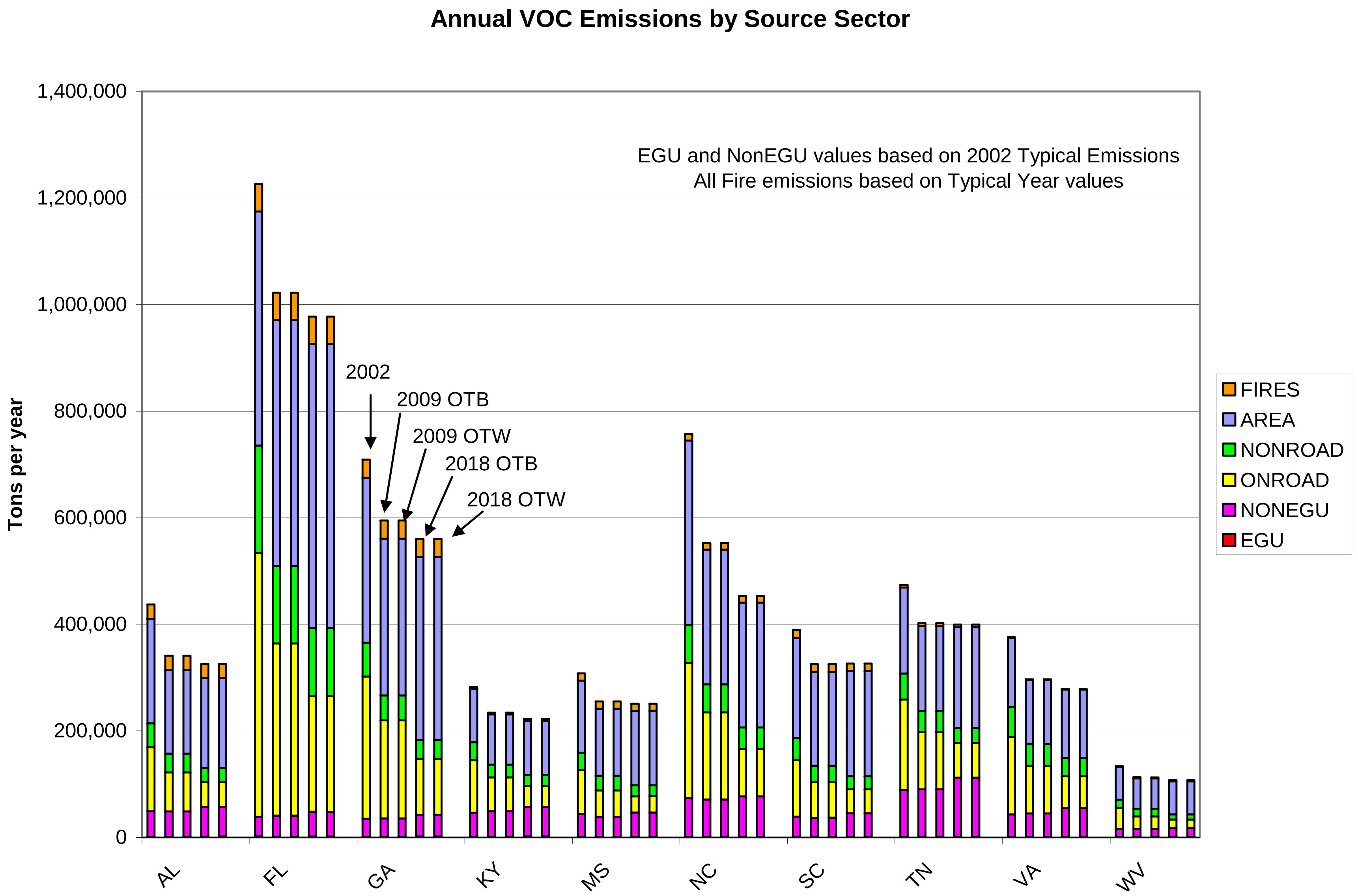
Annual $PM_{2.5}$ Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR	Basis
	3,131	19,016	2,794	4,877	73,352	44,812	2002	OTB - Typical 2002
	24,875	19,184	2,049	4,144	76,248	44,812	2009	OTB - Typical 2002
AL	19,190	19,184	2,049	4,144	76,248	44,812	2009	OTW - Typical 2002
	27,280	22,268	1,262	3,231	82,449	44,812	2018	OTB - Typical 2002
	16,279	22,268	1,262	3,231	82,449	44,812	2018	OTW - Typical 2002
	25,761	24,569	7,852	16,739	81,341	88,756	2002	OTB - Typical 2002
	19,307	23,063	6,216	14,786	90,487	88,756	2009	OTB - Typical 2002
FL	18,186	23,063	6,216	14,786	90,487	88,756	2009	OTW - Typical 2002
	20,848	26,622	4,242	13,044	101,872	88,756	2018	OTB - Typical 2002
	16,278	26,622	4,242	13,044	101,872	88,756	2018	OTW - Typical 2002
	2,137	17,893	5,158	7,899	133,542	55,712	2002	OTB - Typical 2002
	33,111	19,562	3,869	7,014	146,691	55,712	2009	OTB - Typical 2002
GA	22,163	19,562	3,869	7,014	146,691	55,712	2009	OTW - Typical 2002
	34,361	23,110	2,517	5,769	163,925	55,712	2018	OTB - Typical 2002
	20,549	23,110	2,517	5,769	163,925	55,712	2018	OTW - Typical 2002
	3,605	10,729	2,693	5,998	52,765	6,310	2002	OTB - Typical 2002
	26,640	10,837	1,941	4,978	54,397	6,310	2009	OTB - Typical 2002
KY	23,915	10,837	1,941	4,978	54,397	6,310	2009	OTW - Typical 2002
	27,857	12,738	1,160	4,289	57,110	6,310	2018	OTB - Typical 2002
	19,915	12,738	1,160	4,289	57,110	6,310	2018	OTW - Typical 2002
	4,384	10,187	2,109	5,200	63,135	13,680	2002	OTB - Typical 2002
	5,511	9,459	1,522	4,440	65,321	13,680	2009	OTB - Typical 2002
MS	5,530	9,459	1,522	4,440	65,321	13,680	2009	OTW - Typical 2002
	5,919	11,068	876	3,597	68,338	13,680	2018	OTB - Typical 2002
	6,110	11,068	876	3,597	68,338	13,680	2018	OTW - Typical 2002
	16,428	11,204	4,816	7,079	69,663	19,491	2002	OTB - Typical 2002
	17,449	10,888	3,643	5,889	75,570	19,491	2009	OTB - Typical 2002
NC	16,034	10,888	3,643	5,889	75,570	19,491	2009	OTW - Typical 2002
	15,636	12,136	2,158	4,215	85,018	19,491	2018	OTB - Typical 2002
	14,702	12,136	2,158	4,215	85,018	19,491	2018	OTW - Typical 2002
	19,238	13,565	2,496	3,985	51,413	23,511	2002	OTB - Typical 2002
	14,471	12,977	1,870	3,396	54,230	23,511	2009	OTB - Typical 2002
SC	14,079	12,977	1,870	3,396	54,230	23,511	2009	OTW - Typical 2002
	15,601	15,092	1,154	2,718	58,441	23,511	2018	OTB - Typical 2002
	15,509	15,092	1,154	2,718	58,441	23,511	2018	OTW - Typical 2002
	11,918	29,130	3,919	6,756	49,131	8,730	2002	OTB - Typical 2002
	15,770	27,313	2,782	5,873	51,753	8,730	2009	OTB - Typical 2002
TN	15,228	27,313	2,782	5,873	51,753	8,730	2009	OTW - Typical 2002
	17,103	33,502	1,643	4,724	55,712	8,730	2018	OTB - Typical 2002
	10,514	33,502	1,643	4,724	55,712	8,730	2018	OTW - Typical 2002
	2,559	9,868	3,090	7,486	52,271	17,361	2002	OTB - Typical 2002
	13,451	10,368	2,254	6,388	54,587	17,361	2009	OTB - Typical 2002
VA	11,237	10,368	2,254	6,388	54,587	17,361	2009	OTW - Typical 2002
	12,366	12,062	1,641	5,241	58,141	17,361	2018	OTB - Typical 2002
	10,755	12,062	1,641	5,241	58,141	17,361	2018	OTW - Typical 2002
	3,356	12,154	1,003	1,941	25,850	3,239	2002	OTB - Typical 2002
	29,773	12,138	703	1,699	25,835	3,239	2009	OTB - Typical 2002
WV	25,251	12,138	703	1,699	25,835	3,239	2009	OTW - Typical 2002
	30,628	15,045	428	1,284	27,088	3,239	2018	OTB - Typical 2002
	17,548	15,045	428	1,284	27,088	3,239	2018	OTW - Typical 2002


Annual SO_2 Emissions by Source Sector
EGU and NonEGU values based on 2002 Typical Emissions
All Fire emissions based on Typical Year values
2002
2009 OTB
2009 OTW
2018 OTB
2018 OTW
Tons per year
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
AL AL AL FL FL FL GA GA GA KY KY KY MS MS MS NC NC NC SC SC SC TN TN TN VA VA VA WV WV WV
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU

Annual SO_2 Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR	Basis
AL	421,734	96,447	6,885	7,539	47,074	2,559	2002	OTB - Typical 2002
AL	465,576	100,845	635	3,463	17,818	2,559	2009	OTB - Typical 2002
AL	314,841	100,845	635	3,463	17,818	2,559	2009	OTW - Typical 2002
AL	375,305	112,771	720	2,815	49,975	2,559	2018	OTB - Typical 2002
AL	226,506	112,771	720	2,815	49,975	2,559	2018	OTW - Typical 2002
FL	443,152	70,165	20,872	17,023	40,537	4,129	2002	OTB - Typical 2002
FL	219,072	76,851	2,120	8,380	52,390	4,129	2009	OTB - Typical 2002
FL	199,834	76,851	2,120	8,380	52,390	4,129	2009	OTW - Typical 2002
FL	215,177	87,065	2,533	7,511	59,413	4,129	2018	OTB - Typical 2002
FL	126,280	87,065	2,533	7,511	59,413	4,129	2018	OTW - Typical 2002
GA	433,513	62,032	12,155	8,145	57,555	2,815	2002	OTB - Typical 2002
GA	582,078	63,348	1,254	2,588	57,377	2,815	2009	OTB - Typical 2002
GA	394,425	63,348	1,254	2,588	57,377	2,815	2009	OTW - Typical 2002
GA	554,013	70,386	1,458	1,702	61,155	2,815	2018	OTB - Typical 2002
GA	221,615	70,386	1,458	1,702	61,155	2,815	2018	OTW - Typical 2002
KY	508,139	34,026	5,974	13,739	41,805	136	2002	OTB - Typical 2002
KY	483,235	35,479	585	9,092	40,779	136	2009	OTB - Typical 2002
KY	342,670	35,479	585	9,092	40,779	136	2009	OTW - Typical 2002
KY	429,418	38,816	651	8,536	42,326	136	2018	OTB - Typical 2002
KY	225,772	38,816	651	8,536	42,326	136	2018	OTW - Typical 2002
MS	57,263	36,071	4,604	11,551	771	100	2002	OTB - Typical 2002
MS	76,855	35,028	397	7,232	637	100	2009	OTB - Typical 2002
MS	76,855	35,028	397	7,232	637	100	2009	OTW - Typical 2002
MS	74,505	40,318	441	6,638	831	100	2018	OTB - Typical 2002
MS	23,768	40,318	441	6,638	831	100	2018	OTW - Typical 2002
NC	472,192	51,049	13,343	7,207	7,096	423	2002	OTB - Typical 2002
NC	182,356	52,693	1,311	1,798	7,607	423	2009	OTB - Typical 2002
NC	132,054	52,693	1,311	1,798	7,607	423	2009	OTW - Typical 2002
NC	133,691	58,671	1,323	838	8,273	423	2018	OTB - Typical 2002
NC	78,205	58,671	1,323	838	8,273	423	2018	OTW - Typical 2002
SC	203,978	56,329	5,958	4,449	12,900	1,187	2002	OTB - Typical 2002
SC	163,560	53,746	556	1,633	12,945	1,187	2009	OTB - Typical 2002
SC	143,492	53,746	556	1,633	12,945	1,187	2009	OTW - Typical 2002
SC	178,938	60,300	643	1,195	13,517	1,187	2018	OTB - Typical 2002
SC	152,457	60,300	643	1,195	13,517	1,187	2018	OTW - Typical 2002
TN	325,779	90,374	9,184	10,413	29,897	59	2002	OTB - Typical 2002
TN	436,453	85,275	831	5,649	29,787	59	2009	OTB - Typical 2002
TN	279,931	85,275	831	5,649	29,787	59	2009	OTW - Typical 2002
TN	323,654	92,396	944	5,205	31,047	59	2018	OTB - Typical 2002
TN	103,602	92,396	944	5,205	31,047	59	2018	OTW - Typical 2002
VA	234,714	68,038	7,218	8,796	9,510	99	2002	OTB - Typical 2002
VA	220,686	76,081	900	2,248	10,619	99	2009	OTB - Typical 2002
VA	140,665	76,081	900	2,248	10,619	99	2009	OTW - Typical 2002
VA	181,338	85,351	1,059	1,217	11,479	99	2018	OTB - Typical 2002
VA	115,987	85,351	1,059	1,217	11,479	99	2018	OTW - Typical 2002
WV	497,991	54,045	2,489	2,305	11,667	16	2002	OTB - Typical 2002
WV	598,555	54,701	227	392	12,156	16	2009	OTB - Typical 2002
WV	246,851	54,701	227	392	12,156	16	2009	OTW - Typical 2002
WV	482,959	60,141	255	56	13,450	16	2018	OTB - Typical 2002
WV	111,937	60,141	255	56	13,450	16	2018	OTW - Typical 2002


Annual VOC Emissions by Source Sector
Tons per year
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
EGU and NonEGU values based on 2002 Typical Emissions
All Fire emissions based on Typical Year values
2002
2009 OTB
2009 OTW
2018 OTB
2018 OTW
FIRES
AREA
NONROAD
ONROAD
NONEGU
EGU
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV

Annual VOC Emissions by Source Sector

Name	EGU	NONEGU	ONROAD	NONROAD	AREA	FIRES	YEAR	Basis
	1,501	47,893	119,790	44,978	196,538	26,526	2002	OTB - Typical 2002
	1,261	47,600	72,848	35,498	157,405	26,526	2009	OTB - Typical 2002
AL	1,312	47,600	72,848	35,498	157,405	26,526	2009	OTW - Typical 2002
	1,574	55,373	47,296	26,338	168,507	26,526	2018	OTB - Typical 2002
	1,612	55,373	47,296	26,338	168,507	26,526	2018	OTW - Typical 2002
	2,362	36,301	495,225	201,960	439,019	51,527	2002	OTB - Typical 2002
	1,562	39,255	323,290	144,749	462,198	51,527	2009	OTB - Typical 2002
FL	1,559	39,255	323,290	144,749	462,198	51,527	2009	OTW - Typical 2002
	2,052	46,049	216,620	128,131	533,141	51,527	2018	OTB - Typical 2002
	1,988	46,049	216,620	128,131	533,141	51,527	2018	OTW - Typical 2002
	984	33,753	267,378	63,337	309,411	33,918	2002	OTB - Typical 2002
	1,497	34,153	184,239	46,722	294,204	33,918	2009	OTB - Typical 2002
GA	1,499	34,153	184,239	46,722	294,204	33,918	2009	OTW - Typical 2002
	1,794	40,354	105,507	36,014	342,661	33,918	2018	OTB - Typical 2002
	1,790	40,354	105,507	36,014	342,661	33,918	2018	OTW - Typical 2002
	1,518	44,854	98,311	34,156	100,174	3,338	2002	OTB - Typical 2002
	1,594	47,733	63,258	23,980	94,253	3,338	2009	OTB - Typical 2002
KY	1,580	47,733	63,258	23,980	94,253	3,338	2009	OTW - Typical 2002
	1,635	55,729	39,084	20,795	102,117	3,338	2018	OTB - Typical 2002
	1,616	55,729	39,084	20,795	102,117	3,338	2018	OTW - Typical 2002
	696	43,401	82,810	32,401	135,106	13,625	2002	OTB - Typical 2002
	584	38,119	49,670	27,650	125,382	13,625	2009	OTB - Typical 2002
MS	590	38,119	49,670	27,650	125,382	13,625	2009	OTW - Typical 2002
	766	45,966	30,734	20,576	139,419	13,625	2018	OTB - Typical 2002
	827	45,966	30,734	20,576	139,419	13,625	2018	OTW - Typical 2002
	1,043	72,856	253,374	71,378	346,060	12,499	2002	OTB - Typical 2002
	1,100	70,146	163,803	52,430	252,553	12,499	2009	OTB - Typical 2002
NC	1,093	70,146	163,803	52,430	252,553	12,499	2009	OTW - Typical 2002
	1,183	75,985	88,620	40,576	234,207	12,499	2018	OTB - Typical 2002
	1,172	75,985	88,620	40,576	234,207	12,499	2018	OTW - Typical 2002
	438	38,493	106,792	41,374	187,466	14,666	2002	OTB - Typical 2002
	601	36,410	67,281	30,531	176,104	14,666	2009	OTB - Typical 2002
SC	626	36,410	67,281	30,531	176,104	14,666	2009	OTW - Typical 2002
	745	44,586	44,700	24,989	196,946	14,666	2018	OTB - Typical 2002
	754	44,586	44,700	24,989	196,946	14,666	2018	OTW - Typical 2002
	819	87,975	169,914	49,056	161,069	5,153	2002	OTB - Typical 2002
	866	89,128	108,200	38,686	160,265	5,153	2009	OTB - Typical 2002
TN	854	89,128	108,200	38,686	160,265	5,153	2009	OTW - Typical 2002
	899	111,372	64,665	28,667	188,977	5,153	2018	OTB - Typical 2002
	826	111,372	64,665	28,667	188,977	5,153	2018	OTW - Typical 2002
	672	42,589	144,684	57,050	129,792	912	2002	OTB - Typical 2002
	546	44,359	89,678	40,897	120,022	912	2009	OTB - Typical 2002
VA	503	44,359	89,678	40,897	120,022	912	2009	OTW - Typical 2002
	694	53,968	60,454	34,412	128,160	912	2018	OTB - Typical 2002
	674	53,968	60,454	34,412	128,160	912	2018	OTW - Typical 2002
	1,128	14,599	40,066	14,805	61,490	2,184	2002	OTB - Typical 2002
	1,442	14,015	23,907	14,249	57,082	2,184	2009	OTB - Typical 2002
WV	1,397	14,015	23,907	14,249	57,082	2,184	2009	OTW - Typical 2002
	1,471	16,636	15,463	9,500	62,164	2,184	2018	OTB - Typical 2002
	1,456	16,636	15,463	9,500	62,164	2,184	2018	OTW - Typical 2002

APPENDIX B:

STATE VMT TOTALS

State VMT Totals

Million Miles Per Year

2002	LDGV	LDGT1	LDGT2	HDDV	LDDV	LDDT	HDDV	MC	TOTAL
AL	31,982	12,728	4,347	1,630	63	69	4,709	196	55,723
FL	105,340	40,835	13,945	5,079	206	220	12,465	591	178,681
GA	61,660	24,394	8,331	3,103	121	132	8,673	371	106,785
KY	28,751	12,189	3,366	1,606	55	55	4,827	171	51,020
MS	23,933	6,724	439	1,025	330	125	3,610	92	36,278
NC	51,189	30,339	10,787	4,119	230	230	9,440	461	106,795
SC	26,672	10,750	3,671	1,395	52	58	4,306	171	47,074
TN	30,809	20,272	6,922	2,943	52	111	6,810	397	68,316
VA	36,336	24,784	8,667	2,148	61	139	4,969	369	77,472
WV	9,010	5,931	2,028	732	25	37	1,664	117	19,544

2009	LDGV	LDGT1	LDGT2	HDDV	LDDV	LDDT	HDDV	MC	TOTAL
AL	30,638	18,598	5,511	2,069	65	72	5,976	249	63,178
FL	107,641	62,449	18,697	6,820	215	230	16,743	794	213,590
GA	61,569	36,641	10,933	4,077	126	137	11,374	487	125,343
KY	28,006	16,984	4,428	1,983	58	57	5,983	231	57,729
MS	23,641	10,131	573	1,341	356	135	4,719	120	41,017
NC	48,495	43,484	15,122	4,576	40	224	10,928	527	123,396
SC	26,451	16,119	4,796	1,824	55	61	5,617	223	55,147
TN	28,775	28,650	8,521	3,627	52	111	8,391	490	78,615
VA	33,663	34,814	10,597	2,624	61	137	6,073	451	88,419
WV	8,128	8,205	2,427	878	25	37	1,995	140	21,835

2018	LDGV	LDGT1	LDGT2	HDDV	LDDV	LDDT	HDDV	MC	TOTAL
AL	31,706	23,562	6,990	2,634	67	84	7,607	317	72,966
FL	116,576	83,385	24,996	9,156	221	301	22,491	1,066	258,191
GA	65,214	47,687	14,245	5,332	129	171	14,853	637	148,269
KY	29,353	21,058	5,558	2,463	60	66	7,454	288	66,300
MS	24,787	12,984	736	1,727	372	159	6,076	155	46,996
NC	42,247	51,568	18,260	4,985	279	279	11,396	553	129,566
SC	27,930	20,880	6,220	2,375	57	75	7,306	290	65,133
TN	29,253	35,702	10,629	4,538	52	130	10,500	613	91,417
VA	35,030	44,438	13,543	3,358	62	164	7,770	578	104,944
WV	8,130	10,025	2,969	1,078	25	41	2,451	172	24,891

APPENDIX C:

STATE TIER 1 EMISSION TOTALS

State Tier 1 Emission Totals

State	Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
AL	2002	01	FUEL COMB. ELEC. UTIL.	11,460	239	154,704	7,845	4,176	423,736	2,288
AL	2002	02	FUEL COMB. INDUSTRIAL	67,121	234	51,527	6,729	3,791	40,918	2,237
AL	2002	03	FUEL COMB. OTHER	70,498	169	19,237	6,411	5,528	39,606	56,120
AL	2002	04	CHEMICAL & ALLIED PRODUCT	5,721	35	2,032	1,220	888	12,770	7,273
AL	2002	05	METALS PROCESSING	38,247	376	6,011	9,107	7,803	14,039	3,299
AL	2002	06	PETROLEUM & RELATED	13,606	0	878	194	155	22,991	4,024
AL	2002	07	OTHER INDUSTRIAL PROCESSES	47,676	1,468	25,252	22,689	9,516	17,904	25,304
AL	2002	08	SOLVENT UTILIZATION	216	0	226	149	126	3	108,437
AL	2002	09	STORAGE & TRANSPORT	174	0	230	1,086	636	13	16,522
AL	2002	10	WASTE DISPOSAL & RECYCLING	86,302	10	3,465	13,960	13,073	489	11,334
AL	2002	11	HIGHWAY VEHICLES	1,366,056	5,576	158,423	3,898	2,794	6,885	119,790
AL	2002	12	OFF-HIGHWAY	414,385	33	65,366	4,787	4,502	7,584	60,487
AL	2002	14	MISCELLANEOUS	442,778	59,864	9,343	408,115	79,127	2,559	21,686
	2002 Total			**2,564,239**	**68,005**	**496,695**	**486,190**	**132,115**	**589,499**	**438,800**
AL	2009	01	FUEL COMB. ELEC. UTIL.	14,986	359	82,305	6,969	3,921	378,052	2,473
AL	2009	02	FUEL COMB. INDUSTRIAL	68,146	274	36,301	6,140	3,438	40,651	2,191
AL	2009	03	FUEL COMB. OTHER	52,256	158	19,514	5,904	5,104	36,048	31,403
AL	2009	04	CHEMICAL & ALLIED PRODUCT	6,118	38	2,273	1,257	912	13,660	6,613
AL	2009	05	METALS PROCESSING	38,969	500	6,021	9,062	7,756	16,629	3,305
AL	2009	06	PETROLEUM & RELATED	13,241	0	858	221	177	22,495	3,336
AL	2009	07	OTHER INDUSTRIAL PROCESSES	52,004	1,571	26,340	24,196	10,197	19,383	26,519
AL	2009	08	SOLVENT UTILIZATION	247	0	257	165	139	4	92,631
AL	2009	09	STORAGE & TRANSPORT	192	0	253	1,146	584	14	17,738
AL	2009	10	WASTE DISPOSAL & RECYCLING	87,225	11	3,634	14,504	13,485	590	11,207
AL	2009	11	HIGHWAY VEHICLES	942,793	6,350	101,323	3,188	2,049	635	72,848
AL	2009	12	OFF-HIGHWAY	454,686	36	56,862	4,027	3,776	3,471	50,249
AL	2009	14	MISCELLANEOUS	463,498	65,899	9,788	428,698	82,679	2,681	22,657
	2009 Total			**2,194,361**	**75,195**	**345,729**	**505,475**	**134,217**	**534,314**	**343,169**
AL	2018	01	FUEL COMB. ELEC. UTIL.	24,342	1,072	64,358	7,822	4,768	305,262	2,952
AL	2018	02	FUEL COMB. INDUSTRIAL	69,198	275	38,781	6,462	3,613	43,170	2,295
AL	2018	03	FUEL COMB. OTHER	43,744	164	20,185	5,641	4,818	37,162	21,215
AL	2018	04	CHEMICAL & ALLIED PRODUCT	7,384	46	2,804	1,523	1,106	16,509	8,040
AL	2018	05	METALS PROCESSING	49,770	674	7,519	11,036	9,423	21,824	4,234
AL	2018	06	PETROLEUM & RELATED	13,002	0	848	258	207	22,242	3,421
AL	2018	07	OTHER INDUSTRIAL PROCESSES	60,452	1,732	30,831	27,727	11,812	21,843	30,267
AL	2018	08	SOLVENT UTILIZATION	301	0	317	200	169	4	112,412
AL	2018	09	STORAGE & TRANSPORT	234	0	307	1,366	699	17	18,900
AL	2018	10	WASTE DISPOSAL & RECYCLING	88,758	13	3,867	15,343	14,143	718	11,938
AL	2018	11	HIGHWAY VEHICLES	797,966	7,296	46,222	2,488	1,262	720	47,296
AL	2018	12	OFF-HIGHWAY	488,924	42	43,799	3,041	2,835	2,818	40,407
AL	2018	14	MISCELLANEOUS	464,235	73,529	9,803	458,551	85,538	2,686	22,686
	2018 Total			**2,108,311**	**84,843**	**269,643**	**541,458**	**140,394**	**474,974**	**326,063**

State Tier 1 Emission Totals

State	Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
FL	2002	01	FUEL COMB. ELEC. UTIL.	55,899	222	282,507	21,391	15,575	483,590	2,531
FL	2002	02	FUEL COMB. INDUSTRIAL	64,794	131	45,153	20,442	18,547	42,524	4,219
FL	2002	03	FUEL COMB. OTHER	49,230	99	11,593	8,464	8,074	20,031	16,123
FL	2002	04	CHEMICAL & ALLIED PRODUCT	745	1,101	2,221	1,868	1,488	34,462	3,542
FL	2002	05	METALS PROCESSING	1,404	1	194	449	334	882	82
FL	2002	06	PETROLEUM & RELATED	1,070	0	560	259	129	470	724
FL	2002	07	OTHER INDUSTRIAL PROCESSES	18,586	19	12,325	23,419	11,844	6,515	27,024
FL	2002	08	SOLVENT UTILIZATION	0	0	1	128	110	0	304,582
FL	2002	09	STORAGE & TRANSPORT	161	0	561	1,645	720	38	79,281
FL	2002	10	WASTE DISPOSAL & RECYCLING	175,989	351	6,123	22,142	21,604	659	17,449
FL	2002	11	HIGHWAY VEHICLES	4,693,893	18,078	466,098	11,253	7,852	20,872	495,225
FL	2002	12	OFF-HIGHWAY	1,920,729	134	180,627	18,281	17,415	20,614	272,072
FL	2002	14	MISCELLANEOUS	764,337	40,324	15,083	498,855	115,287	4,129	41,274
	2002 Total			7,746,839	60,460	1,023,045	628,597	218,979	634,786	1,264,128
FL	2009	01	FUEL COMB. ELEC. UTIL.	35,928	1,631	86,165	9,007	5,910	186,055	1,910
FL	2009	02	FUEL COMB. INDUSTRIAL	69,972	146	44,480	16,265	14,827	38,225	4,473
FL	2009	03	FUEL COMB. OTHER	33,014	100	10,800	7,555	7,174	19,882	10,907
FL	2009	04	CHEMICAL & ALLIED PRODUCT	901	1,231	2,461	1,908	1,526	34,961	3,821
FL	2009	05	METALS PROCESSING	1,545	1	176	361	251	993	82
FL	2009	06	PETROLEUM & RELATED	1,190	0	612	304	156	519	748
FL	2009	07	OTHER INDUSTRIAL PROCESSES	18,593	26	13,521	33,084	19,357	6,881	26,413
FL	2009	08	SOLVENT UTILIZATION	0	0	1	132	113	0	319,723
FL	2009	09	STORAGE & TRANSPORT	187	0	621	1,661	727	50	83,880
FL	2009	10	WASTE DISPOSAL & RECYCLING	177,953	342	6,251	22,971	22,364	698	17,241
FL	2009	11	HIGHWAY VEHICLES	3,446,095	21,737	314,307	9,953	6,216	2,120	323,290
FL	2009	12	OFF-HIGHWAY	2,104,920	148	163,794	15,613	14,866	8,967	209,543
FL	2009	14	MISCELLANEOUS	764,004	41,471	15,075	557,331	120,796	4,129	41,290
	2009 Total			6,654,301	66,833	658,265	676,145	214,282	303,479	1,043,321
FL	2018	01	FUEL COMB. ELEC. UTIL.	53,772	2,976	73,125	9,953	6,843	132,177	2,376
FL	2018	02	FUEL COMB. INDUSTRIAL	76,847	156	47,835	17,808	16,255	40,443	4,892
FL	2018	03	FUEL COMB. OTHER	27,094	110	12,344	7,254	6,852	20,975	8,878
FL	2018	04	CHEMICAL & ALLIED PRODUCT	1,200	1,448	3,119	2,367	1,907	41,395	4,739
FL	2018	05	METALS PROCESSING	1,973	2	225	466	323	1,325	106
FL	2018	06	PETROLEUM & RELATED	1,513	0	778	387	198	659	918
FL	2018	07	OTHER INDUSTRIAL PROCESSES	20,748	35	15,855	39,871	23,301	7,741	29,716
FL	2018	08	SOLVENT UTILIZATION	0	0	1	158	135	0	387,657
FL	2018	09	STORAGE & TRANSPORT	226	0	690	2,008	879	58	87,732
FL	2018	10	WASTE DISPOSAL & RECYCLING	180,730	418	6,486	24,140	23,427	769	18,335
FL	2018	11	HIGHWAY VEHICLES	3,086,330	26,154	154,611	8,489	4,242	2,533	216,620
FL	2018	12	OFF-HIGHWAY	2,323,327	171	127,885	12,497	11,868	7,536	183,452
FL	2018	14	MISCELLANEOUS	763,701	43,251	15,068	628,984	127,364	4,129	41,338
	2018 Total			6,537,461	74,720	458,023	754,381	223,592	259,739	986,760

State Tier 1 Emission Totals

State	Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
GA	2002	01	FUEL COMB. ELEC. UTIL.	9,650	86	148,126	11,467	5,070	517,633	1,256
GA	2002	02	FUEL COMB. INDUSTRIAL	59,492	27	53,039	12,037	7,886	88,791	3,956
GA	2002	03	FUEL COMB. OTHER	63,314	17	14,465	10,142	10,057	10,740	27,226
GA	2002	04	CHEMICAL & ALLIED PRODUCT	5,387	920	2,277	391	305	2,721	2,668
GA	2002	05	METALS PROCESSING	330	0	60	147	94	0	70
GA	2002	06	PETROLEUM & RELATED	41	0	3	69	44	68	175
GA	2002	07	OTHER INDUSTRIAL PROCESSES	27,960	2,666	12,215	39,630	13,073	8,701	26,999
GA	2002	08	SOLVENT UTILIZATION	4	0	22	13	13	0	234,744
GA	2002	09	STORAGE & TRANSPORT	39	0	6	583	360	0	26,334
GA	2002	10	WASTE DISPOSAL & RECYCLING	203,892	16	6,872	29,227	28,311	312	18,964
GA	2002	11	HIGHWAY VEHICLES	2,833,468	10,524	308,013	7,236	5,158	12,155	267,378
GA	2002	12	OFF-HIGHWAY	791,158	60	97,961	8,618	8,226	9,005	85,965
GA	2002	14	MISCELLANEOUS	498,622	83,032	10,279	687,028	116,756	2,815	25,618
	2002 Total			4,493,357	97,349	653,338	806,587	195,354	652,942	721,352
GA	2009	01	FUEL COMB. ELEC. UTIL.	23,721	686	98,497	17,891	10,907	417,449	2,314
GA	2009	02	FUEL COMB. INDUSTRIAL	63,067	28	53,726	11,206	7,390	89,850	4,163
GA	2009	03	FUEL COMB. OTHER	45,184	17	15,347	8,496	8,400	10,981	15,683
GA	2009	04	CHEMICAL & ALLIED PRODUCT	6,044	1,032	2,531	436	341	2,743	2,814
GA	2009	05	METALS PROCESSING	363	0	61	159	100	0	47
GA	2009	06	PETROLEUM & RELATED	50	0	4	83	54	82	154
GA	2009	07	OTHER INDUSTRIAL PROCESSES	29,976	2,902	12,528	45,339	14,758	7,662	28,441
GA	2009	08	SOLVENT UTILIZATION	4	0	25	14	14	0	216,248
GA	2009	09	STORAGE & TRANSPORT	45	0	7	649	401	0	27,821
GA	2009	10	WASTE DISPOSAL & RECYCLING	218,460	18	7,419	31,955	30,900	360	18,711
GA	2009	11	HIGHWAY VEHICLES	2,053,694	12,660	208,393	6,103	3,869	1,254	184,239
GA	2009	12	OFF-HIGHWAY	882,970	68	85,733	7,521	7,175	2,725	67,686
GA	2009	14	MISCELLANEOUS	515,329	91,406	10,637	765,043	125,665	2,914	26,388
	2009 Total			3,838,907	108,817	494,908	894,896	209,973	536,020	594,708
GA	2018	01	FUEL COMB. ELEC. UTIL.	44,476	1,677	75,717	20,909	13,983	230,856	2,841
GA	2018	02	FUEL COMB. INDUSTRIAL	67,067	30	57,232	11,755	7,769	94,403	4,424
GA	2018	03	FUEL COMB. OTHER	39,440	17	17,801	7,722	7,622	11,958	11,482
GA	2018	04	CHEMICAL & ALLIED PRODUCT	7,076	1,208	2,982	517	405	3,436	3,524
GA	2018	05	METALS PROCESSING	421	0	76	185	118	0	55
GA	2018	06	PETROLEUM & RELATED	63	0	5	105	68	104	191
GA	2018	07	OTHER INDUSTRIAL PROCESSES	33,611	3,559	14,460	55,130	17,899	8,748	33,333
GA	2018	08	SOLVENT UTILIZATION	5	0	30	22	22	0	264,326
GA	2018	09	STORAGE & TRANSPORT	54	0	9	764	470	0	29,409
GA	2018	10	WASTE DISPOSAL & RECYCLING	235,690	22	8,120	35,280	34,038	423	20,411
GA	2018	11	HIGHWAY VEHICLES	1,765,020	14,871	99,821	4,995	2,517	1,458	105,507
GA	2018	12	OFF-HIGHWAY	973,872	79	64,579	6,015	5,730	1,709	56,761
GA	2018	14	MISCELLANEOUS	515,220	102,075	10,635	859,835	134,730	2,914	26,368
	2018 Total			3,682,015	123,537	351,467	1,003,235	225,372	356,010	558,631

State Tier 1 Emission Totals

State	Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
KY	2002	01	FUEL COMB. ELEC. UTIL.	12,607	321	201,928	4,795	2,847	495,153	1,481
KY	2002	02	FUEL COMB. INDUSTRIAL	14,110	182	60,716	2,155	1,463	41,825	1,566
KY	2002	03	FUEL COMB. OTHER	40,806	55	4,997	7,679	7,352	9,647	12,711
KY	2002	04	CHEMICAL & ALLIED PRODUCT	176	214	296	774	581	2,345	3,462
KY	2002	05	METALS PROCESSING	89,197	6	1,082	3,396	2,720	12,328	1,508
KY	2002	06	PETROLEUM & RELATED	4,304	335	2,519	308	205	5,747	2,895
KY	2002	07	OTHER INDUSTRIAL PROCESSES	6,493	78	6,518	31,429	10,394	3,333	25,388
KY	2002	08	SOLVENT UTILIZATION	0	10	9	317	241	1	61,834
KY	2002	09	STORAGE & TRANSPORT	33	8	15	1,920	1,177	3	18,853
KY	2002	10	WASTE DISPOSAL & RECYCLING	20,622	8	1,768	7,229	6,476	606	7,927
KY	2002	11	HIGHWAY VEHICLES	1,260,682	5,044	154,899	3,720	2,693	5,974	98,311
KY	2002	12	OFF-HIGHWAY	325,993	31	104,571	6,425	6,046	14,043	44,805
KY	2002	14	MISCELLANEOUS	25,849	51,026	556	197,402	28,291	146	5,238
	2002 Total			1,800,871	57,318	539,873	267,547	70,486	591,151	285,977
KY	2009	01	FUEL COMB. ELEC. UTIL.	15,812	400	92,021	6,463	4,279	290,193	1,369
KY	2009	02	FUEL COMB. INDUSTRIAL	14,986	195	61,683	2,105	1,456	42,433	1,476
KY	2009	03	FUEL COMB. OTHER	30,045	54	5,178	7,035	6,725	10,123	9,148
KY	2009	04	CHEMICAL & ALLIED PRODUCT	179	249	300	851	633	2,384	3,635
KY	2009	05	METALS PROCESSING	99,428	7	1,156	3,246	2,550	13,735	1,772
KY	2009	06	PETROLEUM & RELATED	4,818	377	2,828	344	230	6,460	3,052
KY	2009	07	OTHER INDUSTRIAL PROCESSES	7,212	84	6,674	32,194	10,912	3,634	27,548
KY	2009	08	SOLVENT UTILIZATION	0	10	11	371	283	1	62,595
KY	2009	09	STORAGE & TRANSPORT	38	9	18	2,064	1,268	3	20,038
KY	2009	10	WASTE DISPOSAL & RECYCLING	22,388	9	1,979	7,770	6,925	733	7,725
KY	2009	11	HIGHWAY VEHICLES	942,350	5,795	97,912	3,002	1,941	585	63,258
KY	2009	12	OFF-HIGHWAY	357,800	34	94,752	5,544	5,203	9,180	38,558
KY	2009	14	MISCELLANEOUS	32,627	52,915	702	206,463	29,601	187	6,335
	2009 Total			1,527,684	60,137	365,214	277,453	72,006	379,651	246,509
KY	2018	01	FUEL COMB. ELEC. UTIL.	17,144	476	64,378	6,694	4,434	226,062	1,426
KY	2018	02	FUEL COMB. INDUSTRIAL	15,692	205	64,533	2,203	1,528	43,772	1,555
KY	2018	03	FUEL COMB. OTHER	24,764	53	5,550	6,469	6,169	9,947	7,479
KY	2018	04	CHEMICAL & ALLIED PRODUCT	219	317	367	1,054	781	2,884	4,384
KY	2018	05	METALS PROCESSING	114,470	9	1,508	3,898	3,065	15,800	2,343
KY	2018	06	PETROLEUM & RELATED	5,495	434	3,244	392	262	7,426	3,394
KY	2018	07	OTHER INDUSTRIAL PROCESSES	8,303	93	7,872	35,349	12,377	4,141	31,394
KY	2018	08	SOLVENT UTILIZATION	0	12	14	464	352	1	73,525
KY	2018	09	STORAGE & TRANSPORT	44	10	21	2,408	1,481	4	21,196
KY	2018	10	WASTE DISPOSAL & RECYCLING	24,677	11	2,256	8,481	7,518	894	8,392
KY	2018	11	HIGHWAY VEHICLES	782,423	6,584	42,104	2,283	1,160	651	39,084
KY	2018	12	OFF-HIGHWAY	381,215	40	79,392	4,556	4,256	8,592	30,920
KY	2018	14	MISCELLANEOUS	33,931	55,118	729	218,725	30,626	196	7,254
	2018 Total			1,408,378	63,361	271,967	292,975	74,010	320,369	232,347

State Tier 1 Emission Totals

State	Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
MS	2002	01	FUEL COMB. ELEC. UTIL.	5,219	198	40,433	1,706	1,147	60,086	629
MS	2002	02	FUEL COMB. INDUSTRIAL	22,710	28	48,726	5,007	3,634	9,740	8,023
MS	2002	03	FUEL COMB. OTHER	36,752	34	4,502	5,445	5,414	789	22,923
MS	2002	04	CHEMICAL & ALLIED PRODUCT	15,410	361	1,725	849	440	1,663	2,375
MS	2002	05	METALS PROCESSING	1,031	0	115	122	58	36	371
MS	2002	06	PETROLEUM & RELATED	975	20	1,187	790	335	15,560	20,788
MS	2002	07	OTHER INDUSTRIAL PROCESSES	13,884	747	9,219	27,617	8,051	8,866	15,525
MS	2002	08	SOLVENT UTILIZATION	45	7	105	219	178	1	80,760
MS	2002	09	STORAGE & TRANSPORT	74	0	80	124	38	40	23,327
MS	2002	10	WASTE DISPOSAL & RECYCLING	1,414	9	89	447	324	31	886
MS	2002	11	HIGHWAY VEHICLES	894,639	3,577	111,791	2,856	2,109	4,604	82,810
MS	2002	12	OFF-HIGHWAY	236,752	23	88,787	5,010	4,690	11,315	41,081
MS	2002	14	MISCELLANEOUS	14,529	58,746	312	323,622	43,028	84	708
	2002 Total			1,243,435	63,753	307,072	373,815	69,446	112,814	300,206
MS	2009	01	FUEL COMB. ELEC. UTIL.	5,051	334	36,011	4,957	4,777	76,579	404
MS	2009	02	FUEL COMB. INDUSTRIAL	24,607	30	44,095	3,728	2,787	7,388	8,007
MS	2009	03	FUEL COMB. OTHER	26,023	33	4,514	5,278	5,245	751	17,445
MS	2009	04	CHEMICAL & ALLIED PRODUCT	16,141	405	1,955	941	488	1,880	2,614
MS	2009	05	METALS PROCESSING	1,098	0	128	129	62	37	402
MS	2009	06	PETROLEUM & RELATED	1,101	23	1,262	894	379	7,926	13,317
MS	2009	07	OTHER INDUSTRIAL PROCESSES	14,181	197	8,376	31,381	8,629	8,254	16,282
MS	2009	08	SOLVENT UTILIZATION	50	8	118	239	194	1	80,393
MS	2009	09	STORAGE & TRANSPORT	92	0	100	172	59	49	23,494
MS	2009	10	WASTE DISPOSAL & RECYCLING	1,486	10	95	473	339	32	743
MS	2009	11	HIGHWAY VEHICLES	628,151	4,026	69,949	2,290	1,522	397	49,670
MS	2009	12	OFF-HIGHWAY	257,453	25	80,567	4,270	3,985	7,191	36,197
MS	2009	14	MISCELLANEOUS	48,314	63,886	1,037	337,018	46,695	283	2,295
	2009 Total			1,023,747	68,978	248,207	391,770	75,160	110,767	251,261
MS	2018	01	FUEL COMB. ELEC. UTIL.	15,282	827	10,271	7,187	7,033	15,146	1,114
MS	2018	02	FUEL COMB. INDUSTRIAL	27,056	33	46,929	4,093	3,058	8,169	8,559
MS	2018	03	FUEL COMB. OTHER	20,900	32	4,767	4,964	4,928	726	14,670
MS	2018	04	CHEMICAL & ALLIED PRODUCT	20,175	475	2,337	1,132	588	2,242	3,290
MS	2018	05	METALS PROCESSING	1,357	0	167	160	79	48	461
MS	2018	06	PETROLEUM & RELATED	1,267	26	1,438	1,010	430	19,028	14,407
MS	2018	07	OTHER INDUSTRIAL PROCESSES	16,267	216	9,996	38,494	10,494	9,657	20,301
MS	2018	08	SOLVENT UTILIZATION	60	9	141	301	244	1	98,354
MS	2018	09	STORAGE & TRANSPORT	115	0	124	210	73	62	24,537
MS	2018	10	WASTE DISPOSAL & RECYCLING	1,638	12	114	533	372	34	870
MS	2018	11	HIGHWAY VEHICLES	528,898	4,565	29,717	1,688	876	441	30,734
MS	2018	12	OFF-HIGHWAY	270,726	29	68,252	3,452	3,203	6,638	28,842
MS	2018	14	MISCELLANEOUS	50,160	70,096	1,076	352,321	47,869	294	2,377
	2018 Total			953,900	76,320	175,329	415,546	79,246	62,486	248,517

State Tier 1 Emission Totals

State	Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
NC	2002	01	FUEL COMB. ELEC. UTIL.	14,074	55	148,809	22,994	16,623	478,488	986
NC	2002	02	FUEL COMB. INDUSTRIAL	23,578	301	48,590	5,596	4,334	33,395	2,540
NC	2002	03	FUEL COMB. OTHER	217,008	2,318	16,460	31,777	26,746	3,971	87,985
NC	2002	04	CHEMICAL & ALLIED PRODUCT	13,952	535	859	866	538	5,736	4,313
NC	2002	05	METALS PROCESSING	5,876	60	201	564	467	1,010	2,512
NC	2002	06	PETROLEUM & RELATED	461	0	174	104	52	283	140
NC	2002	07	OTHER INDUSTRIAL PROCESSES	8,552	480	7,380	25,328	8,924	3,426	18,025
NC	2002	08	SOLVENT UTILIZATION	130	307	229	524	484	26	151,383
NC	2002	09	STORAGE & TRANSPORT	66	46	53	639	354	1	16,120
NC	2002	10	WASTE DISPOSAL & RECYCLING	125,528	247	7,482	2,239	2,218	1,666	15,568
NC	2002	11	HIGHWAY VEHICLES	3,176,811	10,455	341,198	6,905	4,816	13,343	253,374
NC	2002	12	OFF-HIGHWAY	808,231	65	84,284	7,348	7,005	7,693	94,480
NC	2002	14	MISCELLANEOUS	72,673	159,069	1,561	233,551	36,414	423	3,528
	2002 Total			4,466,940	173,937	657,279	338,434	108,975	549,463	650,954
NC	2009	01	FUEL COMB. ELEC. UTIL.	14,942	445	66,517	22,152	15,949	242,286	954
NC	2009	02	FUEL COMB. INDUSTRIAL	24,871	312	38,160	5,159	3,871	30,788	2,509
NC	2009	03	FUEL COMB. OTHER	158,837	2,723	18,441	25,334	19,467	4,060	49,819
NC	2009	04	CHEMICAL & ALLIED PRODUCT	14,732	599	933	981	607	6,286	4,925
NC	2009	05	METALS PROCESSING	6,358	67	207	627	528	1,130	2,790
NC	2009	06	PETROLEUM & RELATED	556	0	212	127	64	349	162
NC	2009	07	OTHER INDUSTRIAL PROCESSES	9,211	507	8,061	28,524	9,788	3,712	18,144
NC	2009	08	SOLVENT UTILIZATION	142	335	246	549	506	28	136,114
NC	2009	09	STORAGE & TRANSPORT	75	51	55	696	380	1	17,367
NC	2009	10	WASTE DISPOSAL & RECYCLING	139,518	307	8,354	2,774	2,750	1,913	17,331
NC	2009	11	HIGHWAY VEHICLES	2,184,901	12,637	207,648	5,861	3,643	1,311	163,803
NC	2009	12	OFF-HIGHWAY	887,605	72	70,997	6,055	5,760	1,892	74,056
NC	2009	14	MISCELLANEOUS	96,825	167,131	2,080	250,912	49,956	566	4,648
	2009 Total			3,538,573	185,185	421,913	349,750	113,268	294,321	492,624
NC	2018	01	FUEL COMB. ELEC. UTIL.	20,223	663	62,346	37,376	29,791	108,492	1,345
NC	2018	02	FUEL COMB. INDUSTRIAL	26,872	341	40,897	5,594	4,222	32,507	2,702
NC	2018	03	FUEL COMB. OTHER	131,365	2,857	20,027	21,847	16,231	4,050	34,104
NC	2018	04	CHEMICAL & ALLIED PRODUCT	18,463	702	1,105	1,175	726	7,414	6,113
NC	2018	05	METALS PROCESSING	7,576	76	255	771	657	1,335	3,516
NC	2018	06	PETROLEUM & RELATED	712	0	272	162	82	448	207
NC	2018	07	OTHER INDUSTRIAL PROCESSES	10,675	559	9,259	34,339	11,601	4,357	20,978
NC	2018	08	SOLVENT UTILIZATION	169	375	277	588	540	31	152,979
NC	2018	09	STORAGE & TRANSPORT	91	59	67	808	430	2	19,511
NC	2018	10	WASTE DISPOSAL & RECYCLING	156,599	387	9,456	3,502	3,474	2,234	19,789
NC	2018	11	HIGHWAY VEHICLES	1,510,848	13,077	81,706	4,299	2,158	1,323	88,620
NC	2018	12	OFF-HIGHWAY	960,709	83	49,046	4,298	4,069	905	61,327
NC	2018	14	MISCELLANEOUS	111,705	177,474	2,399	273,030	54,376	655	5,333
	2018 Total			2,956,008	196,655	277,112	387,788	128,356	163,752	416,523

State Tier 1 Emission Totals

State	Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
SC	2002	01	FUEL COMB. ELEC. UTIL.	6,969	141	88,528	21,827	17,521	210,272	470
SC	2002	02	FUEL COMB. INDUSTRIAL	31,771	97	38,081	5,308	3,641	44,958	1,338
SC	2002	03	FUEL COMB. OTHER	75,800	65	4,367	6,261	6,166	4,318	49,171
SC	2002	04	CHEMICAL & ALLIED PRODUCT	2,526	173	25	501	318	59	8,784
SC	2002	05	METALS PROCESSING	13,833	0	450	639	408	4,160	660
SC	2002	06	PETROLEUM & RELATED	248	0	283	120	71	170	114
SC	2002	07	OTHER INDUSTRIAL PROCESSES	9,502	1,237	15,145	15,224	6,981	12,128	16,342
SC	2002	08	SOLVENT UTILIZATION	0	1	1	78	60	0	88,878
SC	2002	09	STORAGE & TRANSPORT	10	0	4	1,025	626	0	21,009
SC	2002	10	WASTE DISPOSAL & RECYCLING	67,908	10	4,063	9,172	8,641	625	15,291
SC	2002	11	HIGHWAY VEHICLES	1,275,161	4,684	140,428	3,446	2,496	5,958	106,792
SC	2002	12	OFF-HIGHWAY	413,964	33	50,249	4,152	3,945	4,866	55,016
SC	2002	14	MISCELLANEOUS	221,436	28,903	4,335	262,974	47,136	1,187	12,535
	2002 Total			2,119,129	35,343	345,960	330,728	98,009	288,701	376,401
SC	2009	01	FUEL COMB. ELEC. UTIL.	11,135	343	46,915	19,395	16,042	124,608	660
SC	2009	02	FUEL COMB. INDUSTRIAL	33,201	105	35,660	3,307	2,370	37,792	1,414
SC	2009	03	FUEL COMB. OTHER	49,914	63	4,551	5,264	5,183	4,359	25,073
SC	2009	04	CHEMICAL & ALLIED PRODUCT	2,798	173	26	543	345	60	7,409
SC	2009	05	METALS PROCESSING	15,632	0	449	631	378	4,856	663
SC	2009	06	PETROLEUM & RELATED	302	0	340	145	86	200	131
SC	2009	07	OTHER INDUSTRIAL PROCESSES	10,241	1,403	15,069	18,267	8,045	13,443	15,697
SC	2009	08	SOLVENT UTILIZATION	1	1	1	90	69	0	95,538
SC	2009	09	STORAGE & TRANSPORT	13	0	5	569	352	0	21,989
SC	2009	10	WASTE DISPOSAL & RECYCLING	70,379	11	4,215	9,526	8,977	666	15,998
SC	2009	11	HIGHWAY VEHICLES	912,280	5,510	91,696	2,878	1,870	556	67,281
SC	2009	12	OFF-HIGHWAY	448,625	36	43,235	3,471	3,294	1,701	43,061
SC	2009	14	MISCELLANEOUS	250,690	31,416	4,962	282,480	51,151	1,359	13,906
	2009 Total			1,805,210	39,061	247,124	346,565	98,163	189,601	308,820
SC	2018	01	FUEL COMB. ELEC. UTIL.	14,786	617	51,456	28,826	25,032	93,274	906
SC	2018	02	FUEL COMB. INDUSTRIAL	36,105	113	37,333	4,037	2,855	39,714	1,525
SC	2018	03	FUEL COMB. OTHER	39,627	65	5,135	4,791	4,711	4,469	16,391
SC	2018	04	CHEMICAL & ALLIED PRODUCT	3,296	212	32	664	423	74	9,107
SC	2018	05	METALS PROCESSING	18,853	0	587	773	476	5,920	868
SC	2018	06	PETROLEUM & RELATED	389	0	438	186	110	258	166
SC	2018	07	OTHER INDUSTRIAL PROCESSES	12,136	1,566	17,507	20,215	9,044	15,863	18,636
SC	2018	08	SOLVENT UTILIZATION	1	1	1	116	89	0	120,433
SC	2018	09	STORAGE & TRANSPORT	16	0	6	1,380	842	0	22,742
SC	2018	10	WASTE DISPOSAL & RECYCLING	73,403	13	4,512	10,038	9,443	735	17,167
SC	2018	11	HIGHWAY VEHICLES	800,619	6,472	42,354	2,258	1,154	643	44,700
SC	2018	12	OFF-HIGHWAY	481,332	41	31,758	2,617	2,474	1,198	36,131
SC	2018	14	MISCELLANEOUS	250,637	34,345	4,961	306,342	53,367	1,359	13,896
	2018 Total			1,731,198	43,446	196,081	382,244	110,019	163,509	302,665

State Tier 1 Emission Totals

State	Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
TN	2002	01	FUEL COMB. ELEC. UTIL.	6,787	197	152,137	13,866	11,491	320,146	890
TN	2002	02	FUEL COMB. INDUSTRIAL	15,257	6	44,510	8,015	6,649	74,146	2,021
TN	2002	03	FUEL COMB. OTHER	77,857	25	15,568	7,967	7,549	16,253	18,346
TN	2002	04	CHEMICAL & ALLIED PRODUCT	36,920	1,518	1,772	3,246	2,201	6,516	24,047
TN	2002	05	METALS PROCESSING	41,371	14	1,182	7,620	7,030	5,818	6,898
TN	2002	06	PETROLEUM & RELATED	543	0	331	314	243	383	1,850
TN	2002	07	OTHER INDUSTRIAL PROCESSES	9,420	44	11,794	30,484	12,867	5,845	27,336
TN	2002	08	SOLVENT UTILIZATION	275	1	5,066	2,103	1,818	58	110,872
TN	2002	09	STORAGE & TRANSPORT	22	24	105	1,249	736	134	21,962
TN	2002	10	WASTE DISPOSAL & RECYCLING	22,143	31	1,839	7,068	6,469	349	15,505
TN	2002	11	HIGHWAY VEHICLES	1,967,658	6,616	233,324	5,338	3,919	9,184	169,914
TN	2002	12	OFF-HIGHWAY	505,163	43	96,827	6,819	6,458	10,441	66,450
TN	2002	14	MISCELLANEOUS	10,824	34,318	225	180,006	25,193	60	2,252
	2002 Total			2,694,242	42,836	564,680	274,095	92,622	449,332	468,342
TN	2009	01	FUEL COMB. ELEC. UTIL.	7,214	227	66,405	15,608	13,092	255,410	932
TN	2009	02	FUEL COMB. INDUSTRIAL	15,943	7	37,369	7,195	6,004	63,511	1,915
TN	2009	03	FUEL COMB. OTHER	61,443	27	14,793	7,134	6,786	16,955	12,781
TN	2009	04	CHEMICAL & ALLIED PRODUCT	35,440	1,719	1,958	3,519	2,400	7,056	15,594
TN	2009	05	METALS PROCESSING	45,183	15	1,245	7,337	6,823	6,537	7,676
TN	2009	06	PETROLEUM & RELATED	615	0	373	356	276	435	1,433
TN	2009	07	OTHER INDUSTRIAL PROCESSES	9,911	62	12,635	32,661	13,737	6,240	28,598
TN	2009	08	SOLVENT UTILIZATION	309	1	5,984	2,431	2,095	65	112,312
TN	2009	09	STORAGE & TRANSPORT	26	31	12	1,218	733	42	23,687
TN	2009	10	WASTE DISPOSAL & RECYCLING	23,810	35	1,993	7,618	6,968	393	14,922
TN	2009	11	HIGHWAY VEHICLES	1,361,408	7,738	147,757	4,238	2,782	831	108,200
TN	2009	12	OFF-HIGHWAY	554,121	48	86,641	5,877	5,557	5,651	55,358
TN	2009	14	MISCELLANEOUS	17,921	35,200	379	192,464	26,830	102	2,814
	2009 Total			2,133,342	45,108	377,545	287,655	94,083	363,228	386,222
TN	2018	01	FUEL COMB. ELEC. UTIL.	7,723	241	31,715	15,941	13,387	112,672	976
TN	2018	02	FUEL COMB. INDUSTRIAL	17,038	7	38,908	7,693	6,447	65,823	2,054
TN	2018	03	FUEL COMB. OTHER	54,486	30	15,503	6,757	6,412	18,091	10,269
TN	2018	04	CHEMICAL & ALLIED PRODUCT	45,455	2,053	2,424	4,443	3,044	9,088	20,071
TN	2018	05	METALS PROCESSING	52,834	17	1,589	9,579	8,953	7,790	9,956
TN	2018	06	PETROLEUM & RELATED	715	0	430	416	324	508	1,636
TN	2018	07	OTHER INDUSTRIAL PROCESSES	10,946	88	14,157	38,250	16,286	7,286	35,587
TN	2018	08	SOLVENT UTILIZATION	380	1	7,675	3,155	2,718	79	140,793
TN	2018	09	STORAGE & TRANSPORT	33	41	14	1,572	939	49	25,493
TN	2018	10	WASTE DISPOSAL & RECYCLING	26,712	42	2,326	8,562	7,828	468	17,530
TN	2018	11	HIGHWAY VEHICLES	1,150,516	8,962	65,242	3,199	1,643	944	64,665
TN	2018	12	OFF-HIGHWAY	593,100	55	70,226	4,672	4,403	5,207	45,084
TN	2018	14	MISCELLANEOUS	19,210	36,213	408	209,058	28,209	111	3,293
	2018 Total			1,979,148	47,749	250,619	313,294	100,592	228,116	377,408

State Tier 1 Emission Totals

State	Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
VA	2002	01	FUEL COMB. ELEC. UTIL.	6,797	130	85,081	3,892	2,650	233,691	747
VA	2002	02	FUEL COMB. INDUSTRIAL	64,386	100	75,807	18,480	8,453	137,448	5,332
VA	2002	03	FUEL COMB. OTHER	98,788	13	15,648	11,572	11,236	5,508	54,496
VA	2002	04	CHEMICAL & ALLIED PRODUCT	321	2,158	8,062	449	393	2,126	1,530
VA	2002	05	METALS PROCESSING	3,580	0	937	1,575	1,349	5,251	513
VA	2002	06	PETROLEUM & RELATED	23,384	0	182	255	153	170	501
VA	2002	07	OTHER INDUSTRIAL PROCESSES	12,002	726	9,279	33,409	9,795	17,702	13,086
VA	2002	08	SOLVENT UTILIZATION	0	4	0	225	210	2	111,511
VA	2002	09	STORAGE & TRANSPORT	16	7	11	745	505	0	26,121
VA	2002	10	WASTE DISPOSAL & RECYCLING	16,566	109	1,866	3,152	1,277	1,581	4,065
VA	2002	11	HIGHWAY VEHICLES	2,170,508	7,837	219,602	4,537	3,090	7,218	144,684
VA	2002	12	OFF-HIGHWAY	660,105	48	63,219	8,728	8,288	8,663	74,866
VA	2002	14	MISCELLANEOUS	13,225	43,948	285	182,193	21,835	74	706
	2002 Total			3,069,678	55,080	479,980	269,212	69,233	419,436	438,158
VA	2009	01	FUEL COMB. ELEC. UTIL.	12,509	694	66,219	5,508	4,067	225,653	778
VA	2009	02	FUEL COMB. INDUSTRIAL	67,422	105	67,263	18,346	8,345	135,612	5,483
VA	2009	03	FUEL COMB. OTHER	66,037	14	15,966	10,062	9,742	5,258	28,063
VA	2009	04	CHEMICAL & ALLIED PRODUCT	286	2,082	7,790	477	413	1,996	1,419
VA	2009	05	METALS PROCESSING	3,397	0	827	1,563	1,332	4,813	390
VA	2009	06	PETROLEUM & RELATED	26,288	0	197	275	169	187	557
VA	2009	07	OTHER INDUSTRIAL PROCESSES	12,471	733	9,425	33,961	9,984	18,871	13,394
VA	2009	08	SOLVENT UTILIZATION	0	5	0	248	231	3	110,127
VA	2009	09	STORAGE & TRANSPORT	17	7	12	797	544	0	26,456
VA	2009	10	WASTE DISPOSAL & RECYCLING	20,109	119	2,174	3,823	1,515	1,805	4,789
VA	2009	11	HIGHWAY VEHICLES	1,495,771	9,066	133,170	3,760	2,254	900	89,678
VA	2009	12	OFF-HIGHWAY	726,815	53	54,993	7,510	7,136	1,707	57,009
VA	2009	14	MISCELLANEOUS	21,582	46,719	464	198,040	23,990	124	1,077
	2009 Total			2,452,703	59,596	358,500	284,369	69,721	396,929	339,219
VA	2018	01	FUEL COMB. ELEC. UTIL.	15,420	622	75,594	13,775	11,976	140,233	997
VA	2018	02	FUEL COMB. INDUSTRIAL	72,218	114	70,343	19,248	8,892	140,995	5,861
VA	2018	03	FUEL COMB. OTHER	53,171	14	17,852	9,427	9,086	5,369	18,603
VA	2018	04	CHEMICAL & ALLIED PRODUCT	338	2,462	9,211	579	502	2,291	1,708
VA	2018	05	METALS PROCESSING	4,034	0	1,017	1,861	1,592	5,948	469
VA	2018	06	PETROLEUM & RELATED	30,284	0	228	315	194	217	642
VA	2018	07	OTHER INDUSTRIAL PROCESSES	14,029	877	10,836	37,553	11,276	21,294	15,636
VA	2018	08	SOLVENT UTILIZATION	0	6	0	314	293	3	127,953
VA	2018	09	STORAGE & TRANSPORT	21	8	15	949	648	0	27,357
VA	2018	10	WASTE DISPOSAL & RECYCLING	24,293	141	2,595	4,694	1,828	2,171	5,821
VA	2018	11	HIGHWAY VEHICLES	1,310,698	10,757	61,881	3,343	1,641	1,059	60,454
VA	2018	12	OFF-HIGHWAY	797,683	61	40,393	6,208	5,891	507	49,052
VA	2018	14	MISCELLANEOUS	27,223	50,279	584	218,141	26,225	158	1,322
	2018 Total			2,349,413	65,342	290,549	316,406	80,044	320,246	315,875

State Tier 1 Emission Totals

State	Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
WV	2002	01	FUEL COMB. ELEC. UTIL.	10,117	121	222,437	4,472	2,163	500,381	1,140
WV	2002	02	FUEL COMB. INDUSTRIAL	8,685	97	33,831	1,583	1,332	37,118	1,097
WV	2002	03	FUEL COMB. OTHER	29,480	13	15,220	3,814	3,683	3,990	9,275
WV	2002	04	CHEMICAL & ALLIED PRODUCT MFG	50,835	80	1,627	950	831	9,052	5,755
WV	2002	05	METALS PROCESSING	28,837	143	1,570	8,749	7,515	5,619	1,393
WV	2002	06	PETROLEUM & RELATED INDUSTRIES	1	0	1,086	475	475	7,550	2,163
WV	2002	07	OTHER INDUSTRIAL PROCESSES	2,003	56	5,347	18,751	5,567	2,316	1,803
WV	2002	08	SOLVENT UTILIZATION	15	0	18	49	44	0	35,989
WV	2002	09	STORAGE & TRANSPORT	15	0	3	1,952	947	0	12,432
WV	2002	10	WASTE DISPOSAL & RECYCLING	9,395	8	599	4,153	3,731	100	5,098
WV	2002	11	HIGHWAY VEHICLES	560,717	1,933	59,612	1,395	1,003	2,489	40,066
WV	2002	12	OFF-HIGHWAY	133,113	9	33,239	1,850	1,728	2,112	18,566
WV	2002	14	MISCELLANEOUS	2,811	9,909	61	92,633	10,458	16	157
	2002 Total			836,024	12,371	374,650	140,825	39,478	570,742	134,936
WV	2009	01	FUEL COMB. ELEC. UTIL.	11,493	330	86,328	5,657	2,940	277,489	1,361
WV	2009	02	FUEL COMB. INDUSTRIAL	9,296	104	27,094	1,415	1,220	36,912	998
WV	2009	03	FUEL COMB. OTHER	21,558	13	14,229	3,351	3,216	4,047	6,824
WV	2009	04	CHEMICAL & ALLIED PRODUCT MFG	58,271	82	1,804	987	864	10,166	5,426
WV	2009	05	METALS PROCESSING	30,939	142	1,517	7,985	6,724	5,971	1,380
WV	2009	06	PETROLEUM & RELATED INDUSTRIES	1	0	1,221	535	535	8,495	2,172
WV	2009	07	OTHER INDUSTRIAL PROCESSES	2,288	59	4,995	19,228	5,899	2,570	2,064
WV	2009	08	SOLVENT UTILIZATION	17	0	20	52	47	0	32,305
WV	2009	09	STORAGE & TRANSPORT	17	0	3	2,062	1,003	0	12,997
WV	2009	10	WASTE DISPOSAL & RECYCLING	9,131	8	583	4,050	3,632	97	4,898
WV	2009	11	HIGHWAY VEHICLES	385,994	2,183	36,049	1,096	703	227	23,907
WV	2009	12	OFF-HIGHWAY	152,862	11	30,133	1,640	1,528	359	18,069
WV	2009	14	MISCELLANEOUS	4,116	10,574	89	92,900	10,624	23	219
	2009 Total			685,983	13,508	204,064	140,956	38,933	346,356	112,621
WV	2018	01	FUEL COMB. ELEC. UTIL.	11,961	180	51,241	6,349	3,648	115,324	1,387
WV	2018	02	FUEL COMB. INDUSTRIAL	9,917	111	28,710	1,493	1,290	38,531	1,072
WV	2018	03	FUEL COMB. OTHER	18,891	16	17,254	3,160	3,024	4,065	6,270
WV	2018	04	CHEMICAL & ALLIED PRODUCT MFG	70,252	99	2,183	1,188	1,041	12,280	6,560
WV	2018	05	METALS PROCESSING	36,850	183	2,061	10,944	9,372	7,182	1,790
WV	2018	06	PETROLEUM & RELATED INDUSTRIES	1	0	1,407	616	616	9,786	2,338
WV	2018	07	OTHER INDUSTRIAL PROCESSES	2,756	68	5,949	21,347	6,794	3,101	2,561
WV	2018	08	SOLVENT UTILIZATION	20	0	24	61	55	0	38,023
WV	2018	09	STORAGE & TRANSPORT	19	0	4	2,522	1,225	0	13,394
WV	2018	10	WASTE DISPOSAL & RECYCLING	9,237	10	592	4,134	3,692	98	5,272
WV	2018	11	HIGHWAY VEHICLES	319,030	2,484	16,274	844	428	255	15,463
WV	2018	12	OFF-HIGHWAY	167,424	13	25,710	1,292	1,198	56	14,086
WV	2018	14	MISCELLANEOUS	5,175	11,453	112	98,307	11,316	29	268
	2018 Total			651,532	14,617	151,521	152,256	43,699	190,706	108,484

		CO	NH3	NOX	PM10	PM2.5	SO2	VOC
VISTAS	**2002 Total**	31,034,756	666,451	5,442,572	3,916,030	1,094,698	4,858,865	5,079,254
VISTAS	**2009 Total**	25,854,812	722,418	3,721,469	4,155,033	1,119,806	3,454,666	4,118,474
VISTAS	**2018 Total**	24,357,364	790,588	2,692,309	4,559,582	1,205,324	2,539,907	3,873,273

APPENDIX D:

VISTAS TIER 1 EMISSION TOTALS

VISTAS Tier 1 Emission Totals

Year	TIER1	TIER 1 NAME	CO	NH3	NOX	PM10	PM2.5	SO2	VOC
2002	01	FUEL COMB. ELEC. UTIL.	139,579	1,710	1,524,690	114,256	79,263	3,723,175	12,417
2002	02	FUEL COMB. INDUSTRIAL	371,905	1,204	499,981	85,353	59,731	550,864	32,330
2002	03	FUEL COMB. OTHER	759,534	2,810	122,058	99,532	91,805	114,852	354,375
2002	04	CHEMICAL & ALLIED PRODUCT MFG	131,993	7,093	20,896	11,114	7,982	77,450	63,748
2002	05	METALS PROCESSING	223,705	601	11,801	32,367	27,778	49,143	17,306
2002	06	PETROLEUM & RELATED INDUSTRIES	44,633	355	7,204	2,887	1,863	53,392	33,374
2002	07	OTHER INDUSTRIAL PROCESSES	156,077	7,520	114,474	267,980	97,013	86,736	196,831
2002	08	SOLVENT UTILIZATION	687	331	5,677	3,805	3,284	90	1,288,990
2002	09	STORAGE & TRANSPORT	610	85	1,069	10,968	6,100	230	261,959
2002	10	WASTE DISPOSAL & RECYCLING	729,760	801	34,165	98,788	92,125	6,418	112,088
2002	11	HIGHWAY VEHICLES	20,199,593	74,325	2,193,387	50,584	35,929	88,684	1,778,345
2002	12	OFF-HIGHWAY	6,209,596	477	865,130	72,019	68,302	96,336	813,788
2002	14	MISCELLANEOUS	2,067,084	569,139	42,039	3,066,378	523,524	11,494	113,703
2002 Total			31,034,756	666,451	5,442,572	3,916,030	1,094,698	4,858,865	5,079,254
2009	01	FUEL COMB. ELEC. UTIL.	152,790	5,449	727,384	113,607	81,884	2,473,773	13,155
2009	02	FUEL COMB. INDUSTRIAL	391,510	1,305	445,832	74,864	51,709	523,163	32,629
2009	03	FUEL COMB. OTHER	544,310	3,201	123,331	85,412	77,042	112,463	207,146
2009	04	CHEMICAL & ALLIED PRODUCT MFG	140,910	7,611	22,031	11,898	8,528	81,191	54,270
2009	05	METALS PROCESSING	242,911	732	11,788	31,098	26,505	54,700	18,507
2009	06	PETROLEUM & RELATED INDUSTRIES	48,161	399	7,908	3,283	2,124	47,147	25,061
2009	07	OTHER INDUSTRIAL PROCESSES	166,088	7,545	117,625	298,836	111,304	90,649	203,100
2009	08	SOLVENT UTILIZATION	771	360	6,662	4,290	3,690	100	1,257,986
2009	09	STORAGE & TRANSPORT	702	98	1,087	11,035	6,051	160	275,466
2009	10	WASTE DISPOSAL & RECYCLING	770,459	869	36,697	105,463	97,855	7,287	113,566
2009	11	HIGHWAY VEHICLES	14,353,436	87,703	1,408,206	42,370	26,848	8,817	1,146,174
2009	12	OFF-HIGHWAY	6,827,857	530	767,707	61,528	58,279	42,845	649,786
2009	14	MISCELLANEOUS	2,214,906	606,617	45,212	3,311,350	567,986	12,370	121,629
2009 Total			25,854,812	722,418	3,721,469	4,155,033	1,119,806	3,454,666	4,118,474
2018	01	FUEL COMB. ELEC. UTIL.	225,129	9,351	560,200	154,832	120,895	1,479,499	16,318
2018	02	FUEL COMB. INDUSTRIAL	418,010	1,384	471,501	80,386	55,928	547,527	34,938
2018	03	FUEL COMB. OTHER	453,482	3,358	136,418	78,031	69,853	116,812	149,363
2018	04	CHEMICAL & ALLIED PRODUCT MFG	173,857	9,023	26,564	14,641	10,522	97,612	67,534
2018	05	METALS PROCESSING	288,138	961	15,006	39,673	34,058	67,170	23,798
2018	06	PETROLEUM & RELATED INDUSTRIES	53,442	460	9,088	3,846	2,491	60,676	27,321
2018	07	OTHER INDUSTRIAL PROCESSES	189,922	8,793	136,722	348,275	130,883	104,030	238,409
2018	08	SOLVENT UTILIZATION	936	404	8,480	5,378	4,618	119	1,516,454
2018	09	STORAGE & TRANSPORT	855	119	1,258	13,988	7,686	192	290,271
2018	10	WASTE DISPOSAL & RECYCLING	821,737	1,068	40,324	114,708	105,763	8,545	125,525
2018	11	HIGHWAY VEHICLES	12,052,347	101,223	639,931	33,884	17,080	10,027	713,143
2018	12	OFF-HIGHWAY	7,438,312	612	601,040	48,648	45,927	35,166	546,062
2018	14	MISCELLANEOUS	2,241,196	653,831	45,776	3,623,293	599,620	12,532	124,137
2018 Total			24,357,364	790,588	2,692,309	4,559,582	1,205,324	2,539,907	3,873,273

APPENDIX E:

AIRCRAFT PM EXCERPT FROM 2001 TUCSON REPORT

Final Report

EMISSIONS INVENTORIES FOR THE TUCSON AIR PLANNING AREA

VOLUME I. STUDY DESCRIPTION AND RESULTS

Prepared for

Pima Association of Governments
177 N. Church Avenue, Suite 405
Tucson, AZ 85701

Prepared by

Marianne Causley
Rumla, Inc.
3243 Gloria Terrace
Lafayette, CA 94549

Daniel Meszler
Energy and Environmental Analysis, Inc.
1655 North Fort Myer Drive
Arlington, VA 22209

Russell Jones
Stratus Consulting, Inc.
P.O. Box 4059
Boulder, CO 80306-4059

Steven Reynolds
Envair
12 Palm Avenue
San Rafael, CA 94901

November 2001

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Many individuals in the Tucson area participated in the annual and day-specific emissions surveys conducted as part of this study. The information they provided is sincerely appreciated.

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ABBREVIATIONS AND ACRONYMS

ADEQ	Arizona Department of Environmental Quality
ADWM	Arizona Department of Weights and Measures
ALD2	High Molecular Weight Aldehydes (RCHO, $R \neq H$)
AML	Arc Macro Language
AQM	Air Quality Model
APU	Aircraft Power Unit
ARB	California Air Resources Board
ASC	Area Source Category Code
AT	Air Taxi
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CSF	Chemical Speciation Factor
DM	Davis-Monthan Air Force Base
DOT	Department of Transportation
EDMS	Emissions Dispersion Modeling System
EEA	Energy & Environmental Analysis, Inc.
EIPP	Emission Inventory Preparation Plan
EPA	The U.S. Environmental Protection Agency
ETH	Ethene ($CH_2{=}CH_2$)
FAA	Federal Aviation Administration
FAEED	FAA Aircraft Engine Emission Database
FIPS	Federal Information Processing System
FIRE	EPA's Factor Information REtrieval Data System
FORM	Formaldehyde ($CH_2{=}O$)
GA	General Aviation
GIS	Geographical Information System
GSE	Ground Support Equipment
ICAO	International Civil Aviation Organization

ABBREVIATIONS AND ACRONYMS

ISOP	Isoprene
LPG	Liquid Petroleum Gas
LTO	Landing and TakeOff
NAD27	North American Datum - 1927
NCDC	National Climatic Data Center
NEI	US EPA National Emission Inventory
NEVES	Nonroad Engine and Vehicle Emission Study
NG	Natural Gas
NO	Nitric Oxide
NO_2	Nitrogen Dioxide
NO_X	Oxides of Nitrogen
OLE	Olefinic Carbon Bond (C═C)
ORNL	Oak Ridge National Laboratory
PAG	Pima Association of Governments
PAR	Paraffinic Carbon Bond (C—C)
PDEQ	Pima County Department of Environmental Quality
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter less than 2.5 microns
PM_{10}	Particulate Matter less than 10 microns
RASP	Regional Aviation System Plan
RVP	Reid Vapor Pressure
SAF	Spatial Allocation Factor
SCC	Source Category Code
SCF	Standard Cubic Foot
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
SO_X	Oxides of Sulfur
TAF	Temporal Allocation Factor

ABBREVIATIONS AND ACRONYMS

TAPA	Tucson Air Planning Area
TAZ	Transportation Analysis Zone
THC	Total Hydrocarbon
TIA	Tucson International Airport
TIM	Time-In-Mode
TOL	Tolulene (C_6H_5—CH_3)
TTN	EPA Technology Transfer Network
UAM	Urban Airshed Model
UP	Union Pacific Railroad
VOC	Volatile Organic Compounds as defined by the 1990 Clean Air Act Amendments
XYL	Xylene (C_6H_6—$(CH_3)_2$)

(Prior material unrelated to VISTAS modeling is intentionally omitted)

While emission rates for HC, CO, and NO_x are routinely measured from (new) commercial air carrier engines under the emissions certification component of International Civil Aviation Organization (ICAO) regulations, measurement of PM emissions is not required. As a result, almost all aircraft engine PM emission rate data have been collected under special studies. Currently, such data exists for only about 20 aircraft engines, with a considerable portion of these data collected by the U.S. Air Force for military aircraft engines. While emission factors for these engines are included in the AP-42 database upon which the FAEED and EDMS emission inventory models were developed, they have not been included in either model due to their limited applicability. To date, it has been standard EPA practice not to estimate PM emissions for aircraft engines. However, since the emissions models maintain a placekeeper for PM emission rates and include PM emission estimates for GSE, it can appear to the uninformed user that aircraft PM emission rates are zero. As a result, aircraft are often incorrectly considered to be insignificant PM sources even though those engines tested for PM have demonstrated significant emission rates. This policy of exclusion by omission is not appropriate in developing an accurate modeling inventory, even in the absence of a large emissions database. While a precise emissions estimate cannot be made with available data, it is clear that a zero emission rate is far from accurate.

As an alternative for this study, measured emissions data for aircraft engines that have been tested for PM were statistically analyzed to determine whether or not a relationship to other measured emissions parameters could be established. Intuitively, it was hoped that an inverse relationship with NO_x might be demonstrated, as such a relationship is theoretically attractive. While the level of sophistication of the statistical analysis is constrained by the quantity of data available, simple direct and indirect linear relationships can be examined. Because data are not available for each test engine in each of the four LTO cycle modes and because relationships might be expected to vary by operating mode (due to significant changes in engine and combustion efficiency), all statistical analysis was performed for each operating mode individually.

Statistically significant relationships were found for the direct linear analysis for three of the four LTO cycle modes. Significant in this context means that coefficient t-statistics for one or more of the other measured pollutants (HC, CO, or NO_x) indicated a direct relationship with measured PM (at a confidence level exceeding 95 percent). In all cases, correlation coefficients were poor (as expected), suggesting a high level of variability and poor predictability of PM emissions for any given engine. Nevertheless, statistics were unbiased and should provide an accurate mechanism to initially assess PM emissions on a aggregate basis (i.e., over a range of aircraft engine models such as those associated with an analysis for an entire set of airport operations). Only at idle was no significant relation found, which is not surprising given relative engine inefficiency in this mode.

The indirect linear analysis revealed a consistent and significant inverse relationship between PM and NO_x based on calculated t-statistics. Correlation coefficients continue to be poor, but t-statistics are generally improved over those of the direct linear analysis (all developed inverse relations, including idle, were significant at the 99 percent confidence level). In selecting the most appropriate relationship for estimation of PM emission rates for non-tested aircraft engines, the statistical analysis that produced the best combination of a significant t-statistic, a relatively low root mean square error, and an intuitive engineering basis was identified. This was the inverse NO_x relationship for the takeoff (i.e., full throttle) mode of operation. Figure 4-1 illustrates the selected statistical relationship.

With this relationship established, PM emission rate data for the other aircraft operating modes (i.e., the approach, taxi, and climbout modes) was statistically analyzed against observed PM emission rate data for the takeoff mode. Statistically significant relations were developed for all three modes. Table 4-23 presents the coefficients developed for these PM-to-PM regressions as well as the statistics for the PM-to-NO_x regression developed for the takeoff mode. These four relations were used to develop a set of fleetwide PM emission factors based on measured takeoff NO_x emission rates. These emission factors were then input into the EEA aircraft emissions model and used to generate PM emission estimates for TIA aircraft operations.

FIGURE 4-1. Relationship Used to Estimate Aircraft PM Emission Rates

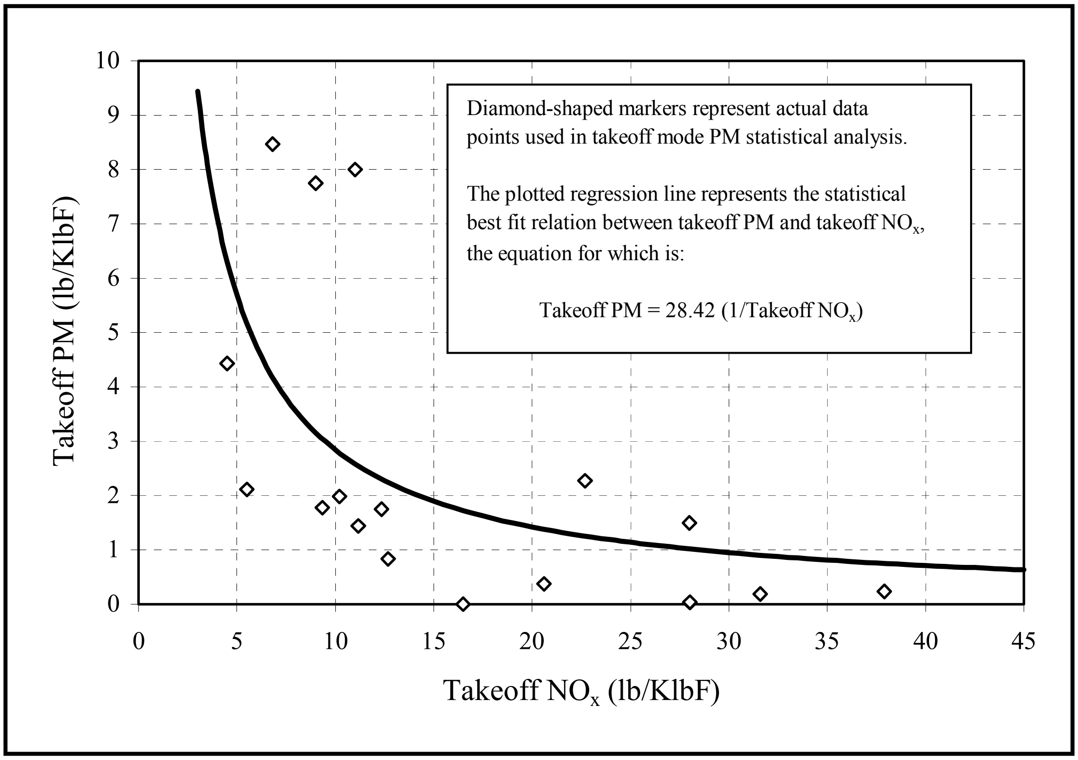


TABLE 4-23. Statistics for Aircraft and APU PM Relations

Statistical Parameter	Takeoff PM	Climbout PM	Approach PM	Taxi PM
Predictive Parameter	1/Takeoff NO_x	Takeoff PM	Takeoff PM	Takeoff PM
Coefficient	28.42	1.42	1.53	3.10
Coefficient t-statistic	5.1	11.8	14.9	5.7
Correlation Coefficient	0.30	0.84	0.91	0.56
F-statistic	7.4	86.1	135.7	21.9
Number of Observations	18	17	15	18

(Subsequent material unrelated to VISTAS modeling is intentionally omitted)

APPENDIX F:

COMPARISON OF BASE F AND BASE G ON-ROAD MOBILE EMISSIONS

Base G Onroad Mobile Emissions (Annual Tons)

	VOC			NOx			CO			SO2			PM-10			PM-2.5			NH3		
FIPSST	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018
AL	125,768	76,065	44,503	156,460	100,693	42,622	1,303,508	902,469	594,725	6,827	802	654	3,861	3,136	2,193	2,768	2,010	1,085	5,530	6,298	6,630
FL	520,757	336,707	199,050	460,503	312,321	136,040	4,493,820	3,308,863	2,263,190	20,687	2,584	2,302	11,148	9,801	7,516	7,779	6,104	3,671	17,922	21,549	23,778
GA	279,975	192,773	99,464	304,309	207,024	92,113	2,699,650	1,956,263	1,303,529	12,043	1,568	1,325	7,165	6,005	4,406	5,110	3,797	2,166	10,436	12,554	13,511
KY	102,362	73,142	42,810	154,634	100,025	46,993	1,214,191	950,912	711,211	6,238	751	694	3,682	2,944	2,348	2,667	1,899	1,158	5,003	5,737	7,095
MS	86,811	51,600	28,699	110,672	69,952	27,620	853,774	602,257	394,247	4,566	532	401	2,828	2,250	1,479	2,089	1,491	746	3,549	3,995	4,147
NC	260,895	166,844	91,720	323,606	199,281	79,433	2,839,283	1,966,195	1,207,391	12,286	1,487	1,346	6,505	5,510	3,994	4,571	3,453	1,931	9,601	11,702	12,776
SC	114,861	71,781	41,866	138,940	91,471	39,348	1,226,555	878,825	588,536	5,909	713	584	3,414	2,831	1,986	2,473	1,834	988	4,646	5,466	5,878
TN	177,943	114,032	61,339	235,869	150,179	62,446	1,893,704	1,320,562	863,682	9,127	1,065	862	5,312	4,160	2,813	3,904	2,720	1,405	6,556	7,702	8,196
VA	157,989	95,694	55,992	219,835	132,699	57,192	2,136,288	1,435,359	954,463	8,196	1,067	949	4,499	3,706	2,922	3,067	2,216	1,404	7,770	8,990	9,653
WV	41,703	24,570	14,652	58,340	35,234	15,530	526,841	360,865	243,683	2,438	276	231	1,366	1,057	747	984	676	369	1,889	2,126	2,268
VISTAS	**1,869,063**	**1,203,208**	**680,096**	**2,163,168**	**1,398,879**	**599,336**	**19,187,613**	**13,682,570**	**9,124,656**	**88,316**	**10,844**	**9,348**	**49,780**	**41,400**	**30,403**	**35,411**	**26,200**	**14,922**	**72,902**	**86,118**	**93,932**

Base F Onroad Mobile (Annual Tons)

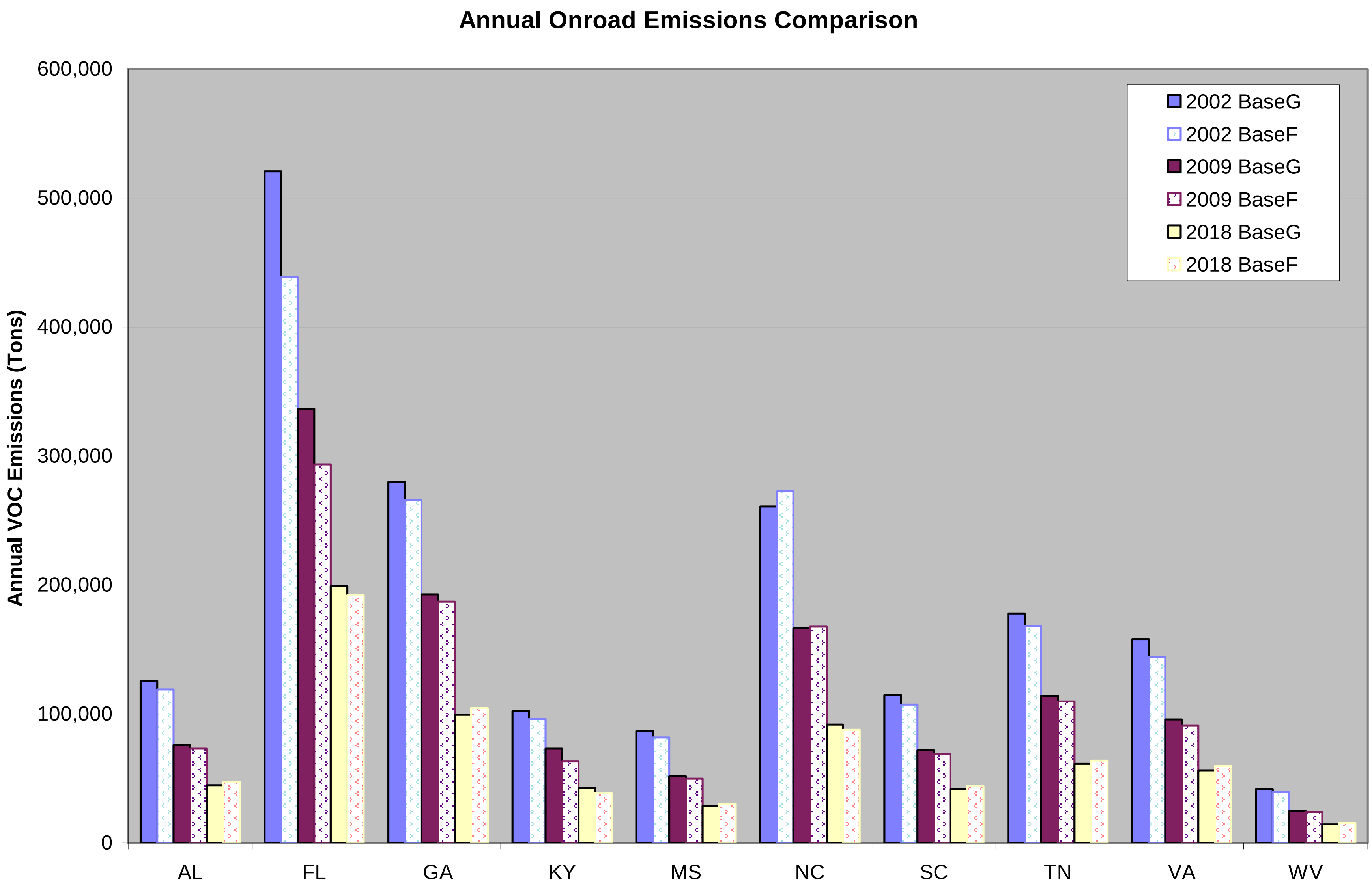
	VOC			NOx			CO			SO2			PM-10			PM-2.5			NH3		
FIPSST	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018
AL	118,978	73,137	47,151	157,626	101,299	46,598	1,300,754	934,442	675,902	6,898	637	720	3,905	3,195	2,488	2,799	2,053	1,262	5,586	6,362	7,296
FL	438,761	293,423	192,096	402,099	284,737	134,465	4,022,000	3,090,443	2,306,759	18,802	1,911	2,289	10,185	9,027	7,691	7,126	5,653	3,848	16,183	19,553	23,595
GA	265,972	187,102	104,678	306,998	208,568	100,707	2,712,473	2,044,169	1,474,029	12,182	1,256	1,458	7,252	6,116	4,995	5,169	3,877	2,517	10,545	12,685	14,870
KY	96,202	63,210	38,814	154,093	97,731	43,014	1,195,656	932,296	669,891	5,988	587	651	3,728	3,008	2,283	2,699	1,946	1,160	5,055	5,807	6,584
MS	81,701	49,986	30,337	110,242	69,949	29,829	849,049	624,575	445,150	4,614	398	441	2,863	2,296	1,688	2,114	1,525	876	3,585	4,035	4,565
NC	272,594	167,894	87,718	290,873	207,670	83,399	2,677,118	2,192,253	1,238,802	12,482	1,314	1,323	6,733	5,874	4,299	4,754	3,651	2,158	9,711	12,663	13,077
SC	107,236	69,026	44,121	139,403	91,832	42,641	1,220,825	921,308	663,597	5,972	558	643	3,454	2,884	2,258	2,502	1,874	1,154	4,694	5,522	6,472
TN	168,389	109,716	63,916	233,324	147,591	66,879	1,881,893	1,359,880	961,929	9,202	833	944	5,349	4,247	3,199	3,927	2,788	1,643	6,629	7,753	8,962
VA	143,969	91,230	59,737	222,830	133,039	64,079	1,996,287	1,483,125	1,091,546	7,234	902	1,059	4,546	3,768	3,343	3,097	2,258	1,641	7,852	9,084	10,757
WV	39,581	23,914	15,375	60,335	36,000	16,940	533,258	379,272	273,900	2,495	228	255	1,399	1,099	844	1,005	705	428	1,938	2,188	2,484
VISTAS	**1,733,382**	**1,128,638**	**683,942**	**2,077,822**	**1,378,416**	**628,551**	**18,389,312**	**13,961,764**	**9,801,505**	**85,868**	**8,622**	**9,783**	**49,414**	**41,513**	**33,086**	**35,191**	**26,330**	**16,687**	**71,778**	**85,652**	**98,664**

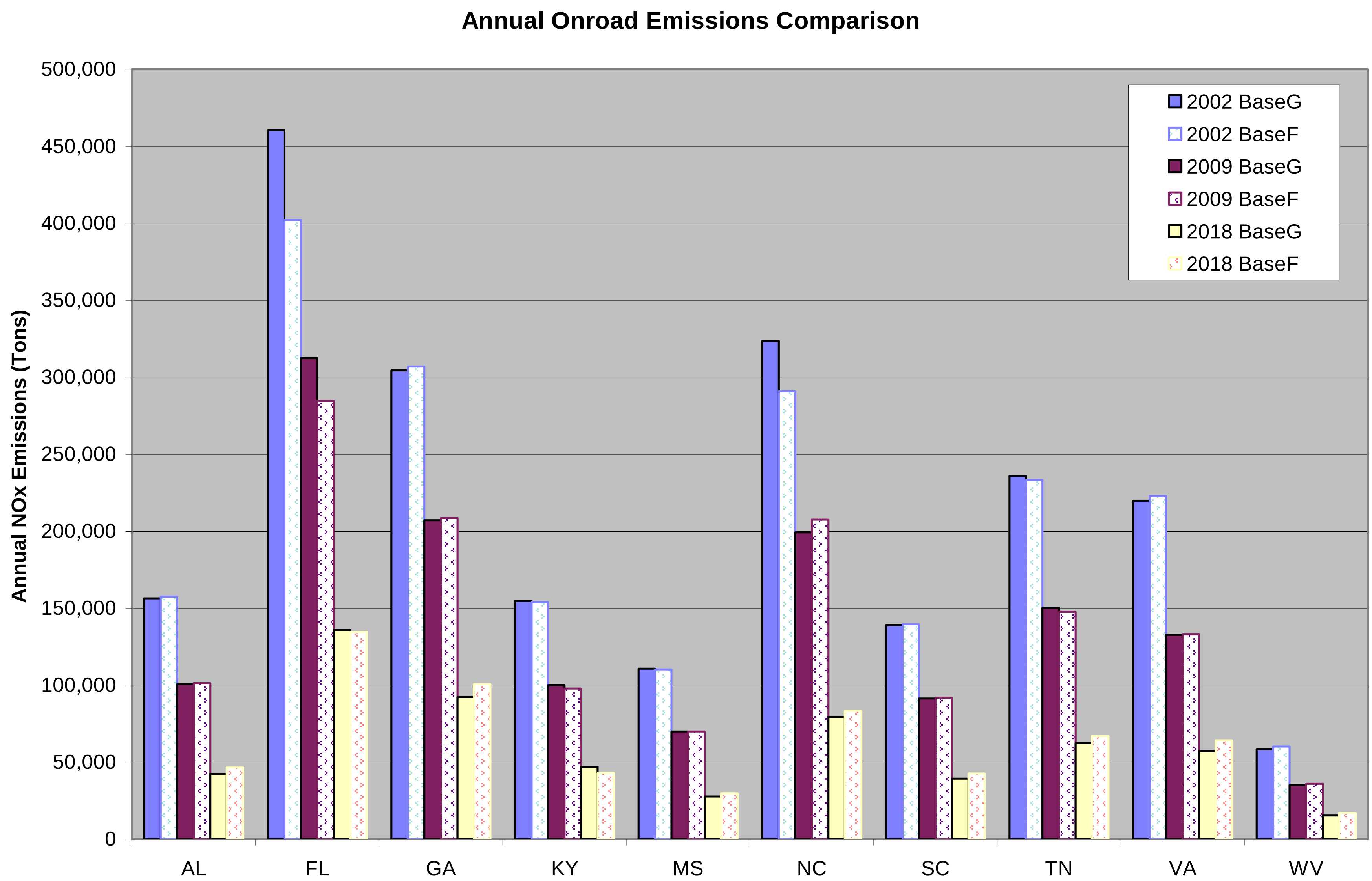
Emissions Change (Base G - Base F, Annual Tons) -- Positive Value Indicates Increase from Base F

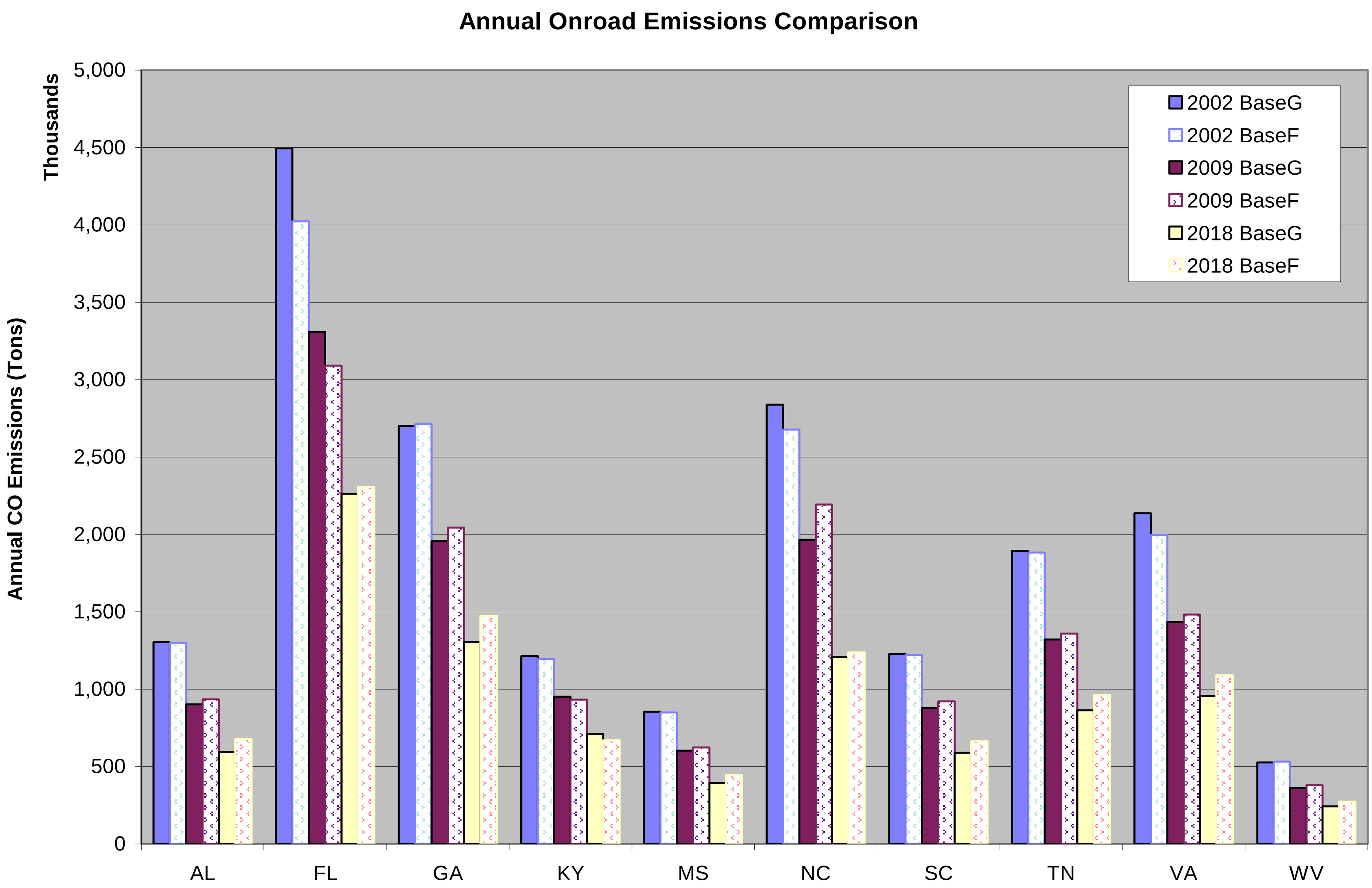
	VOC			NOx			CO			SO2			PM-10			PM-2.5			NH3		
FIPSST	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018
AL	6,789	2,928	-2,647	-1,166	-606	-3,977	2,754	-31,973	-81,178	-71	165	-66	-45	-58	-295	-31	-43	-178	-56	-63	-666
FL	81,997	43,284	6,955	58,404	27,584	1,575	471,820	218,420	-43,569	1,885	672	14	963	774	-175	653	451	-177	1,738	1,996	183
GA	14,003	5,671	-5,214	-2,689	-1,544	-8,594	-12,823	-87,906	-170,500	-139	312	-133	-86	-111	-589	-59	-80	-352	-109	-131	-1,359
KY	6,160	9,933	3,996	541	2,294	3,979	18,534	18,615	41,319	250	164	43	-46	-65	65	-32	-47	-2	-52	-70	512
MS	5,110	1,613	-1,638	430	3	-2,209	4,724	-22,319	-50,903	-48	134	-41	-35	-46	-209	-25	-34	-130	-35	-40	-419
NC	-11,699	-1,049	4,001	32,734	-8,389	-3,966	162,165	-226,057	-31,411	-196	174	23	-228	-364	-304	-183	-198	-226	-111	-961	-302
SC	7,625	2,755	-2,255	-462	-362	-3,293	5,731	-42,483	-75,061	-63	156	-59	-40	-53	-272	-29	-40	-166	-48	-56	-594
TN	9,554	4,316	-2,577	2,545	2,589	-4,433	11,811	-39,318	-98,246	-75	232	-82	-37	-87	-385	-22	-68	-238	-73	-52	-766
VA	14,020	4,464	-3,744	-2,995	-340	-6,887	140,001	-47,766	-137,084	962	165	-110	-47	-62	-420	-30	-42	-237	-83	-94	-1,104
WV	2,122	656	-723	-1,995	-766	-1,410	-6,416	-18,407	-30,217	-57	49	-24	-32	-42	-97	-22	-29	-59	-49	-62	-217
VISTAS	**135,680**	**74,570**	**-3,846**	**85,346**	**20,462**	**-29,215**	**798,301**	**-279,194**	**-676,850**	**2,448**	**2,222**	**-435**	**367**	**-114**	**-2,683**	**219**	**-130**	**-1,764**	**1,123**	**466**	**-4,732**

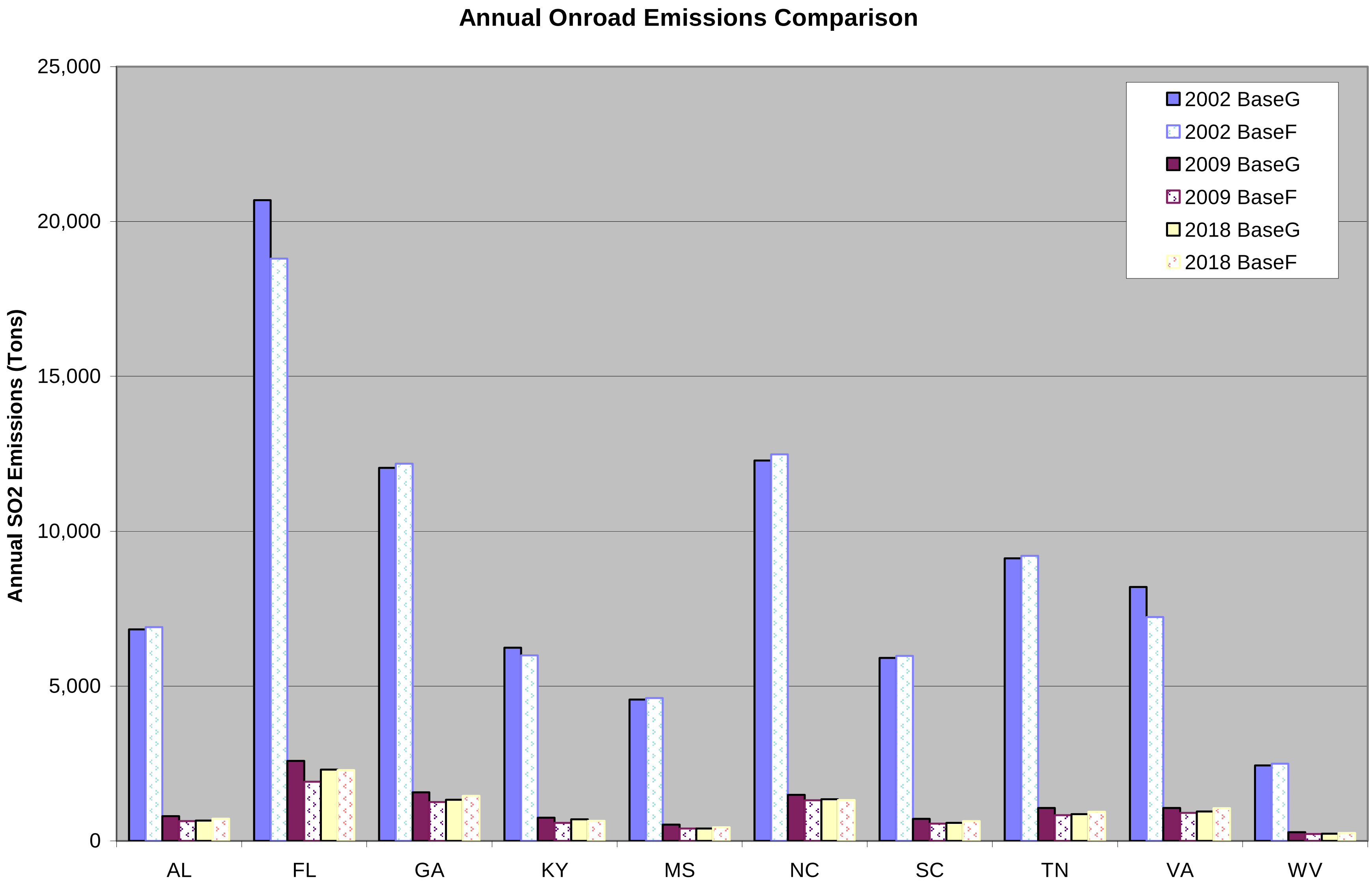
Emissions Change (Base G - Base F/Base F, Annual %) -- Positive Value Indicates Increase from Base F

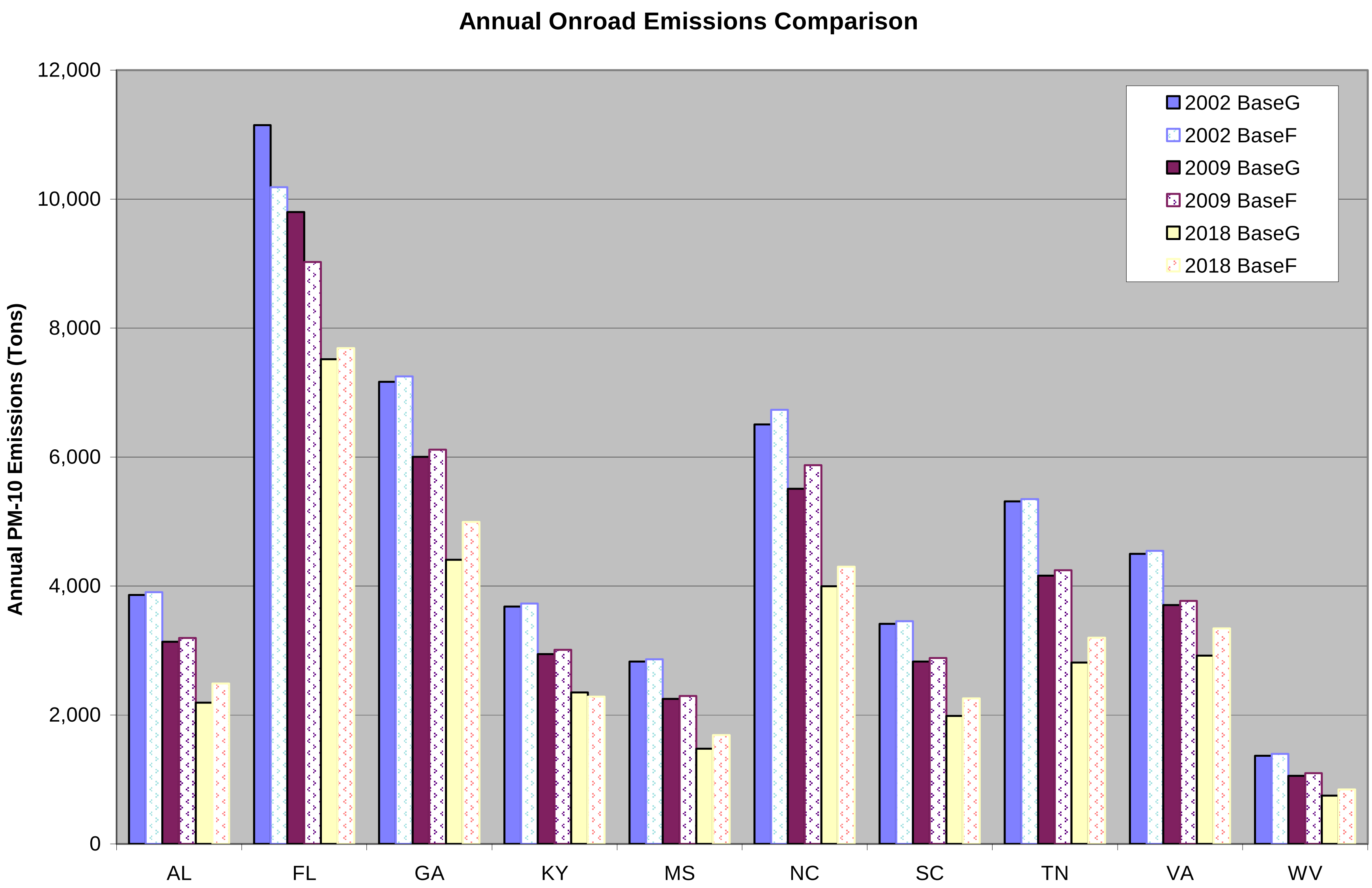
	VOC			NOx			CO			SO2			PM-10			PM-2.5			NH3		
FIPSST	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018	2002	2009	2018
AL	6%	4%	-6%	-1%	-1%	-9%	0%	-3%	-12%	-1%	26%	-9%	-1%	-2%	-12%	-1%	-2%	-14%	-1%	-1%	-9%
FL	19%	15%	4%	15%	10%	1%	12%	7%	-2%	10%	35%	1%	9%	9%	-2%	9%	8%	-5%	11%	10%	1%
GA	5%	3%	-5%	-1%	-1%	-9%	0%	-4%	-12%	-1%	25%	-9%	-1%	-2%	-12%	-1%	-2%	-14%	-1%	-1%	-9%
KY	6%	16%	10%	0%	2%	9%	2%	2%	6%	4%	28%	7%	-1%	-2%	3%	-1%	-2%	0%	-1%	-1%	8%
MS	6%	3%	-5%	0%	0%	-7%	1%	-4%	-11%	-1%	34%	-9%	-1%	-2%	-12%	-1%	-2%	-15%	-1%	-1%	-9%
NC	-4%	-1%	5%	11%	-4%	-5%	6%	-10%	-3%	-2%	13%	2%	-3%	-6%	-7%	-4%	-5%	-10%	-1%	-8%	-2%
SC	7%	4%	-5%	0%	0%	-8%	0%	-5%	-11%	-1%	28%	-9%	-1%	-2%	-12%	-1%	-2%	-14%	-1%	-1%	-9%
TN	6%	4%	-4%	1%	2%	-7%	1%	-3%	-10%	-1%	28%	-9%	-1%	-2%	-12%	-1%	-2%	-14%	-1%	-1%	-9%
VA	10%	5%	-6%	-1%	0%	-11%	7%	-3%	-13%	13%	18%	-10%	-1%	-2%	-13%	-1%	-2%	-14%	-1%	-1%	-10%
WV	5%	3%	-5%	-3%	-2%	-8%	-1%	-5%	-11%	-2%	21%	-9%	-2%	-4%	-12%	-2%	-4%	-14%	-3%	-3%	-9%
VISTAS	**8%**	**7%**	**-1%**	**4%**	**1%**	**-5%**	**4%**	**-2%**	**-7%**	**3%**	**26%**	**-4%**	**1%**	**0%**	**-8%**	**1%**	**0%**	**-11%**	**2%**	**1%**	**-5%**

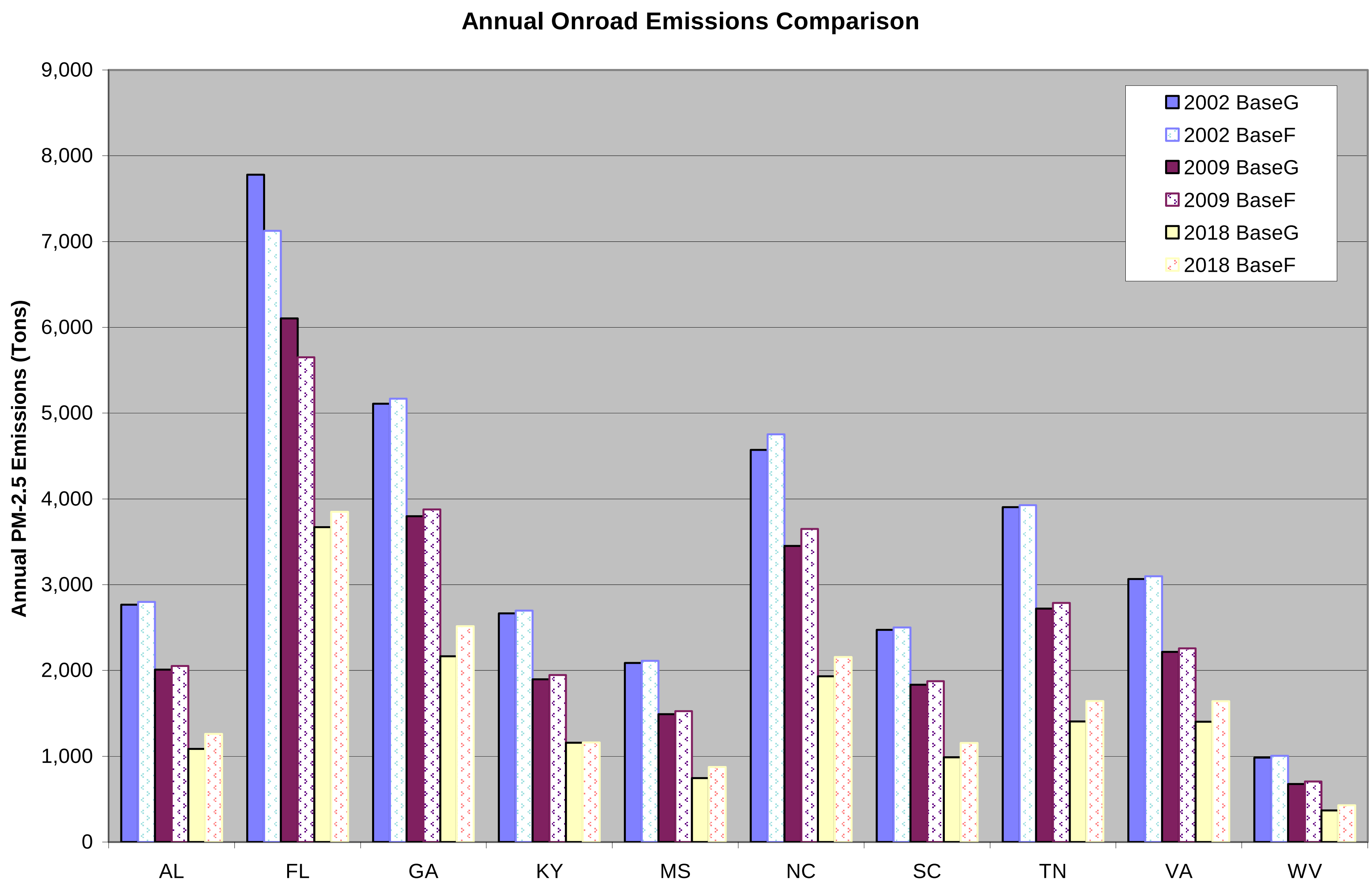

Annual Onroad Emissions Comparison
600,000
500,000
400,000
300,000
200,000
100,000
0
Annual VOC Emissions (Tons)
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
2002 BaseG
2002 BaseF
2009 BaseG
2009 BaseF
2018 BaseG
2018 BaseF

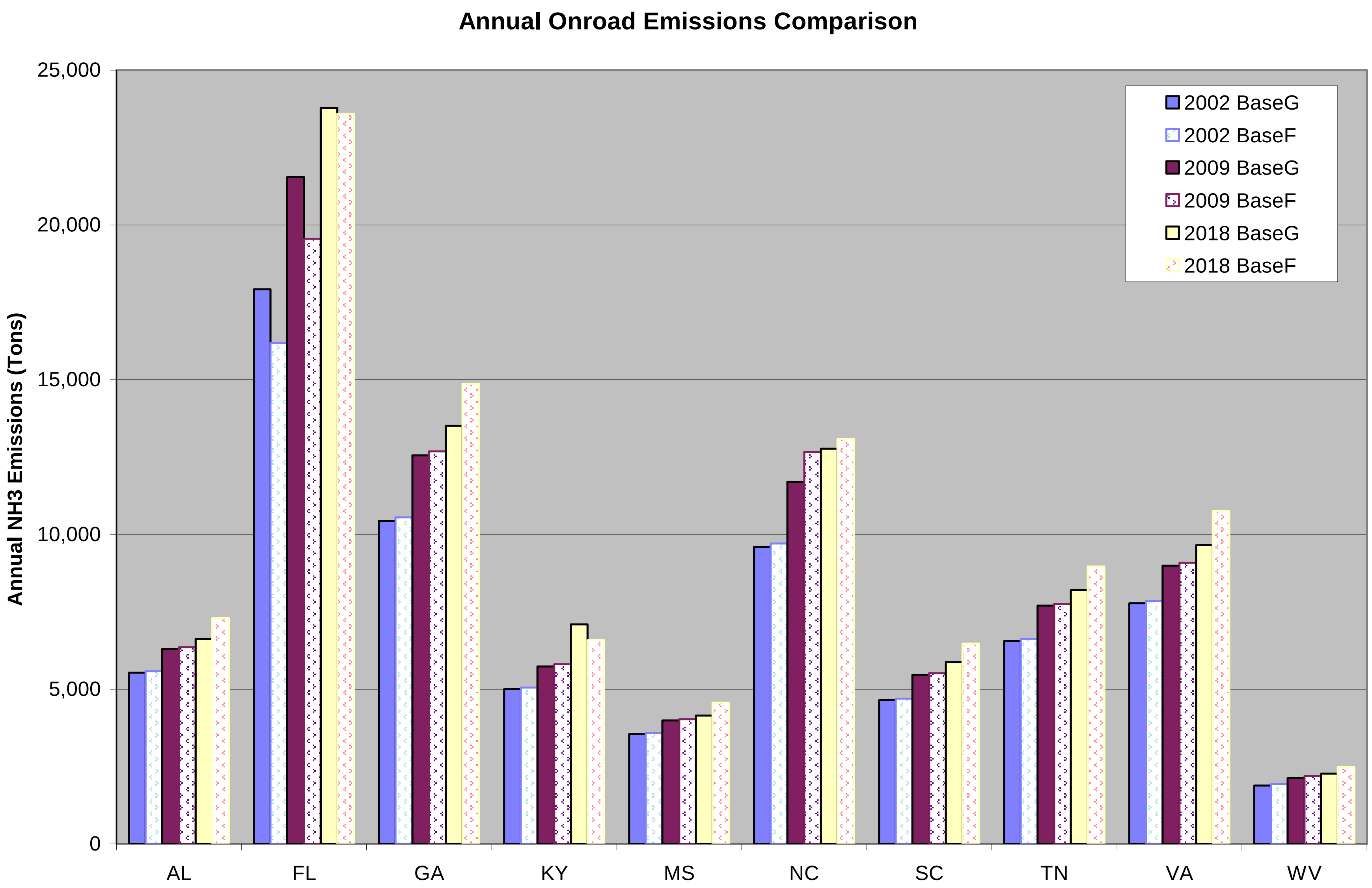

Annual Onroad Emissions Comparison
Annual NOx Emissions (Tons)
500,000
450,000
400,000
350,000
300,000
250,000
200,000
150,000
100,000
50,000
0
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
2002 BaseG
2002 BaseF
2009 BaseG
2009 BaseF
2018 BaseG
2018 BaseF


Annual Onroad Emissions Comparison
Thousands
Annual CO Emissions (Tons)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
2002 BaseG
2002 BaseF
2009 BaseG
2009 BaseF
2018 BaseG
2018 BaseF
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV


Annual Onroad Emissions Comparison
Annual SO2 Emissions (Tons)
25,000
20,000
15,000
10,000
5,000
0
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
2002 BaseG
2002 BaseF
2009 BaseG
2009 BaseF
2018 BaseG
2018 BaseF


Annual Onroad Emissions Comparison
Annual PM-10 Emissions (Tons)
12,000
10,000
8,000
6,000
4,000
2,000
0
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
2002 BaseG
2002 BaseF
2009 BaseG
2009 BaseF
2018 BaseG
2018 BaseF


Annual Onroad Emissions Comparison
Annual PM-2.5 Emissions (Tons)
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
2002 BaseG
2002 BaseF
2009 BaseG
2009 BaseF
2018 BaseG
2018 BaseF



Annual Onroad Emissions Comparison
Annual NH3 Emissions (Tons)
25,000
20,000
15,000
10,000
5,000
0
AL
FL
GA
KY
MS
NC
SC
TN
VA
WV
2002 BaseG
2002 BaseF
2009 BaseG
2009 BaseF
2018 BaseG
2018 BaseF

Appendix 8H

TECHNICAL SUPPORT DOCUMENT FOR 2002 MANE-VU SIP MODELING INVENTORIES, VERSION 3

TECHNICAL SUPPORT DOCUMENT FOR 2002 MANE-VU SIP MODELING INVENTORIES, VERSION 3

Prepared by
E.H. Pechan & Associates, Inc.
3622 Lyckan Parkway, Suite 2005
Durham, NC 27707

November 20, 2006

for the
Mid-Atlantic/Northeast Visibility Union (MANE-VU)

CONTENTS

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FIGURES

ACRONYMS AND ABBREVIATIONS

ATP	Anaerobic Thermal Processor
BEIS	Biogenic Emissions Inventory System
CAA	Clean Air Act
CAIR	Clean Air Interstate Rule
CAMD	Clean Air Markets Division
CAP	criteria air pollutant
CE	Control Equipment (NIF 3.0) table
CEM	Continuous Emissions Monitoring
CENRAP	Central Regional Air Planning Organization
CERR	Consolidated Emissions Reporting Rule
CMU	Carnegie Mellon University
CNG	compressed natural gas
CO	carbon monoxide
CO_2	carbon dioxide
EF	emission factor
EFIG	Emission Factors and Inventory Group
EGU	electricity generating unit
EI	inventory
EM	Emission (NIF 3.0) table
EP	Emission Process (NIF 3.0) table
EPA	U.S. Environmental Protection Agency
ERP	Emission Release Point (NIF 3.0) table
ETBE	ethyl tertiary butyl ether
ETOH	ethanol
ETS	Emission Tracking System
EU	Emission Unit (NIF 3.0) table
FIPS	Federal Information Processing Standard
FIRE	Factor Information and REtrieval Factor
GIS	geographic information system
GSE	ground support equipment
HAP	hazardous air pollutant
HC	hydrocarbon
HPMS	Highway Performance Monitoring System
ID	identification
IDA	Inventory Data Analyzer format
I/M	inspection and maintenance
km	kilometer
LAI	leaf area indices
LEV	low emission vehicle
LPG	liquified petroleum gas
MACT	maximum achievable control technology
MANE-VU	Mid-Atlantic/Northeast Visibility Union
MARAMA	Mid-Atlantic Regional Air Management Association
MTBE	methyl tertiary butyl ether
NAAQS	National Ambient Air Quality Standard
NAICS	North American Industrial Classification System

NEI	National Emissions Inventory
NH_3	ammonia
NIF	NEI Input Format
NMIM	National Mobile Inventory Model
NO	nitrous oxide
NO_x	oxides of nitrogen
NYSDEC	New York State Department of Environmental Conservation
ORIS	Office of Regulatory Information Systems
OTC	Ozone Transport Commission
PAR	photosynthetic active radiation
PE	Emission Period (NIF 3.0) table
Pechan	E.H. Pechan & Associates, Inc.
PFC	portable fuel container
PM	particulate matter
PM-CON	condensible PM
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PM10-FIL	filterable PM_{10}
PM10-PRI	primary PM_{10}
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM25-FIL	filterable $PM_{2.5}$
PM25-PRI	primary $PM_{2.5}$
POTWs	public owned treatment works
ppm	parts per million
psi	pounds per square inch
QA	quality assurance
QAPP	Quality Assurance Project Plan
RPO	Regional Planning Organization
RVP	Reid vapor pressure
SCC	Source Classification Code
SPDPRO	speed profile
SPDREF	speed cross reference
SI	Site (NIF 3.0) table
SIC	Standard Industrial Classification
SIP	State Implementation Plan
S/L	State and Local
SMOKE	Sparse Matrix Operator Kernel Emissions
SO_2	sulfur dioxide
TAME	tertiary amyl methyl ether
TR	Transmittal (NIF 3.0) table
TSD	technical support document
U.S.	United States
VISTAS	Visibility Improvement State and Tribal Association of the Southeast
VMT	vehicle miles traveled
VOC	volatile organic compound
WRAP	Western Regional Air Partnership

CHAPTER I – INTRODUCTION

A. What is the purpose of this TSD?

This technical support document (TSD) explains the data sources, methods, and results for preparing Version 3 of the 2002 base year criteria air pollutant (CAP) and ammonia (NH_3) emissions inventories for point, area, onroad, nonroad, and biogenic sources for the Mid-Atlantic/Northeast Visibility Union (MANE-VU) Regional Planning Organization (RPO). The MANE-VU region includes Connecticut, Delaware, the District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont. Local air planning agencies include Philadelphia and Allegheny County, Pennsylvania. The region also includes the Penobscot Tribe of Maine Indian Nation (Tribal code 018) and the St. Regis Band of Mohawk Indians of New York (Tribal code 007). However, these tribal authorities did not provide any data for the 2002 MANE-VU inventory. MANE-VU will use these inventories to support air quality modeling, State Implementation Plan (SIP) development, and implementation activities for the regional haze rule and fine particulate matter (PM) and ozone National Ambient Air Quality Standards (NAAQS).

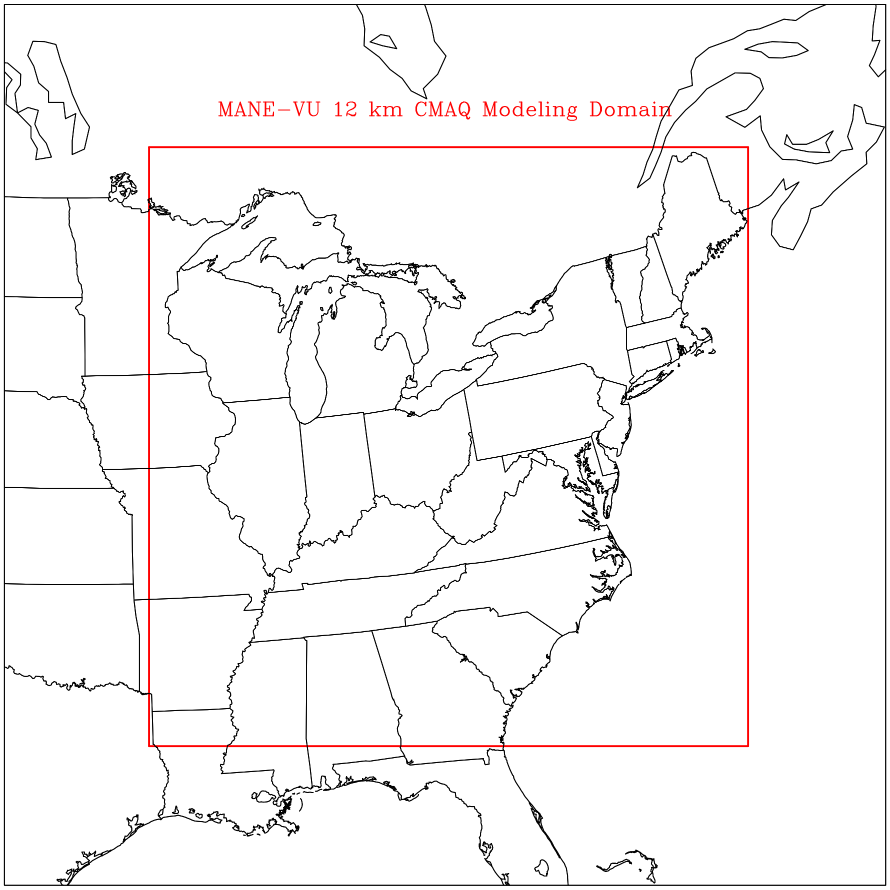
The inventories and supporting data prepared include the following:

(1) Comprehensive, county-level, mass emissions and modeling inventories for of 2002 emissions for CAPs and NH_3 for the State and Local (S/L) agencies included in the MANE-VU region;
(2) The temporal, speciation, and spatial allocation profiles for the MANE-VU region inventories;
(3) Inventories for wildfires, prescribed burning, and agricultural field burning for the southeastern provinces of Canada; and
(4) Inventories for other RPOs, Canada, and Mexico.

The mass emissions inventory files were prepared in the National Emissions Inventory (NEI) Input Format Version 3.0 (NIF 3.0). The modeling inventory files were prepared in Sparse Matrix Operator Kernel Emissions/Inventory Data Analyzer (SMOKE/IDA) format. Ancillary files (holding spatial, temporal, and speciation profile data) were prepared in SMOKE/IDA compatible format. Figure 1 shows the Models-3 Community Multiscale Air Quality Modeling System (CMAQ) modeling domain for the MANE-VU region.

The inventories include annual emissions for sulfur dioxide (SO_2), oxides of nitrogen (NO_x), volatile organic compounds (VOC), carbon monoxide (CO), NH_3, and particles with an aerodynamic diameter less than or equal to a nominal 10 and 2.5 micrometers (i.e., primary PM_{10} and $PM_{2.5}$). The inventories included summer day, winter day, and average day emissions. However, not all agencies included daily emissions in their inventories, and, for the agencies that did, the temporal basis for the daily emissions varied between agencies. The temporal profiles prepared for this project will be used to calculate daily emissions when not available in the inventory files.

Figure 1. MANE-VU 12-Kilometer CMAQ Modeling Domain



B. What are Versions 1, 2, and 3 of the 2002 MANE-VU Inventory?

Work on Version 1 of the 2002 MANE-VU inventory began in April 2004. The consolidated inventory for point, area, onroad, and nonroad sources was prepared by starting with the inventories that S/L agencies submitted to the United States (U.S.) Environmental Protection Agency (EPA) from May through July of 2004 as a requirement of the Consolidated Emissions Reporting Rule (CERR). The EPA's format and content quality assurance (QA) programs (and other QA checks not included in EPA's QA software) were run on each inventory to identify format and/or data content issues (EPA, 2004a). E.H. Pechan & Associates, Inc. (Pechan) worked with the MANE-VU S/L agencies and the staff of the Mid-Atlantic Regional Air Management Association (MARAMA) to resolve QA issues and augment the inventories to fill data gaps in accordance with the Quality Assurance Project Plan (QAPP) prepared for this project (MANE-VU, 2004a). MARAMA is the MANE-VU organization's employees, whereas

MANE-VU is the member S/L agencies plus MARAMA employees. MARAMA is one of three RPOs (in addition to Ozone Transport Commission (OTC) and North East States for Coordinated Air Use Management) supporting the MANE-VU effort.

A draft of the point and area source inventories and summary files were provided for stakeholder review during August 2004. Stakeholder comments were reviewed by the S/L agencies and revisions to the inventory files were made to the files to incorporate stakeholder comments as approved by each S/L agency. The inventories were finalized during December 2004 and the SMOKE input files were prepared and reviewed by the modelers during December 2004 and early January 2005. The final inventory and SMOKE input files were finalized during January 2005.

Work on Version 2 (covering the period from April through September 2005) involved incorporating revisions requested by some S/L agencies on the point, area, and onroad inventories. Work on Version 3 (covering the period from December 2005 through April 2006) included additional revisions to the point, area, and onroad inventories as requested by some states. Thus, the Version 3 inventory for point, area, and onroad sources were built upon Versions 1 and 2. This work also included development of the biogenics inventory. Version 3 of the nonroad inventory was completely redone due to changes that EPA made to the NONROAD2005 model.

C. How is this TSD organized?

Chapters II through V of this TSD present the general and State-specific methods and data sources used to develop Version 3 of MANE-VU's 2002 inventory for point, area, nonroad, and onroad sources. Chapter VI presents the methods, data sources, and model used to develop the biogenics inventory. Chapter VII documents the temporal allocation, speciation, and spatial allocation modeling input files used for Version 3 of MANE-VU's 2002 inventory for all sectors. Chapter VIII describes the non-MANE-VU region inventory data used for MANE-VU BaseB Modeling. References for the TSD are provided in Chapter IX. Appendices A and B provide the QA Summary Report files prepared during development of the State-specific inventories for point and area sources, respectively. Appendices A and B also provide tables that identify for each S/L agency, the Version 3 data sources, emission type period, pollutant, and the number of counties by source classification code (SCC). For the nonroad inventory, Appendix C provides the final county, monthly National Mobile Inventory Model (NMIM) inputs provided or confirmed by the States for Reid vapor pressure (RVP), weight percent oxygen, and gasoline sulfur.

CHAPTER II – POINT SOURCES

A. General Methods for all State and Local Agencies

1. What Data Sources Were Used?

Version 3 of the 2002 MANE-VU point source inventory is based primarily on Version 1 with some state-specific revisions incorporated into Versions 2 and 3. Version 1 was developed using the inventories that S/L agencies submitted to EPA from May through July of 2004 as a requirement of the CERR. All 12 State agencies submitted point source inventories to EPA. In addition, Allegheny and Philadelphia Counties in Pennsylvania each submitted their own point source inventories to EPA. The EPA performed some limited QA review of the S/L inventories to identify format, referential integrity, and duplicate record issues. The EPA revised the inventories to address these issues and made the files available to the S/L agencies on August 6, 2004. These inventory files were used as the starting point for Version 1 of the MANE-VU inventory. These inventory files were obtained from EPA, consolidated into a single data set, subjected to extensive QA review, revised (as approved by the MANE-VU S/L agencies) to address QA issues and to fill data gaps identified while preparing Version 1. Subsequently, the following agencies provided revisions to their point source inventories:

- Version 2 – Connecticut, Delaware, and Maryland
- Version 3 – Massachusetts, New York, and Rhode Island

The revisions that these states provided for Versions 2 and 3 are discussed in the "State-Specific Methods" section of this chapter.

In order to track the origin of data, the temporal period of emissions, and to facilitate generation of emission summaries, the following NIF plus fields were added to the Transmittal (TR), Site (SI), Emission Unit (EU), Emission Release Point (ER), Emission Process (EP), Emission Period (PE), Emission (EM), and Control Equipment (CE) tables:

- Data Source Codes:

Code	Description
S	State agency-supplied data.
L	Local agency-supplied data to incorporate S/L comments for individual records.
P	NH_3 emissions from MANE-VU inventory for cement kilns.
AUG-A	PM Augmentation: ad-hoc change.
AUG-C	PM Augmentation: standard augmentation method.
AUG-O	PM Augmentation: set PMxx-FIL = PMxx-PRI for SCCs starting with 10 (external fuel combustion) and 20 (internal fuel combustion). Note: emission factors and particle-size data for estimating condensible emissions for fuel combustion SCCs starting with 30 were not available; therefore, condensible emissions were not estimated for these processes

if an agency provided filterable and not primary emissions for these processes. In other words, the primary emissions were assumed to equal the filterable emissions.

AUG-Z PM Augmentation: automated fill-in of zero values where all PM for a particular process is zero.

- Revision Date: This field indicates the month and year during which the last revision was made to a record.

- State Federal Information Processing Standard (FIPS): This field indicates the state FIPS code of the submittal.

- County FIPS: This field indicates the county FIPS code of the submittal.

The following NIF plus fields were added to the EM table:

- Emission Ton Value: This field indicates the values of the emissions in tons. This field was used to prepare summaries of emissions on a consistent EU basis.

- Emission Type Period: This field indicates the period of the Emission Type – either ANNUAL or NONANNUAL. This field was used to prepare summaries of annual emissions.

- CAP_HAP: This field identifies records for CAP versus records for hazardous air pollutants (HAPs). For the MANE-VU inventory, the flag is CAP for all records.

- Year: This field indicates the year of the data; for this inventory, it is 2002.

Note that the QAPP for Version 1 includes more data source codes than were used in Version 3 of the point source inventory. The data source codes listed above are the codes used in Version 3. The exception is for Rhode Island, who requested that their Version 2 inventory be replaced with its inventory included in the final 2002 NEI prepared by EPA. Thus, for Rhode Island, it was agreed to maintain the data source codes used in the NEI in Version 3 of the MANE-VU inventory. The data source codes for Rhode Island's point source inventory are explained under the state-specific section for Rhode Island.

2. What Quality Assurance Steps Were Performed?

A QAPP was prepared and approved by MANE-VU/MARAMA and the EPA Regional Office prior to initiating work on Version 1 of the inventory (MANE-VU, 2004a). This QAPP was followed during preparation of all three versions of the inventory. This section provides an overview of the QA checks completed on each version of the inventory. The QA process for each S/L inventory involved the following steps:

- Conduct QA checks on each S/L inventory;
- Prepare a QA Summary Report for submittal to the agency for review;

- Revise the inventory to resolve QA issues as directed by the agency;
- Repeat the QA checks on the revised inventory to verify that the corrections were completed;
- Perform augmentation to correct for missing data; and
- Repeat the QA checks to verify that the augmentation was completed correctly.

a. QA checks for S/L agency inventories

The following discusses the QA diagnoses that were run on the consolidated point source inventory data set. For each S/L agency, a "QA Summary Report" was prepared for each QA check in an Excel Workbook file. The results of each QA check was summarized in a separate spreadsheet and submitted to the S/L agency for review and resolution. The agencies provided corrections to the data in the Excel files or via e-mail and the inventory was updated with the corrections.

i. Continuous Emissions Monitoring (CEM) Analysis

The goal of this analysis was to compare annual NO_x and SO_2 emissions that were measured with CEM systems and reported to EPA to the annual NO_x and SO_2 emissions reported in the S/L inventories. Facilities report hourly CEM data to EPA for units that are subject to CEM reporting requirements of the NO_x SIP Call rule and Title IV of the Clean Air Act (CAA). Thus, hourly CEM emissions were summed to the annual level and compared to the annual emissions in the S/L inventories. If the S/L agencies agreed, the CEM hourly emissions would be used to support air quality modeling to accurately reflect the temporal distribution of emissions from CEM units during 2002. Since some of the states require facilities to certify the emissions they report for inclusion in the inventory, the agencies needed proof that the emissions in the CEM inventory compared well with the emissions in the S/L inventory.

The 2002 CEM inventory containing hourly NO_x and SO_2 emissions and heat input data were downloaded from the EPA/Clean Air Markets Division's (CAMD) web site (www.epa.gov/airmarkets) on July 8, 2004 (CAMD, 2004). The data were provided by quarter and state resulting in 48 separate files for the 12 states in the MANE-VU region. For each state, the hourly emissions were summed to the annual level by facility and EU.

The first stage in the CEM analysis involved preparing a crosswalk file to match facilities and units in the CEM inventory to facilities and units in the S/L inventories. In the CEM inventory, the Office of Regulatory Information Systems (ORIS) identification (ID) code identifies unique facilities and the unit ID identifies unique boilers and internal combustion engines (i.e., turbines and reciprocating engines). In the S/L inventories, the state and county FIPS and state facility ID together identify unique facilities and the EU ID identifies unique boilers or internal combustion engines. However, in some of the S/L inventories, the emissions for multiple EUs were summed and reported under the same EU ID. Thus, an Excel Workbook was sent to the S/L agencies that contained an initial crosswalk with the ORIS ID and unit ID in the CEM inventory matched to the state and county FIPS, state facility ID, and EU ID in the S/L inventory. Agencies were asked to confirm/correct/supplement the information in the crosswalk. The initial crosswalk also contained annual emissions summed from the hourly CEM emissions and flags that indicated if

CEM units were subject to reporting requirements under the NO_x SIP Call and/or Title IV of the CAA. It should be noted that the initial matching of the IDs in both inventories was based on previous crosswalks that had been developed for the 1999 NEI and in-house information compiled by Pechan. The matching at the facility level was nearly complete; however, S/L agency assistance was needed to match most of CEM units to EUs in the S/L inventories.

The crosswalk was updated with corrections to facility and CEM unit-to-EU matches, and with new matches provided by the S/L agencies. The matching of each CEM unit to an EU was still incomplete. Consequently, the comparison of annual emissions was performed at the facility level.

The second stage in the CEM analysis was to prepare an Excel Workbook file for each S/L agency that compared the annual emissions summed from the hourly CEM inventory to the annual emissions reported in the S/L inventory. The file included three spreadsheets that compared annual emissions at the facility level, listed the facilities in the CEM inventory that could not be matched to the facilities in the S/L inventory, and listed the facilities in the S/L inventory identified as an electricity generating unit (EGU) that could not be matched to a facility in the CEM inventory. The Excel files were sent to the S/L agencies for review. The S/L agencies then indicated if they did or did not want to use the hourly CEM inventory.

The facility-level comparison of CEM to emission inventory NO_x and SO_2 emissions found that for some facilities, the annual emissions from the S/L inventory exceeded the CEM annual emissions because the facility in the S/L inventory contained more than just CEM units. This condition was determined to be acceptable. However, S/L agencies were asked to review data for facilities where the CEM emissions were higher than the emissions summed from the S/L inventory. For these cases, CEM emissions may be higher than those reported in a S/L inventory due to methods EPA uses for using artificially high default values to fill in hourly CEM data when not reported or when a CEM unit was not working properly.

After reviewing the comparison of the CEM to S/L inventory emissions, New York and Vermont elected to use the 2002 CEM inventory containing hourly NO_x and SO_2 emissions for all facilities. Maryland; New Hampshire; and Allegheny County, Pennsylvania elected to use the 2002 CEM data for some but not all of the facilities within their jurisdiction. The Excel Workbook files containing the comparison of CEM to S/L inventories provides a spreadsheet identifying the facilities for which these S/L agencies elected to use the CEM inventory.

Subsequent to the completion of this analysis, it was determined that the structure of the EPA/CAMD file would not be compatible with the format of the SMOKE input file. The database structure did not affect the annual emissions summed from the hourly CEM emissions used in the comparison to S/L inventory data. For each of the S/L agencies that elected to use the 2002 CEM data, CAMD agreed to provide separate database files for each state with a structure compatible with the SMOKE input file format. Pechan then used the crosswalk to add to the CEM inventory files the state and county FIPS, state facility ID, and EU ID (if the crosswalk contains a CEM unit to EU match) to the hourly CEM database files provided by CAMD. The modified database was then used to create the SMOKE input files for these states.

Note that Delaware requested that the 2002 CEM inventory for its facilities not be used for regional haze modeling. However, if the consolidated point source inventory prepared under this project is used to support ozone episode modeling, Delaware may consider using the CEM hourly data for the episodes modeled. Therefore, the 2002 CEM inventory was also processed for Delaware's facilities.

ii. PM Emissions Consistency and Completeness Review

The following consistency checks were performed at the EM table data key level (for annual emissions) to compare PM emissions:

- If a process was associated with a PM emission record, but was missing one or more of the following (as appropriate for the SCC [i.e., condensible PM (PM-CON) is associated with fuel combustion only]): filterable PM_{10} (PM10-FIL), primary PM_{10} (PM10-PRI), filterable $PM_{2.5}$ (PM25-FIL), primary $PM_{2.5}$ (PM25-PRI), or PM-CON, the record was flagged for review.

- The following equations were used to determine consistency:

  PM10-FIL + PM-CON = PM10-PRI
  PM25-FIL + PM-CON = PM25-PRI
  PM-FIL + PM-CON = PM-PRI

- The following comparisons were applied to determine consistency:

  PM10-PRI >= PM10-FIL
  PM25-PRI >= PM25-FIL
  PM10-PRI >= PM-CON
  PM25-PRI >= PM-CON
  PM10-FIL >= PM25-FIL
  PM10-PRI >= PM25-PRI
  PM-PRI >= PM10-PRI
  PM-PRI >= PM25-PRI
  PM-FIL >= PM10-FIL
  PM-FIL >= PM25-FIL

If the data failed one of these checks it was diagnosed as an error, summarized in an Excel Workbook file, and provided to the S/L agency for corrections. If a S/L agency did not provide corrections to these errors, the errors were corrected or filled in according to the augmentation procedures.

iii. ERP Coordinate Review

Location coordinates for point sources were evaluated using geographic information system (GIS) mapping to determine if the coordinates were within 0.5-kilometers of the boundary of the county in which the source was located. If not, the S/L agency was asked to review the coordinates and provide corrections to either the coordinates or the state and county FIPS codes. The 0.5-kilometer test resulted in a large number of ERPs for review by the agencies. Therefore, to assist S/L agencies in prioritizing their review of coordinates, ERP records with coordinates located more than 0.5, 1, 2, 3, 5, 7, and 10 or more kilometers from their county boundary, and coordinates that mapped outside of their state boundary were identified. Annual emissions summed to the ERP level were included in the QA Summary Report to identify records with zero emissions for all pollutants and to identify the highest emitting stacks. The QA Summary Report was provided to the S/L agency for review and corrections.

iv. ERP Parameter Review

The EPA's QA guidance for diagnosing ERP issues for the point source NEI (EPA, 2004b) was applied to identify QA issues in the S/L point source inventories. The QA guidance involved diagnosing the correct assignment of the ERP type (i.e., stack or fugitive), parameters with zero values, parameters not within the range of values specified in the EPA's QA procedures, and consistency checks (i.e., comparing calculated values against the values reported in the inventory). In many cases errors were caused by missing or zero values. In other cases, out-of-range errors were caused by unit conversion issues (e.g., stack parameters were in ft, ft/sec, cu ft/sec, or degrees Fahrenheit). The QA issues were summarized in a separate QA Summary Report for each agency and each agency was asked to provide corrections. If an agency did not provide corrections for out-of-range or missing values, the data were corrected or filled in according to the ERP augmentation procedures.

v. Control Device Type and Control Efficiency Data Review

The CE codes in the "Primary Device Type Code" and "Secondary Device Type Code" fields were reviewed to identify invalid codes (i.e., codes that did not exist in the NIF 3.0 reference table) and missing codes (e.g., records with a null or uncontrolled code of 000 but with control efficiency data).

QA review of control efficiency data involved diagnosis of two types of errors. First, records were reviewed to identify control efficiency values that were reported as a decimal rather than as a percent value. Records with control efficiencies with decimal values were flagged as a potential error (although not necessarily an error, since the real control efficiency may be less than 1%).

The second check identified records where 100% control was reported in the CE table, but the emissions in the EM table were greater than zero and the rule effectiveness value in the EM table was null, zero, or 100% (implying 100% control of emissions). Because many agencies did not populate the rule effectiveness field or a default value of zero was assigned, records with null or zero rule effectiveness values were included where the CE was 100% and emissions were greater than zero. The records that met these criteria were summarized in a QA Summary Report for review and correction, if necessary, by the S/L agency.

vi. Start and End Date Checks

QA review was conducted to identify start date and end date values in the PE and EM tables to confirm consistency with the inventory year in the TR table, and to confirm that the end date reported was greater than the start date reported. This check did not identify any QA issues in the three versions of the inventory.

vii. Annual and Daily Emissions Comparison

The following QA checks were conducted to identify potential errors associated with the incorrect reporting of daily and/or annual emissions:

- Any "DAILY" type record that is greater than its associated "ANNUAL".

A review of the daily vs. annual comparison revealed that in many cases, the daily value was nonzero (but very small), but the annual value was zero. This was generally a result of rounding in a S/L agency's original emissions database, where annual records were recorded in tons per year to a set number of decimal places, while the corresponding daily records were recorded in pounds per year to a set number of decimal places. The annual record rounds to zero in the original database, while the daily value remains non-zero. A tolerance check reveals the following (comparison in tons):

- Difference Tolerance (daily - annual)> 0
- Difference Tolerance (daily - annual)> .000001
- Difference Tolerance (daily - annual)> .00001
- Difference Tolerance (daily - annual)> .0001
- Difference Tolerance (daily - annual)> .001
- Difference Tolerance (daily - annual)> .01

For Version 1, the affected S/L agencies were as follows:

- Connecticut (09) 11 records
- Maine (23) 4 records
- Maryland (24) 72 records
- New Jersey (34) 2935 records
- Pennsylvania Allegheny County (42003) 17 records
- Pennsylvania Philadelphia County (42101) 146 records
- Rhode Island (44) 1 record

Rhode Island, Philadelphia, and New Jersey responded that the dailies that were greater than the annuals could be deleted. Maryland determined that they should be kept since the difference values were small. The records for the remaining S/L agencies were kept. This QA issue only occurred during processing of Version 1.

b. Responses from S/L agencies

Each S/L agency reviewed its "QA Summary Report" files and the S/L agency provided direction for correcting QA issues either in the QA Summary Report Excel files or via e-mail. The inventory was then revised to incorporate responses from each agency and the QA checks were run again to verify that the QA issues were addressed. If an agency responded to a QA issue by e-mail, the direction was recorded in the "QA Summary Report" file. The "QA Summary Report" file for each S/L agency was updated to document QA issues and resolution of issues associated with developing Versions 2 and 3 of the point source inventory. The "QA Summary Report" files for Version 3 are provided with this report in a separate zip file. The files in the zip file are organized in separate folders for each S/L agency. Each folder includes a separate Excel workbook file for the following QA checks if a QA issue existed:

- PM Augmentation QA Summary;
- Stack Parameter QA Summary;
- Stack Coordinates QA Summary;
- Stack Parameter and Coordinate Augmentation Summary;
- CEM Comparisons and Revisions; and
- Control Device/Efficiency Summary.

c. Gap Filling and Augmentation

The following discusses the augmentation procedures that were used to fill in missing data that were not supplied by the S/L agencies. The S/L agencies approved the procedures before they were applied. These procedures were applied after revising the inventory to address QA issues as directed by each S/L agency.

i. MANE-VU-Sponsored Inventories

MANE-VU prepared a 2002 NH_3 emissions inventory for cement kilns for SCCs 30500606 and 30500706 located in four MANE-VU states. Maryland chose to add one new facility 24013/0012 (state and county FIPS code/facility ID). New York chose to add the following three sites 36001/4010300016, 36001/4012400001, and 36111/3514800084. Maine and Pennsylvania chose not to add emissions from this inventory. The data for Maryland and New York were added to Version 1. These data were not changed in Versions 2 and 3 of the point source inventory.

ii. PM Augmentation

The PM augmentations process gap-fills missing PM pollutant complements. For example, if a S/L agency provided only PM10-PRI pollutants the PM augmentation process filled in the PM25-PRI pollutants. The steps in the PM augmentation process were as follows:

- Step 1: Initial QA and remediation of S/L provided PM pollutants;

- Step 2: Development of PM factor ratios based on factors from the Factor Information and REtrieval (FIRE) Data System, version 6.2, and the PM Calculator (EPA, 2003a; EPA, 2004c);
- Step 3: Implementation of the ratios developed in step 2.; and
- Step 4: Presentation of PM augmentation results to S/L agencies for review and comment.

An Access database (named *Reference Tables for PM Augmentation*) accompanies this document. This database contains the SCC Control Device Ratio table, the Emission Factors table, and Emission Factors Crosstab table discussed in Step 2. The Emission Factors Crosstab table contains the ratios developed from the Emission Factors table. The Emission Factors table contains detailed information on the emission factors used to develop the ratios. The PM Calculator ratio table can be provided upon request – it contains all possible combinations for SCC and Control Device types that are available in the PM Calculator. Ratios from the PM calculator were developed using a standard input of 100 TONS of uncontrolled PM-FIL emissions.

1. Initial QA and Remediation of PM Pollutants

S/L agencies were initially presented with files that detailed potential inconsistencies and missing information in their PM pollutant inventory. Inconsistencies in PM pollutants include the following:

- PM-PRI less than PM10-PRI, PM25-PRI, PM10-FIL, PM25-FIL, or PM-CON;
- PM-FIL less than PM10-FIL, PM25-FIL;
- PM10-PRI less than PM25-PRI, PM10-FIL, PM25-FIL or PM-CON;
- PM10-FIL less than PM25-FIL;
- PM25-PRI less than PM25-FIL or PM-CON;
- The sum of PM10-FIL and PM-CON not equal to PM10-PRI; and
- The sum of PM25-FIL and PM-CON not equal to PM25-PRI.

Potential missing information was summarized in a table which detailed the variety of cases provided by each S/L agency. For example, an S/L agency might have provided PM10-FIL and PM25-FIL for some processes, but provided only PM10-FIL for other processes.

S/L agencies were asked to review this information and provide corrections where possible. In general, corrections (or general directions) were provided in the case of the potential inconsistency issues. An example of a general direction provided by a S/L agency was to remove PM25-FIL where greater than PM10-FIL because the PM10-FIL was (in their particular case) known to be more reliable. In other cases, the agency-provided specific process-level pollutant corrections. If specific direction was not provided by the agency, zero PM pollutants were generally removed, or complements were set equal to the higher number.

2. *Development of PM Factor Ratio*

The primary deliverable of this step of the process was the development of a table keyed by SCC, primary control device, and secondary control device. This table is called the SCC Control Device Ratios table (see Table II-1). This table was filled according to the following steps:

- Ratios (both condensible and noncondensible) were added from FIRE for SCCs starting with 10* (external fuel combustion) and 20* (internal fuel combustion) where there was a direct match between the provided SCC, and primary and secondary control devices.

- Ratios (non-condensable) were added from the PM Calculator for SCCs starting with 10* and 20* where there was not a direct match between the provided SCC, and primary and secondary control devices. Condensible ratios were added from the PM Calculator based on the uncontrolled SCC for these SCCs. In some cases, it was necessary to map the SCC and control devices to the PM calculator to find a match for the noncondensible ratios. In other cases, it was necessary to map the SCC to FIRE to find a match for condensible ratios.

- For natural gas, process gas, and liquified petroleum gas (LPG) SCCs starting with 10* and 20*, it was assumed (based on FIRE emission factors) that the PM-PRI/PM10-PRI/PM25-PRI ratio was equal to 1. It was also assumed that the PM-FIL/PM10- FIL /PM25- FIL was equal to 1. Condensible ratios were calculated from uncontrolled FIRE emission factors for these SCCs. In some cases it was necessary to map the SCC to FIRE to find a match for condensible ratios.

- Ratios for SCCs not like 10* and 20* were obtained from the PM Calculator. It was assumed that the condensible component was zero.

Table II-1. Description of the Field Names and Descriptions for the SCC Control Device Ratios Table

Field Name	Field Description
PM Calculator	A "Yes" in this field indicates that at least some of the information was retrieved from the PM Calculator
FIRE	A "Yes" in this field indicates that at least some of the information was retrieved from the Emission Factors table. A "Condensible Ratios" in this field indicates that the condensible ratios factors were retrieved from this table.
Other	A field to indicate other sources as necessary.
SCC	Source category code from the S/L agency-provided data.
SCC_DESC	Description of source category code from the S/L agency-provided data.
maptoSCC	This field equals SCC unless the SCC provided was not found in the appropriate source table. In that case, the SCC was mapped using the closest available appropriate mapping choice.
maptoSCC_DESC	Description of the maptoSCC.
mapSCCNote	Any notes related to the mapping of the SCC. A "Yes" in this field indicates that the SCC was mapped.
PD	Primary device type from the S/L agency provided data.
PD_DESC	Description of the primary device (PD).
maptoPD	This field equals PD unless the PD provided was not found in the appropriate source table. In that case, the PD was mapped using the closest available appropriate mapping choice.
maptoPD_DESC	Description of the maptoPD.
mapPDNote	Any notes related to the mapping of the PD. A "Yes" in this field indicates that the PD was mapped.
SD	Secondary device type from the S/L agency provided data.
SD_DESC	Description of the secondary device (SD).
maptoSD	This field equals SD unless the SD provided was not found in the appropriate source table. In that case, the SD was mapped using the closest available appropriate mapping choice.
maptoSD_DESC	Description of the maptoSD.
mapSDNote	Any notes related to the mapping of the SD. A "Yes" in this field indicates that the SD was mapped.
PM-FIL/PM10-FIL	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM-FIL/PM25-FIL	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM-FIL/PM-PRI	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM-PRI/PM10-PRI	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM-PRI/PM25-PRI	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM10-FIL/PM25-FIL	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM10-PRI/PM25-PRI	This field and the following are ratios calculated from emission factors found either in FIRE or the PM calculator.
PM-CON/PM10-FIL	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
PM-CON/PM10-PRI	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
PM-CON/PM25-FIL	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
PM-CON/PM25-PRI	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
PM-CON/PM-FIL	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
PM-CON/PM-PRI	Condensible ratios were calculate from FIRE if available for 10* and 20* SCCs. If condensible ratios were not found in FIRE for 10* and 20* these ratios were set to zero.
RPO Specific Note	Indicates SCC and control device combinations are in the RPO inventory.
Additional Notes	Any notes regarding assumptions about ratios.

3. Implementation of the QA Ratios

In order to calculate the additional PM pollutants based on the SCC Control Device ratio table developed in the above step, a crosstab table was created from the EM table based on the following fields:

- State FIPS
- County FIPS
- Tribal Code
- EU ID
- Process ID
- Start Date
- End Date
- Emission Type
- SCC
- Primary Device Type
- Secondary Device Type

The primary and secondary device type fields were added based on information from the CE table. If CE information was not available these fields were defaulted to 000 ("UNCONTROLLED"). In the few cases where there was a conflict between the control devices reported for the same process for PM pollutants (e.g., a PM10-PRI is listed as controlled, but PM-PRI did not have control information), the control device type was selected based on the controlled pollutant.

In addition to the fields listed above, the crosstab included the PM emission amounts for the particular process and a field that indicated whether those emissions existed in the inventory. These fields were as follows:

- PM_PRI
- PM_FIL
- PM10_PRI
- PM10_FIL
- PM25_PRI
- PM25_FIL
- PM_CON
- PM_PRI_EXISTS
- PM_FIL_EXISTS
- PM10_PRI_EXISTS
- PM10_FIL_EXISTS
- PM25_PRI_EXISTS
- PM25_FIL_EXISTS
- PM_CON_EXISTS

The emission values were in the PM_PRI, PM_FIL, PM10_PRI, PM10_FIL, PM25_PRI, PM25_FIL, PM_CON fields. The _EXISTS field indicated whether the pollutant was provided by the S/L agency. A zero indicated that the pollutant was not provided; a number greater than zero (usually one) indicates that it was provided by the S/L agency.

Prior to the development of this crosstab, the EM table was filled in as much as possible using basic assumptions. For example, if the S/L agency provided zero emissions for some but not all forms of PM for a particular process, it was assumed that all forms of PM for that process were zero and they were filled in accordingly. Since that assumption was that for non 10* and 20* SCCs, the condensible value was zero – that would lead to PM10-FIL = PM10-PRI and PM25-FIL = PM25-PRI and PM-FIL = PM-PRI. Given that assumption, values for these pollutants were also filled in. After this data insertion, a subset of the crosstab was created. This subset only contained processes that required additional augmentation. The SCC Control Device Type ratio table was based on only those SCC and control device types that required augmentation.

The next step was to fill in the missing information in this crosstab using the information found in the SCC Control Device Ratio table.

In calculating PM complement pollutants, priority was given to calculating –PRI and –CON pollutants. FIL pollutants were only calculated if necessary to calculate other pollutants or if it was a by-product of this calculation.

In augmenting the PM pollutants, the non 10* and 20* SCCs were augmented first, with order given to augmenting based on PM_{10} where available, $PM_{2.5}$ where available, and then PM.

Augmenting the PM pollutants for the 10* and 20* SCCs is more complicated, but the basic approach was to augment based on PM_{10} (FIL or PRI) where available, $PM_{2.5}$ (FIL or PRI) where available, and then PM (FIL or PRI) if PM_{10} or $PM_{2.5}$ variations were not available. Where both PM_{10} (FIL or PRI) and $PM_{2.5}$ (FIL or PRI) variations were both available, the calculation for PM-CON was generally driven from the PM_{10} number and the complements as necessary were back calculated. Where a PRI emission factor ratio was required and was not available, the FIL emission factor ratio was used.

After completing the calculations, the data was QA checked to ensure that the calculations resulted in consistent values for the PM complement. On a few occasions, the mix of ratio value and the pollutants and values provided by the S/L agency resulted in negative values when FIL was back-calculated. In this case the negative FIL value was set to zero and the PRI value was readjusted. In a few cases the appropriate combination of ratios, SCC, and control efficiencies were not available to calculate the PM10-PRI and PM25-PRI values. In these cases, PM10-PRI and PM25-PRI were set equal. The resultant PM table information was appended to the EM table.

Note: The augmentation procedures resulted in some high condensible ratios that were calculated for some SCC control device type combinations. In most cases, these high condensible ratios were the result of the back calculation of PM-CON from PMxx-PRI records.

Since the state had already provided the PMxx-PRI records, these PM-CON values were not added.

The data source code field was used to identify records that were added to the inventory to complete the set of PM10-PRI and PM25-PRI emissions.

iii. ERP Coordinates

If an S/L agency did not provide corrections for ERP coordinates that map more than 5 km outside of the county boundary, or provide coordinates for ERP records that did not have any coordinates in the S/L inventory, the following procedures were applied to replace the coordinates:

- Coordinates for other ERPs at the same facility, if available, that map within the county;
- Coordinates for the centroid of the zip code for a facility if a valid zip code was provided or could be obtained from the agency if it is not valid; or
- County centroid coordinates.

The zip code was taken from the SI NIF 3.0 table. The zip code was compared to a reference table of valid zip codes to verify that it was an active zip code and existed in the state and county reported in the inventory. If a valid zip code for a facility could not be identified, the centroid for the facility's county was used as a last resort. In some cases, the S/L agency provided confirmation that the S/L coordinates were correct even if the analysis indicated that the coordinates were outside of the county. These coordinates were not changed. Additionally, all coordinates were converted to latitude/longitude measurements.

iv. ERP Parameters

If valid ERP parameters were not provided by the S/L agency, the ERP augmentation procedures that EPA developed for the 2002 point source NEI were applied to the MANE-VU inventory (EPA, 2004b). It has been determined that the augmentation procedures in this document regarding SCC-specific ERP types and temperatures may be difficult to resolve. When this situation occurs, preference was given to the S/L agency -supplied ERP type and SCC. For example, the procedures do not account for cases where an EU has two processes with one defined as a stack source and the other as a fugitive source. Therefore, the S/L-supplied ERP type was used when this situation occurred. If the ERP type was null, and information was not available from the S/L agency, the stack height information was used as a guide. If stack height information was available, the ERP was treated as a stack, if stack height information was not available, the ERP was treated as a fugitive. An additional modification to the augmentation procedure was also implemented. Since in many cases null values were filled in with zeros by S/L local databases when comparing out-of-range velocities and flows (after it was determined that the stack and diameter information was correct) – null and zero values were treated in the same manner to prevent inappropriate replacement of stack parameter values. Additionally, stack parameter values were rounded to 1 decimal place when comparing with range values (just for the purposes of comparison) to prevent replacement of S/L parameter values based on negligible decimal differences.

v. Control Device Type and Control Efficiency Data

Control efficiencies that were 100% and rule effectiveness of 100% with non-zero emissions were diagnosed as potential errors and sent to the S/L agencies. Where possible these data were updated with S/L data corrections. Decimal control efficiencies were also diagnosed and sent to the S/L agencies. A decimal control efficiency was usually a sign that a control efficiency had not been entered as a percentage as is required by NIF 3.0. Where possible these data was updated with S/L data corrections.

c. QA Review of Final Inventory

Final QA checks were run on the revised point source inventory data set to ensure that all corrections provided by the S/L agencies were incorporated into the S/L inventories and that there were no remaining QA issues that could be addressed during the duration of the project. The EPA QA program was run on the inventory and the QA output was reviewed to verify that all QA issues that could be addressed were resolved. The QA output file was provided in an Access database along with Version 3 of the inventory.

3. Version 3 Emissions Summary

Table II-2 presents a State-level summary of the annual point source emissions in Version 3 of the 2002 MANE-VU inventory. Note that PM10-PRI and PM25-PRI emissions are included in the inventory for all SCCs for which S/L agencies reported any form of PM, PM_{10}, and/or $PM_{2.5}$ emissions. If an agency did not report PM10-PRI and/or PM25-PRI but reported PM-PRI, PM-FIL, PM-CON, PM10-FIL, and/or PM25-FIL, the PM augmentation procedures discussed in the TSD were applied to the form of PM emissions supplied by the agency to calculate emissions for the other forms of PM emissions. If an agency reported PM10-PRI and/or PM25-PRI emissions but not PM10-FIL, PM25-FIL, or PM-CON emissions, the agency's inventory was not augmented to calculate filterable or condensible emissions. Note that PM-CON is associated with only fuel combustion sources.

Table II-2. Version 3 2002 MANE-VU Point Source Emissions by State (Tons/Year)

State	CO	NH_3	NO_x	PM10-FIL	PM10-PRI	PM25-FIL	PM25-PRI	PM-CON	SO_2	VOC
Connecticut	4,053		12,923	738	1,617	0	1,283	389	15,988	4,907
Delaware	9,766	196	16,345	2,466	4,217	1,919	3,666	1,750	73,744	4,755
District of Columbia	248	4	780	91	161	54	132	68	963	69
Maine	17,005	845	19,939	4,535	7,289	2,567	5,787	2,753	23,711	5,319
Maryland	99,024	305	95,328	3,723	9,029	0	5,054	2,018	290,927	6,184
Massachusetts	21,262	1,463	47,086	2,776	5,852	997	4,161	2,984	101,049	8,263
New Hampshire	2,725	74	9,759	1,180	3,332	786	2,938	2,151	46,560	1,599
New Jersey	12,300		51,593	2,928	6,072	2,543	4,779	3	61,217	14,401
New York	66,427	1,861	118,978	1,808	10,392	1,965	7,080	210	294,729	11,456
Pennsylvania	121,524	1,388	297,379	18,044	40,587	6,038	20,116	5,065	995,175	37,323
Rhode Island	2,234	58	2,764	233	300	117	183	68	2,666	1,928
Vermont	1,078		787	130	304	97	267	2	905	1,097
MANE-VU	**357,645**	**6,194**	**673,660**	**38,654**	**89,150**	**17,083**	**55,447**	**17,462**	**1,907,634**	**97,300**

B. State-Specific Methods

For each of the MANE-VU states and two local agencies in Pennsylvania, this section identifies the temporal basis of the emissions included in Version 3 and discusses revisions incorporated into Version 3. In addition, this section also discusses the origin of each S/L agency's emissions included in Version 3. For each agency, a table is provided in Appendix A that lists the data source codes by SCC, emission type period, and pollutant. In addition, an electronic folder is provided for each S/L agency containing the QA Summary Reports prepared during Version 1 and other files documenting revisions included in Versions 2 and 3.

1. Connecticut

Connecticut's Version 3 point source inventory originates from Version 1 except for the following revisions that Connecticut provided for Version 2 and included in Version 3:

- Changed coordinates for AES Thames, Inc. in New London County to -72.3184, 41.4499 (FIPS code 09011, facility identifier 1544).

- Changed values for Hartford Steam (FIPS code 09003, facility identifier 3471), EU P0250, process 02 for summer daily values as follows: Changed actual throughput from 1934 E6FT3 to 1.934 E6FT3, CO summer daily emissions from 53.185 tons to 0.0532 tons, NO_x summer daily emissions from 255.288 tons to 0.1021 tons, and VOC summer daily emissions from 1.2569 tons to 0.0027 tons.

Table II-3 shows the emission type periods for which Connecticut provided emissions.

Table II-3. Connecticut 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20011201	20020228	27
NONANNUAL	20011201	20020228	29
NONANNUAL	20020601	20020831	27
NONANNUAL	20020601	20020831	29

Table A-1 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Connecticut provided the data for CO, NO_x, PM10-PRI, SO_2, and VOC. Connecticut did not provide any data for NH_3. Emissions for PM10-FIL, PM25-PRI, PM25-FIL, and PM-CON were calculated from the PM10-PRI emissions provided by Connecticut using the PM augmentation procedures.

2. Delaware

Delaware's Version 3 point source inventory originates from Version 1 except for some updates to ORIS Boiler IDs in the EU table that were incorporated into Version 2 and included in Version 3. Table II-4 shows the emission type periods for which Delaware provided emissions.

Table II-4. Delaware 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20020601	20020831	29

Table A-2 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Delaware provided the data for CO, NH_3, NO_x, SO_2, and VOC. Delaware also provided much of the PM emissions data but in some cases the PM augmentation procedures were applied to the PM data provided by Delaware to calculate emissions for other forms of PM (e.g., to estimate PM10-PRI from PM10-FIL, PM25-PRI from PM25-FIL, PM10-PRI and PM10-FIL from PM25-PRI and PM25-FIL).

3. District of Columbia

The District of Columbia's Version 3 point source inventory originates from Version 1. Table II-5 shows the emission type period for which the District of Columbia provided emissions.

Table II-5. District of Columbia 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Type

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30

Table A-3 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. The District of Columbia provided the data for CO, NH_3, NO_x, SO_2, and VOC. The District of Columbia provided at least one form of PM emissions and the PM augmentation procedures were applied to the emissions provided by the District of Columbia to calculate emissions for the other forms of PM.

4. Maine

Maine's Version 3 point source inventory originates from Version 1. Table II-6 shows the emission type periods for which Maine provided emissions.

Table II-6. Maine 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20020601	20020831	29

Table A-4 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Maine provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. Maine provided PM10-FIL and/or PM25-FIL emissions data and the PM augmentation procedures were applied to the emissions that Maine provided to calculate emissions for the other forms of PM.

5. Maryland

Maryland's Version 3 point source inventory originates from Version 1 except for some updates to ORIS Boiler IDs in the EU table that were incorporated into Version 2 and included in Version 3. Table II-7 shows the emission type periods for which Maryland provided emissions.

Table II-7. Maryland 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
ANNUAL	20040101	20041231	30
NONANNUAL	20020101	20021231	29
NONANNUAL	20020501	20020930	29
NONANNUAL	20040101	20041231	29

Table A-5 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Maryland provided the emissions data for CO, NH_3, NO_x, SO_2, VOC, PM10-PRI, and PM-PRI. The PM augmentation procedures were applied to the PM10-PRI emissions that Maryland provided to calculate emissions for the other forms of PM. Maryland provided NH_3 emissions for its point sources except for one new facility (state and county FIPS code 24013, facility ID 0012, SCC 30500622, data source code P) for which it used NH_3 emissions for four EUs (preheater kiln/dry process) prepared by MANE-VU.

6. Massachusetts

Massachusetts' Version 3 point source inventory originates from Version 1 except for the some stack parameter revisions that Massachusetts provided and were incorporated into Version 3. For Version 3, Massachusetts provided revisions to stack parameters in the ERP table for six EUs at three facilities. The revisions are listed in the Excel file named "MA Revisions to MANEVU V3 Point EI_040706.xls". Table II-8 shows the emission type periods for which Massachusetts provided emissions.

Table II-8. Massachusetts 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
ANNUAL	20030101	20031231	30

Table A-6 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Massachusetts provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. Massachusetts provided PM-FIL, PM10-FIL, and/or PM25-FIL emissions data and the PM augmentation procedures were applied to the emissions that Massachusetts provided to calculate emissions for the other forms of PM.

7. New Hampshire

New Hampshire's Version 3 point source inventory originates from Version 1.
Table II-9 shows the emission type periods for which New Hampshire provided emissions.

Table II-9. New Hampshire 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20020601	20020831	29

Table A-7 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. New Hampshire provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. New Hampshire provided PM-FIL, PM10-FIL, and/or PM25-FIL emissions data and the PM augmentation procedures were applied to the emissions that New Hampshire provided to calculate emissions for the other forms of PM.

8. New Jersey

New Jersey's Version 3 point source inventory originates from Version 1. In addition to the QA checks discussed previously in this TSD, New Jersey's original inventory submittal to EPA contained several issues with SCCs. For Version 1, per direction provided by New Jersey, SCCs that were less than 8 digits were changed to SCCs with 8 digits. Also, as approved by New Jersey, inactive SCC 39999901 was changed to active SCC 39999999. The invalid unit "GAL" was changed to the valid unit "E6GAL" in the EP table.

Table II-10 shows the emission type periods for which New Jersey provided emissions.

Table II-10. New Jersey 2002 Point, Version 3:
Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20011201	20020228	29
NONANNUAL	20020601	20020831	29

Table A-8 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. New Jersey provided the emissions data for CO, NO_x, SO_2, and VOC. New Jersey provided PM-PRI, PM10-PRI, and/or PM25-PRI emissions data and the PM augmentation procedures were applied to the emissions that New Jersey provided to calculate emissions for the other forms of PM. New Jersey did not provide any data for NH_3.

9. New York

New York's Version 3 point source inventory originates from Version 1 except for the following revisions that New York provided and were incorporated into Version 3.

For Version 3, New York provided an Access database named "MANEVU_NY2002_ Point_Corrected_093005.mdb" with revisions to records in the EM table. New York also provided in this database 651 records that were not included in Version 2 of MANE-VU's point source inventory, and, therefore, these records were added to Version 3 of MANE-VU's point source inventory. The new records added emissions for pollutants (not in Version 2) for EUs and processes that existed in Version 2 of MANE-VU's point source inventory.

The records in Version 2 that were revised and the records that were added to Version 3 are listed in the Excel file named "NY Revisions to MANE-VU V3 Point EI_040706.xls".
Table II-11 shows the emission type period for which New York provided emissions.

**Table II-11. New York 2002 Point, Version 3:
Unique List of Start Date, End Date, and Emission Type**

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30

Table A-9 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. New York provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. New York provided PM-PRI, PM10-PRI, and/or PM25-PRI emissions data and the PM augmentation procedures were applied to the emissions that New York provided to calculate emissions for the other forms of PM. New York provided NH_3 emissions for its point sources except for four cement kilns for which it used NH_3 emissions from a MANE-VU-sponsored inventory. The following identifies the facilities for which the MAEN-VU-sponsored NH_3 emissions inventory for cement kilns was used.

FIPS Code	Facility ID	SCC	Data Source
36001	4010300016	30500606 (2 kilns/dry process)	P
36001	4012400001	30500706 (1 kiln/wet process)	P
36111	3514800084	30500606 (1 kiln/dry process)	P

10. Pennsylvania (State, Excluding Allegheny and Philadelphia Counties)

The Version 3 point source inventory for the state of Pennsylvania originates from Version 1. The following summary excludes Allegheny and Philadelphia Counties who provided their own point source inventories for Versions 1, 2, and 3.

Table II-12 shows the emission type periods for which Pennsylvania provided emissions. Table A-10 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Pennsylvania provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. Pennsylvania provided PM10-PRI and/or PM25-PRI emissions data and the PM augmentation procedures were applied to the emissions that Pennsylvania provided to calculate emissions for the other forms of PM.

Table II-12. Pennsylvania 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type	Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20020104	30	ANNUAL	20020131	20020812	30
ANNUAL	20020101	20020111	30	ANNUAL	20020131	20021231	30
ANNUAL	20020101	20020120	30	ANNUAL	20020201	20020228	30
ANNUAL	20020101	20020123	30	ANNUAL	20020201	20020424	30
ANNUAL	20020101	20020130	30	ANNUAL	20020201	20020831	30
ANNUAL	20020101	20020131	30	ANNUAL	20020201	20020930	30
ANNUAL	20020101	20020212	30	ANNUAL	20020201	20021030	30
ANNUAL	20020101	20020215	30	ANNUAL	20020201	20021130	30
ANNUAL	20020101	20020221	30	ANNUAL	20020201	20021231	30
ANNUAL	20020101	20020228	30	ANNUAL	20020205	20021223	30
ANNUAL	20020101	20020313	30	ANNUAL	20020213	20020913	30
ANNUAL	20020101	20020329	30	ANNUAL	20020214	20021231	30
ANNUAL	20020101	20020331	30	ANNUAL	20020216	20020331	30
ANNUAL	20020101	20020412	30	ANNUAL	20020301	20020331	30
ANNUAL	20020101	20020414	30	ANNUAL	20020301	20020430	30
ANNUAL	20020101	20020422	30	ANNUAL	20020301	20020531	30
ANNUAL	20020101	20020427	30	ANNUAL	20020301	20021031	30
ANNUAL	20020101	20020430	30	ANNUAL	20020301	20021130	30
ANNUAL	20020101	20020503	30	ANNUAL	20020301	20021231	30
ANNUAL	20020101	20020514	30	ANNUAL	20020311	20021213	30
ANNUAL	20020101	20020517	30	ANNUAL	20020311	20021231	30
ANNUAL	20020101	20020521	30	ANNUAL	20020314	20021209	30
ANNUAL	20020101	20020531	30	ANNUAL	20020318	20021223	30
ANNUAL	20020101	20020603	30	ANNUAL	20020320	20020915	30
ANNUAL	20020101	20020614	30	ANNUAL	20020320	20021231	30
ANNUAL	20020101	20020626	30	ANNUAL	20020328	20021120	30
ANNUAL	20020101	20020628	30	ANNUAL	20020330	20021122	30
ANNUAL	20020101	20020630	30	ANNUAL	20020401	20020430	30
ANNUAL	20020101	20020701	30	ANNUAL	20020401	20020531	30
ANNUAL	20020101	20020731	30	ANNUAL	20020401	20020731	30
ANNUAL	20020101	20020813	30	ANNUAL	20020401	20020930	30
ANNUAL	20020101	20020831	30	ANNUAL	20020401	20021231	30
ANNUAL	20020101	20020909	30	ANNUAL	20020409	20021205	30
ANNUAL	20020101	20020930	30	ANNUAL	20020415	20021117	30
ANNUAL	20020101	20021031	30	ANNUAL	20020415	20021231	30
ANNUAL	20020101	20021101	30	ANNUAL	20020421	20021024	30
ANNUAL	20020101	20021112	30	ANNUAL	20020424	20021016	30
ANNUAL	20020101	20021130	30	ANNUAL	20020428	20021231	30
ANNUAL	20020101	20021213	30	ANNUAL	20020429	20020922	30
ANNUAL	20020101	20021216	30	ANNUAL	20020429	20021031	30
ANNUAL	20020101	20021217	30	ANNUAL	20020501	20020630	30
ANNUAL	20020101	20021220	30	ANNUAL	20020501	20020930	30
ANNUAL	20020101	20021223	30	ANNUAL	20020501	20021013	30
ANNUAL	20020101	20021230	30	ANNUAL	20020501	20021031	30
ANNUAL	20020101	20021231	30	ANNUAL	20020501	20021231	30
ANNUAL	20020102	20020703	30	ANNUAL	20020506	20021202	30
ANNUAL	20020102	20021203	30	ANNUAL	20020511	20021231	30
ANNUAL	20020102	20021215	30	ANNUAL	20020515	20021231	30
ANNUAL	20020102	20021223	30	ANNUAL	20020519	20020727	30
ANNUAL	20020102	20021227	30	ANNUAL	20020525	20021231	30

Table II-12. (Continued)

Emission Type Period	Start Date	End Date	Emission Type	Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020102	20021228	30	ANNUAL	20020601	20020602	30
ANNUAL	20020102	20021229	30	ANNUAL	20020601	20020831	30
ANNUAL	20020102	20021230	30	ANNUAL	20020601	20020930	30
ANNUAL	20020102	20021231	30	ANNUAL	20020601	20021019	30
ANNUAL	20020103	20021126	30	ANNUAL	20020603	20021231	30
ANNUAL	20020103	20021228	30	ANNUAL	20020606	20021127	30
ANNUAL	20020103	20021231	30	ANNUAL	20020629	20021231	30
ANNUAL	20020104	20020930	30	ANNUAL	20020701	20020731	30
ANNUAL	20020104	20021223	30	ANNUAL	20020701	20020930	30
ANNUAL	20020104	20021231	30	ANNUAL	20020701	20021231	30
ANNUAL	20020105	20021218	30	ANNUAL	20020708	20021231	30
ANNUAL	20020105	20021231	30	ANNUAL	20020801	20020831	30
ANNUAL	20020106	20021231	30	ANNUAL	20020801	20020930	30
ANNUAL	20020107	20021231	30	ANNUAL	20020801	20021130	30
ANNUAL	20020108	20021221	30	ANNUAL	20020801	20021231	30
ANNUAL	20020108	20021228	30	ANNUAL	20020802	20021231	30
ANNUAL	20020110	20021204	30	ANNUAL	20020901	20020930	30
ANNUAL	20020111	20021231	30	ANNUAL	20020901	20021231	30
ANNUAL	20020113	20021006	30	ANNUAL	20020920	20021231	30
ANNUAL	20020114	20021203	30	ANNUAL	20021001	20021030	30
ANNUAL	20020115	20020318	30	ANNUAL	20021001	20021231	30
ANNUAL	20020115	20020323	30	ANNUAL	20021028	20021231	30
ANNUAL	20020115	20020326	30	ANNUAL	20021101	20021231	30
ANNUAL	20020115	20020830	30	ANNUAL	20021118	20021231	30
ANNUAL	20020123	20020127	30	ANNUAL	20021201	20021231	30
ANNUAL	20020124	20021127	30				

11. Pennsylvania (Allegheny County, FIPS code 42003)

The Version 3 point source inventory for Allegheny County, Pennsylvania originates from Version 1. Table II-13 shows the emission type periods for which Allegheny County provided emissions.

Table II-13. Pennsylvania - Allegheny County 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20011201	20020228	29
NONANNUAL	20020601	20020831	29

Table A-11 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Allegheny County provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. Allegheny County provided PM-FIL, PM10-FIL, PM25-FIL, and/or PM-CON emissions data and the PM augmentation procedures were applied to the emissions that Allegheny County provided to calculate emissions for the other forms of PM.

12. Pennsylvania (Philadelphia County, FIPS code 42101)

The Version 3 point source inventory for Philadelphia County, Pennsylvania originates from Version 1. Table II-14 shows the emission type periods for which Philadelphia County provided emissions.

Table II-14. Pennsylvania - Philadelphia County 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20011201	20020228	29
NONANNUAL	20020601	20020831	29

Table A-12 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Philadelphia County provided the emissions data for CO, NH_3, NO_x, SO_2, and VOC. Philadelphia County provided PM-FIL, PM10-FIL, and/or PM25-FIL emissions data and the PM augmentation procedures were applied to the emissions that Philadelphia County provided to calculate emissions for the other forms of PM.

13. Rhode Island

Rhode Island requested that their Version 2 inventory be replaced with the CAP and NH_3 inventory in the final 2002 point source NEI that EPA released during March 2006. Therefore, all of Rhode Island's point source data in Version 2 was replaced with the point source data provided in the final 2002 point source NEI. The following provides a summary of the QA issues identified and addressed in Version 1. The Excel file named "RI Revisions to MANE-VU V3 Point EI_040706.xls" provides documentation and correction of each of these issues for Version 3.

The Site table in the NEI did not include the ORIS IDs for all of the EGUs identified in the EGU crosswalk table. Therefore, the crosswalk table was used to add the ORIS IDs to the Site table. Matching of boiler IDs to the EU table for one facility was maintained in the NEI, and, therefore, included in Version 3 of MANE-VU's inventory. However, matching of boiler IDs for other facilities was not available in the crosswalk table.

The data source codes that EPA used in the Rhode Island's point source inventory for the NEI were maintained in the MANE-VU inventory. The following defines the codes:

Code	**Description**
A	Augmented PM data.
CAMD	Record only in 2002 Emission Tracking System (ETS)/CEM for SO_2, NO_x, and heat input values; other emissions estimated.
SCAMD1	Data were received from the state. The state's NO_x and SO_2 emission values were replaced with the ETS values.
99_PMPRI	Not defined – presumed to mean PM-PRI data originating from the 1999 NEI.
SUM	Primary PM emissions calculated as the sum of the filterable PM and PM-CON emissions
DIFF	PM-CON emissions calculated as the difference between the primary PM and filterable PM emissions

QA of PM emissions was also performed in accordance with the QAPP for the 2002 base year inventory for EM table records that were revised or added for Rhode Island and New York. As a result, it was identified that the emission ton value was not correctly calculated from the emission unit numerator and emission numeric value fields in the NEI file, therefore, the emission ton value was corrected for the MANE-VU inventory. In addition, the final NEI for Rhode Island contained NH_3 emissions for several facilities but no SCCs were provided for the NH_3 emissions; therefore, the NH_3 emissions were removed for the MANE-VU inventory as requested by Rhode Island.

For Version 3 of MANE-VU's inventory, Facility ID EGU1036 and Facility Name MANCHESTER STREET in the final 2002 NEI was changed to Facility ID AIR936 and Facility Name USGEN NEW ENGLAND INC per Rhode Island's request because this is the same facility (with ORIS ID 3236). Also, for State Facility ID AIR594, EU ID 2, ERP 2, and Process ID 2, the SCC was changed from 39000589 to 39000599. In addition, the ORIS IDs reported in the NEI were revised to make them consistent with the crosswalk prepared for MANE-VU that matches state facility IDs to ORIS IDs.

One issue was identified with one record for Rhode Island where the sum of the PM10-FIL and PM-CON emissions was more than the PM10-PRI emissions, and the sum of the PM25-FIL and PM-CON emissions was more than the PM25-PRI emissions for facility ID AIR1248 in County FIPS 44007; SCC 10300601 (External Combustion Boilers : Commercial/Institutional : Natural Gas : > 100 Million Btu/hr). In addition, the PM10-FIL emissions reported was 1.6 tons more than the PM10-PRI emissions reported, and the PM25-FIL emissions reported was 1.6 tons more than the PM25-PRI emissions reported for this facility. The record has very low emissions and it was not clear how the PM consistency issues should be addressed; therefore, due to time and resource constraints, this issue was not corrected in Version 3.

Table II-15 shows the emission type periods for which Rhode Island provided emissions.

Table II-15. Rhode Island 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020601	20020831	29
NONANNUAL	20020601	20020831	29
NONANNUAL	20020601	20020831	30

Table A-13 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Rhode Island provided the emissions data for CO, NO_x, SO_2, VOC, and PM-PRI. The EPA applied PM augmentation procedures to the PM-PRI emissions that Rhode Island provided to calculate emissions for the other forms of PM. The EPA added NH_3 emissions for an EGU from EPA's CAMD data; otherwise, NH_3 emissions are not available for other point sources in Rhode Island.

14. Vermont

Vermont's Version 3 point source inventory originates from Version 1. Table II-16 shows the emission type periods for which Vermont provided emissions.

Table II-16. Vermont 2002 Point, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
NONANNUAL	20020101	20020331	27
NONANNUAL	20020101	20021231	29
NONANNUAL	20020601	20020831	27

Table A-14 in Appendix A identifies the data sources by SCC, emission type period, and pollutant in the Version 3 point source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Vermont provided the emissions data for CO, NO_x, SO_2, and VOC. Vermont provided PM-FIL, PM10-FIL, and/or PM25-FIL emissions data and the PM augmentation procedures were applied to the emissions that Vermont provided to calculate emissions for the other forms of PM. Vermont's inventory does not include NH_3 emissions.

C. What Issues Need to be Addressed in Future Versions?

This section provides a summary of potential revisions to incorporate into future versions of the MANE-VU point source inventory.

All States – A coordinated effort between the S/L agencies should be developed to apply consistent methods to avoid having to apply procedures to augment inventory data to correct for the QA issues and fill in missing data as discussed previously in this chapter. For example, this will ensure that consistent methods are applied across S/L agencies to ensure accurate reporting of stack parameters, PM emissions, and minimize other QA issues that were identified during the development of Versions 1, 2, and 3 of the inventory.

For PM emissions, the S/L agencies should develop and apply a consistent method for including condensible emissions for fuel combustion sources that can be applied when the agencies develop their inventories. This may include compiling the emission factors for all forms of PM into one database, organized by SCC and control type (for filterable emissions), and sharing the database among the MANE-VU S/L agencies. Use of a consistent set of emission factors will help to avoid the PM consistency issues identified in Versions 1, 2, and 3 of the MANE-VU inventory as well as ensure that condensible emissions are included in the primary emissions reported in the inventory.

The EGU crosswalk should be maintained to ensure that State Facility IDs and EU IDs are correctly matched with ORIS IDs and boiler IDs.

State-specific suggestions are as follows:

Connecticut, New Jersey, Rhode Island, and Vermont – Include NH_3 emissions.

New Jersey – Develop a method to translate the SCCs that are less than 8 digits reported by facilities to 8 digit SCCs for reporting in the inventory.

CHAPTER III – AREA SOURCES

A. General Methods for all States

1. What Data Sources Were Used?

Version 1 of the 2002 MANE-VU area source inventory was built on the inventories that the State agencies submitted to EPA from May through July of 2004 as a requirement of the CERR. Except for Rhode Island, all of the MANE-VU States also submitted area source inventories to EPA. Rhode Island elected to use the preliminary 2002 NEI for its area source inventory. The EPA performed some limited QA review of the State inventories to identify format, referential integrity, and duplicate record issues. The EPA revised the inventories to address these issues and made the files available to the State agencies on August 6, 2004. These inventory files were used as the starting point for the MANE-VU inventory. These inventory files were obtained from EPA, consolidated into a single data set, subjected to extensive QA review, and revised (as approved by the MANE-VU State agencies) to address QA issues and fill data gaps identified while preparing Version 1. Subsequently, the following agencies provided revisions to their area source inventories:

- Version 2 – District of Columbia, Massachusetts, Maryland, New Hampshire, New Jersey, New York, and Vermont.

- Version 3 – Massachusetts, Maine, New Jersey, New York, and Rhode Island.

The Version 2 and 3 revisions for these States are discussed in section III.B (State-Specific Methods) of this chapter. In addition, as requested by MANE-VU, revisions were made to Version 3 to (1) add emissions for portable fuel containers (PFCs), industrial adhesives, and outdoor residential wood combustion for some States; (2) decrease the $PM_{2.5}$ emissions for paved and unpaved roads and construction for all States; and (3) remove invalid CE records that originated from the preliminary 2002 NEI for some States. These revisions are explained in section III.A.3 of this chapter.

To track the origin of data, the temporal period of emissions, and to facilitate generation of emission summaries, the following NIF plus fields were added to the EP, PE, EM, and CE tables:

- Data Source Codes:

For the area source inventory data, the data source codes are based on the following 9-character format:

[Data Origin]-[Year]-[Grown/Not Grown/Carried Forward]-[PM Augmentation Code]

Code	Field Length
Data Origin	1
Year	3 (including leading hyphen)
Grown/Not Grown/Carried Forward	2 (including leading hyphen)
PM Augmentation	3 (including leading hyphen)

Data Origin Codes

Code	Description
S	State agency-supplied data
L	Local agency-supplied data
R	Tribal agency-supplied data
P	Regional Planning Organization
E	EPA/Emission Factors and Inventory Group (EFIG)-generated data

Year Codes

Year for which data are supplied (e.g., Year = -02 for 2002), or from which prior year data are taken (e.g., Year = -99 for 1999; -01=2001).

Grown/Carried Forward/Not Grown Codes

Code	Description
-G	Used when emissions in a pre-2002 inventory are grown to represent 2002 emissions.
-F	Used when emissions in a pre-2002 inventory are carried forward and included in the 2002 inventory without adjustment for growth.
-X	Used when the emissions are not grown or are not carried forward. For example, X is used when emissions are calculated for the 2002 inventory using 2002 activity, or when data are replaced with 2002 State data.

PM Augmentation Codes

- **-PA** PM Augmented Emissions: Record for $PM_{10}/PM_{2.5}$ emissions that were updated or added using ad-hoc updates.
- **-PC** PM Augmented Emissions: Record added for $PM_{10}/PM_{2.5}$ emissions estimated using the PM Calculator.
- **-PR** PM Augmented Emissions: Record added for $PM_{10}/PM_{2.5}$ emissions estimated using ratios of PM_{10}-to-PM or $PM_{2.5}$-to-PM_{10}. If PM_{10} and $PM_{2.5}$ emissions are equal and one of the pollutants is assigned this code, the ratio is assumed to be 1.

- Revision Date: This field indicates the month and year during which the last revision was made to a record.

- State FIPS: This field indicates the State FIPS code of the submittal.

- County FIPS: This field indicates the county FIPS code of the inventory.

The following NIF plus fields were added to the EM table:

- Emission Ton Value: This field indicates the values of the emissions in tons. This field was used to prepare summaries of emissions on a consistent EU basis.

- Emission Type Period: This field indicates the period of the Emission Type – either ANNUAL, SEASONAL, MONTHLY, or DAILY. Emission table records designated as ANNUAL were used to prepare summaries of annual emissions.

- CAP_HAP: This field identifies records for CAP versus records for HAPs. For the MANE-VU inventory, the flag is CAP for all records.

- Year: This field indicates the year of the data; for this inventory, it is 2002.

2. What Quality Assurance Steps Were Performed?

A QAPP was prepared and approved by MANE-VU/MARAMA and the EPA Regional Office prior to initiating work on Version 1 of the inventory (MANE-VU, 2004a). This QAPP was followed during preparation of all three versions of the inventory. This section provides an overview of the QA checks completed on each version of the inventory. The QA process for each State inventory involved the following steps that are also included in the following discussion:

- Conduct QA checks on each State inventory;
- Prepare a QA Summary Report for submittal to the agency for review;
- Revise the inventory to resolve QA issues as directed by the agency;
- Repeat the QA checks on the revised inventory to verify that the corrections were completed;

- Perform augmentation to correct for missing data; and
- Repeat the QA checks to verify that the augmentation was completed correctly.

a. QA checks for State emission inventories

The following QA checks were run on each State inventory:

i. County and SCC coverage
ii. Pollutant coverage
iii. EPA QA summaries sent to State agencies
iv. Range errors
v. PM emissions consistency and completeness review
vi. Control device type and control efficiency data review
vii. Start and end date checks
viii. Annual and daily emissions comparison

<u>County and SCC Coverage</u>

The county coverage in the State inventories appeared to be reasonable for all States. The SCC coverage was difficult to evaluate simply by showing a count of the number of SCCs by State. Each State inventory was compared to the preliminary 2002 NEI, and area source categories in the NEI but not in a State inventory were sent to each agency for review. Each State agency then selected the NEI categories that were then added to the MANE-VU inventory.

<u>Pollutant Coverage</u>

The pollutant coverage in the State inventories was complete for all pollutants except for PM_{10} and $PM_{2.5}$. Diagnosis and resolution of PM_{10} and $PM_{2.5}$ pollutant emissions is discussed later in section III.A.2.c. The exception was Connecticut who included only VOC, NO_x, and CO emissions in its inventory submittal to EPA.

<u>EPA QA Summaries Sent to State Agencies</u>

Under a separate project with EPA, Pechan performed QA review of the State area source inventories. This QA review involved running EPA's QA program on each data set to identify and resolve QA issues. Using the results of this QA work, Pechan prepared two sets of QA summaries that EPA sent to the State agencies. Pechan contacted each State agency with QA issues identified in the EPA reports to obtain direction for correcting the QA issues identified in the reports. The following explains these two summaries:

High-level Summary of State Inventories Submitted to EPA:

The first summary was an Excel workbook file with four spreadsheets that provided the following information:

- 2002 Nonpoint File Names: This spreadsheet documented names and formats of the files that EPA received from the State agencies and the dates on which they were transferred to Pechan.

- 2002 Nonpoint Summary: This spreadsheet documented the name of the state agency, type of inventory (i.e., CAP, HAP, or both), a comparison of the number of the counties in the inventory to the total number of counties in the State to identify the geographic coverage of the inventory, a unique list of CAP codes, and the total number of area source SCCs. This spreadsheet also indicated if any nonroad or onroad emissions data were moved from the agency's area source inventory to its nonroad or onroad inventory.

- 2002 Nonpoint Emission Sums: This spreadsheet summarized emissions by start date, end date, and emission type and assigned the appropriate code to the emission type period NIF plus field.

- 2002 Nonpoint Error Summary: This spreadsheet provided a copy of the "SummaryStats" table from the EPA QA program (EPA, 2004a). This table provided the count of records for each NIF 3.0 table and identified the number of records with errors by type of error.

Detailed Summary of QA Issues:

This summary (sent to State agencies on August 11) was prepared in a text file that listed by State and NIF table the number of records with errors, and provided corrections for the errors. To support documentation of corrections to some of the errors in the text file, Pechan prepared an Excel workbook file that summarized the following errors and corrections by State: invalid pollutants codes; invalid units; invalid maximum achievable control technology (MACT) codes; and invalid and inactive SCCs. A spreadsheet was also included to show the mapping of standard industrial classification (SIC) codes to North American Industrial Classification System (NAICS) codes. This crosswalk was used to correct invalid NAICS codes if a valid SIC code was available in the State inventories and vice versa.

Additional QA for the MANE-VU Area Source Inventory

The following explains additional QA and data tracking that was performed for the MANE-VU inventory. The following data elements were reviewed to identify QA issues:

- Range Errors;
- PM Emissions Consistency and Completeness;
- Control Device Codes and Control Efficiency Values;
- Start and End Dates;
- Annual and Daily Emissions Comparison; and
- Comparison of State Inventories to the 2002 Preliminary NEI.

For each State inventory for which QA issues were identified, a separate QA Summary Report was prepared in an Excel workbook file, and sent to each State agency for review. The State agencies provided directions in the Excel Workbook file, via e-mail, or by submitting revised records in NIF 3.0 in an Access database to correct the inventories. The QA reports are discussed under section III.A.2.b.

Range Errors

The EPA's QA program contains routines that compare annual emission values, numeric fields in the PE and EP tables, and other temporal numeric fields against a range of values. The QA program flags records that are less than or greater than the range of values for review. Pechan summarized the range errors for the State agencies to review and provide corrections. According to EPA, the ranges to which values in inventories are compared represent "normal" ranges that are based on percentiles from previous inventories. The range values are conservative in that EPA wants to identify suspicious values even though the values may be real (Thompson, 2002).

PM Emissions Consistency and Completeness Review

The following consistency checks were performed at the EM table data key level (for annual emissions) to compare PM emissions:

- If an SCC was associated with a PM emission record, but was missing one or more of the following (as appropriate for the SCC [i.e., PM-CON is associated with fuel combustion only]): PM10-FIL, PM10-PRI, PM25-FIL, PM25-PRI, or PM-CON, the record was flagged for review.

- The following equations were used to determine consistency:

PM10-FIL + PM-CON = PM10-PRI
PM25-FIL + PM-CON = PM25-PRI

- The following comparisons were made to determine consistency:

  PM10-PRI >= PM10-FIL
  PM25-PRI >= PM25-FIL
  PM10-PRI >= PM-CON
  PM25-PRI >= PM-CON
  PM10-FIL >= PM25-FIL
  PM10-PRI >= PM25-PRI

If the data failed one of these checks it was diagnosed as an error. If a State agency did not provide corrections to these errors, the errors were corrected/filled in according to an augmentation procedure explained in section III.A.2.c.

For information purposes, all PM-PRI and PM-FIL records were flagged to indicate that these pollutants were included instead of, or in addition to, the standard PM10-PRI/FIL, PM25-PRI/FIL, and PM-CON pollutants.

Control Device Type and Control Efficiency Data Review

The CE codes in the "Primary Device Type Code" and "Secondary Device Type Code" fields were reviewed to identify invalid codes (i.e., codes that did not exist in the NIF 3.0 reference table) and missing codes (e.g., records with a null or uncontrolled code of 000 but with control efficiency data).

QA review of control efficiency data involved diagnosis of two types of errors. First, records were reviewed to identify control efficiency values that were reported as a decimal rather than as a percent value. Records with control efficiencies with decimal values were flagged as a potential error (although not necessarily an error, since the real control efficiency may be less than 1%). Records with a 1% control efficiency value were also identified for review by the State agency to determine if the value was reported as a decimal in its internal data system but rounded to 1% when the data were converted to NIF 3.0.

The second check identified records where 100% control was reported in the CE table, but the emissions in the EM table were greater than zero and the rule effectiveness value in the EM table was null, zero, or 100% (implying 100% control of emissions). Because many agencies did not populate the rule effectiveness field or a default value of zero was assigned, records with null or zero rule effectiveness values were included where the CE was 100% and emissions were greater than zero. For records that met these criteria, Pechan consulted with the State agency to determine if corrections were needed to any of the fields.

Start and End Date Checks

QA review was conducted to identify start and end date values in the PE and EM tables to confirm consistency with the inventory year in the TR table, and to confirm that the end date reported was greater than the start date reported.

Annual and Daily Emissions Comparison

The State inventories were reviewed to determine if any of the following conditions existed:

- Multiple records coded at the SCC level as emission type 30, but with different start and end dates. While not a true duplicate, this may indicate an error or inclusion of both annual and seasonal values.
- Multiple records coded at the SCC level as a daily emission type (27, 29, etc.) but with different start and end dates. While not a true duplicate, this may indicate an error or just inclusion of additional types of daily emissions.
- Multiple records coded at the SCC level with the same start and end date, but different emission types. While not a true duplicate, this may indicate an error or just inclusion of additional types of daily emissions.
- Any "DAILY" type record that was missing its associated "ANNUAL" record was flagged for review.
- Any "DAILY" type record that was greater than its associated "ANNUAL" record was flagged for review.

b. Responses from State Agencies

QA Summary Reports were sent to the State agencies to review the QA issues identified. The State agencies were asked to return these reports to MANE-VU with their corrections documented in the reports. These reports were then used to document revisions to the State inventories. The QA Summary Reports containing the revisions provided by the State agencies are provided in Excel Workbook files with this TSD.

c. Gap Filling and Augmentation

This section explains the methods used to add data for categories and/or pollutants missing in a State's inventory after revising the inventory to address QA issues.

i. MANE-VU sponsored inventories
ii. PM augmentation
iii. Fossil fuel combustion sources
iv. Other sources of PM emissions
v. Merging of NEI data into S/L inventories
vi. Revisions to the preliminary 2002 NEI incorporated into Version 1 of the MANE-VU inventory
vii. Additional work on Area source methods
   - Fugitive Dust Emissions from Paved and Unpaved Roads
   - Wildfires and Prescribed Burning

The following discusses the augmentation procedures that were applied to the State inventories to improve the inventories or to fill in missing data not supplied by the State agencies.

MANE-VU -Sponsored Inventories

MANE-VU sponsored inventory development for residential wood combustion, open burning, public owned treatment works (POTWs), compositing, and industrial refrigeration. At the beginning of the project for developing Version 1, each State agency was requested to indicate if it (1) included the MANE-VU-sponsored inventory for one or more of these categories in the inventory it submitted to EPA; (2) included its own estimates for a category in the inventory it submitted to EPA; or (3) if it did not include a category in its inventory, if the MANE-VU-sponsored inventory or the 2002 preliminary NEI should be used as the source of data for the category. The results of this Version 1 inventory development request are summarized in Table III-1.

Improvements to fugitive dust emissions for the paved and unpaved road categories were completed after the draft version of the consolidated area source inventory was prepared. Agencies provided guidance on if they wanted the MANE-VU-sponsored inventory for these two categories to replace the paved and unpaved road inventories they had included in their inventories. For paved roads, all States requested that the MANE-VU-sponsored inventory be used; however, New Jersey and Maryland requested that the winter-time sand/silt adjustment not be included in their inventories. For unpaved roads, nine of the 12 States requested that the MANE-VU-sponsored inventory be used. New Jersey requested that its unpaved road inventory be used instead of the MANE-VU-sponsored inventory. In addition, the District of Columbia and Delaware do not have any unpaved road activity and excluded this category from their inventories.

PM Augmentation

Procedures were developed to estimate missing pollutant data from data provided by the State agencies in order to develop a complete set of PM10-PRI and PM25-PRI emissions to support air quality modeling. The following discusses the procedures for fossil fuel combustion sources first followed by the procedures for all other area sources of PM emissions.

Fossil Fuel Combustion Sources

Fossil fuel combustion sources include industrial, commercial/institutional, and residential anthracite coal, bituminous/subbituminous coal, distillate oil and kerosene, residual oil, natural gas, and LPG. All of these sources emit both filterable and condensible emissions. The QA review of the PM emissions data for these sources focused on verifying that the emissions reported in the State inventories included both filterable and condensible emissions. The emissions for these pollutants can be reported in State inventories individually (i.e., as filterable and condensible separately) or as primary emissions (i.e., the sum of the filterable and condensible emissions). The QA review also focused on evaluating the emission factors reported in the State inventories to determine if they were reasonable.

Table III-1. Summary of MANE-VU-Sponsored Inventories Included in Version 1 of the Area Source Consolidated Emissions Inventory

Area Source Category	Pollutant	SCCs	MANE-VU Inventory Included in State's Inventory Submitted to EPA			Not Included in State's Inventory - Add to MANE-VU Inventory			State's Inventory Includes State-Developed Estimates			Not Included in State's Inventory - Add 2002 Preliminary NEI Data to State's Inventory
			Annual	Summer Day	Winter Day	Annual	Summer Day	Winter Day	Annual	Summer Day	Winter Day	Annual
POTWs	NH_3, VOC	2630020010 (Wastewater Treatment)	DE, NJ, PA	DE, NJ, PA		VT	VT		CT, DC, DE, MA, MD, NH, NJ, NY	CT, DC, DE, MA, MD, NH, NJ	NJ	ME, RI
		2630020020 (Biosolids Processes)	DE, NJ, PA	DE, NJ, PA		VT	VT		CT, DC, DE, MA, MD, NH, NJ, NY	CT, DC, DE, MA, MD, NH, NJ	NJ	ME, RI
		2630050000 (Digested Sludge)	DE, NH, NJ, PA	DE, NH, NJ, PA		VT	VT		CT, DC, DE, MA, MD, NY	CT, DC, DE, MA, MD		ME, RI
Composting	NH_3, VOC	2680001000 (Biosolids)	NH, NJ	NH, NJ		CT, DC, MA, ME, PA, VT	CT, DC, MA, ME, PA, VT					
		2680002000 (Mixed Biosolids and Green Waste)	NH, NJ	NH, NJ		CT, DC, MA, ME, PA, VT	CT, DC, MA, ME, PA, VT					
		2680003000 (Composting; Green Waste)				DC, MA, ME	DC, MA, ME					
Industrial Refrigeration	NH_3	2399010000	ME, NH, NJ	ME, NH, NJ		CT, MA, PA, VT	CT, MA, PA, VT					
Residential Wood Combustion	All criteria pollutants/ precursors, and many toxic air pollutants	2104008000 (Indoor)	MA, MD, NH	MA, MD, NH	MA, MD, NH	CT, DE, ME	CT, DE, ME	CT, DE, ME	NJ, NY, VT	NJ	NJ	DC, PA, RI
		2104008070 (Outdoor)	MA, MD, NH	MA, MD, NH	MA, MD, NH	CT, DE, ME	CT, DE, ME	CT, DE, ME				
Open Burning	All criteria pollutants/ precursors, and many toxic air pollutants	2610000100 (Leaves)	MA, MD, NH, PA			DC, DE, NY, VT			NJ	NJ	NJ	ME, RI
		2610000400 (Brush)	MA, MD, PA			CT, DC, DE, NY, VT			NJ	NJ	NJ	ME, NH, RI
		2610030000 (Municipal Solid Waste)	MA, MD, PA			DC, DE, NY			NH, NJ	NH, NJ	NJ	ME, RI, VT
		2610040400 (Municipal Yard Waste)	MA, NY, PA			DC, NY, VT			DE, NJ	DE, NJ	DE, NJ	

Table III-1 (continued)

Notes:

Gray shading identifies categories for which daily emissions are not available.

POTWs:

CT, MD: Provided VOC but not NH_3 emissions in its State inventory.

DC, MA, MD, ME, NH, RI: Reported POTW emissions under SCC 2630020000 (Total Processed).

DE: MANE-VU inventory used for NH_3; DE provided its own VOC emissions under SCC 2630020000 (Total Processed).

NJ: MANE-VU-sponsored inventory used for NH_3 only. NJ included its own inventory for the other criteria pollutants under SCCs 2630010000 and 2630020000.

NY: Reported VOC emissions under SCC 2630000000 (from the preliminary 2002 NEI) and SCC 2630020000 (State-developed inventory). MANE-VU-sponsored NH_3 inventory was not used.

Composting:

CT, NH: SCC 2680003000 is not in the MANE-VU-sponsored composting inventory for these States.

DE: This State does not have composting activity.

MD: State requested that the MANE-VU inventory for this category not be included in its inventory.

NY, RI: Did not include emissions for this category in the 2002 inventory.

Industrial Refrigeration:

DC: Requested that the preliminary 2002 NEI be used but the NEI does not contain any emissions for this category in DC.

DE: State-developed emissions are included in point source inventory.

MD, RI: Did not include emissions for this category in its inventory.

ME: Used the MANE-VU inventory emissions under SCC 2302080002 (Miscellaneous Food and Kindred Products/Refrigeration).

NH: Original inventory submittal to EPA includes SO_2 and PM emissions for SCC 2399000000 from the preliminary 2002 NEI; NH_3 emissions for SCC 2399010000 are from the MANE-VU inventory.

NY: Original inventory submittal to EPA includes SO_2 and PM emissions for SCC 2399000000 from the preliminary 2002 NEI; NY did not use the MANE-VU-sponsored NH_3 inventory for SCC 2399010000.

Residential Wood Combustion:

DC: RWC inventory in 2002 NEI covers seven SCCs and does not include daily emissions.

Open Burning:

CT: Statewide activity for SCC 2610000100 (Leaves) and SCC 2610030000 (Municipal Solid Waste) is negligible.

For SCCs 2610000400 (Brush) and 2610040400 (Municipal Yard Waste), State initially provided VOC, NO_x, and CO emissions under SCC 2610000000 which is no longer a valid SCC in EPA's master SCC list. CT recalculated emissions to include VOC, NO_x, CO, PM10-PRI/-FIL, and PM25-PRI/-FIL, and placed the emissions on valid SCC 2610000500 (Land Clearing Debris) since the majority of the activity is associated with activities covered by this SCC.

MD: The MANE-VU inventory for SCC 2610040400 (Municipal Yard Waste) reports zero emissions indicating that the activity for the category does not occur in MD. MD did not include the SCC in its inventory for this reason.

NH: Did not include NH_3 emissions in MANE-VU inventory for SCC 2610040400 (Municipal Yard Waste).

To support the QA review effort, the uncontrolled PM emission factors shown in Table III-2 were compiled from AP-42. The emission factors reported in the State inventories were compared to the emission factors in this table. Emission factors that appeared too high or too low were flagged for review by the State agency. In addition, inventory data were flagged for review by the State agency if the emissions were reported under the primary PM pollutant codes but the emission factors matched with the emission factors for filterable PM in Table III-2. Finally, if emission factors were not reported in the State agency inventory, the emission factors were back-calculated using the throughput data (if available), emissions, rule effectiveness values, and control efficiency data (if available). The back-calculated emission factors were compared to the factors in Table III-2 to identify data with major difference between the factors. It is emphasized that the uncontrolled emission factors in Table III-2 were used as a reference for reviewing State inventory data. The emission factors in this table should not be construed to be the best available for all State agencies since the emission factors will vary depending on the composition of the boiler population in an agency's area source inventory.

Delaware, Massachusetts, Maryland, New Hampshire, New Jersey, New York, and Pennsylvania provided their own inventory for all fossil fuel combustion categories. Connecticut, the District of Columbia, Maine, Rhode Island, and Vermont used fossil fuel combustion inventory data in the preliminary 2002 NEI for some or all of the categories. The following provides details on the origin of the fossil fuel combustion inventories for these States:

> Connecticut supplied VOC, NO_x, and CO emissions from its 1999 inventory for industrial and commercial/institutional fossil fuel combustion. PM10-PRI, PM25-PRI, SO_2, and NH_3 emissions were taken from preliminary NEI estimates (carried forward from Version 3 of the 1999 NEI). For the residential sector, Connecticut's inventory was taken from the preliminary 2002 NEI. Connecticut provided guidance on the counties with natural gas and LPG activity for which to use the NEI estimates.
>
> For the District of Columbia, the preliminary NEI was used to gap fill missing PM10-PRI and PM25-PRI emissions for commercial/institutional bituminous/ subbituminous coal combustion and PM10-PRI, PM25-PRI, SO_2, and NH_3 for commercial/institutional natural gas combustion. The NEI estimates for these commercial/institutional categories were carried forward from Version 3 of the 1999 NEI. The District of Columbia used the NEI estimates for residential bituminous/subbituminous coal combustion.
>
> Maine and Rhode Island used the preliminary 2002 NEI for all three sectors. The NEI estimates for the industrial and commercial/institutional sectors were carried forward from Version 3 of the 1999 NEI, while the residential sector estimates are based on 2000 or 2002 activity estimates prepared by EPA.
>
> Vermont used the preliminary 2002 NEI for the industrial and commercial/ institutional sectors and residential anthracite coal (carried forward from Version 3 of the 1999 NEI), but provided its own inventory for residential distillate oil, natural gas, and LPG.

Table III-2. Area Source Industrial, Commercial/Institutional, and Residential Fossil Fuel Combustion Uncontrolled Emission Factors for PM10-PRI/FIL, PM25-PRI/FIL, and PM-CON

Pollutant1	Uncontrolled Emission Factor (EF)	EF Numerator	EF Denominator	Calculated Uncontrolled EF	Reference
Industrial Boilers: Anthracite Coal (SCC 2102001000)					
PM10-FIL	2.3 x % Ash content of coal	LB	TON	30.77	AP-42 Table 1.2-4 EF calculated from formula of 2.3 * % Ash Content (13.38%). Reference for ash content is EPA, 2002.
PM25-FIL	0.6 x % Ash content of coal	LB	TON	8.03	AP-42 Table 1.2-4 EF calculated from formula of 0.6 * % Ash Content (13.38%) (used Commercial/Institutional emission factors). Reference for ash content is EPA, 2002.
PM-CON	0.08 x % Ash content of coal	LB	TON	1.07	AP-42 Table 1.2-3 Used formula for SCC 10300101, EF calculated from formula of .08 * % Ash Content (13.38%). Reference for ash content is EPA, 2002.
PM10-PRI		LB	TON	31.84	
PM25-PRI		LB	TON	9.10	
Industrial Boilers: Bituminous/Subbituminous Coal (SCC 2102002000)					
PM10-FIL	13.2	LB	TON	13.2	AP-42 Table 1.1-9 EF (used Commercial/Institutional emission factors)
PM25-FIL	4.6	LB	TON	4.6	AP-42 Table 1.1-9 EF (used Commercial/Institutional emission factors)
PM-CON	1.04	LB	TON	1.04	AP-42 Table 1.1-5 (used Commercial/Institutional emission factors)
PM10-PRI		LB	TON	14.24	
PM25-PRI		LB	TON	5.64	
Industrial Boilers and IC Engines: Distillate Oil (SCC 2102004000)					
PM10-FIL	1	LB	E3GAL	1	AP-42 Table 1.3-6
PM25-FIL	0.25	LB	E3GAL	0.25	AP-42 Table 1.3-6
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-2
PM10-PRI		LB	E3GAL	2.30	
PM25-PRI		LB	E3GAL	1.55	
Industrial Boilers: Residual Oil (SCC 2102005000)					
PM10-FIL	7.17 x % Sulfur content of oil	LB	E3GAL	10.683	AP-42 Table 1.3-5. EF calculated from formula of 7.17(A); where A=1.12(S)+0.37; Assumed S=1% for purpose of calculating EF ratios.
PM25-FIL	4.67 x % Sulfur content of oil	LB	E3GAL	6.958	AP-42 Table 1.3-5. EF calculated from formula of 7.17(A); where A=1.12(S)+0.37; Assumed S=1% for purpose of calculating EF ratios.
PM-CON	1.5	LB	E3GAL	1.5	AP-42 Table 1.3-2
PM10-PRI		LB	E3GAL	12.18	
PM25-PRI		LB	E3GAL	8.46	
Industrial Boilers and IC Engines: Natural Gas (SCC 2102006000)					
PM10-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4-2
PM25-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4-2
PM-CON	5.7	LB	E6FT3	5.7	AP-42 Table 1.4-2
PM10-PRI	7.6	LB	E6FT3	7.60	
PM25-PRI	7.6	LB	E6FT3	7.60	

Table III-2 (continued)

Pollutant1	Uncontrolled Emission Factor (EF)	EF Numerator	EF Denominator	Calculated Uncontrolled EF	Reference
Industrial Boilers - Liquified Petroleum Gas (SCC 2102007000)					
PM10-FIL	0.6	LB	E3GAL	0.6	AP-42 Table 1.5-1
PM25-FIL	0.6	LB	E3GAL	0.6	AP-42 Table 1.5-1
PM-CON	0.506	LB	E3GAL	0.506	Used natural gas PM-CON emission factor of 5.7 lb/Million Cubic Feet (for all PM controls and uncontrolled). Used factor of 0.0887 to convert emission factor from lb/Million Cubic Feet of natural gas to lb/1,000 gallons of propane. Reference: AP-42, Table 1.4-2. Conversion factor assumes 1020 Btu/scf for natural gas (AP-42, Table 1.4-2) and 90,500 Btu/gallon for propane (AP-42, Appendix A, page A-5).
PM10-PRI		LB	E3GAL	1.11	
PM25-PRI		LB	E3GAL	1.11	
Industrial Boilers: Kerosene (SCC 2102011000)					
PM10-FIL	1	LB	E3GAL	1	AP-42 Table 1.3-6
PM25-FIL	0.25	LB	E3GAL	0.25	AP-42 Table 1.3-6
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-6
PM10-PRI		LB	E3GAL	2.30	
PM25-PRI		LB	E3GAL	1.55	
Commercial/Institutional Heating: Anthracite Coal (SCC 2103001000)					
PM10-FIL	2.3 x % Ash content of coal	LB	TON	30.77	AP-42 Table 1.2-4 EF calculated from formula of 2.3 * % Ash Content (13.38%). Reference for ash content is EPA, 2002.
PM25-FIL	0.6 x % Ash content of coal	LB	TON	8.03	AP-42 Table 1.2-4 EF calculated from formula of 0.6 * % Ash Content (13.38%). Reference for ash content is EPA, 2002.
PM-CON	0.08 x % Ash content of coal	LB	TON	1.07	AP-42 Table 1.2-3 Used formula for SCC 10300101, EF calculated from formula of 0.08 * % Ash Content (13.38%). Reference for ash content is EPA, 2002.
PM10-PRI		LB	TON	31.84	
PM25-PRI		LB	TON	9.10	
Commercial/Institutional Heating: Bituminous and Lignite (SCC 2103002000)					
PM10-FIL	13.2	LB	TON	13.2	AP-42 Table 1.1-9 EF
PM25-FIL	4.6	LB	TON	4.6	AP-42 Table 1.1-9 EF
PM-CON	1.04	LB	TON	1.04	AP-42 Table 1.1-5 (0.04 lb/MMBtu * 26MMBtu/ton=1.04)
PM10-PRI		LB	TON	14.24	
PM25-PRI		LB	TON	5.64	
Commercial/Institutional Heating: Distillate Oil (SCC 2103004000)					
PM10-FIL	1.08	LB	E3GAL	1.08	AP-42 Table 1.3-7
PM25-FIL	0.83	LB	E3GAL	0.83	AP-42 Table 1.3-7
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-2
PM10-PRI		LB	E3GAL	2.38	
PM25-PRI		LB	E3GAL	2.13	

Table III-2 (continued)

Pollutant[1]	Uncontrolled Emission Factor (EF)	EF Numerator	EF Denominator	Calculated Uncontrolled EF	Reference
Commercial/Institutional Heating: Residual Oil (SCC 2103005000)					
PM10-FIL	5.17 x % Sulfur content of oil	LB	E3GAL	7.703	AP-42 Table 1.3-7. EF calculated from formula of 5.17(A); where A=1.12(S)+0.37; Assumed S=1% for purpose of calculating EF ratios.
PM25-FIL	1.92 x % Sulfur content of oil	LB	E3GAL	2.861	AP-42 Table 1.3-7. EF calculated from formula of 5.17(A); where A=1.12(S)+0.37; Assumed S=1% for purpose of calculating EF ratios.
PM-CON	1.5	LB	E3GAL	1.5	AP-42, Table 1.3-2
PM10-PRI		LB	E3GAL	9.20	
PM25-PRI		LB	E3GAL	4.36	
Commercial/Institutional Heating: Natural Gas (SCC 2103006000)					
PM10-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4-2
PM25-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4-2
PM-CON	5.7	LB	E6FT3	5.7	AP-42 Table 1.4-2
PM10-PRI		LB	E6FT3	7.60	
PM25-PRI		LB	E6FT3	7.60	
Commercial/Institutional Heating: Liquified Petroleum Gas (SCC 2103007000)					
PM10-FIL	0.4	LB	E3GAL	0.4	AP-42 Table 1.5-1 (Propane for Commercial Boilers)
PM25-FIL	0.4	LB	E3GAL	0.4	AP-42 Table 1.5-1 (Propane for Commercial Boilers)
PM-CON	0.506	LB	E3GAL	0.506	Used natural gas PM-CON emission factor of 5.7 lb/Million Cubic Feet (for all PM controls and uncontrolled). Used factor of 0.0887 to convert emission factor from lb/Million Cubic Feet of natural gas to lb/1,000 gallons of propane. Reference: AP-42, Table 1.4-2. Conversion factor assumes 1020 Btu/scf for natural gas (AP-42, Table 1.4-2) and 90,500 Btu/gallon for propane (AP-42, Appendix A, page A-5).
PM10-PRI		LB	E3GAL	0.91	
PM25-PRI		LB	E3GAL	0.91	
Commercial/Institutional Heating: Kerosene (SCC 2103011000)					
PM10-FIL	1.08	LB	E3GAL	1.08	AP-42 Table 1.3-7 Used EF for Distillate Oil (per EIIP)
PM25-FIL	0.83	LB	E3GAL	0.83	AP-42 Table 1.3-7 Used EF for Distillate Oil (per EIIP)
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-2 Used EF for Distillate Oil (per EIIP)
PM10-PRI		LB	E3GAL	2.38	
PM25-PRI		LB	E3GAL	2.13	
Residential Heating: Anthracite Coal (SCC 2104001000)					
PM10-FIL	10	LB	TON	10	EPA, 2002.
PM25-FIL	0.6 x % Ash content of coal	LB	TON	8.03	EF calculated from formula of 0.6 * % Ash Content (13.38%). Reference for EF and ash content is EPA, 2002.
PM-CON	0.08 x % Ash content of coal	LB	TON	1.07	EF calculated from formula of 0.08 * % Ash Content (13.38%). Reference for EF and ash content is EPA, 2002.
PM10-PRI		LB	TON	11.07	
PM25-PRI		LB	TON	9.10	

Table III-2 (continued)

Pollutant[1]	Uncontrolled Emission Factor (EF)	EF Numerator	EF Denominator	Calculated Uncontrolled EF	Reference
Residential Heating: Bituminous and Lignite Coal (SCC 2104002000)					
PM10-FIL	6.2	LB	TON	6.2	AP-42 Table 1.1-11
PM25-FIL	3.8	LB	TON	3.8	AP-42 Table 1.1-11
PM-CON	1.04	LB	TON	1.04	AP-42 Table 1.1-5 (0.04 lb/MMBtu * 26 MMBtu/ton=1.04)
PM10-PRI		LB	TON	7.24	
PM25-PRI		LB	TON	4.84	
Residential Heating: Distillate Oil (SCC 2104004000)					
PM10-FIL	1.08	LB	E3GAL	1.08	AP-42 Table 1.3-7 (Commercial/Institutional EF)
PM25-FIL	0.83	LB	E3GAL	0.83	AP-42 Table 1.3-7 (Commercial/Institutional EF)
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-2
PM10-PRI		LB	E3GAL	2.38	
PM25-PRI		LB	E3GAL	2.13	
Residential Heating: Natural Gas - All types (SCC 2104006000)					
PM10-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4.2
PM25-FIL	1.9	LB	E6FT3	1.9	AP-42 Table 1.4.2
PM-CON	5.7	LB	E6FT3	5.7	AP-42 Table 1.4.2
PM10-PRI		LB	E6FT3	7.60	
PM25-PRI		LB	E6FT3	7.60	
Residential Heating: Liquified Petroleum Gas (SCC 2104007000)					
PM10-FIL	0.4	LB	E3GAL	0.4	AP-42 Table 1.5-1 (Same factor used for Propane for Commercial Boilers; based on EIIP)
PM25-FIL	0.4	LB	E3GAL	0.4	AP-42 Table 1.5-1 (Same factor used for Propane for Commercial Boilers; based on EIIP)
PM-CON	0.506	LB	E3GAL	0.506	Used natural gas PM-CON emission factor of 5.7 lb/Million Cubic Feet (for all PM controls and uncontrolled). Used factor of 0.0887 to convert emission factor from lb/Million Cubic Feet of natural gas to lb/1,000 gallons of propane. Reference: AP-42, Table 1.4-2. Conversion factor assumes 1020 Btu/scf for natural gas (AP-42, Table 1.4-2) and 90,500 Btu/gallon for propane (AP-42, Appendix A, page A-5).
PM10-PRI		LB	E3GAL	0.91	
PM25-PRI		LB	E3GAL	0.91	
Residential Heating: Kerosene (SCC 2104011000)					
PM10-FIL	1.08	LB	E3GAL	1.08	AP-42 Table 1.3-7 Used EF for Distillate Oil (per EIIP)
PM25-FIL	0.83	LB	E3GAL	0.83	AP-42 Table 1.3-7 Used EF for Distillate Oil (per EIIP)
PM-CON	1.3	LB	E3GAL	1.3	AP-42 Table 1.3-2 Used EF for Distillate Oil (per EIIP)
PM10-PRI		LB	E3GAL	2.38	
PM25-PRI		LB	E3GAL	2.13	

1 PM10-PRI EF = sum of PM10-FIL and PM-CON emission factors; PM25-PRI EF = sum of PM25-FIL and PM-CON emission factors.

Revisions to the NEI for residential LPG and kerosene were completed after the preliminary 2002 NEI was released in February 2004. Connecticut, the District of Columbia, Maine, and Rhode Island approved replacement of the preliminary 2002 NEI estimates with the revised estimates for LPG. Connecticut was the only State that elected to use the NEI for the residential kerosene category, and Connecticut approved replacing the preliminary 2002 NEI for this category with the revised inventory prepared by EPA.

<u>Other Sources of PM Emissions</u>

For States that provided only PM10-FIL and PM25-FIL emissions, PM10-PRI emissions were set equal to PM10-FIL emissions and PM25-PRI emissions were set equal to PM25-FIL emissions. The PM10-PRI and PM25-PRI emissions that were added to the inventory were assigned a data source code of S-02-X-PR where S-02-X represents the code assigned to the PM10-FIL and PM25-FIL emissions provided by the State agency and the "-PR" indicates that the ratio was applied to estimate the primary emissions (in this case, the ratio of primary to filterable emissions is "1").

PM25-PRI emissions missing from State inventories were estimated by applying a ratio of PM25-PRI-to-PM10-PRI emissions to the PM10-PRI emissions provided by the State agency. Table III-3 identifies the agencies with SCCs for which ratios were applied to estimate PM25-PRI emissions. This table also shows the ratios and the reference for the ratios.

Table III-3. SCCs for which PM25-PRI Emissions were Estimated by Applying a Ratio to the PM10-PRI Emissions in the State inventory

SCC	SCC Description	Agency	Ratio of PM25-PRI to PM10-PRI	Reference
2309100010	Industrial Processes: Fabricated Metals: SIC 34: Coating, Engraving, and Allied Services: Electroplating	NY	0.947	AP-42 emission factors for hard chrome plating tank controlled with mist eliminator. AP-42 (Table 12.20-3) shows 94.7% of total PM as less than 2.35 micrometers. Applied factor to State-supplied PM10-PRI emissions to estimate PM25-PRI emissions.
2461023000	Solvent Utilization: Miscellaneous Non-industrial: Commercial: Asphalt Roofing: Total: All Solvent Types	MA	1	No data available; assumed PM25-PRI equals PM10-PRI.
2601000000	Waste Disposal, Treatment, and Recovery: On-site Incineration: All Categories: Total	MD, NH	1	No data available; assumed PM25-PRI equals PM10-PRI.
2610000100	Waste Disposal, Treatment, and Recovery: On-site Incineration: All Categories: Yard Waste - Leaf Species Unspecified	NH	1	No data available; assumed PM25-PRI equals PM10-PRI.
2810001000	Miscellaneous Area Sources: Other Combustion: Forest Wildfires: Total	MD	1	No data available; assumed PM25-PRI equals PM10-PRI.
2810015000	Miscellaneous Area Sources: Other Combustion: Prescribed Burning for Forest Management: Total	MD	1	No data available; assumed PM25-PRI equals PM10-PRI.
2810020000	Miscellaneous Area Sources: Other Combustion: Prescribed Burning of Rangeland: Total	MD	0.86	Based on ratio of PM25-PRI to PM10-PRI for same SCC used by States in 2002 NEI.
2810030000	Miscellaneous Area Sources: Other Combustion: Structure Fires: Total	MD, NH	0.91	NEI Method.
2810050000	Miscellaneous Area Sources: Other Combustion: Motor Vehicle Fires: Total	MD, NH	0.91	NEI Method.

d. 2002 NEI

<u>Merging of NEI Data into State Inventories</u>

The area source inventory provided by each State agency was compared to the 2002 NEI to identify categories in the NEI that were not in each State inventory. The list of categories identified was provided to each State agency and each agency then selected the NEI categories to be added to its inventory. Identification of categories included in the 2002 NEI but not in a State inventory involved a two-step process. First, Pechan identified the categories in the NEI that did not have an electronic match on the data key of the EM table between the State inventory and the NEI. Then, Pechan manually compared the NEI categories without an electronic match to the State inventory to identify and eliminate NEI categories that were in the State inventory but had a different SCC. For example, a State inventory may use a general SCC for a category while the NEI may use different SCCs to breakout emissions at a finer detail. Examples of categories where this typically occurred include the residential wood combustion, open burning of land clearing debris, solvent utilization, and petroleum marketing and transportation categories. In addition, if a State agency requested that a MANE-VU-sponsored inventory be added to its inventory, the NEI categories that overlapped with the MANE-VU -sponsored categories were removed from the list of NEI categories considered for incorporation into a State inventory.

The source categories in the 2002 NEI that were added to a State inventory can be identified where the data source code starts with "E". These categories can be identified using the data source code field in the NIF 3.0 files or in the summary of area source emissions that contains the data source code.

Revisions to the Preliminary 2002 NEI

During preparation of the MANE-VU inventory, EPA completed revisions to the emissions for six categories in the preliminary 2002 NEI released in February 2004. As agreed to with each State agency, the revised emissions were used in the MANE-VU inventory in lieu of the preliminary 2002 NEI emissions if the agency requested that the category be included.

- Non-Residential Construction (SCC 2311020000): 2002 emissions data replaced data in preliminary 2002 NEI that were carried forward from 1999 NEI.

- Highway Construction (SCC 2311030000): 2002 emissions data replaced data in preliminary 2002 NEI that were carried forward from 1999 NEI.

- Open Burning of Land Clearing Debris (SCC 2610000500): 2002 emissions data replaced data in preliminary 2002 NEI that were carried forward from 1999 NEI. The activity for this category was based on activity prepared for the non-residential and highway construction categories. For 2002, emissions were set to zero for counties with a population that was 80% urban or more based on 2000 Census data. This was not done for the 1999 NEI. For the NEI method, it was assumed that highly urban counties do not allow this activity to take place. Note that 2002 emissions data were already included in the preliminary 2002 NEI for the open burning of residential municipal solid waste, open burning of yard waste, and the residential construction categories.

- Residential LPG Combustion (SCC 2104007000): 2000 emissions data replaced data in the preliminary 2002 NEI that were carried forward from 1999 NEI.

- Residential Kerosene Combustion (SCC 2104011000): 2000 emissions data replaced data in the preliminary 2002 NEI that were carried forward from 1999 NEI.

- Residential Wood Combustion (SCCs starting with 2104008xxx; 4 SCCs for fireplaces and 3 SCCs for woodstoves): The preliminary 2002 NEI emissions were revised to:

- Correct the CO, PM10-PRI, and PM25-PRI emission factors for fireplaces without inserts (this change doubled the emission factors associated with correcting an error in converting the values from g/kg to lb/ton);

- Correct the climate zone map for allocating national activity to States;

- Replace 1997 total residential wood consumption with 2001 estimates (this change reduced wood consumption for fireplaces with inserts and woodstoves);

- Update urban/rural population data to reflect 2002 estimates based on year 2002 total county population and year 2000 county ratios of urban/rural population to total population; and

- Change the data source code from E-02-X (this was incorrect) to E-01-X to reflect 2001 activity data adjusted to 2002.

e. QA Review of Final Inventory

Final QA checks were run on the revised data set to ensure that all corrections provided by the State agencies were incorporated into the State inventories and that there were no remaining QA issues that could be addressed during the duration of the project. After exporting the inventory in Oracle to an Access database in NIF 3.0, the EPA's QA program was run on the Access database and the QA output was reviewed to verify that all QA issues that could be addressed were resolved (EPA, 2004a).

The output file from the EPA's QA program run on the area source inventory is provided in an Access 2000 database along with the Access database containing the area source inventory in NIF 3.0.

Additional Work on Area Source Methods

- Fugitive Dust Emissions from Paved and Unpaved Roads

Review of Methods

This work involved compiling and summarizing information on emission estimation methods and data sources from the MANE-VU State agencies, RPOs, and EPA for the following fugitive dust area source categories: windblown dust, paved and unpaved roads, agricultural tiling and harvesting, and construction activities. A short survey form was prepared and sent to the MANE-VU State agencies to collect information on whether an agency had activity for each category during 2002. For each agency for which activity occurred in its jurisdiction during 2002, information was requested on the methods and data sources it used to prepare its 2002 inventory for each category. This information was used to prioritize the categories (e.g., work on agricultural field burning was eliminated from further consideration if MANE-VU State agencies did not have activity for this category). The methods and data applied by RPOs other than MANE-VU were obtained from RPO websites and discussions with the RPOs.

The results of this review were documented in a technical memorandum (MANE-VU, 2004b). Based on the results of the review, MANE-VU decided to proceed with developing a paved and unpaved road fugitive dust inventory that incorporated improvements to activity data used in the NEI methodology.

Methods for Improving Paved and Unpaved Road Fugitive Dust Inventory

Fugitive dust emissions from paved and unpaved roads are classified under SCCs 2294000000 and 2296000000, respectively. Fugitive dust emissions from paved and unpaved road traffic were estimated for PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL. Since these categories are not sources of PM-CON, PM10-PRI emissions are equal to PM10-FIL emissions and PM25-PRI emissions are equal to PM25-FIL. The following provides a summary of the methods.

Paved Roads

Several changes were made in the paved road fugitive dust emission calculations to improve these estimates over those prepared for EPA’s 2002 NEI. First, the monthly precipitation data representing the number of days in a month with at least 0.01 inches of precipitation were developed at the county level. In comparison, a single monthly precipitation value was used to model an entire State in the 2002 NEI. Thus, the resulting MANE-VU county-specific paved road fugitive dust emission estimates should be more representative of each county than the NEI data since precipitation events can vary significantly from one part of the State to another.

The second improvement made to the paved road fugitive dust emission calculations was the use of county and road-type-specific average vehicle weights. This is an improvement over the NEI where a single average vehicle weight is applied nationwide. Thus, in the MANE-VU inventory, county/road type combinations with significant heavy truck traffic have a higher average vehicle weight and a corresponding emission factor compared to county/road type combinations with primarily lighter vehicle traffic.

The final improvement made to the MANE-VU paved road emission calculations was the use of the winter silt loading adjustments. These adjustments account for the application of sand and salt on the roads during months with frozen precipitation. The 2002 NEI does not include any wintertime silt loading adjustments. The effect of the wintertime silt loading adjustments is an increase in the paved road emission factors during the months in which it is applied. The months during which this adjustment was applied varied by State in the MANE-VU inventory.

Unpaved Roads

The county-specific precipitation data used in the paved road fugitive dust calculations were also used to improve the unpaved road fugitive dust calculations. As with the paved roads, this represents an improvement over the State-specific precipitation data used in the 2002 NEI unpaved road emission inventory. The other improvement made to the unpaved roads was the use of State-supplied unpaved road mileage data by county for Maine.

- Wildfires and Prescribed Burning

Review of Methods

This work involved compiling and summarizing information on emission estimation methods and data sources from the MANE-VU State agencies, RPOs, and EPA for the following area source categories: wildfires, prescribed burning, slash burning, and agricultural field burning. The approach previously described for the fugitive dust categories was used to collect and compile data from the MANE-VU State agencies, RPOs other than MANE-VU, and EPA for the fire categories. All of the information collected from these various information sources was summarized in a technical memorandum (MANE-VU, 2004c).

Results of Methods Review

MANE-VU recognized the need to improve the methods for estimating emissions for the fire categories. The most important revision would be to inventory fire events as point sources rather than as area sources at the county-level. However, due to resource constraints, it was decided not to pursue improvements to the methods for estimating emissions from the fire categories. It should be noted that during this project, some of the MANE-VU States provided revisions to their wildfire and prescribed burning inventories to add PM25-PRI emissions and to improve the spatial allocation of activity data at the county level. These improvements were incorporated into the MANE-VU area source inventory.

3. Version 3 Revisions

The following explains revisions to Version 3 that applied to several or all of the MANE-VU States.

Gap Filling

In Version 2 of MANE-VU's inventory, emissions for PFCs, industrial adhesives, and residential outdoor wood burning existed for some States but were missing for other States. Since these are categories for which SIP rules may be developed, it was determined that emissions for these categories should be added to Version 3. The following provides a summary of the Version 3 revisions to address missing data concerns for these categories:

- PFCs: MANE-VU estimated default 2002 emissions for these States using a per capita emission factor and county population data for each State. The derivation of the emission factor, population data, and calculation of annual and daily VOC emissions for PFCs is provided in an Excel file named "PFC_Adhesive Calcs for 2002_022106.xls" along with this TSD.

Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont elected to use MANE-VU's default inventory which was added to Version 3. Massachusetts elected to use the per capita emission factor but provided revisions to the population data, used 2002 owner occupied units to allocate the emissions to counties, and then allocated emissions between the commercial (16%) and residential (84%) sectors. Massachusetts' calculations are provided in the spreadsheet named "Version 3 Revisions" in the Excel file named MA_AR_QA_Report_030806.xls" provided with this TSD.

- Industrial Adhesives: Emissions for industrial adhesives were missing in Version 2 for Connecticut, the District of Columbia, Delaware, Maryland, Massachusetts, and Rhode Island. MANE-VU estimated default 2002 emissions for these States using a per capita emission factor and county population data for each State. The derivation of the emission factor, population data, and calculation of annual and daily VOC emissions for industrial adhesives is provided in an Excel file named "PFC_Adhesive Calcs for 2002_022106.xls" along with this TWD.

Massachusetts elected to use MANE-VU's gap-filling inventory which was added to Version 3. The rest of the States elected to use EPA's 2002 inventory which is based on a top-down, mass balance methodology where national industrial adhesive solvent estimates were allocated to counties using industrial employment. The EPA estimates were adjusted to remove uncontrolled VOC emissions included in the final 2002 point source NEI. The point-source adjustments were conducted at the county level. Note that the point-source-adjusted emissions for Rhode Island are zero for all three counties.

Note New Jersey is the only State that prepared its own 2002 inventory for this category that is included in Version 3. The industrial adhesive inventory data for the rest of the MANE-VU States originates from the 1999 NEI. These States were contacted to determine if they wanted the 1999 data replaced with the default estimates or with the EPA's 2002 inventory for industrial adhesives. Maine commented that the 1999 estimates are more realistic of the solvent emissions for their State than the 2002 NEI or MANE-VU default estimates. The other States did not indicate that they wanted their data replaced. Therefore, the 1999 NEI data for Maine, New Hampshire, New York, Pennsylvania, and Vermont was not changed in Version 3 of MANE-VU's inventory.

- Residential Wood Burning: Residential outdoor wood burning emissions were missing in Version 2 of the MANE-VU inventory for the District of Columbia, Pennsylvania, Rhode Island, and Vermont. In Versions 1 and 2, New Jersey's and New York's emissions for outdoor wood burning were included with their inventory for indoor wood burning. The District of Columbia, Rhode Island, and Vermont elected to use MANE-VU's outdoor wood burning inventory which was added to Version 3. In addition, per direction provided by New Jersey, its wood burning inventory was replaced with the MANE-VU-sponsored indoor wood burning inventory in Version 3, and the MANE-VU outdoor wood burning inventory was added to Version 3.

New York's inventory in Version 2 included emissions for both residential indoor and outdoor wood burning. For Version 3, New York provided revisions that lowered its overall emissions relative to Version 2 and broke out its inventory to show emissions for fireplaces, woodstoves, and outdoor equipment separately. New York also added NH_3 emissions to its inventory for Version 3.

Adjustments to $PM_{2.5}$ Emissions for Fugitive Dust Categories

Information developed by the Western Governors' Association, Western Regional Air Partnership (WRAP) Dust Emissions Joint Forum and EPA indicates that, for paved and unpaved roads and the construction nonpoint source categories, the $PM_{2.5}$-to-PM_{10} ratio is lower than the ratio used in the EPA method to estimate PM25-PRI/-FIL emissions from PM10-PRI/-FIL emissions (WRAP, 2005). Therefore, for the final 2002 NEI, EPA applied an adjustment factor to the PM25-PRI/-FIL emissions to correct for overestimates of PM25-PRI/-FIL emissions for these categories. Because the $PM_{2.5}$-to-PM_{10} ratio used for the MANE-VU States is based on the EPA method, this information was communicated to the MANE-VU States and all of the States agreed that these adjustments should be made to the MANE-VU inventory. Table III-4 identifies the categories to which this adjustment was applied, the old and new $PM_{2.5}$-to-PM_{10} ratios, and the adjustment factors applied to the PM25-PRI/-FIL emissions in Version 3 of MANE-VU's inventory. Note that these adjustments to $PM_{2.5}$ emissions were applied prior to applying the transport adjustment factors for PM_{10} and $PM_{2.5}$ emissions. The modelers applied the transport adjustment factors to the mass emissions in Version 3. Documentation of the file containing the transport adjustment factors is provided under "Speciation Profiles" section of Table VII-1 in Chapter VII.

For the construction categories, the EPA assumed an original $PM_{2.5}$-to-PM_{10} ratio of 0.15 and an adjustment factor of 0.67. However, the original $PM_{2.5}$-to-PM_{10} ratio used for both the NEI method and MANE-VU's inventory for construction is 0.2. Based on discussions with EPA, the goal is to revise the original $PM_{2.5}$ emissions such that the $PM_{2.5}$-to-PM_{10} ratio is 0.1. Therefore, for Version 3 of MANE-VU's 2002 area source inventory, an adjustment factor of 0.5 (ratio of 0.1-to-0.2) was applied to adjust the $PM_{2.5}$ emissions.

Note that based on Pechan's discussions with EPA during the week of March 6, 2006 concerning the application of the paved road $PM_{2.5}$ adjustment factor, it was determined that adjusting the emissions by applying the factor (shown in Table III-4) to the $PM_{2.5}$ emissions is a simplistic approach. The EPA noted that it is evaluating this issue and will be issuing guidance in the near future for revising the equation for estimating $PM_{2.5}$ emissions which, when applied, will likely yield different results. Because EPA was unable to provide guidance on how to address this issue before Version 3 needed to be completed during the week of March 6, the adjustment factor shown in Table III-4 was applied to the $PM_{2.5}$ emissions for paved roads because this adjustment will provide a better estimate of $PM_{2.5}$ emissions than the unadjusted emissions.

Table III-4. Revisions to PM25-PRI and PM25-FIL Emissions for Paved and Unpaved Roads and Construction

SCC	SCC Description	Original $PM_{2.5}$-to-PM_{10} Ratio	Revised $PM_{2.5}$-to-PM_{10} Ratio	Adjustment Factor[1,2]
2294000000	Mobile Sources : Paved Roads : All Paved Roads : Total: Fugitives	0.25	0.15	0.6
2296000000	Mobile Sources : Unpaved Roads : All Unpaved Roads : Total: Fugitives	0.15	0.1	0.67
2296005000	Mobile Sources : Unpaved Roads : Public Unpaved Roads : Total: Fugitives	0.15	0.1	0.67
2296010000	Mobile Sources : Unpaved Roads : Industrial Unpaved Roads : Total: Fugitives	0.15	0.1	0.67
2311000000	Industrial Processes : Construction: SIC 15 - 17 : All Processes : Total	0.2	0.1	0.50
2311010000	Industrial Processes : Construction: SIC 15 - 17 : Residential : Total	0.2	0.1	0.50
2311010040	Industrial Processes : Construction: SIC 15 - 17 : Residential : Ground Excavations	0.2	0.1	0.50
2311020000	Industrial Processes : Construction: SIC 15 - 17 : Industrial/Commercial/Institutional : Total	0.2	0.1	0.50
2311020040	Industrial Processes : Construction: SIC 15 - 17 : Industrial/Commercial/Institutional : Ground Excavations	0.2	0.1	0.50
2311030000	Industrial Processes : Construction: SIC 15 - 17 : Road Construction : Total	0.2	0.1	0.50

[1] For these categories, filterable and primary emissions are equal because they are not sources of condensible emissions. The adjustment factor was applied to both the PM25-PRI and PM25-FIL emissions and emission factors in the MANE-VU inventory.
[2] See text for discussion of issue concerning the adjustment factor for paved road $PM_{2.5}$ emissions. Also, for construction, see text for explanation of $PM_{2.5}$ adjustment factor shown in this table.

Removal of Invalid CE Records

For the following SCCs, Version 2 contained invalid CE records for Connecticut, the District of Columbia, Maine, New Hampshire, New York, Pennsylvania, Rhode Island, and Vermont that were removed in Version 3:

SCC	SCC Description
2311020000	Construction: SIC 15 - 17 : Industrial/Commercial/Institutional : Total
2311030000	Construction: SIC 15 - 17 : Road Construction : Total
2610000100	Open Burning : All Categories : Yard Waste - Leaf Species Unspecified
2610000400	Open Burning : All Categories : Yard Waste - Brush Species Unspecified
2610030000	Open Burning : Residential : Household Waste

The CE records all originate from the preliminary 2002 NEI that have been removed from the final 2002 nonpoint NEI. They are invalid because they have a control efficiency value of 100% and corresponding records in the EM table with rule effectiveness and rule penetration values of 100% (implying that the emissions are zero), but with emissions greater than zero. The Excel spreadsheet file named “CE_records_removed from V3.xls” provides the CE records by State and county FIPS, SCC, and pollutant code that were removed in Version 3.

4. Version 3 Emissions Summary

Table III-5 presents a State-level summary of the annual area source emissions in Version 3 of the 2002 MANE-VU inventory. Note that PM10-PRI and PM25-PRI emissions are included in the inventory for all SCCs for which State agencies reported any form of PM, PM_{10}, and/or $PM_{2.5}$ emissions. If an agency did not report PM10-PRI and/or PM25-PRI but reported PM-PRI, PM-FIL, PM-CON, PM10-FIL, and/or PM25-FIL, the PM augmentation procedures discussed in the TSD were applied to the form of PM emissions supplied by the agency to calculate emissions for the other forms of PM emissions. If an agency reported PM10-PRI and/or PM25-PRI emissions but not PM10-FIL, PM25-FIL, or PM-CON emissions, the agency's inventory was not augmented to calculate filterable or condensible emissions. Note that PM-CON is associated with only fuel combustion sources.

For NH_3, the area source inventory includes emissions for natural sources for the following States: SCCs 28060xxxxx for domestic cats and dogs in Delaware, Massachusetts, and New Jersey; 28070xxxxx for wild animals in Delaware, Massachusetts, New Jersey, and New York; and SCC 2810010000 for human perspiration in Delaware, Massachusetts, and New Jersey. The area source inventory also includes NH_3 biogenic emissions (SCC 2701420000) for Massachusetts.

Table III-5. Version 3 2002 MANE-VU Area Source Emissions by State (Tons/Year)

State	CO	NH_3	NO_x	PM10-FIL	PM10-PRI	PM25-FIL	PM25-PRI	PM-CON	SO_2	VOC
Connecticut	70,198	5,318	12,689	37,790	48,281	4,038	14,247	846	12,418	87,302
Delaware	14,052	13,279	2,608	12,910	13,039	3,075	3,204	128	1,588	15,519
District of Columbia	2,300	14	1,644	5,745	6,293	507	1,029	147	1,337	6,432
Maine	109,223	8,747	7,360	155,237	168,953	19,090	32,774	686	13,149	100,621
Maryland	141,178	25,834	15,678	31,116	95,060	3,375	27,318	611	12,393	120,254
Massachusetts	136,552	18,809	31,358	150,046	192,839	23,354	42,067	1,156	54,923	162,016
New Hampshire	79,647	2,158	10,960	32,138	43,328	6,688	17,532	449	7,072	65,370
New Jersey	97,657	17,572	26,692	37,282	61,601	2,811	19,350	476	10,744	167,882
New York	356,254	67,422	98,803	288,991	369,595	30,894	87,154	102	130,409	507,292
Pennsylvania	266,935	79,911	47,591	363,173	391,897	51,792	74,925	266	63,679	240,785
Rhode Island	8,007	883	3,886	7,090	8,295	887	2,064	336	4,557	31,402
Vermont	43,849	9,848	3,208	51,392	56,131	6,729	11,065	180	4,087	23,265
MANE-VU	**1,325,853**	**249,795**	**262,477**	**1,172,909**	**1,455,311**	**153,243**	**332,729**	**5,383**	**316,357**	**1,528,141**

B. State-Specific Methods

For each of the MANE-VU States, this section identifies the temporal basis of the emissions included in Version 3 and discusses revisions incorporated into Version 3. In addition, this section also discusses the origin of each State agency's emissions included in Version 3. For each agency, a table is provided in Appendix B that lists the data source codes by SCC, emission type period, and pollutant. In addition, an electronic folder is provided for each State agency containing the QA Summary Reports prepared for Versions 1, 2, and/or 3 and other files documenting revisions included in Versions 2 and 3. Except for Rhode Island, a QA Summary Report was prepared for Version 1. Subsequently, a QA Summary Report was prepared for States that provided Version 2 or 3 revisions. Rhode Island elected to use EPA's draft 2002 NEI for Versions 1 and 2 but provided revisions for Version 3; therefore, a QA Summary Report is available for Version 3 only for Rhode Island.

1. Connecticut

Table III-6 shows the emission type periods for which Connecticut provided emissions.

Table III-6. Connecticut 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29

Table B-1 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Connecticut provided 2002 emissions for many of the area source categories in Version 3. Connecticut elected to use the EPA's 2002 inventory for industrial adhesives. Connecticut elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor residential wood combustion;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily NH_3 emissions for industrial refrigeration processes;
- Annual and daily VOC emissions for PFCs; and
- Annual and daily VOC and NH_3 emissions for composting.

Emissions for the remaining area source categories were taken from the draft 2002 NEI. For Connecticut, these emissions are either based on 2002 data prepared by EPA or carried forward from final Version 3 of the 1999 NEI. Data carried forward from the 1999 NEI originate from either State data included in the 1999 NEI or EPA data developed for the 1999 NEI.

2. Delaware

Table III-7 shows the emission type periods for which Delaware provided emissions.

Table III-7. Delaware 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type	Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20020831	30	DAILY	20011201	20020228	27
ANNUAL	20020101	20021231	30	DAILY	20020101	20020831	27
ANNUAL	20020512	20020512	30	DAILY	20020512	20020512	27
ANNUAL	20020629	20020629	30	DAILY	20020601	20020831	27
ANNUAL	20021029	20021029	30	DAILY	20020629	20020629	27
ANNUAL	20021104	20021104	30	DAILY	20021029	20021029	27
ANNUAL	20021205	20021205	30	DAILY	20021104	20021104	27
				DAILY	20021205	20021205	27

Table B-2 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Delaware provided 2002 emissions for the majority of the area source categories in Version 3, and used 2002 data that EPA prepared for the draft 2002 NEI or MANE-VU-sponsored inventories for the remaining categories. Delaware elected to use the EPA's 2002 inventory for industrial adhesives, and prepared its own inventory for PFCs. Delaware elected to use data from MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved roads (note: there are no unpaved roads in Delaware);
- Annual and daily NH_3 emissions for POTWs; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM10-FIL, PM25-PRI, PM25-FIL, and SO_2 emissions for open burning categories.

3. District of Columbia

Table III-8 shows the emission type periods for which the District of Columbia provided emissions.

Table III-8. District of Columbia 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27

Table B-3 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. The District of Columbia provided 2002 emissions for the majority of the area source categories in Version 3. The District of Columbia provided annual VOC emissions for PFCs for Version 2 that were kept in Version 3. The District of Columbia elected to use the EPA's 2002 inventory for industrial adhesives and indoor wood burning. The exception is for the following categories for which the District of Columbia elected to use data from MANE-VU-sponsored inventories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved roads (note: there are no unpaved roads in the District of Columbia);
- Annual and daily VOC and NH_3 emissions for composting; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for open burning categories.

4. Maine

Table III-9 shows the emission type periods for which Maine provided emissions.

Table III-9. Maine 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29
DAILY	20020601	20020929	29

Table B-4 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Maine provided 2002 emissions for many of the area source categories in Version 3. Maine's inventory for industrial adhesives originates from the 1999 NEI. Maine provided annual and daily VOC and annual NH_3 emissions for industrial wastewater treatment that were added to Version 3. Maine elected to use data from MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily VOC emissions for PFCs; and
- Annual and daily VOC and NH_3 emissions for composting.

5. Maryland

Table III-10 shows the emission type periods for which Maryland provided emissions. Table B-5 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC.

Table III-10. Maryland 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type	Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30	MONTHLY	20020101	20020131	30
SEASONAL	20020401	20020930	30	MONTHLY	20020201	20020228	30
SEASONAL	20020401	20021031	30	MONTHLY	20020301	20020331	30
SEASONAL	20020601	20020831	30	MONTHLY	20020401	20020430	30
DAILY	20011201	20020228	27	MONTHLY	20020501	20020531	30
DAILY	20020101	20021231	29	MONTHLY	20020601	20020630	30
DAILY	20020401	20020930	29	MONTHLY	20020701	20020731	30
DAILY	20020401	20021031	29	MONTHLY	20020801	20020831	30
DAILY	20020601	20020831	27	MONTHLY	20020901	20020930	30
DAILY	20020601	20020831	29	MONTHLY	20021001	20021031	30
				MONTHLY	20021101	20021130	30
				MONTHLY	20021201	20021231	30

Maryland provided 2002 annual, seasonal, and daily emissions for the majority of the area source categories in Version 3 and used 2002 data that EPA prepared for the draft 2002 NEI for industrial adhesives and commercial cooking. Maryland prepared its own inventory for PFCs.

Maryland elected to use data from MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM10-FIL, PM25-PRI, PM25-FIL, and SO_2 emissions for open burning categories; and
- Annual and monthly NH_3 emissions for agricultural crop fertilizers.

For Version 2, Maryland provided revisions to annual, seasonal, and daily VOC emissions for SCC 2505030120 (Storage and Transport : Petroleum and Petroleum Product Transport : Truck : Gasoline). Maryland also removed PM10-FIL and PM25-FIL annual, seasonal, and daily records for open burning of land clearing debris (SCC 2610000500). Maryland had revised the PM10-PRI and PM25-PRI emissions in an earlier version of the MANE-VU inventory but not the PM10-FIL and PM25-FIL. As a result of revising the primary emissions, the filterable emissions were no longer met the consistency check as compared to the primary emissions.

QA of PM emissions in Version 3 identified one record for Maryland in county 510 for SCC 2801000003 (Agriculture - Crops : Tilling) where PM10-PRI annual emissions are 2317.2 tons and PM25-PRI annual emissions are 0 tons. For the other counties in Maryland with this SCC, PM25-PRI emissions are about 20% of the PM10-PRI emissions. This issue was not addressed due to time and resource constraints for completing revisions to Version 3.

6. Massachusetts

Table III-11 shows the emission type periods for which Massachusetts provided emissions.

Table III-11. Massachusetts 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29

Table B-6 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Massachusetts provided 2002 annual and daily emissions for the majority of the area source categories in Version 3 and used 2002 data that EPA prepared for the draft 2002 NEI for residential coal combustion, asphalt roofing, and agricultural livestock (NH_3).

Massachusetts elected to use data from MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily VOC emissions for industrial adhesives and PFCs;
- Annual and daily NH_3 emissions for industrial refrigeration processes;
- Annual and daily VOC and NH_3 emissions for composting; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM10-FIL, PM25-PRI, PM25-FIL, and SO_2 emissions for open burning categories.

For Version 2, Massachusetts revised annual and summer day VOC emissions for 14 counties for the following categories: aircraft refueling, surface coating, degreasing, miscellaneous non-industrial: consumer and commercial products and pesticides, and gasoline service stations (stage 1: balanced submerged fill). Massachusetts also revised annual and daily emissions for 14 counties for forest wildfires, revised annual emissions for four counties for residential open burning of brush using the correct rule penetration factors for the counties, and revised control efficiency and control device data for selected categories in the CE table.

For Version 3, Massachusetts revised annual and summer day VOC emissions for 14 counties for auto refinishing. In the CE table, Massachusetts changed control device code 102 (low-solvent coatings) to 000 (uncontrolled) and associated control efficiency values were set to null for all counties. Massachusetts also added annual and summer day VOC emissions for 14 counties for gasoline service stations (stage 2: displacement loss/controlled).

For PFCs, Massachusetts elected to use the per capita emission factor but provided revisions to the population data, used 2002 owner occupied units to allocate the emissions to counties, and then allocated emissions between the commercial (16%) and residential (84%) sectors. Massachusetts' calculations are provided in the spreadsheet named "Version 3 Revisions" in the Excel file named MA_AR_QA_Report_030806.xls".

7. New Hampshire

Table III-12 shows the emission type periods for which New Hampshire provided emissions. Table B-7 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. New Hampshire provided 2002 emissions for many of the area source categories in Version 3. New Hampshire's inventory for industrial adhesives originates from the 1999 NEI.

Table III-12. New Hampshire 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29
MONTHLY	20020101	20020131	30
MONTHLY	20020201	20020228	30
MONTHLY	20020301	20020331	30
MONTHLY	20020401	20020430	30
MONTHLY	20020501	20020531	30
MONTHLY	20020601	20020630	30
MONTHLY	20020701	20020731	30
MONTHLY	20020801	20020831	30
MONTHLY	20020901	20020930	30
MONTHLY	20021001	20021031	30
MONTHLY	20021101	20021130	30
MONTHLY	20021201	20021231	30

New Hampshire elected to use data from MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily VOC emissions for PFCs;
- Annual and daily NH_3 emissions for industrial refrigeration processes and POTWs;
- Annual and daily VOC and NH_3 emissions for composting;
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for open burning categories; and
- Annual and monthly NH_3 emissions for agricultural crop fertilizers and livestock.

Emissions for the remaining area source categories were taken from the draft 2002 NEI; these emissions are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI.

New Hampshire provided revisions to Version 2 that were kept in Version 3. For Version 2, New Hampshire revised annual and daily VOC emissions for the gasoline storage and transport sector to reflect revisions it made to the 2002 inventory that EPA prepared for the 2002 NEI. The categories revised include bulk plant breathing losses, gasoline service stations (stages 1 and 2 total and underground tank breathing and emptying losses), and gasoline tank trucks.

8. New Jersey

Table III-13 shows the emission type periods for which New Jersey provided emissions.

Table III-13. New Jersey 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20011201	20020228	29
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29

Table B-8 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. New Jersey provided 2002 emissions for the majority of the area source categories. New Jersey provided its own 2002 inventory for industrial adhesives and PFCs. Emissions for the remaining area source categories were taken from the draft 2002 NEI (that are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI) or MANE-VU-sponsored inventories. New Jersey elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for indoor and outdoor residential wood combustion (replacing New Jersey's indoor residential wood combustion inventory provided in Versions 1 and 2);
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved roads;
- Annual and daily NH_3 emissions for industrial refrigeration processes and POTWs; and
- Annual and daily VOC and NH_3 emissions for composting.

For Version 3, New Jersey added annual and summer day VOC emissions for 21 counties for SCC 2501060100 (gasoline service stations : stage 2: total). The emissions are summarized in the spreadsheet named "Version 3 Revisions" in the Excel file named "NJ_AR_QA_Report_030806.xls". New Jersey provided 2002 emissions data for the industrial adhesives and PFC categories in Version 1. For Version 2, New Jersey corrected PM25-PRI emissions that were greater than PM10-PRI emissions for SCC 2601000000 (on-site incineration : all categories : total).

9. New York

Table III-14 shows the emission type periods for which New York provided emissions. Table B-9 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination or because emissions are not reported for all pollutants for the same SCC and emission type period combination.

Table III-14. New York 2002 Area, Version 3:
Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
MONTHLY	20020101	20020131	30
MONTHLY	20020201	20020228	30
MONTHLY	20020301	20020331	30
MONTHLY	20020401	20020430	30
MONTHLY	20020501	20020531	30
MONTHLY	20020601	20020630	30
MONTHLY	20020701	20020731	30
MONTHLY	20020801	20020831	30
MONTHLY	20020901	20020930	30
MONTHLY	20021001	20021031	30
MONTHLY	20021101	20021130	30
MONTHLY	20021201	20021231	30

New York provided revisions to annual emissions for all 62 counties for the categories and pollutants shown in Table III-15. This revision completely replaced the 2002 emissions that New York provided in Version 2. Table III-15 also identifies categories and pollutants for which emissions were added to Version 3 (i.e., not in Version 2). The emissions are summarized in the spreadsheet named "Version 3 Revisions" in the Excel file named NY_AR_QA_Report_030806.xls".

New York's inventory in Version 2 included emissions for both residential indoor and outdoor wood burning. For Version 3, New York provided revisions that lowered its overall emissions relative to Version 2 and broke out its inventory to show emissions for fireplaces, woodstoves, and outdoor equipment separately. New York also added NH_3 emissions to its inventory for Version 3. New York's inventory for industrial adhesives originates from the 1999 NEI. New York provided its own 2002 inventory for PFCs. Emissions for the remaining area source categories were taken from the draft 2002 NEI (that are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI) or MANE-VU-sponsored inventories.

New York elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily NH_3 emissions for agricultural livestock; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for open burning categories.

A QA issue that may affect the use of the MANE-VU inventory for air quality modeling and revisions to the projection year inventory is the addition of SCCs 2103004001 and 2103004002 by New York that are not in EPA's master SCC list used by the EPA QA program. These SCCs are defined in Table III-15. In addition, the QA program shows SCCs for PFCs and outdoor wood burning as invalid because EPA has not updated the master list to include these SCCs for the EPA QA program. These SCCs were included in Version 2 and should have been assigned speaciation profiles and included in the projection year inventory prepared from Version 2.

Table III-15. Summary of New York's Revisions to Version 3 of MANE-VU's Area Source Inventory

SCC	SCC Description	Pollutant	Type of Revision to Emissions
Revisions to Waste Disposal, Treatment, and Recovery : Wastewater Treatment			
2630020000	Public Owned : Total Processed	VOC	Revised emissions for all pollutants
Revisions to Stationary Source Fuel Combustion : Residential : Wood			
2104008001	Fireplaces: General	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added NH3, revised emissions for rest of pollutants
2104008052	Non-catalytic Woodstoves: Low Emitting	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants
2104008070	Outdoor Wood Burning Equipment	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants
Revisions to Stationary Source Fuel Combustion : Electric Utility			
2101001000	Anthracite Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	No change to emissions
2101002000	Bituminous/Subbituminous Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2101004000	Distillate Oil : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2101005000	Residual Oil : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2101006000	Natural Gas : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
Revisions to Stationary Source Fuel Combustion : Industrial			
2102001000	Anthracite Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	No change to emissions
2102002000	Bituminous/Subbituminous Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2102004000	Distillate Oil : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2102005000	Residual Oil : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2102006000	Natural Gas : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2102007000	Liquified Petroleum Gas (LPG) : Total: All Boiler Types	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2102008000	Wood : Total: All Boiler Types	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	No change to emissions
2102011000	Kerosene : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants
Revisions to Stationary Source Fuel Combustion : Commercial/Institutional			
2103001000	Anthracite Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	No change to emissions
2103002000	Bituminous/Subbituminous Coal : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2103005000	Residual Oil : Total: All Boiler Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2103004000	Residual Oil : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Removed and replaced with data for SCCs 2103004001 and 2103004002
2103004001	Distillate Oil : Boilers	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants
2103004002	Distillate Oil : IC Engines	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants
2103006000	Natural Gas : Total: Boilers and IC Engines	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2103007000	Liquified Petroleum Gas (LPG) : Total: All Combustor Types	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2103008000	Wood : Total: All Boiler Types	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2103011000	Kerosene : Total: All Combustor Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants

Table III-15. Summary of New York's Revisions to Version 3 of MANE-VU's Area Source Inventory (Continued)

SCC	SCC Description	Pollutant	Type of Revision to Emissions
Revisions to Stationary Source Fuel Combustion : Residential			
2104001000	Anthracite Coal : Total: All Combustor Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	No change to emissions
2104002000	Bituminous/Subbituminous Coal : Total: All Combustor Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2104004000	Distillate Oil : Total: All Combustor Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2104006010	Natural Gas : Residential Furnaces	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2104007000	Liquified Petroleum Gas (LPG) : Total: All Combustor Types	VOC, NOX, CO, SO2, PM10-PRI, PM25-PRI	Revised emissions for all pollutants
2104011000	Kerosene : Total: All Heater Types	VOC, NOX, CO, NH3, SO2, PM10-PRI, PM25-PRI	Added emissions for all pollutants

10. Pennsylvania

Table III-16 shows the emission type periods for which Pennsylvania provided emissions.

**Table III-16. Pennsylvania 2002 Area, Version 3:
Unique List of Start Date, End Date, and Emission Types**

Emission Type Period	Start Date	End Date	Emission Type	Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30	MONTHLY	20020101	20020131	30
DAILY	20011201	20020228	27	MONTHLY	20020201	20020228	30
DAILY	20020601	20020831	27	MONTHLY	20020301	20020331	30
				MONTHLY	20020401	20020430	30
				MONTHLY	20020501	20020531	30
				MONTHLY	20020601	20020630	30
				MONTHLY	20020701	20020731	30
				MONTHLY	20020801	20020831	30
				MONTHLY	20020901	20020930	30
				MONTHLY	20021001	20021031	30
				MONTHLY	20021101	20021130	30
				MONTHLY	20021201	20021231	30

Table B-10 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Note that some SCC and emission type period combinations are listed more than once because the data source codes are different for more than one SCC and emission type period combination. Pennsylvania provided 2002 emissions for the majority of the area source categories. Pennsylvania provided its own 2002 inventory for PFCs and residential indoor wood burning. Pennsylvania's inventory for industrial adhesives originates from the 1999 NEI. Emissions for the remaining area source categories were taken from the draft 2002 NEI (that are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI) or MANE-VU-sponsored inventories.

Pennsylvania elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily NH_3 emissions for industrial refrigeration processes and agricultural crop fertilizers and livestock;
- Annual and daily VOC and NH_3 emissions for POTWs and composting; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for open burning categories.

11. Rhode Island

Table III-17 shows the emission type periods for which Rhode Island provided emissions.

**Table III-17. Rhode Island 2002 Area, Version 3:
Unique List of Start Date, End Date, and Emission Types**

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29

Table B-11 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Rhode Island provided 2002 annual VOC emissions for several solvent utilization categories (surface coating, degreasing, graphic arts, rubber/plastics, and industrial adhesive); annual and daily VOC emissions for petroleum and petroleum product storage (gasoline service stations and all transport types); and annual VOC emissions for POTWs. Rhode Island's indoor wood burning inventory originates from the draft 2002 NEI. Emissions for the remaining area source categories were taken from the draft 2002 NEI (that are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI) or MANE-VU-sponsored inventories.

Rhode Island elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads; and
- Annual and daily VOC emissions for PFCs.

12. Vermont

Table III-18 shows the emission type periods for which Vermont provided emissions.

Table III-18. Vermont 2002 Area, Version 3: Unique List of Start Date, End Date, and Emission Types

Emission Type Period	Start Date	End Date	Emission Type
ANNUAL	20020101	20021231	30
DAILY	20011201	20020228	27
DAILY	20020601	20020831	27
DAILY	20020601	20020831	29

Table B-12 in Appendix B identifies the data sources by SCC, emission type period, and pollutant in the Version 3 area source inventory. This table also shows the number of counties by SCC. Vermont provided 2002 annual VOC, NO_x, CO, PM10-PRI or PM10-FIL, PM25-PRI or PM25-FIL, and SO_2 emissions for residential fuel combustion (distillate oil, natural gas, LPG, and indoor wood burning); annual VOC emissions for gasoline service stations and breathing losses at bulk terminals; annual VOC, NO_x, CO, PM10-PRI, PM25-PRI, and SO_2 emissions for residential open burning; annual VOC, NO_x, CO, NH_3, PM10-PRI, and PM25-PRI emissions for forest fires, and annual VOC, NO_x, CO, PM10-PRI, and PM25-PRI emissions for structure fires. Vermont's inventory for industrial adhesives originates from the 1999 NEI.

For Version 2, Vermont provided revisions to EPA's draft 2002 inventory for SCC 2501050120 (bulk stations and terminals : breathing loss : gasoline) to incorporate the effects of vapor balance controls not accounted for in the EPA estimates. The revised inventory for this category was added to Version 2 (and kept in Version 3) that did not include this category. Control records were added to the NIF 3.0 CE table for the counties with vapor balance controls. In addition, Vermont provided emissions for three counties (i.e., county FIPS codes 50015, 50017, and 50019) that were not in EPA's inventory. Emissions for the remaining area source categories were taken from the draft 2002 NEI (that are either based on 2002 data prepared by EPA or EPA data carried forward from final Version 3 of the 1999 NEI) or MANE-VU-sponsored inventories. Vermont elected to use MANE-VU-sponsored inventories for the following source categories:

- Annual and daily VOC, NO_x, CO, NH_3, PM10-PRI, PM25-PRI, and SO_2 emissions for outdoor wood burning;
- Annual PM10-PRI, PM10-FIL, PM25-PRI, and PM25-FIL emissions for paved and unpaved roads;
- Annual and daily NH_3 emissions for industrial refrigeration processes and POTWs;
- Annual and daily VOC emissions for PFCs;
- Annual and daily VOC and NH_3 emissions for composting; and
- Annual VOC, NO_x, CO, NH_3, PM10-PRI, PM10-FIL, PM25-PRI, PM25-FIL, and SO_2 emissions for open burning categories.

C. What Issues Need to be Addressed in Future Versions?

This section provides a summary of potential revisions to incorporate into future versions of the MANE-VU area source inventory.

All States – A coordinated effort between the State agencies should be developed to apply consistent methods to avoid having to apply procedures to augment inventory data to correct for the QA issues and fill in missing data as discussed previously in this chapter. For example, this will ensure that consistent methods are applied across State agencies to ensure consistent and accurate reporting of source categories using the same SCCs across States, PM emissions, and minimize other QA issues that were identified during the development of Versions 1, 2, and 3 of the inventory.

For PM emissions, the State agencies should develop and apply a consistent method for including condensible emissions for fuel combustion sources that can be applied when the agencies develop their inventories. This may include compiling the emission factors for all forms of PM into one database, organized by SCC and control type (for filterable emissions), and sharing the database among the MANE-VU State agencies. Use of a consistent set of emission factors will help to avoid the PM consistency issues identified in Versions 1, 2, and 3 of the MANE-VU inventory as well as ensure that condensible emissions are included in the primary emissions reported in the inventory.

State-specific suggestions are as follows:

Delaware: Revise the residential wood combustion emissions inventory with the latest revisions sponsored by MARAMA.

Rhode Island: This State felt that the area sources (from the nonpoint inventory EPA prepared) which they had changed to zeros in Version 3 would revert back to the Version 2 numbers which were from the EPA report. Rhode Island would like to see this change in the next version of the inventory. (Table with changes can be received upon request).

New Jersey:

- Why is the EPA VOC emission factor for fireplaces completely out of proportion with the other emission factors? The ratio of conventional wood stoves/fireplaces = 0% to 10% for other pollutants and is 77% for VOC. It is discussed in the Pechan Technical Memo #5, 9/3/03, page 19, how a study of the accuracy of the emission factors showed the VOC should be more like 10 to 30 lb/ton, instead of 229 lb/ton and the woodstove emission factors (certified) should be higher than Emission Inventory Improvement Program guidance.

- The summer seasonal adjustment factors for indoor wood burning used in the model appear high. This combined with the very high VOC emission factor results in high ozone season wood burning emissions.

- In general, the accuracy of the very large residential wood burning numbers, all pollutants.

- The large fugitive dust inventory numbers don not correlate to dust found in monitors, even with the latest 30% to 40% reduction in paved and unpaved road emissions.

- We need consistent guidance from the EPA for adhesives and sealants, PFC, and commercial cooking.

CHAPTER IV – NONROAD SOURCES

A. General Methods for all States

This section provides an overview of the data sources and QA steps used in preparing the 2002 nonroad sector inventory for the MANE-VU States. The nonroad sector is comprised of nonroad engines included in EPA's NONROAD model, as well as other engines not modeled in NONROAD, including aircraft, commercial marine vessels and locomotives.

1. What Data Sources Were Used?

Data sources used for the various nonroad categories are described below.

a. Aircraft, Commercial Marine, and Locomotive Categories

As a starting point, aircraft, commercial marine vessel and locomotive inventories were prepared using the inventories that State agencies submitted to the EPA in June 2004 as a requirement of the CERR. In addition, some States provided data directly to MANE-VU for use in this inventory that were not submitted for the CERR.

Missing data were supplemented with estimates from EPA's preliminary 2002 NEI. For the aircraft and commercial marine vessel source categories, the 2002 NEI CAP emissions were estimated by carrying over the 2001 estimates. 2001 emissions were estimated using the methodologies described in EPA's *Documentation for Aircraft, Commercial Marine Vessel, Locomotive, and Other Nonroad Components of the National Emissions Inventory* (EPA, 2003b). The 2002 locomotive emissions were calculated using 2002 activity data and the methodologies described in the EPA, 2003b documentation.

Table IV-1 provides a summary of the aircraft, commercial marine, and locomotive emission SCCs reported in the MANE-VU inventory. Table IV-2 provides a summary of the basis for these nonroad subsector emissions by State.

Table IV-1. List of Unique Aircraft, Commercial Marine, and Locomotive SCCs Reported by States in MANE-VU Inventory

SCC	SCC Description 1	SCC Description 2	SCC Description 3	SCC Description 4
2275000000	Mobile Sources	Aircraft	All Aircraft Types and Operations	Total
2275001000	Mobile Sources	Aircraft	Military Aircraft	Total
2275020000	Mobile Sources	Aircraft	Commercial Aircraft	Total: All Types
2275050000	Mobile Sources	Aircraft	General Aviation	Total
2275060000	Mobile Sources	Aircraft	Air Taxi	Total
2275070000	Mobile Sources	Aircraft	Aircraft Auxiliary Power Units	Total
2280000000	Mobile Sources	Marine Vessels, Commercial	All Fuels	Total, All Vessel Types
2280002000	Mobile Sources	Marine Vessels, Commercial	Diesel	Total, All Vessel Types
2280002010	Mobile Sources	Marine Vessels, Commercial	Diesel	Ocean-going Vessels
2280002020	Mobile Sources	Marine Vessels, Commercial	Diesel	Harbor Vessels
2280002100	Mobile Sources	Marine Vessels, Commercial	Diesel	Port emissions
2280002200	Mobile Sources	Marine Vessels, Commercial	Diesel	Underway emissions
2280003100	Mobile Sources	Marine Vessels, Commercial	Residual	Port emissions
2280003200	Mobile Sources	Marine Vessels, Commercial	Residual	Underway emissions
2285000000	Mobile Sources	Railroad Equipment	All Fuels	Total
2285002000	Mobile Sources	Railroad Equipment	Diesel	Total
2285002005	Mobile Sources	Railroad Equipment	Diesel	Total Line Haul Locomotives
2285002006	Mobile Sources	Railroad Equipment	Diesel	Line Haul Locomotives: Class I Operations
2285002007	Mobile Sources	Railroad Equipment	Diesel	Line Haul Locomotives: Class II / III Operations
2285002008	Mobile Sources	Railroad Equipment	Diesel	Line Haul Locomotives: Passenger Trains (Amtrak)
2285002009	Mobile Sources	Railroad Equipment	Diesel	Line Haul Locomotives: Commuter Lines
2285002010	Mobile Sources	Railroad Equipment	Diesel	Yard Locomotives

Table IV-2. Summary of Basis for 2002 MANE-VU Aircraft, Commercial Marine, and Locomotive Inventory

FIPSST	State	Basis for Subsector of Nonroad Inventory		
		Aircraft	Commercial Marine Vessels	Locomotives
09	Connecticut	2002 Preliminary NEI	2002 Preliminary NEI	State supplied in March 2006
10	Delaware	June 2004 CERR Submittal; State supplied revisions in Sep 2004	June 2004 CERR Submittal	June 2004 CERR Submittal
11	District of Columbia	Not supplied by State and not available from NEI	2002 Preliminary NEI	June 2004 CERR Submittal
23	Maine	State supplied in Oct 2004	State supplied in Oct 2004	State supplied in Oct 2004
24	Maryland	June 2004 CERR Submittal; State supplied revisions in Sep 2004	June 2004 CERR Submittal; State supplied revisions in Oct 2004	June 2004 CERR Submittal
25	Massachusetts	June 2004 CERR Submittal	State-supplied for June 2004 CERR Submittal, with revisions as directed by State	June 2004 CERR Submittal
33	New Hampshire	June 2004 CERR Submittal	2002 Preliminary NEI	June 2004 CERR Submittal
34	New Jersey	June 2004 CERR Submittal	June 2004 CERR Submittal	June 2004 CERR Submittal
36	New York	2002 Preliminary NEI	State supplied in Oct 2004	2002 Preliminary NEI
42	Pennsylvania	State supplied to Pechan in June 2004	State supplied to Pechan in June 2004	State supplied to Pechan in June 2004; State supplied revisions in Aug 2005
44	Rhode Island	State-supplied for June 2004 CERR Submittal, with revisions as directed by State	State-supplied for June 2004 CERR Submittal, with revisions as directed by State	State-supplied in Oct 2004
50	Vermont	2002 Preliminary NEI	Not supplied by State and not available from NEI	Not supplied by State and not available from NEI

b. NONROAD Model Categories

NONROAD model categories include equipment such as recreational marine and land-based vehicles, farm and construction machinery, and lawn and garden equipment. Aircraft ground support equipment (GSE) and rail maintenance equipment are also included in NONROAD. These equipment are powered by diesel, gasoline, compressed natural gas (CNG) and LPG engines.

EPA released a final version of NONROAD during December 2005 called NONROAD2005 (EPA, 2005a). To reflect the updates made to EPA's final NONROAD model, all MANE-VU Version 2 NONROAD model estimates were replaced with updated NONROAD2005 emission estimates.

EPA also released an updated version of its NMIM, which incorporates the final NONROAD2005 model. EPA's NMIM2005 is a consolidated modeling system that incorporates the NONROAD and MOBILE models, along with a county database of inputs (EPA, 2005b). The NMIM county database contains monthly input data to reflect county-specific fuel parameters and temperatures. Because incorporating revised monthly inputs for use in NMIM2005 is more efficient than preparing county-specific monthly option files needed to run NONROAD2005 independently, Pechan used NMIM2005 for most MANE-VU States. The two exceptions were for the District of Columbia and Maine due to the differences in oxygenated fuel inputs used for NMIM versus NONROAD.

As a first step, Pechan compiled fuel input data available from NMIM2005 by county and by month for all MANE-VU states for 2002. Pechan developed a spreadsheet that summarized the gasoline RVP, gasoline weight percent oxygen, and gasoline and diesel sulfur content proposed as inputs to the updated runs. Values consistent with State-supplied MOBILE6 inputs used for the development of 2002 MANE-VU highway vehicle inventories were presented for use where they differed from NMIM. Pechan requested that States confirm the use of these data for the NONROAD model runs, or provide alternative inputs.

The final county, monthly NMIM inputs provided or confirmed by the States for RVP, weight percent oxygen, and gasoline sulfur are presented in Appendix C, Table C-1. Pechan used NMIM's 2002 default value for nonroad diesel sulfur content. This value is 2,457 parts per million (ppm) for land-based equipment, and 2,767 ppm for recreational marine, for all MANE-VU counties.

Pechan also requested that States provide any local activity data in the format of updated NONROAD external data files. These include data files which specify activity parameters such as equipment populations, equipment annual hours of use, county allocation factors, and monthly allocation profiles.

Pechan updated the NMIM county database for 2002 to add in new gasoline profiles to reflect the monthly and county fuel input values provided by States. Pechan also updated the NMIM county database to cross reference the State-supplied NONROAD data files that replaced default

NONROAD2005 inputs. Pechan then ran NMIM/NONROAD2005 at the county and monthly level for 2002 and generated the results in NIF 3.0.

c. NONROAD2005 Model Runs

The majority of the model runs were performed using NMIM2005. NMIM and NONROAD have differences in the required format of the oxygenated fuel inputs. For NONROAD, this variable is required to be expressed as a composite weight percent oxygen that accounts for the market share and the percent oxygen of all contributing oxygenates. Since NMIM models HAP emissions, the volume percent and market share of each of four oxygenates must be entered as fuel inputs. These oxygenates include methyl tertiary butyl ether (MTBE), ethyl tertiary butyl ether (ETBE), ethanol (ETOH), and tertiary amyl methyl ether (TAME). In cases where only one known oxygenate is present, this is straightforward to reflect in NMIM, as weight percent can be easily converted to volume percent. However, two States (the District of Columbia and Maine) provided a composite weight percent value for more than one oxygenate, but could not provide the corresponding volume percent and market share for each oxygenate to use in NMIM. As such, Pechan used NONROAD2005 for both the District of Columbia and Maine so that their submitted values for weight percent oxygen could be used directly. The 2002 minimum, maximum, and average hourly temperatures included in NMIM2005 were used to calculate average monthly temperature inputs to NONROAD for both States.

Pechan developed monthly NONROAD option files and ran these files through NONROAD2005 to generate monthly emissions that were then summed to develop an annual 2002 inventory. Pechan performed additional calculations using NMIM emission factors and fuel consumption to calculate NH_3, since NONROAD does not calculate NH_3 emissions.

2. What Quality Assurance Steps Were Performed?

The final MANE-VU nonroad inventory was comprised of emission estimates that were either: 1) submitted by States for the June 2004 CERR submittal or as additional revisions after this date; 2) developed using NONROAD model inputs provided or approved by States; or 3) reported by EPA in the preliminary 2002 NEI. As such, the QA steps were tailored to each of these types of submittals. Note that a Quality Assurance Plan was prepared prior to initiating work on Version 1 (MANE-VU, 2003). This plan was applied during development of all three versions of the MANE-VU inventory.

a. Summary of QA checks for State emission submittals

Nonroad emission submittals were accepted as part of the June 2004 CERR submittals to EPA or as direct submittals to MANE-VU. Upon receipt of an emissions submittal, Pechan prepared spreadsheets providing a unique list of errors identified by running the EPA NIF 3.0 QA software tool on the nonroad source inventory (EPA, 2004a). Notes were provided to identify the NIF 3.0 tables in which the errors appeared, as well as clarification as to where an error occurred (e.g., for what SCC and pollutant). For many of the errors, Pechan provided a potential correction, and States indicated whether they agreed with the correction, or provided their own instructions for correcting the error. These spreadsheets served to document each state's direction on how to correct errors and the state's representative authorizing the correction.

The list of general QA checks include the following:

- Duplicate records (i.e., only one record allowed for each unique county/SCC/ pollutant)
- Invalid record type
- Mandatory field is not populated
- Invalid field length
- Invalid data type (e.g., invalid SCCs or pollutants)
- “Out-of-range” emission values
- Referential integrity (i.e., the presence of widow or orphan records in the NIF 3.0 relational tables)

Note that EPA’s NIF 3.0 QA software tool also checks for other specific QA issues by field not listed above. See EPA’s User Guide, Appendix A for a listing of all potential errors that are checked by the program, and EPA’s guidance for how they should be resolved.

Pechan also performed other general QA procedures outside of EPA’s NIF 3.0 QA software tool, including pollutant augmentation, SCC reconciliation, and completeness and reasonableness checks.

Pechan performed pollutant augmentation in cases where the complete set of CAPs and NH_3 were not provided by a State. For example, several States did not provide PM25-PRI, but did provide PM10-PRI, so that PM25-PRI was estimated using EPA-published particle-size multipliers. Where multipliers were not available from EPA documentation, Pechan used available pollutant emission estimates reported by all other MANE-VU States to develop “emission ratios” for a given SCC. These “emission ratios” were then used to multiply available pollutant estimates to estimate values for the missing pollutants. Specific values used for a given State and SCC are cited in the “State-Specific Methods” section below.

In addition, SCC assignments were reviewed and reassigned after clarification from States as to what the specific SCC estimate represented. For example, a State may have reported all aircraft activity under one of the specific aircraft type SCCs (e.g., commercial or general aviation), when it should more accurately be reported under the general SCC 2275000000 (All Aircraft Types and Operations).

Finally, completeness checks were performed on the inventory to determine that emissions for nonroad categories known to operate in a State or county were being reported. Note that emissions may not be reported for all NONROAD SCCs for all counties in the MANE-VU RPO, and will depend on the geographic allocation methods used by the model, or specific allocation data provided by a State.

NONROAD model category estimates originally provided by States for the June 2004 submittal were replaced by emission estimates developed using NMIM/NONROAD 2005. As such, this

TSD will not document corrections made by Pechan to these original NONROAD model estimates, since they were replaced for Version 3.

b. Data input summary spreadsheets for State review

As mentioned above for NONROAD model categories, Pechan prepared the MANE-VU emission estimates using EPA's final NMIM/NONROAD2005 model. An important QA step in running NONROAD is to ensure that the inputs used for fuel specifications and temperatures for a given county and month in 2002 are representative. As such, Pechan compiled the RVP, percent oxygen, and gasoline sulfur inputs reported by NMIM2005 by county and month for States to review. If a State had previously submitted input data for the MANE-VU onroad inventory, these data were proposed in lieu of NMIM data. States either confirmed use of the default NMIM/onroad MANE-VU inputs, or provided alternate data in the specified format to replace the proposed inputs. Pechan updated the *gasoline* table in the NMIM county database to add in new gasoline profiles to reflect revised fuel input values provided by States. These profiles were then cross-referenced to the appropriate county and month in a separate table called *countyyearmonth*. Pechan performed QA checks of these NMIM county database tables for each State to ensure that the correct fuel data were input by county and by month as requested by the State.

c. QA of final mass emissions

After performing QA of the inputs, Pechan ran NMIM/NONROAD2005 at the county and monthly level for 2002 and generated the results in NIF 3.0. As a QA step, Pechan ran EPA's NIF 3.0 QA software tool on the NIF 3.0 files. Errors identified were resolved and checked to ensure they were corrected in the final files.

As part of final processing of the inventories, and to assist in tracking revisions and preparing emission summaries, Pechan added the following NIF plus fields to each table:

TblCE : State FIPS, County FIPS, Data Source, Revision Date
TblEM : State FIPS, County FIPS, Data Source, Revision Date, CAP/HAP, Year, Emission Ton Value, Emission Type Period
TblEP : State FIPS, County FIPS, Data Source, Revision Date
TblPE : State FIPS, County FIPS, Data Source, Revision Date
TblTR : State FIPS, County FIPS, Revision Date

Data source codes are included to document the origin of the emissions data, which assists in tracking and quality-assuring revisions made to the emission estimates. Table IV-3 provides a listing of the data source codes included in the MANE-VU nonroad inventories, as well as a definition of each code. State FIPS and County FIPS are separated out to assist in developing area-specific emission summaries, and the Emission Ton Value places all emissions on the same basis. The Emission Type Period describes the temporal basis of the estimates (in this case, they are all annual). Finally, the Revision Date tracks when record-specific changes are made.

Table IV-3. Data Source Code Descriptions

Data Source Code	Description
E-02-F	E = EPA-generated data; -02 = year 2002; -F = emissions are carried forward for inclusion in the 2002 base year
E-02-X	E = EPA-generated data; -02 = year 2002; -F = emissions are not grown or carried forward
P-02-X	P = RPO-generated data; -02 = year 2002; -X = emissions are not grown or carried forward
S-02-X	S = State data; -02 = year 2002 data; -X = emissions are not grown or carried forward

3. Version 3 Emission Summaries

Table IV-4 presents a summary of the annual 2002 nonroad sector pollutant emissions for each MANE-VU State, as well as a regional total. These emissions include SCCs for all NONROAD model engines, as well as aircraft, commercial marine vessel, and locomotive categories, where applicable, for each State. Table IV-5 presents the emission results for NONROAD model equipment only, while Table IV-6 provides emission estimates for aircraft, commercial marine vessel, and locomotive categories separately.

Table IV-4. Annual 2002 Nonroad Sector Emissions by MANE-VU State (Tons/Year)

State	CO	NH_3	NO_x	PM10-PRI	PM25-PRI	SO_2	VOC
Connecticut	276,773.0	16.6	25,460.2	1,952.1	1,793.9	2,087.4	33,880.2
Delaware	68,782.0	5.2	16,226.5	1,021.4	925.6	3,983.3	8,010.1
District of Columbia	18,844.7	2.4	3,571.3	310.2	298.7	375.4	2,072.5
Maine	153,423.6	11.4	9,820.4	1,436.8	1,329.4	916.8	31,144.1
Maryland	437,400.3	28.2	37,472.2	4,936.0	4,357.1	7,941.6	56,330.4
Massachusetts	461,514.3	28.2	42,768.5	3,531.2	3,226.4	3,791.2	56,748.5
New Hampshire	130,782.2	9.1	9,912.1	1,057.8	965.4	891.0	22,376.5
New Jersey	704,396.4	43.0	63,479.0	5,495.1	4,997.2	15,686.0	83,918.9
New York	1,233,968.3	79.3	109,878.3	9,605.3	8,820.9	12,919.7	157,611.7
Pennsylvania	931,978.0	55.0	103,824.2	9,737.9	8,440.1	7,915.0	102,331.0
Rhode Island	73,012.7	4.1	5,001.5	500.2	443.1	377.2	7,779.7
Vermont	62,248.1	4.5	4,217.1	529.9	485.8	372.1	10,547.6
Total MANE-VU	**4,553,123.5**	**286.9**	**431,631.3**	**40,113.9**	**36,083.6**	**57,256.6**	**572,751.3**

Table IV-5. Annual 2002 NONROAD2005 Model Emissions by MANE-VU State (Tons/Year)

State	CO	NH_3	NO_x	PM10-PRI	PM25-PRI	SO_2	VOC
Connecticut	274,387.6	16.6	17,897.0	1,712.9	1,577.6	1,376.6	33,519.0
Delaware	65,954.1	4.9	5,798.3	570.4	525.1	513.0	7,530.5
District of Columbia	18,774.9	2.4	3,066.4	298.4	287.8	341.3	2,052.9
Maine	148,555.3	11.4	8,228.9	1,204.2	1,135.1	771.8	30,741.0
Maryland	424,776.8	28.2	27,789.1	3,118.7	2,870.4	2,569.2	53,035.0
Massachusetts	448,398.7	28.2	30,046.7	2,887.2	2,658.8	2,428.1	54,835.8
New Hampshire	128,571.5	9.1	8,149.5	946.8	871.7	672.7	22,237.8
New Jersey	692,547.9	43.0	43,515.2	4,285.4	3,950.5	3,524.9	81,900.4
New York	1,219,308.7	79.3	78,648.3	8,338.9	7,677.1	6,966.3	155,475.1
Pennsylvania	903,167.7	55.0	62,265.2	6,281.5	5,784.3	5,292.4	99,240.9
Rhode Island	71,573.1	4.1	4,563.9	402.8	371.1	335.5	7,698.7
Vermont	61,732.1	4.5	4,169.9	517.6	476.6	367.6	10,520.4
Total MANE-VU	**4,457,748.6**	**286.6**	**294,138.2**	**30,564.8**	**28,186.1**	**25,159.4**	**558,787.4**

Table IV-6. Annual 2002 Aircraft, Commercial Marine, and Locomotive Emissions by MANE-VU State (Tons/Year)

State	CO	NH_3	NO_x	PM10-PRI	PM25-PRI	SO_2	VOC
Connecticut	2,385.4	0.0	7,563.2	239.2	216.4	710.8	361.2
Delaware	2,827.9	0.3	10,428.2	451.1	400.5	3,470.3	479.6
District of Columbia	69.7	0.0	505.0	11.8	10.9	34.1	19.7
Maine	4,868.3	0.0	1,591.5	232.6	194.3	145.0	403.1
Maryland	12,623.5	0.0	9,683.2	1,817.3	1,486.7	5,372.3	3,295.4
Massachusetts	13,115.6	0.0	12,721.7	644.0	567.6	1,363.1	1,912.7
New Hampshire	2,210.7	0.0	1,762.5	111.0	93.7	218.3	138.6
New Jersey	11,848.5	0.0	19,963.9	1,209.7	1,046.7	12,161.1	2,018.6
New York	14,659.6	0.0	31,230.0	1,266.4	1,143.8	5,953.4	2,136.6
Pennsylvania	28,810.2	0.0	41,559.0	3,456.4	2,655.8	2,622.7	3,090.2
Rhode Island	1,439.6	0.0	437.6	97.4	72.1	41.7	81.0
Vermont	516.0	0.0	47.3	12.2	9.2	4.5	27.2
Total MANE-VU	**95,374.9**	**0.3**	**137,493.1**	**9,549.1**	**7,897.4**	**32,097.3**	**13,963.9**

B. State-Specific Methods

The following sections describe the methods used and QA issues addressed for each MANE-VU State in developing Version 3.0 of MANE-VU's nonroad sector inventory.

1. Connecticut

a. What Data Sources Were Used?

Pechan ran EPA's NMIM2005 to generate NONROAD model SCC emission estimates. Pechan incorporated Connecticut-supplied data for gasoline sulfur content and RVP into the NMIM database. Pechan used NMIM defaults for diesel sulfur content and for weight percent oxygenate values. The final input data by county and by month are summarized in Table B-1.

Aircraft and commercial marine vessel emissions are based on the preliminary 2002 nonroad NEI. In March 2006, Connecticut provided county-level emission estimates for VOC, NO_x, and CO for all line-haul and switchyard locomotive SCCs.

b. What QA Issues were Identified and Addressed?

For commercial aircraft (SCC 2275020000), PM10-PRI and PM25-PRI were not reported in the EPA's NEI. For completeness, Pechan estimated PM10-PRI emissions by applying an average PM10-PRI/NO_x emission ratio of 0.058 to available NO_x emissions. Commercial aircraft PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.976 (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

Because EPA's NEI does not include locomotive category emission estimates for Connecticut, and since Connecticut only provided emission estimates for VOC, NO_x, and CO, estimates are still missing for PM10-PRI, PM25-PRI, and SO_2.

2. Delaware

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. Delaware approved of the fuel inputs used in NMIM2005. The final fuel input data by county and by month are summarized in Table B-1. Delaware provided updated files listed in Table IV-7 to replace the default files used in NMIM. These included county allocation files for five nonroad categories, and a revised equipment population file with updated populations for specific SCCs.

Table IV-7. Delaware NONROAD External Data Files

County NR File Name	File Type
10000air.alo	County allocation for airport GSE
10000gc.alo	County allocation for golf carts
10000hou.alo	County allocation for lawn & garden
10000log.alo	County allocation for logging
10000rvp.alo	County allocation for land-based recreational
10000.pop	Equipment population

Pechan used Delaware's June 2004 CERR submittal as the basis for aircraft, locomotive and commercial marine vessel category estimates in the 2002 MANE-VU inventory.

i. What Revisions Were Requested by State?

In September 2004, Delaware provided corrections to the general aviation emissions (SCC 227505000) for all pollutants for Kent County to add in general aviation activity at Dover Air Force Base.

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by Delaware. Commercial aircraft (SCC 2275020000) included emission estimates for all pollutants except PM25-PRI. Pechan calculated commercial aircraft PM25-PRI emissions using the assumption that 97.6% of PM10-PRI is PM25-PRI (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

3. District of Columbia

a. What Data Sources Were Used?

Pechan developed NONROAD Model SCC emissions for District of Columbia using NONROAD2005. NONROAD2005 was used directly instead of NMIM2005 to incorporate State-supplied weight percent oxygen data. The District of Columbia also requested changes to the default NMIM RVP and gasoline values for some months. The final fuel input data by county and by month are summarized in Table B-1.

The 2002 minimum, maximum, and average hourly temperatures included in NMIM were used to calculate average monthly temperature inputs to NONROAD. Pechan developed monthly NONROAD2005 option files for the District of Columbia. Pechan ran the option files through NONROAD2005 to generate monthly emissions that were then summed to develop an annual 2002 inventory. Pechan performed additional calculations using NMIM emission factors and NONROAD2005 fuel consumption to calculate NH_3, since NONROAD does not calculate NH_3 emissions. NMIM reports NH_3 emission factors of 116 grams NH_3 per gallon gasoline for gasoline engines, and 83 grams NH_3 per gallon fuel for diesel engines.

The District of Columbia provided locomotive emissions for their nonroad sector June 2004 CERR submittal.

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by the District of Columbia. PM emissions in the inventory were not identified as either PM_{10} or $PM_{2.5}$, nor were the emissions identified as primary or filterable. The District of Columbia authorized Pechan to change PM to PM10-PRI. Locomotive PM25-PRI emissions were estimated using the assumption that 90 percent of PM_{10} is $PM_{2.5}$ (EPA, 2003b). Hydrocarbon (HC) pollutant emissions were also removed from the inventory, as this is not a valid pollutant code in NIF3.0.

Pechan added commercial marine vessel emissions from the preliminary 2002 Nonroad NEI. There are no aircraft emission estimates in the NEI for the District of Columbia, since there are not airports located in the District of Columbia.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

4. Maine

a. What Data Sources Were Used?

Pechan developed NONROAD model SCC emissions using NONROAD2005. For Maine, weight percent oxygen values were submitted based on actual fuel survey results by county and by month, but Maine had not tracked the corresponding oxygenate volume percent and market share. As such, Pechan used NONROAD2005 so that Maine's values for weight percent oxygen could be reflected. Maine also provided revisions to the RVP and gasoline sulfur values reported in NMIM2005. Pechan developed NONROAD2005 monthly option files for two county groups in Maine that shared values for all three fuel inputs (see Appendix C, Table C-1). The 2002 minimum, maximum, and average hourly temperatures included in NMIM were used to calculate average monthly temperature inputs to NONROAD. Pechan ran the option files through NONROAD2005 to generate monthly emissions that were then summed to develop an annual 2002 inventory. Pechan performed additional calculations using NMIM emission factors and fuel consumption to calculate NH_3, since NONROAD does not calculate NH_3 emissions. NMIM reports NH_3 emission factors of 116 grams NH_3 per gallon gasoline for gasoline engines, and 83 grams NH_3 per gallon fuel for diesel engines.

i. What Revisions Were Requested by State?

In October 2004, Maine provided aircraft, commercial marine vessel, and locomotive SCC emissions to be added to their inventory. Commercial marine emissions submitted by Maine only represented in-port emissions. Diesel and residual commercial marine underway emissions (SCCs 2280002200 and 2280003200) were based on EPA's 2002 preliminary NEI.

b. What QA Issues were Identified and Addressed?

PM25-PRI estimates were missing from all aircraft SCC records provided by Maine. Pechan estimated general aviation, military aircraft, and air taxi PM25-PRI emissions by multiplying PM10-PRI emissions by a particle size multiplier of 0.69 (EPA, 2003b). Commercial aircraft PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.976 (ERG, 2004). In-port commercial marine emissions (SCC 2280002100) were missing estimates for PM10-PRI and PM25-PRI. Pechan estimated PM10-PRI emissions by applying a PM10-PRI/NO_x emission ratio of 0.042 to available NO_x emissions. PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.92 (EPA, 2003b).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

5. Maryland

a. What Data Sources Were Used?

Pechan used NMIM2005 to prepare NONROAD model SCC emission estimates. Maryland reviewed the default NMIM inputs and provided revisions to the input values for RVP and weight percent oxygen for all months. Maryland requested that a value of 2.1 percent oxygen be used for all counties and months. This weight percent value was then converted to a volume percent of 11.8 percent for use in NMIM, assuming MTBE was the only oxygenate. In addition, gasoline sulfur content revisions were incorporated into NMIM for select counties for the months of April through September. The final fuel input data by county and by month are summarized in Table B-1.

Maryland also provided updated files listed in Table IV-8 to replace the default files used in NMIM. These included county allocation files for several nonroad categories.

Table IV-8. Maryland NONROAD External Data Files

County NR File Name	File Type
24000pop.alo	County allocation for several nonroad categories (population)
24000con.alo	County allocation for construction
24000hou.alo	County allocation for lawn & garden

Pechan used Maryland's nonroad sector CERR submittal as the basis for the MANE-VU inventory for the aircraft, locomotive and commercial marine vessel categories.

i. *What Revisions Were Requested by State?*

In September 2004, Maryland provided revised aircraft and commercial marine vessel emission estimates. Pechan replaced the aircraft and commercial marine vessel emissions from their CERR submittal with the revised emissions.

b. *What QA Issues were Identified and Addressed?*

Pechan performed QA of the file, and revised the file to address QA issues as approved by Maryland. Maryland did not provide PM25-PRI aircraft emissions in their inventory. Pechan estimated general aviation, military aircraft, and air taxi PM25-PRI emissions by multiplying PM10-PRI emissions by a particle size multiplier of 0.69 (EPA, 2003b). Commercial aircraft PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.976 (ERG, 2004).

c. *What Issues Need to be Addressed in Future Versions?*

None identified by the State.

6. Massachusetts

a. *What Data Sources Were Used?*

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. Massachusetts reviewed the NMIM inputs and approved of the fuel input values for RVP and gasoline sulfur content. NMIM2005 reported a weight percent oxygen of 2.1 percent for all months for all counties in Massachusetts, and the State requested a value of 1.5 percent be used for all counties from October through April. This weight percent value was then converted to a volume percent of 8.4 percent for use in NMIM, given that MTBE was the only oxygenate. Final fuel input data by county and by month are presented in Table B-1.

Massachusetts provided annual emissions for aircraft, locomotive and commercial marine vessel categories for their nonroad sector CERR submittal. These inventories included all CAP.

i. *What Revisions Were Requested by State?*

Massachusetts requested that Pechan incorporate revisions supplied for annual emissions for in-port diesel commercial marine (SCC 2280002010) for Dukes County (25007).

b. What QA Issues were Identified and Addressed?

Pechan changed the aircraft SCC "2275050000" to "2275000000," since Massachusetts verified that this emission record represents all aircraft types, not just general aviation.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

7. New Hampshire

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. New Hampshire reviewed and approved of the fuel inputs used in NMIM2005. See Table B-1 for a summary of the final fuel input data by county and month.

Pechan used New Hampshire's nonroad sector CERR submittal as the basis for the MANE-VU aircraft and locomotive inventory. Pechan added commercial marine vessel emissions from the preliminary 2002 Nonroad NEI.

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by New Hampshire. New Hampshire did not provide PM_{10} and $PM_{2.5}$ aircraft emissions in their inventory. New Hampshire authorized Pechan to develop aircraft PM_{10} emissions for all aircraft types by applying an average PM10/NO_x emission ratio to the aircraft NO_x emissions in their inventory. The PM_{10}/NO_x ratios used were 3.819 for military and air taxi, 3.642 for general aviation, and 0.058 for commercial aircraft. Pechan estimated general aviation, military aircraft, and air taxi PM25-PRI emissions by multiplying PM10-PRI emissions by a particle size multiplier of 0.69 (EPA, 2003b). For commercial aircraft, Pechan estimated PM25-PRI emissions using the assumption that 97.6% of PM_{10} is $PM_{2.5}$ (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

8. New Jersey

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. New Jersey approved of the default fuel inputs used in NMIM2005. See Table B-1 for a summary of the final fuel input data by county and month. New Jersey provided an updated data input file containing revised equipment populations (34000.pop) for specific SCCs for the NMIM model runs.

Pechan used New Jersey's nonroad sector CERR submittal as the basis for the aircraft, locomotive and commercial marine vessel categories. These inventories included all CAPs.

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by New Jersey. The only QA issue identified was the inclusion of carbon dioxide (CO_2) in the inventory, which is not a valid pollutant code in NIF3.0, so these records were removed.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

9. New York

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. New York reviewed the default NMIM inputs and provided revisions to the input values for RVP and gasoline sulfur for all months. New York also requested revisions to weight percent oxygen values for all counties and months. These weight percent values were then converted to a volume percent for use in NMIM, based on MTBE as the only oxygenate for all counties, with the exception of four counties. These included Cattaraugus, Chautauqua, Erie, and Niagara counties, which use ETOH as the oxygenate. The final fuel input data by county and by month are summarized in Table B-1.

For the aircraft and locomotive categories, Pechan used emissions reported in the preliminary 2002 Nonroad NEI.

i. What Revisions Were Requested by State?

In October 2004, New York provided commercial marine vessel emissions to be added to their inventory. New York did not provide PM-2.5 commercial marine vessel emissions for some counties in their inventory. Pechan estimated the commercial marine vessel PM25-PRI emissions from PM10-PRI using the assumption that 92% of PM_{10} is $PM_{2.5}$ (EPA, 2003b).

b. What QA Issues were Identified and Addressed?

Commercial aircraft (SCC 2275020000) emissions for PM10-PRI and PM25-PRI were not reported in the EPA's preliminary 2002 NEI. Pechan estimated PM10-PRI emissions by applying a PM10-PRI/NO_x emission ratio of 0.058 to available NO_x emissions for this SCC. Commercial aircraft PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.976 (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

10. Pennsylvania

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. Pennsylvania approved of the fuel inputs provided, which were based on the onroad MOBILE6 inputs. Since these differed from the values in NMIM2005, Pechan updated the NMIM profiles accordingly. See Table B-1 for a summary of the final fuel input data by county and month. Pennsylvania provided one county allocation file for the lawn and garden category (42000hou.alo) to replace the default file used in NMIM.

Pennsylvania submitted an aircraft, locomotive, and commercial marine vessel emissions inventory to MANE-VU after the CERR submittal date.

i. What Revisions Were Requested by State?

In August 2005, Pennsylvania provided Pechan with county-level updates to SCC 2285002006 (Line Haul Locomotives: Class I Operations) emissions for all pollutants. Pechan updated all emission records for this SCC in Pennsylvania's inventory.

b. What QA Issues were Identified and Addressed?

Pennsylvania authorized Pechan to remove the CO_2 emission records from their inventory. In addition, the following data augmentation was performed to add missing SCCs and pollutants. Pennsylvania did not provide commercial aircraft emissions in their inventory. Pechan added commercial aircraft emissions from the 2002 preliminary NEI to Pennsylvania's inventory. Pennsylvania did not provide PM10-PRI and PM25-PRI aircraft emissions in their inventory. Pechan developed aircraft PM_{10} emissions for all aircraft types by applying an average PM_{10}/ NO_x emission ratio to Pennsylvania's available aircraft NO_x emissions. The PM_{10}/NO_x ratios used were 3.819 for military and air taxi, 3.642 for general aviation, and 0.058 for commercial aircraft. Pechan estimated general aviation, military aircraft, and air taxi PM25-PRI emissions by multiplying PM10-PRI emissions by a particle size multiplier of 0.69 (EPA, 2003b). For commercial aircraft, Pechan estimated PM25-PRI emissions using the assumption that 97.6% of PM_{10} is $PM_{2.5}$ (ERG, 2004).

Pennsylvania also did not provide SO_2 general aviation and air taxi emissions in the inventory. Pechan estimated the SO_2 emissions by applying a SO_2/NO_x emission ratio to the general aviation and air taxi NO_x emissions, using ratios of 0.154 and 0.095, respectively.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

11. Rhode Island

a. What Data Sources Were Used?

Pechan used NMIM2005 to generate NONROAD model SCC emission estimates. Rhode Island approved of the fuel inputs used in NMIM2005. See Table B-1 for a summary of the final fuel input data by county and month. Rhode Island provided a revised equipment population file (44000.pop) with updated populations for specific SCCs to replace the default file used in NMIM.

Rhode Island provided emissions for aircraft, locomotive and commercial marine vessel categories for their nonroad sector CERR submittal.

i. What Revisions Were Requested by State?

Rhode Island provided updates in September 2004 to their county-level railroad equipment emissions. The new emissions fall under SCC 2285002005 and replace all line haul locomotive emissions provided in their CERR submittal. Emission estimates for yard locomotives were also provided (SCC 2285002010).

b. What QA Issues were Identified and Addressed?

Pechan performed QA of the file, and revised the file to address QA issues as approved by Rhode Island.

PM_{10} was not identified as either primary or filterable. Rhode Island authorized Pechan to change it to PM10-PRI. To avoid double counting, Pechan removed the following SCCs from Rhode Island's inventory: 2275000000, 2280002000, 2280002020, 2280003000, and 2280003020. These emissions are accounted for under more specific SCCs for aircraft, and more aggregate SCCs for commercial marine.

Rhode Island did not provide PM10-PRI and PM25-PRI aircraft emissions in their inventory. Pechan developed aircraft PM_{10} emissions for all aircraft types by applying an average PM_{10}/NO_x emission ratio to the aircraft NO_x emissions in their inventory. The PM_{10}/NO_x ratios used were 3.819 for military and air taxi, 3.642 for general aviation, and 0.058 for commercial aircraft. Pechan estimated general aviation, military aircraft, and air taxi PM25-PRI emissions by multiplying PM10-PRI emissions by a particle size multiplier of 0.69 (EPA, 2003b). For commercial aircraft, Pechan estimated PM25-PRI emissions using the assumption that 97.6% of PM_{10} is $PM_{2.5}$ (ERG, 2004).

Rhode Island did not provide yard locomotive, and commercial marine vessel PM25-PRI emissions in their inventory. Pechan estimated the yard locomotive PM25-PRI emissions from PM10-PRI using the assumption that 90% of PM_{10} is PM25 (EPA, 2003b). Pechan estimated the commercial marine vessel PM25-PRI emissions from PM10-PRI using the assumption that 92% of PM_{10} is $PM_{2.5}$ (EPA, 2003b).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

12. Vermont

a. What Data Sources Were Used?

Pechan developed NONROAD model SCC emissions for Vermont using NMIM2005. Vermont approved of the default fuel input values used in NMIM2005 for weight percent oxygen, but requested that the RVP and gasoline sulfur values reflect values used for onroad mobile source emissions.

Pechan added aircraft emissions for Vermont from the preliminary 2002 Nonroad NEI.

b. What QA Issues were Identified and Addressed?

Commercial aircraft (SCC 2275020000) emissions for PM10-PRI and PM25-PRI were not reported in the EPA's preliminary 2002 NEI. Pechan estimated PM10-PRI emissions by applying an average PM10-PRI/NO_x emission ratio of 0.058 to available NO_x emissions. Commercial aircraft PM25-PRI emissions were estimated by multiplying PM10-PRI emissions by a particle size multiplier of 0.976 (ERG, 2004).

c. What Issues Need to be Addressed in Future Versions?

Note that there are no locomotive or commercial marine vessel emissions in the NEI for Vermont. Where activity for any of these SCCs occurs in Vermont, these categories are not represented in the State's inventory.

CHAPTER V – ONROAD SOURCES

A. General Methods for All States

This section provides an overview of the data sources and QA steps used in preparing the 2002 onroad sector inventory for the MANE-VU States and in preparing the corresponding modeling inputs for the MANE-VU Version 3 modeling inventory. The onroad sector is comprised of all motorized vehicles that travel on the public highways including passenger cars, light-duty trucks, minivans, sport utility vehicles, heavy-duty trucks, and buses. It should be noted that, unlike the other emission sectors, the modeling inventory inputs for the onroad sector do not include any emissions data. The primary modeling inputs for the onroad sector instead are the activity inputs (vehicle miles traveled (VMT)) and SMOKE-formatted MOBILE6 input files. The SMOKE model then generates full MOBILE6 input files using the MOBILE6 inputs, speed inputs, and meteorological inputs for the episode(s) to be modeled, runs the MOBILE6 emission factor model to calculate the appropriate emission factors, and calculates emissions using the supplied VMT and additional temporal allocation factors for the VMT.

1. Data Sources

a. Source of default model data

The MANE-VU 2002 onroad emissions inventory was compiled from data supplied by the MANE-VU State agencies in the form of onroad emissions input data or emissions inventories either directly to MANE-VU or to EPA through their CERR submittal. States provided information in one or more of the following ways: (1) an onroad emission inventory submittal to EPA, (2) MOBILE6 inputs and VMT data in NMIM format to EPA, (3) portions of MOBILE6 inputs or full MOBILE6 input files and supporting files plus VMT to EPA, or (4) portions of MOBILE6 inputs or full MOBILE6 input files and supporting files plus VMT to MANE-VU. Different procedures were followed in developing the MANE-VU 2002 onroad emission inventory depending upon how the data were submitted.

As discussed above, the primary data needed in preparing the inputs for the onroad modeling files were the VMT data and MOBILE6 input files. All of the MANE-VU States provided VMT data, which were incorporated in the SMOKE modeling. The level of detail of the supplied VMT data and any additional processing of the VMT data are discussed individually by State, below, in Section B: State-Specific Methods. Therefore, no default data were needed for the VMT inputs. Default model inputs for the SMOKE MOBILE6 input files were needed in some cases. The source of default information to be included in these input files was the NMIM national county database, as this was also the default source of data for EPA in preparing the 2002 NEI. This database includes information on monthly fuel data by county, control program information by county, such as inspection and maintenance (I/M) program inputs, and other fleet information, such as vehicle registration distributions, that may have been supplied by the States. Additionally, vehicle speed information is needed in the SMOKE modeling files. Some States supplied this information. In cases where no speed data were supplied, the default speeds used by EPA in calculating the NEI were used. These speeds differ by road class group and by vehicle class group.

For the SMOKE modeling, Pechan did not provide any ambient data such as temperature or humidity. Instead, the SMOKE model needs meteorological input data specific to the episode(s) being modeled. Thus, although the SMOKE MOBILE6 input files do include temperature data and in some cases humidity data, these inputs will be replaced by the SMOKE model with the appropriate episode-specific data.

b. Model inputs and revisions provided by States

The model inputs and revisions provided by the States are discussed in detail in Section B, below. These inputs include VMT data, VMT temporal data, vehicle speeds, I/M program inputs, registrations distributions, and other MOBILE6 input data.

c. Model inputs provided vs. model inputs used

Pechan prepared the following model input files for Version 3 of the MANE-VU modeling inventory:

- MANEVU_2002_mbinv_02022006.txt—contains VMT and speeds by county and SCC;
- MANEVU_2002_mtpro_02022006.txt—contains VMT temporal profiles;
- MANEVU_2002_mtref_02022006.txt—contains cross references between temporal profiles and county/SCC;
- MANEVU_2002_vmtmix_02022006.txt—contains VMT vehicle mix fractions;
- MANEVU_2002_mcref_02022006.txt—contains cross reference between MANE-VU counties and the SMOKE MOBILE6 input files;
- MANEVU_2002_mvref_02022006.txt—contains general county-level information for SMOKE;
- MANEVU_2002_spdpro.txt—contains hourly speed profiles (SPDPRO);
- MANEVU_2002_spdref.txt—contains cross references between speed profiles and MANE-VU county/SCC;
- MANEVU_2002_mcodes.txt—contains information on SCCs used in MBINV file;
- MANEVU_SMOKE_M6Inputs_MA_NJ_02022006.zip—contains monthly SMOKE-formatted MOBILE6 input files for Massachusetts and New Jersey, updated for Version 3;
- MANEVU_2002_SMOKE_M6_InputFiles032004.zip—contains monthly SMOKE-formatted MOBILE6 input files for all MANE-VU States. Files for Massachusetts and New Jersey from this zip file should be replaced by the Version 3 files dated 02/02/2006.
- MANEVU_2002_SMOKE_M6_ExternalFiles.zip—contains external data files called by the SMOKE MOBILE6 input files.

2. What Quality Assurance Steps were Performed?

This section provides a brief summary of the QA steps and processes that were performed in the development of the onroad sector modeling inputs for MANE-VU. The initial QA procedures were performed on the emissions and input data used to calculate the MANE-VU 2002 onroad emission inventory. Some of these QA procedures are also relevant here to the modeling inventory as many of the inputs are either the same or start with common information.

For States submitting onroad emission inventories to EPA, Pechan performed QA checks on the State-provided emission inventory data to ensure completeness, referential integrity, and correct formatting of the data. Where necessary as a result of these QA checks, and with the approval of the affected State, Pechan revised the inventories to meet the necessary inventory standards. For the modeling inventory, the VMT checks included in these QA checks are relevant. Note that a Quality Assurance Plan was prepared prior to initiating work on Version 1 (MANE-VU, 2003). This plan was applied during development of all three versions of the MANE-VU inventory.

a. Data input summary spreadsheets for State review

In reviewing the data submitted for both the annual onroad inventory and the onroad modeling files, Pechan prepared a State QA report for each State. These reports were in the form of Excel spreadsheets. In each of the State QA reports, a page was included that summarized the modeling inputs. This included MOBILE6 input parameters, such as I/M data, registration data, and fuel data. Columns were included indicating the data file name, data coverage (e.g., statewide or for specific counties), data source, any comments regarding the data, an indication of whether any guidance was requested from the State agency before proceeding, and columns for State agency approval of the listed inputs. These reports were provided to each State agency and the State could either approve the inputs summarized or provide an alternate data source or calculation method. For States that had submitted emission inventories in NIF format, results of the NIF QA checks were also included in these State QA reports for the states to review and approve and provide alternate data or methods. This table also include information on the VMT data source and any proposed methodologies needed for processing the VMT.

b. Responses from State Agencies

The appropriate State agency staff reviewed the State QA reports and provided direction for correcting QA issues either in the QA Summary Report Excel file or via e-mail. The modeling inputs were then revised to incorporate responses from the agencies.

3. Version 3 Emission Summaries

Table V-1 presents a summary of the annual 2002 Version 3 MANE-VU onroad sector pollutant emissions for each MANE-VU State, as well as a regional total. Differences between these Version 3 annual emission totals and the Version 2 totals documented in the January 2005 MANE-VU mobile sources inventory report are the result of updated data provided by New Jersey and Massachusetts. Emissions for the remaining states have not changed. It should be noted that these emission results are from the annual inventory modeling. These will differ from the results obtained by the SMOKE onroad modeling. Additionally, the emissions in this table do not reflect VMT updates from Vermont that were provided after the Version 2 MANE-VU annual inventory had been calculated, but were included in the SMOKE Version 2 and Version 3 modeling inputs.

Table V-1. Annual 2002 Onroad Sector Emissions by MANE-VU State (Tons/Year)

State	VOC	NO_x	CO	SO_2	PM10-PRI	PM25-PRI	NH_3
Connecticut	31,755.3	68,816.2	562,124.0	1,666.9	1,580.0	1,041.6	3,293.9
Delaware	10,563.8	21,340.5	160,760.4	583.9	581.1	414.9	902.8
District of Columbia	4,895.3	8,902.0	66,017.6	271.1	222.0	153.0	397.8
Maine	23,037.4	54,686.8	410,957.8	1,803.9	1,239.1	934.4	1,467.5
Maryland	61,846.7	122,210.0	1,000,762.8	4,057.6	3,168.3	2,200.4	5,594.3
Massachusetts	57,185.5	143,367.6	1,039,100.1	4,398.8	3,407.5	2,409.9	5,499.1
New Hampshire	16,762.3	33,283.0	306,792.5	776.9	814.3	561.8	1,447.0
New Jersey	89,752.9	152,076.1	1,273,513.1	3,648.6	3,725.3	2,469.0	7,382.0
New York	287,845.2	319,732.5	3,711,149.6	10,639.5	8,457.5	5,897.7	14,680.9
Pennsylvania	176,090.3	346,471.5	2,784,196.5	10,924.1	7,351.5	5,331.2	10,532.3
Rhode Island	12,537.8	16,677.2	186,196.8	425.3	345.1	210.5	852.6
Vermont	17,287.8	20,669.9	248,247.6	893.8	669.6	482.8	934.1
Total MANE-VU	**789,560.3**	**1,308,233.3**	**11,749,818.8**	**40,090.5**	**31,561.3**	**22,107.2**	**52,984.3**

B. State-Specific Methods

The following sections describe what modeling inputs were used for each State and how these inputs were developed.

1. Connecticut

a. What Data Sources Were Used?

Table V-2 summarizes the onroad SMOKE input files that were prepared containing information for the State of Connecticut. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

The VMT inputs provided by Connecticut were in the form of three sets of data. This included a file with VMT by county and four road types (Expressway, Arterial/Collector, Local, and Ramp), a set of Statewide VMT mixes at the 16 vehicle type-level for each of the four Connecticut road types, and a Statewide hourly VMT distribution file. Additional data provided by Connecticut showing the correspondence between the four Connecticut road types and the 12 Highway Performance Monitoring System (HPMS) road types were used to first distribute the county VMT to the 12 road types. Average daily miles were converted to annual miles by multiplying the average daily miles by 365. Pechan then developed a simple MOBILE6 input file that used the Connecticut registration distribution and with a separate scenario for each of the VMT mixes provided at the 16 vehicle type level. Pechan used the resulting MOBILE6 output file to extract the 28 vehicle type VMT mix corresponding to each of the four Connecticut road types. The VMT data by county and 12 road types were then multiplied by the 28 vehicle type VMT fractions to obtain a VMT file at the 28 vehicle type level and 12 road type level by county (for use in calculating the annual emission inventory). VMT from these 28 vehicle types were then aggregated to the 12 vehicle types needed for the SMOKE MBINV input file. The VMT mix fractions by vehicle type for each county and road type were also calculated for inclusion in the SMOKE VMTMIX file.

Table V-2. Connecticut Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	CT
Speeds	MANEVU_2002_mbinv_02022006.txt	Road type/3 vehicle groups	Default NEI
Speed profiles	MANEVU_2002_spdpro.txt and MANEVU_2002_spdref.txt	County/hour/road type	CT
VMT mix	MANEVU_2002_vmtmix_02022006.txt	Statewide/road type	CT
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

For Connecticut, speed information is contained in both the MBINV SMOKE file as well as in the SMOKE speed profile (SPDPRO) and speed cross reference file (SPDREF) files. The speed information contained in the MBINV file is simply the default NEI speed data. The actual speed data to be used in the modeling inventory for Connecticut are contained in the SMOKE SPDPRO and SPDREF. The speed data from these two files should overwrite the default speed information contained in the MBINV file during the SMOKE modeling. The data used to develop the speed profiles were provided by Connecticut in the form of NMIM speed input files with the fraction of VMT occurring within each of 14 speed bins. These speed distributions differ by hour of day and by freeways versus arterials and collectors. Separate speed distribution files were provided by Connecticut for each county. Pechan then converted these speed data into the speed profile format needed for SMOKE—hourly average speeds by county and the two specified road types.

Connecticut provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution;
- Hourly VMT distributions;
- Statewide I/M program inputs and Anaerobic Thermal Processor (ATP); and
- RVP and fuel program data.

The data submitted by Connecticut indicated that Federal Northern reformulated gasoline is in place in the State, with an ozone season RVP of 6.8 pounds per square inch (psi). Based on the NMIM modeling that was performed for the annual emission inventory, the reformulated gasoline program was modeled in the SMOKE MOBILE6 input files using the combination of the FUEL PROGRAM: 4 command (indicating user-supplied gasoline sulfur inputs), RVP command, and the OXYGENATED FUELS command. The monthly oxygenated fuel and gasoline sulfur inputs, and the non-ozone season monthly RVP values were obtained from the

NMIM national county database for Connecticut. During the ozone season months, the RVP value submitted by Connecticut of 6.8 psi was modeled. The fuel data obtained from NMIM are the same for all counties in Connecticut, except Fairfield, which shows different fuel properties, but all represent reformulated gasoline. These values for both Fairfield and the remaining counties differed by season (i.e., the ozone season from May through September, transition months of March, April, October, and November, and the winter months of December, January, and February). Statewide diesel sulfur values modeled from NMIM were 367 ppm sulfur in the summer months (June, July, and August), 340 ppm sulfur in the winter months (December, January, and February), and 353 ppm sulfur in the spring and fall months.

Data provided by Connecticut indicated that the State follows the OTC low emission vehicle (LEV) program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Connecticut.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

2. Delaware

a. What Data Sources Were Used?

Table V-3 summarizes the onroad SMOKE input files that were prepared containing information for the State of Delaware. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Delaware provided VMT data in the form of the NEI NIF PE table as well as in the NMIM BaseYearVMT table format. Additionally, Delaware provided monthly VMT fractions developed from VMT counts on a variety of road types. These monthly VMT fractions were provided for each of the Delaware counties. Since the data in the NEI NIF PE table were at the level of detail needed for the SMOKE MBINV file, the format of the VMT data was simply converted from the NIF format to the SMOKE MBINV format. Similarly, the monthly VMT fractions were converted to the profile format needed in the SMOKE MTPRO file, with the appropriate cross references in the MTREF file. The average speeds provided by Delaware at the county/road type level were included in the SMOKE MBINV file.

Table V-3. Delaware Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	DE
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	DE
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly by county/road type	DE
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

The fuel data submitted by Delaware was based on the NMIM defaults with the NMIM October data replaced by the NMIM November data. The reformulated gas fuel parameters were modeled in the SMOKE MOBILE6 input files by using the combination of the OXYGENATED FUELS, FUEL RVP, and FUEL PROGRAM (for gasoline sulfur contents) commands for each month. Statewide diesel sulfur values modeled from NMIM were 300 ppm sulfur in the summer months (June, July, and August), 280 ppm sulfur in the winter months (December, January, and February), and 290 ppm sulfur in the spring and fall months.

Data provided by Delaware indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Delaware.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

3. District of Columbia

a. What Data Sources Were Used?

Table V-4 summarizes the onroad SMOKE input files that were prepared containing information for the District of Columbia. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-4. District of Columbia Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	DC
Speeds	MANEVU_2002_mbinv_02022006.txt	Road type	DC
VMT mix	MANEVU_2002_vmtmix_02022006.txt	Road type	DC
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

The District of Columbia provided 2002 VMT data in the form of the NMIM BaseYearVMT table. This table included VMT at the 28 vehicle type level for each of the six urban road types in the District of Columbia. VMT from these 28 vehicle types were then aggregated to the 12 vehicle types needed for the SMOKE MBINV input file. The VMT mix fractions by vehicle type for each county and road type were also calculated for inclusion in the SMOKE VMTMIX file. The District also provided a spreadsheet including the daily average weighted speed by roadway class. These speeds were incorporated in the SMOKE MBINV file. The District of Columbia provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- District-wide registration distribution;
- I/M program and ATP inputs; and
- Weekday trip length distribution file.

The District of Columbia specified that the NMIM fuel program default data for the District should be used for the MANE-VU modeling. This included reformulated gasoline district wide, modeled using the FUEL RVP, and FUEL PROGRAM (for gasoline sulfur contents) commands for each month. Statewide diesel sulfur values modeled from NMIM were 329 ppm sulfur in the summer months (June, July, and August), 324 ppm sulfur in the winter months (December, January, and February), and 326 ppm sulfur in the spring and fall months.

Data provided by the District of Columbia indicated that the District follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for the District of Columbia.

c. *What Issues Need to be Addressed in Future Versions?*

The SMOKE MOBILE6 files for the District of Columbia should include the OXYGENATED FUELS command to fully model reformulated gasoline in the District of Columbia. This command was inadvertently left out of the SMOKE MOBILE6 files.

4. Maine

a. *What Data Sources Were Used?*

Table V-5 summarizes the onroad SMOKE input files that were prepared containing information for the State of Maine. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-5. Maine Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	ME
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	ME
VMT mix	MANEVU_2002_vmtmix_02022006.txt	Statewide/road type	Default
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Maine provided 2002 average daily VMT by county and 12 roadway types. Maine had no information available on the distribution of VMT among vehicle types. Therefore, Pechan developed the VMT by county, roadway type, and vehicle type by using the default MOBILE6 2002 VMT mix by vehicle type. These VMT data were converted to annual VMT by multiplying the average daily VMT by 365. The MOBILE6 VMT default mix fractions by vehicle type for 2002 were included for Maine in the SMOKE VMTMIX file. Maine also provided average speed data by county and roadway type. These data were included in the SMOKE MBINV file.

Maine provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- I/M program inputs and ATP inputs for Cumberland County only; and
- Monthly average RVP data.

Statewide diesel sulfur values were obtained from the NMIM defaults for Maine. A diesel sulfur value of 390 ppm sulfur was modeled in the summer months (June, July, and August), 338 ppm sulfur in the winter months (December, January, and February), and 364 ppm sulfur in the spring and fall months.

Data provided by Maine indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Maine.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

5. Maryland

a. What Data Sources Were Used?

Table V-6 summarizes the onroad SMOKE input files that were prepared containing information for the State of Maryland. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Maryland submitted annual VMT data in the form of a NIF tblMobilePE table. This included VMT by county, 12 vehicle types, and 12 road types. These VMT data were then converted to the format needed for the SMOKE MBINV file. Pechan calculated VMT mix fractions from the VMT data supplied by Maryland to obtain the VMT mixes by county and road type contained in the SMOKE VMTMIX file. In addition, Maryland provided monthly VMT distribution data by road type. Pechan converted these data to the format needed for the SMOKE MTPRO and MTREF files. The same set of monthly temporal profiles were applied to all counties in Maryland. Maryland also provided a spreadsheet showing the average speed Statewide for each of the 12 roadway types. These speed data were included in the SMOKE MBINV file.

Maryland provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- County-specific registration distribution;
- County-specific diesel sales fractions;
- I/M program inputs and ATP inputs to be applied in the 14 I/M counties; and
- Statewide monthly diesel sulfur content data.

Maryland indicated that the NMIM default fuel parameters for Maryland should be used in the MANE-VU modeling. This fuel data includes reformulated gasoline in 14 of the Maryland counties. The reformulated gasoline program was modeled using the FUEL RVP, and FUEL PROGRAM (for gasoline sulfur contents) commands for each month. Maryland provided monthly Statewide diesel sulfur values. These values ranged from 455 ppm sulfur to 500 ppm sulfur. These values were included in the corresponding monthly SMOKE MOBILE6 input files.

Table V-6. Maryland Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	MD
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	MD
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	MD
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Statewide monthly by road type	MD
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Data provided by Maryland indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Maryland affecting the modeling inventory files.

c. What Issues Need to be Addressed in Future Versions?

The SMOKE MOBILE6 files for Maryland should include the OXYGENATED FUELS command to fully model reformulated gasoline in the Maryland counties that implement the reformulated gasoline program. This command was inadvertently left out of the Maryland SMOKE MOBILE6 files.

6. Massachusetts

a. What Data Sources Were Used?

Table V-7 summarizes the onroad SMOKE input files that were prepared containing information for the State of Massachusetts. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-7. Massachusetts Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	MA
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	MA
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	Default
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly by county	MA
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

The Version 3 MANE-VU onroad modeling for Massachusetts differed from the Version 2 modeling, based on updates provided by Massachusetts in December 2005. The primary changes for Massachusetts from Version 3 is the use of updated 2002 VMT data and vehicle speed date. Massachusetts provided a spreadsheet containing revised VMT values and vehicle speeds for 2002 by county and SCC. Pechan prepared the revised Massachusetts VMT data and the speed data in the format of the SMOKE MBINV file. Using the revised VMT data by SCC, Pechan calculated the updated VMT mixes by vehicle type for each county and road type in Massachusetts and formatted the resulting data to be included in the SMOKE VMTMIX file.

The original VMT data submitted by Massachusetts included VMT for each of the four seasons. Pechan used these data to develop monthly VMT temporal profiles. Seasonal VMT was assigned to the months in that season based on the ratio of the number of days in a specific month to the number of days in the season. Pechan then formatted the monthly temporal VMT allocation factors for inclusion in the SMOKE MTPRO and MTREF files.

Massachusetts provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution;
- Statewide I/M program inputs and ATP inputs;
- RVP and fuel program data;
- Diesel sulfur content of 350 ppm sulfur year-round and statewide; and
- Massachusetts-specific LEV and Tier 2 implementation files.

Northern reformulated gasoline was modeled statewide throughout the State, with a RVP value of 6.7 psi during the ozone season and 13.5 psi during the remaining months, based on inputs provided by Massachusetts. The section below on QA issues for Massachusetts discusses the fuel inputs modeled in the Version 3 SMOKE MOBILE6 input files in more detail. Massachusetts provided the necessary inputs to model the State's LEV implementation schedule and Tier 2 data, which differ from the OTC-LEV program and from the default MOBILE6 Tier 2 data.

b. What QA Issues were Identified and Addressed?

In addition to the VMT updates, Pechan revised the SMOKE MOBILE6 input files for Massachusetts for Version 3. This was done because Version 2 of the MANE-VU modeling inventory was prepared using the default setting of MOBILE6 to model reformulated gasoline (i.e., using the command line "FUEL PROGRAM : 2 N"). Since the time that the Version 2 inventory was created, EPA found a bug with the sulfur content values used when the default reformulated gasoline command is used. To eliminate this problem, Pechan created revised SMOKE MOBILE6 input files for Massachusetts that model reformulated gasoline by explicitly setting the RVP, gasoline sulfur contents, and gasoline oxygen contents. The gasoline sulfur contents and gasoline oxygen contents were set according to the default parameters laid out in the MOBILE6 user's guide. The summer (May through September) sulfur content is 129 ppm in 2002 and the winter sulfur content is 279 ppm in 2002. The summer gasoline contains 2.1 percent oxygen, with MTBE as the oxygenate. The winter gasoline contains 1.5 percent oxygen in 70 percent of the fuel having MTBE as the oxygenate, and 3.5 percent oxygen in 30 percent of the fuel having ETOH as the oxygenate. The RVP values were not changed from those modeled in Version 2 (6.7 psi in the summer and 13.5 psi in the winter).

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

7. New Hampshire

a. What Data Sources Were Used?

Table V-8 summarizes the onroad SMOKE input files that were prepared containing information for the State of New Hampshire. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-8. New Hampshire Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	NH
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	NH
VMT mix	MANEVU_2002_vmtmix_02022006.txt	Statewide	NH
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

The VMT inputs provided by New Hampshire were in the form of summer day VMT by county or nonattainment area and roadway type. In addition, New Hampshire provided a Statewide VMT mix distribution by 16 vehicle types in the MOBILE6 files provided by the State. Pechan then developed a simple MOBILE6 input file that used the New Hampshire Statewide registration distribution and the Statewide VMT mix by vehicle type. Pechan used the resulting MOBILE6 output file to extract the 28 vehicle type VMT mix to be applied Statewide to the county/roadway type VMT data. Summer day miles were converted to annual miles by using national data from the Federal Highway Administration's Travel Volume Trends which provides 2002 monthly VMT for groups of road categories. Additionally, the VMT data from the three New Hampshire nonattainment areas represented four counties. To allocate these VMT by county, Pechan first totaled the VMT data from these three nonattainment areas by roadway type. Then, using ratios developed from the preliminary 2002 NEI VMT, Pechan allocated the grouped VMT by county and roadway type. With VMT for the entire State at the county/roadway type level of detail, Pechan then multiplied the VMT data by the 28 vehicle type VMT fractions to obtain a VMT file at the 28 vehicle type level and 12 roadway type level by county for use in preparing the annual onroad emission inventory. VMT from these 28 vehicle types were then aggregated to the 12 vehicle types needed for the SMOKE MBINV input file. The VMT mix fractions by vehicle type for each county and road type were also calculated for inclusion in the SMOKE VMTMIX file. New Hampshire also provided a spreadsheet including the average speed by roadway class for each county or county group. These speeds were incorporated in the SMOKE MBINV file.

New Hampshire provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution; and
- Statewide ATP inputs.

New Hampshire specified that the NMIM fuel program default data for New Hampshire should be used for the MANE-VU modeling. This included reformulated gasoline in four counties, modeled using the FUEL RVP, and FUEL PROGRAM (for gasoline sulfur contents) commands for each month. Statewide diesel sulfur values modeled from NMIM were 400 ppm sulfur in the summer months (June, July, and August), 340 ppm sulfur in the winter months (December, January, and February), and 370 ppm sulfur in the spring and fall months.

Data provided by New Hampshire indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

Through the State QA report process, New Hampshire provided updated inputs for VMT and speeds that were incorporated in the modeling inventory inputs.

c. What Issues Need to be Addressed in Future Versions?

The SMOKE MOBILE6 files for the four New Hampshire that implement reformulated gasoline should include the OXYGENATED FUELS command to fully model the benefits reformulated gasoline. This command was inadvertently left out of the SMOKE MOBILE6 files.

8. New Jersey

a. What Data Sources Were Used?

Table V-9 summarizes the onroad SMOKE input files that were prepared containing information for the State of New Jersey. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-9. New Jersey Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	NJ
Speeds	MANEVU_2002_mbinv_02022006.txt	Road type/3 vehicle groups	Default NEI
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	NJ
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly by 3 county groups and weekday/weekend	NJ
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Updates were made to the Version 2 MOBILE6 SMOKE inputs for New Jersey in December 2005 to create Version 3, based on revised data provided by the State. New Jersey provided the following files:

- a set of SMOKE MOBILE6 input files by county and month;
- NJ_2002_mbinv.txt file that contained revised VMT and speeds by county and SCC, generated by NJDEP in August 2005, in SMOKE format;
- amptref.m3.manevu.vistascem.032805_NJVMT.txt—a SMOKE-formatted file containing county/SCC-level temporal profile cross-references;
- amptro.m3.manevu.vistascem.032805_NJVMT.txt—a SMOKE-formatted file containing county-specific VMT temporal profiles prepared by NJDEP in August 2005; and
- zip files containing external files needed to run the SMOKE MOBILE6 files.

After an initial review of these files, Pechan did not note any differences in the SMOKE MOBILE6 files from the Version 2 files. Pechan then confirmed with New Jersey that the only changes from the Version 2 date were in the VMT data. The VMT and speed data by county and SCC in the MBINV file provided by New Jersey were copied to the MANE-VU SMOKE MBINV file, replacing the VMT and speed data from the Version 2 SMOKE MBINV file for New Jersey. The speed data included by New Jersey are the default NEI speeds by road type and vehicle type. Using the new VMT data provided by New Jersey, Pechan calculated a revised set of VMT mix fractions by vehicle type and included these in the Version 3 SMOKE VMTMIX file. Pechan pasted the temporal profiles provided for New Jersey into the SMOKE MTPRO file. This included monthly temporal profiles and diurnal temporal profiles. The diurnal temporal profiles were applied to both weekdays and weekends. Similarly the temporal cross reference data included in the file provided by New Jersey was pasted into the SMOKE MTREF file for MANE-VU Version 3.

The following New Jersey-provided were included in the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution;
- Statewide diesel sales fractions;
- Statewide I/M program and ATP inputs; and
- Diesel sulfur content data (340 ppm statewide).

Northern reformulated gasoline was modeled statewide throughout the State, using NMIM fuel program input defaults for New Jersey. The section below on QA issues for New Jersey discusses the fuel inputs modeled in the Version 3 SMOKE MOBILE6 input files in more detail.

Data provided by New Jersey indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

As discussed above for New Jersey, the Version 2 New Jersey SMOKE MOBILE6 input files modeled reformulated gasoline using the command line "FUEL PROGRAM : 2 N", which is the default method for modeling reformulated gasoline with MOBILE6. To eliminate the effects of the MOBILE6 reformulated gasoline bug from the SMOKE MOBILE6 inputs, Pechan explicitly modeled the reformulated gasoline program in the New Jersey MOBILE6 input files by explicitly modeling the appropriate settings of the RVP, oxygenated fuel content commands, and gasoline sulfur commands. The values for oxygenated fuel settings and gasoline sulfur contents by month were extracted from the NMIM county-level database used in developing the annual emissions inventory for the MANE-VU Version 2 onroad emissions inventory.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

9. New York

a. What Data Sources Were Used?

Table V-10 summarizes the onroad SMOKE input files that were prepared containing information for the State of New York. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-10. New York Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	NY
Speeds	MANEVU_2002_mbinv_02022006.txt	Road type/3 vehicle groups	Default NEI
Speed profiles	MANEVU_2002_spdpro.txt and MANEVU_2002_spdref.txt	County/hour/road type	NY
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	NY
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly by 3 county groups	NY
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

VMT for New York was provided in the form of a NIF PE table. These VMT data were extracted and included in the SMOKE MBINV file. VMT mix fractions by vehicle type were calculated from these VMT data and included in the SMOKE VMTMIX file.

New York provided a spreadsheet with average speeds in each of four daily time periods by county and road type. Pechan converted these speed data to the SMOKE SPDPRO format, assigning the speed for a given time period to all hours included in that time period. Pechan also prepared the SMOKE SPDREF file to appropriately cross reference each county and road type to the corresponding hourly speed profile. Because these more detailed speed files were provided for New York, the average speed by road type and county in the MBINV file was populated with default NEI speeds.

New York also provided spreadsheets showing monthly VMT by county and roadtype. After processing these VMT values to develop monthly temporal factors, Pechan observed that there were only three unique monthly profiles in this data set. These three profiles were then added to the SMOKE MTPRO file. Pechan then matched each county and road type in the State to the corresponding monthly VMT profile in the SMOKE MTREF file.

New York provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Registration distributions—one for the New York metropolitan area and one for the rest of the State;
- Diesel sales fractions—one for the New York metropolitan area and one for the rest of the State;
- Statewide mileage accumulation rate input;
- Monthly RVP data—one set for the New York metropolitan area and one for the rest of the State;
- Reformulated gasoline program inputs for affected counties modeled with MOBILE6 defaults (i.e., "FUEL PROGRAM : 2 N");
- I/M program inputs for affected counties;
- Statewide ATP inputs;
- Hourly VMT distributions by county group;
- Start distributions by county;
- Diesel sulfur content data (400 ppm statewide).

New York also provided the necessary input files to model the State's LEV program implementation schedule, which differs from the OTC LEV program. New York also provided MOBILE6 Tier 2 modeling files to be used along with the New York LEV program inputs. These inputs were included in the SMOKE MOBILE6 modeling.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for New York affecting the modeling inventory files.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

10. Pennsylvania

a. What Data Sources Were Used?

Table V-11 summarizes the onroad SMOKE input files that were prepared containing information for the State of Pennsylvania. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-11. Pennsylvania Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	PA
Speeds	MANEVU_2002_mbinv_02022006.txt	County/road type	PA
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	PA
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly by county	PA
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Pennsylvania provided a database file (NEIANN02.dbf) that contained the VMT and speed data by county, roadway type, and vehicle type. This included the same VMT used in the calculation of the annual onroad inventory submitted by Pennsylvania for MANE-VU. Pechan converted the data from this database file into VMT and speed data in the format of the SMOKE MBINV file. From the VMT data, Pechan calculated VMT fractions by vehicle type by county and road type for inclusion in the SMOKE VMTMIX file. Pennsylvania also provided estimates of VMT by month for each county. Pechan converted these data to monthly allocation factors in the format needed by the SMOKE MTPRO and MTREF files. A separate monthly profile was developed for each county, but applied to all road types within that county.

Pennsylvania provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Registration distributions for each individual county;
- I/M program and ATP inputs for affected Philadelphia and Pittsburgh area counties (inputs differ for the two areas);
- Monthly RVP data for all counties including 7.8 psi RVP program from May through September for Pittsburgh counties;
- Reformulated gasoline for the 5-county Philadelphia area modeled with MOBILE6 defaults (i.e., "FUEL PROGRAM : 2 N"); and
- Diesel sulfur content data (500 ppm statewide).

Data provided by Pennsylvania indicated that the State follows the OTC-LEV program vehicle implementation schedule. Therefore, the OTC-LEV program LEV implementation schedule was included in the MOBILE6 SMOKE input files, starting implementation in the 1999 model year followed by a full implementation of the National LEV program in the 2001 model year.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Pennsylvania affecting the modeling inventory files.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

11. Rhode Island

a. What Data Sources Were Used?

Table V-12 summarizes the onroad SMOKE input files that were prepared containing information for the State of Rhode Island. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-12. Rhode Island Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	**Level of Detail**	**Data Source**
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	RI
Speeds	MANEVU_2002_mbinv_02022006.txt	County group/road type	RI
VMT mix	MANEVU_2002_vmtmix_02022006.txt	Statewide	RI
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Rhode Island provided a spreadsheet with the 2002 VMT as well as Statewide 2002 VMT fractions by 16 vehicle types. Pechan prepared a simple MOBILE6 input file including this Rhode Island 2002 VMT mix by vehicle type and the 2002 Rhode Island registration distribution. The VMT mix in the MOBILE6 output file at the 28 vehicle type level was then used to distribute the VMT by vehicle category. The 2002 daily VMT was at the State level, broken down by the 12 roadway types. To allocate these VMT data to the county/road type level of detail, Pechan summed the VMT from the preliminary version of EPA’s 2002 NEI for Rhode Island first by State and roadway type and then by county and roadway type. Pechan calculated county/roadway type VMT fractions by dividing the VMT at the county/roadway type level by the State/roadway type VMT for the same roadway type. These fractions were then multiplied by the VMT supplied by Rhode Island at the State/roadway type level of detail to obtain county/roadway type VMT data. These county/roadway type VMT data were then multiplied by the 28 vehicle type VMT fractions to obtain VMT at the level of detail needed to populate the NMIM BaseYearVMT table for calculating the annual inventory and were then summed to the 16-vehicle type level of detail for use in the SMOKE MBINV file. The data were also converted from daily VMT to annual by multiplying the average daily VMT by 365. VMT mix fractions from this final data set were then formatted in the SMOKE VMTMIX format at the State level of detail. Statewide speeds by road type, as provided by Rhode Island, were included in the SMOKE MBINV file.

Rhode Island provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution; and
- Statewide I/M program inputs.

Data for fuel parameters were obtained from the NMIM national county database for Rhode Island. This included reformulated gasoline Statewide, modeled using the FUEL RVP, and FUEL PROGRAM (for gasoline sulfur contents) commands for each month. These values differed by season, but were consistent Statewide. Statewide diesel sulfur values modeled from NMIM were 400 ppm sulfur in the summer months (June, July, and August), 340 ppm sulfur in the winter months (December, January, and February), and 370 ppm sulfur in the spring and fall months.

The NMIM default LEV program for Rhode Island was modeled, which includes the OTC-LEV program LEV implementation schedule.

b. What QA Issues were Identified and Addressed?

No QA issues were identified for Rhode Island.

c. What Issues Need to be Addressed in Future Versions?

The Rhode Island SMOKE MOBILE6 input files did not include the OXYGENATED FUELS command. This should have been used to fully characterize the parameters of reformulated gasoline that is used Statewide in Rhode Island.

12. Vermont

a. What Data Sources Were Used?

Table V-13 summarizes the onroad SMOKE input files that were prepared containing information for the State of Vermont. This table notes the level of detail of the data included as well as the source of the original information used to create these data files.

Table V-13. Vermont Onroad Data in SMOKE Input Files

	Final MANE-VU Version 3 SMOKE Input File	Level of Detail	Data Source
VMT	MANEVU_2002_mbinv_02022006.txt	County/SCC	VT
Speeds	MANEVU_2002_mbinv_02022006.txt	Road type/vehicle group (light-duty vs. heavy-duty)	VT
VMT mix	MANEVU_2002_vmtmix_02022006.txt	County/road type	VT
Temporal profiles	MANEVU_2002_mtpro_02022006.txt and MANEVU_2002_mtref_02022006.txt	Monthly statewide	
SMOKE MOBILE6 file listing	MANEVU_2002_mcref_02022006.txt	County	
SMOKE MOBILE6 file listing	MANEVU_2002_mvref_02022006.txt	County	

Vermont submitted VMT data in the format of the NIF PE table. Vermont then provided updated VMT data for three road classifications (rural minor collectors, rural local roads, and urban local roads) in December 2004, after the time that these changes could be included in the MANE-VU annual onroad emission inventory. However, the updated VMT were included in the MANE-VU Version 3 onroad SMOKE modeling files. This VMT change resulted in a Statewide decrease in VMT from about 9.5 billion miles to about 7.8 billion miles. As a result, the SMOKE modeling performed by MANE-VU will not match the MANE-VU emission inventory for Vermont. The VMT data were converted to the SMOKE MBINV file format. VMT mix fractions were calculated from the VMT data and included in the SMOKE VMTMIX file. Vermont also provided information on the temporal allocation of VMT. From these data, Pechan prepared a monthly VMT profile for Vermont and included the data in the SMOKE MTPRO and MTREF files.

Vermont provided information on Statewide speeds by roadway type. These speeds differed for light-duty vehicles and heavy-duty vehicles. Pechan incorporated this speed information into the SMOKE MBINV file.

Vermont provided the following data that were incorporated into the monthly MOBILE6 input files for the SMOKE modeling:

- Statewide registration distribution;
- Statewide I/M program inputs; and
- RVP data.

The RVP data provided by Vermont were based on data from a local gasoline tank farm and resulted in an RVP value of 8.5 psi during the ozone season months (May through September) and 9.47 psi for the remaining months. Data for fuel parameters other than RVP (e.g., diesel and gasoline fuel sulfur content) were obtained from the NMIM national county database for Vermont. These values differed by season, but were consistent Statewide. Statewide diesel sulfur values modeled from NMIM were 300 ppm sulfur in the summer months (June, July, and August), 290 ppm sulfur in the winter months (December, January, and February), and 295 ppm sulfur in the spring and fall months.

The NMIM default LEV program for Vermont was modeled, which includes Vermont's State-specific LEV implementation schedule.

b. What QA Issues were Identified and Addressed?

Through the State QA report process, Vermont provided a missing registration data file, RVP data and revised VMT.

c. What Issues Need to be Addressed in Future Versions?

None identified by the State.

CHAPTER VI – BIOGENIC SOURCES

A. General Methods for all States

1. What Data Sources Were Used?

Biogenic emissions for the time period from January 1, 2002 – December 31, 2002 were calculated by the New York State Department of Environmental Conservation (NYSDEC) for all of the MANE-VU states using the Biogenic Emissions Inventory System (BEIS) version 3.12 integrated within SMOKE2.1. The inventory was prepared at the state-level for CO, nitrous oxide (NO), and VOC.

General information about BEIS is available at http://www.epa.gov/AMD/biogen.html while documentation about biogenic emissions processing within SMOKE2.1 is available at http://cf.unc.edu/cep/empd/products/smoke/version2.1/html/ch06s10.html and http://cf.unc.edu/cep/empd/products/smoke/version2.1/html/ch06s17.html. Note that the SMOKE documentation refers to BEIS3.09 and has not yet been updated for BEIS3.12. This affects the number of species modeled as well as the use of different speciation profiles. However, the general processing approach has not changed from BEIS3.09 to BEIS3.12. In short, this processing approach is as follows and was utilized by NYSDEC for its biogenic emission processing for MANE-VU and the OTC modeling:

- **Normbeis3** reads gridded land use data and emissions factors and produces gridded normalized biogenic emissions for 34 species/compounds. The gridded land use file utilized by NYSDEC includes the fractional coverage of 230 different land use types for each of the 172 * 172 12-km grid cells in the MANE-VU/OTC modeling domain. In a separate BEIS3.12 input file, both summer and winter emissions factors for each species/compound are provided for each of the 230 land use types. On output, **Normbeis3** generates a file `B3GRD` which contains gridded summer and winter emission fluxes for the modeling domain that are normalized to 30 °C and a photosynthetic active radiation (PAR) of 1000 μmol/m^{2}s. In addition, gridded summer and winter leaf area indices (LAI) are also written to `B3GRD`.

- **Tmpbeis3** reads the gridded, normalized emissions file B3GRD and meteorological data from the MCIP-processed MM5 meteorological fields generated by the University of Maryland for MANE-VU/OTC modeling. Specifically, the following MM5/MCIP meteorological variables are used by **Tmpbeis3** to compute hour-specific, gridded biogenic emissions from the normalized emission fluxed contained in B3GRD: layer-1 air temperature ("TA"), layer-1 pressure ("PRES"), total incoming solar radiation at the surface ("RGRND"), and convective ("RC") and non-convective ("RN") rainfall. Additionally, the emissions for the 34 species/compounds modeled by BEIS3.12 are converted to CO, NO, and the CB-IV VOC species utilized in CMAQ via the use of the BEIS3.12-CB-IV speciation profile. Furthermore, an external file, BIOSEASON, was utilized to decide whether to use summer or winter emissions factors for any given grid cell on any given day. This file was generated by the SMOKE2.1 utility **Metscan** based on MM5 layer-1 air temperatures to determine the date of the last spring frost and first fall frost at each grid cell. Summer emission factors are used by **Tmpbeis3** for the time period between the day of the last spring frost and the day of the first fall frost at any given grid cell, and winter emission factors are used for the remaining time period. Documentation for the **Metscan** utility is available at http://cf.unc.edu/cep/empd/products/smoke/version2.1/html/ch05s07.html. An animated GIF file showing the BIOSEASON file used by NYSDEC can be found at ftp://ftp.dec.state.ny.us/dar/air_research/chogrefe/biog_reports/b3season_movie.gif.

- For reporting purposes, the hourly, speciated, gridded emissions were aggregated to the county level for each day. For any given grid cell, emissions were distributed among the counties intersecting this grid cell in proportion to the area of each of these counties within the grid cell. The area gridding surrogates needed for this aggregation are based on a file obtained from EPA via http://www.epa.gov/ttn/chief/emch/spatial/new/bgpro.2km_041604.us.gz, followed by windowing for the MANE-VU/OTC modeling domain.

2. Version 3 Emissions Summary

Table VI-1 presents a State-level summary of the annual biogenic source emissions in Version 3 of the 2002 MANE-VU inventory. The annual emissions are based on the sum of the daily emissions prepared using the modeling approach previously discussed.

Table VI-1. Version 3 2002 MANE-VU Biogenic Source Emissions by State (Tons/Year)

State	CO	NO	VOC*
Connecticut	6,889	560	64,017
Delaware	4,274	990	46,343
District of Columbia	150	30	1,726
Maine	64,936	2,018	600,205
Maryland	18,351	2,934	210,104
Massachusetts	11,594	1,257	113,958
New Hampshire	14,306	482	141,894
New Jersey	14,058	1,813	181,617
New York	63,436	8,313	492,487
Pennsylvania	59,946	8,646	585,272
Rhode Island	1,764	211	19,233
Vermont	14,745	1,142	118,377
MANE-VU	274,451	28,396	2,575,232

* VOC emissions were calculated by adding the emissions for the following pollutants: ALD2, ETH, FORM, ISOP, NR, OLE, PAR, TERB, TOL, XYL.

B. State-Specific Methods

No state-specific methods were used in Version 3 of the MANE-VU inventory for biogenic emissions.

CHAPTER VII. TEMPORAL, SPECIATION, AND SPATIAL ALLOCATION PROFILES AND PREPARATION OF SMOKE (IDA) AND RPO DATA EXCHANGE PROTOCOL (NIF 3.0) FORMATS

Table VII-1 provides a summary of the file names and documentation used for modeling inputs for Version 3 of MANE-VU's 2002 inventory for point, area, nonroad, and onroad sources. The final input files used for temporal allocation, speciation, and spatial allocation of emissions were developed for Version 1 of the 2002 inventory and delivered to MARAMA during January 2005 (MANE-VU, 2005). These files were developed starting with the latest model input files available from EPA and then revised to include updates needed for the MANE-VU region or to add SCCs and profile assignments not included in the initial EPA data sets. The files were revised between September 2004 and January 2005 to incorporate comments provided by MANE-VU. Files in Table VII-1 with a date that is later than January 2005 were prepared to support modeling for Version 3. The notes column in the table identifies the modifications made to the files if the files were changed after this date. Otherwise, files with a date later than January 2005 were either provided by a state agency or were obtained from EPA and used for modeling Version 3.

The remainder of this chapter provides a brief summary of the revisions made to the EPA data sets prepared for Version 1 of the 2002 MANE-VU inventory and subsequently carried for the modeling for Version 3. Sections A, B, and C of this chapter discuss how the temporal allocation, speciation, and spatial allocation profiles, respectively, were developed. Section D of this chapter describes how the emissions inventory data were prepared in the SMOKE (IDA) and RPO Data Exchange Protocol (NIF 3.0) Formats.

A. Temporal Profiles

1. Point and Area Sources

The most recent SMOKE temporal cross-reference files available from EPA during the summer of 2004 were used as the starting point for developing the cross-reference files for point and area sources. The following 3 classes of modifications were completed to improve the temporal allocation input files:

- Update temporal cross-reference to assign an existing profile in the default SMOKE profiles for SCCs in the MANE-VU inventory
- Create a new temporal cross-reference to an existing profile in the default SMOKE profiles for SCCs in the MANE-VU inventory; the cross-reference did not previously exist in the default SMOKE files but the profile did exist.
- Create new temporal profiles and cross-references for SCCs in the MANE-VU inventory; neither the cross-reference nor profiles for the MANE-VU SCCs previously existed in the default SMOKE files.

a. Point Sources

A total of 30 point SCCs existed in the MANE-VU point source inventory that were not in the point source cross-reference file; therefore, the SCCs were added to the cross-reference file and assigned to existing profiles based on the assignment of similar SCCs already assigned to the profiles. Table II-2 lists the SCCs along with the state and county FIPS where they occurred in the MANE-VU inventory. Temporal profiles could not be identified for the SCCs listed in Table VII-3 due to either the SCC being shorter than 8-digits or the lack of information about the source categories for identifying an appropriate profile assignment. These SCCs were assigned the default profile by SMOKE.

b. Area Sources

For area sources, the improvements to the EPA cross-reference file included updates to existing profiles in the file based on MANE-VU-specific data (see Table VII-4), addition of SCCs that were assigned to existing profiles based on the assignment of similar SCCs already assigned to the profiles (see Table VII-5), and addition of new SCCs and profiles based on MANE-VU- or RPO-specific data (see Table VII-6).

Additional cross-referencing information used to revise the temporal cross-reference file included MANE-VU county-level information for residential wood combustion, monthly temporal profiles developed for NH_3 source categories using the Carnegie Mellon University (CMU) model, and a Delaware-specific cross-reference file associated with the Delaware inventory. The additions of new SCCs and new profiles shown in Table VII-6 mostly apply to the state of Delaware (State FIPS=10). For the FIPS column, the "-9" designation means the cross-reference is applied for all counties that do not have a county or state-specific SCC cross-reference record. These changes to the temporal cross-reference file allowed for the assignment of a non-flat temporal profile (262= uniform monthly, 7=uniform weekly and 24=uniform diurnal) to 95% of the SCCs in the area inventory.

2. Nonroad Sources

Nonroad sources used the same temporal profile and cross-reference files as area sources.

3. Onroad Sources

For onroad sources, the following States provided their own data to update the default temporal profile files and the temporal cross reference files: Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Vermont. Each of these States provided VMT information that could be used to develop monthly temporal profiles. The data were provided in a variety of formats, ranging from monthly or seasonal VMT to SMOKE-formatted monthly VMT temporal profiles. Where necessary, the monthly or seasonal VMT data were converted into the SMOKE monthly temporal profile format. In addition, New Jersey provided information for diurnal temporal profiles. However, the level of detail or variability provided in these monthly profiles varied by State. Connecticut's and Delaware's profiles each varied by county and road type. Maryland's profiles applied Statewide, with variability in the profiles by road type. Massachusetts' profiles varied by county, road type, and vehicle type. Both New Jersey and New York provided information for three monthly temporal profiles, each used throughout one of the three county groups in each State. The Pennsylvania profiles varied by county, but not by road type. Vermont provided information for a single monthly temporal profile to be used throughout the State.

B. Speciation Profiles

1. Point and Area Sources

The most recent SMOKE speciation cross-reference files available from EPA during the summer of 2004 were used as the starting point for developing the cross-reference files for point and area sources. These files were revised to complete SCC assignments for the Carbon Bond IV (CB-IV) with PM mechanism for point and area sources. In addition, sulfur tagging species were added to the REMSAD7 CB-IV with PM mechanism (see Table VII-1).

a. Point Sources

Thirty-one SCCs in the MANE-VU point source inventory did not have chemical speciation profile assignments for the CB-IV with PM mechanism in the default SMOKE chemical cross-reference file. For 10 of the SCCs, assignments for VOC and $PM_{2.5}$ were added to the speciation cross-reference file based on the speciation profile codes assigned to similar SCCs. Table VII-7 shows the SCCs where an SCC speciation cross-reference record was added, the VOC and $PM_{2.5}$ speciation profile code assigned, and the method used to assign the profiles. Assignments were not completed for the remaining 21 point source SCCs because of a lack of information on the emission sources needed to complete the assignments (see Table VII-8 for the list of the SCCs).

b. Area Sources

Speciation profile assignments were completed for many area source SCCs for the CB-IV with PM mechanism and were documented in separate spreadsheet files provided to MARAMA during September 2004. Assignments for VOC and $PM_{2.5}$ were added to the speciation cross-reference file based on the speciation profile codes assigned to similar SCCs. Note that the transport fractions for fugitive dust were applied as a part of the modeling effort to adjust the mass emissions in Version 3 of the inventory.

2. Nonroad Sources

No updates to the speciation profiles or speciation assignments for nonroad sources were provided by the MANE-VU States.

3. Onroad Sources

No updates to the speciation profiles or speciation assignments for onroad sources were provided by the MANE-VU States.

C. Spatial Allocation Profiles

The most recent spatial profile data files available from EPA during the summer of 2004 were used as the starting point for developing the spatial profile file for point and area sources. A detailed description of this surrogate dataset was provided in a file named "surrogate_documentation_workbook052804.xls" from EPA's website at: http://www.epa.gov/ttn/chief/emch/spatial/newsurrogate.html. Many SCCs in the MANE-VU inventory did not have surrogate assignments in the default SMOKE gridding cross-reference file. About 200 SCC assignments were added to the gridding cross-reference file. The assignments were based on matching surrogate descriptions from the EPA99 surrogate data with the SCC descriptions.

No updates to the spatial allocation files for nonroad and onroad sources were provided by the MANE-VU States.

D. Preparation of SMOKE (IDA) and RPO Data Exchange Protocol (NIF 3.0) Formats

Table VII-9 identifies the mass emissions and SMOKE input files for Version 3 of the MANE-VU point, area, nonroad, and onroad inventories.

The SMOKE input file format contains one field for storing daily emissions for each pollutant. The area source inventory contains summer day, winter day, and average day emissions depending on the state and source category. Thus, two sets of SMOKE input files were prepared for the area source inventory. One file contains annual, summer day, and average day emissions and the other file contains annual, winter day, and average day emissions. If summer day and average day emissions were provided for the same process and pollutant in the inventory, the summer day value was included in the SMOKE input file. If winter day and average day emissions were provided for the same process and pollutant in the inventory, the winter day value was included in the SMOKE input file.

The point source inventory contains summer day and winter day emissions. Two sets of SMOKE input files were prepared for point sources as well (one file containing annual and summer day emissions and the other containing annual and winter day emissions).

Table VII-10 provides the unique list of the start date, end date, and emission type combinations for daily emissions in the point and area source inventories that were used to define summer, winter, and average day emissions. This table also shows the names of the SMOKE input files in which the emissions are included.

For onroad sources, daily emissions were calculated by SMOKE using the monthly MOBILE6 input files included in the SMOKE input files.

The nonroad IDA file only has annual total emissions. The values in the "typical day" column are zero. Annual total emissions were allocated for each hour using the monthly, weekly, and diurnal profiles described in Section A.2 of this chapter.

Table VII-1. Profiles, Cross-references, and Documentation for Model Inputs for Version 3 of 2002 MANE-VU Inventory

Description	File Name	Format	Date of File used for Version 3	Size (Bytes)	Notes
SCC descriptions file	scc_desc_manevu.083104.txt	SMOKE	8/31/2004	1,335,524	
Temporal Allocation Profiles					
Technical memo on profile/cross-reference review for area sources	MANE-VU_AreaEI_review_draft_090304.doc	MS Word	9/3/2004	760,320	
Technical memo on profile/cross-reference review for point sources	MANE-VU_PointEI_review_draft_090304.doc	MS Word	9/3/2004	262,144	
Temporal profile cross-reference file for point sources	amptref.m3.manevu.vistascem.032805.txt	SMOKE	3/28/2005	704,998	Based on "amptref.m3.manevu.012405.txt" prepared for Version 1, but added VISTAS BaseD cross-references to the state-specific 2002 continuous emissions monitoring (CEM)-derived point source temporal profiles generated by VISTAS for their BaseD modeling.
Temporal profiles file for point sources	amptpro.m3.us+can.manevu.vistascem.032805.txt	SMOKE	3/28/2005	178,427	Based on "amptpro.m3.us+can.manevu.030205.txt" prepared for Version 1, but added state-specific 2002 CEM-derived point source temporal profiles generated by VISTAS for their BaseD modeling.
Temporal profile cross-reference file for area sources	amptref.m3.manevu.012405.txt	SMOKE	1/24/2005	687,196	
Temporal profiles file for area sources	amptpro.m3.us+can.manevu.030205.txt	SMOKE	3/2/2005	136,131	
Temporal cross-reference file containing state-specific onroad mobile source data for Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Vermont	MANEVU_2002_mtref_02022006_addCT.txt	SMOKE	2/22/2006	2,522,013	Data for Connecticut were added to the file after the file was prepared for the other states. Hence the reason "_addCT" is included at the end of the file name.

Table VII-1 (continued)

Description	File Name	Format	Date of File used for Version 3	Size (Bytes)	Notes
Temporal profiles file containing state-specific onroad mobile source data for Connecticut, Delaware, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, and Vermont	MANEVU_2002_mtpro_02022006_addCT.txt	SMOKE	2/22/2006	23,122	Data for Connecticut were added to the file after the file was prepared for the other states. Hence the reason "_addCT" is included at the end of the file name.
Spatial/Gridding					
Spreadsheet summary generated for area source gridding review	MANE-VU_agref_review.xls		8/31/2004	1,607,680	
Spatial profile cross-reference file	amgref.m3.us+can+mex.manevu.082404.txt	SMOKE	8/31/2004	89,860	
Gridding surrogate cross-reference file	amgref_us_051704_manevu_added	SMOKE	5/17/2004	35,825	Based on the surrogate cross-reference file downloaded from the EPA/CHIEF site that corresponds to the gridding surrogates file. However, several MANE-VU-specific additions included in "amgref.m3.us+can+mex.manevu.082404.txt" for Version 1 were added to the gridding-cross reference file downloaded from EPA. These are cross-references for SCCs 2806010000, 2806015000, 2870000011, 2870000015, 2870000021, and 2870000022.
Modeling grid (12-km)	amgpro.12km_041604.otc12.us.txt	SMOKE	4/16/2004	150,689,358	Based on downloaded 12-km EPA gridding surrogates windowed for the OTC domain
Speciation Profiles					
Spreadsheet summary generated for area source speciation review	MANE-VU_asref_review.xls	Excel	8/31/2004	5,626,880	
Speciation profiles file for CB-IV	gspro.cmaq.cb4p25.txt	SMOKE		142,255	
Speciation cross-reference file for CB-IV	gsref.cmaq.cb4p25.manevu.083104.txt	SMOKE	8/31/2004	786,998	

Table VII-1 (continued)

Description	File Name	Format	Date of File used for Version 3	Size (Bytes)	Notes
Speciation profile cross-reference assignment file	gsref.cmaq.cb4p25.txt	SMOKE	2/1/2005	754,302	This file is based on the file "gsref.cmaq.cb4p25.manevu.083104.txt" prepared for version 1 of the MANE-VU inventory. The only revision was to change the PM2_5 speciation profile # from its default 99999 to 35501 for some mobile source categories. This update had been done by either CENRAP or VISTAS in the speciation profiles they provided and the update had a more recent creation date than the MANE-VU files created for Version 1, so this appeared to be a refinement.
Speciation profiles for REMSAD7	gspro.remsad7.cb4mpm.txt_tag	SMOKE	5/1/2005	532,990	Based on "gspro.remsad7.cb4mpm.txt" in the SMOKE, but added tagged species for REMSAD state-level sulfur tagging.
Speciation cross-reference for REMSAD7	gsref.remsad7.cb4mpm.txt_tag	SMOKE	5/1/2005	2,614,360	Based on "gsref.remsad7.cb4mpm.txt" in the SMOKE, but added tagged species for REMSAD state-level sulfur tagging.
Transport fractions for fugitive dust	gcntl.xportfrac.txt	SMOKE	2/1/2004	124,495	File obtained from input file EPA used to adjust for PM transport for modeling of Clean Air Interstate Rule (CAIR).

Table VII-2. Point Source Temporal Cross-reference Additions

State	FIPS	SCC	Recommended profiles			Method of assignment	SCC Description (Complete description not always available)
			Monthly	Weekly	Diurnal		
VT	50005	10200908	262	7	24	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50019	10200908	262	7	24	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50021	10200908	262	7	24	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50017	10300908	262	7	24	Use SCC=103009XX profiles	External Combustion Boilers;Commercial/Institutional;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
PA	42009	20200299	262	7	24	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42029	20200299	262	7	24	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42045	20200299	262	7	24	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42061	20200299	262	7	24	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42067	20200299	262	7	24	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42015	20300299	262	7	24	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42029	20300299	262	7	24	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42037	20300299	262	7	24	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42071	20300299	262	7	24	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42011	28888899	262	7	24	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42123	28888899	262	7	24	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42123	28888899	262	7	24	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42129	28888899	262	7	24	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
MD	24031	30500261	262	7	24	Use SCC=30500260 profile	Industrial Processes;Mineral Products;Asphalt Concrete;Drum Mix Plant: Rotary Drum Dryer/Mixer, Waste/Drain/#6 Oil-Fired

Table VII-2 (continued)

State	FIPS	SCC	Recommended profiles			Method of assignment	SCC Description (Complete description not always available)
			Monthly	Weekly	Diurnal		
NY	36055	31603001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Substrate Preparation;Extrusion Operations
NY	36055	31603002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Substrate Preparation;Film Support Operations
NY	36055	31604001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Chemical Manufacturing
NY	36055	31604002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Emulsion Making Operations
NY	36055	31604003	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Chemical Mixing Operations
NY	36055	31605001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Surface Coating Operations
NY	36055	31605002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Grid Ionizers
NY	36055	31605003	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Corona Discharge Treatment
NY	36055	31606001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;General Film Manufacturing
NY	36055	31606002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;Cutting/Slitting Operations
PA	42101	31606002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;Cutting/Slitting Operations
NY	36055	31612001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Cleaning Operations;Tank Cleaning Operations
NY	36055	31612002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Cleaning Operations;General Cleaning Operations
NY	36055	31613002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Storage Operations;General Storage Operations

Table VII-2 (continued)

State	FIPS	SCC	Recommended profiles			Method of assignment	SCC Description (Complete description not always available)
			Monthly	Weekly	Diurnal		
NY	36055	31614001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Material Transfer Operations;Filling Operations (non petroleum)
NY	36055	31614002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Material Transfer Operations;Transfer of Chemicals
NY	36055	31615001	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Separation Processes;Recovery Operations
NY	36055	31615003	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Separation Processes;Distillation Operations
NY	36055	31616002	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;General Process Tank Operations
NY	36055	31616003	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Miscellaneous Manufacturing Operations
NY	36055	31616004	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Paint Spraying Operations
NY	36055	31616006	262	7	24	Use SIC=3861 and SIC=2796 as guidance and evaluate specific sources	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Chemical Weighing Operations
PA	Numerous counties	39000698	262	7	24	Use SCC=39000699 profile	Industrial Processes;In-process Fuel Use;Natural Gas;Unknown
NJ	Numerous counties	39999901	262	7	24	Use SCC=399999XX profiles	Industrial Processes;Miscellaneous Manufacturing Industries;Miscellaneous Industrial Processes;Unknown
PA	42015	40202598	266	7	16	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42017	40202598	266	7	16	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42091	40202598	266	7	16	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42095	40202598	266	7	16	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42097	40202598	266	7	16	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42013	40400299	262	7	24	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown
PA	42041	40400299	262	7	24	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown

Table VII-2 (continued)

State	FIPS	SCC	Recommended profiles			Method of assignment	SCC Description (Complete description not always available)
			Monthly	Weekly	Diurnal		
PA	42045	40400299	262	7	24	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown
PA	42071	40400299	262	7	24	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown

Table VII-3. Unknown SCCs in the MANE-VU Point Source Inventory

State	FIPS	SCC	Description
PA	42101	24950002	Need more info: Unknown SCC
PA	42061	40500299	Need more info:Printing/Publishing; General
PA	42091	40500299	Need more info:Printing/Publishing; General
PA	42133	40500299	Need more info:Printing/Publishing; General

Table VII-4. Area Source Temporal Cross-Reference Updates

SCC	SCC description	SMOKE Default profile			New MANE-VU profile		
		Monthly	Weekly	Diurnal	Monthly	Weekly	Diurnal
30502713	Industrial Processes;Mineral Products;Industrial Sand and Gravel;Screening: Size Classification	262	7	24	262	5	12
30502760	Industrial Processes;Mineral Products;Industrial Sand and Gravel;Sand Handling, Transfer, and Storage	262	7	24	262	5	12
2302000000	Industrial Processes;Food and Kindred Products: SIC 20;All Processes;Total	262	7	26	262	7	250
2302050000	Industrial Processes;Food and Kindred Products: SIC 20;Bakery Products;Total	262	7	26	262	5	26
2305000000	Industrial Processes;Mineral Processes: SIC 32;All Processes;Total	262	7	26	262	5	10
2309100010	Industrial Processes;Fabricated Metals: SIC 34;Coating, Engraving, and Allied Services;Electroplating	262	7	26	262	5	10
2311010000	Industrial Processes;Construction: SIC 15 - 17;General Building Construction;Total	262	7	26	262	5	12
2311020000	Industrial Processes;Construction: SIC 15 - 17;Heavy Construction;Total	262	7	26	262	5	12
2311030000	Industrial Processes;Construction: SIC 15 - 17;Road Construction;Total	262	7	26	262	5	12
2325000000	Industrial Processes;Mining and Quarrying: SIC 14;All Processes;Total	262	7	26	262	5	10
2399000000	Industrial Processes;Industrial Processes: NEC;Industrial Processes: NEC;Total	262	7	26	262	5	10
2399010000	Industrial Processes; Industrial Refrigeration; Refrigerant Losses; All Processes	262	7	26	262	5	10
2401015000	Solvent Utilization;Surface Coating;Factory Finished Wood: SIC 2426 thru 242;Total: All Solvent Types	173	7	26	173	5	26
2401020000	Solvent Utilization;Surface Coating;Wood Furniture: SIC 25;Total: All Solvent Types	287	7	26	287	5	26
2401025000	Solvent Utilization;Surface Coating;Metal Furniture: SIC 25;Total: All Solvent Types	287	7	26	287	5	26
2401030000	Solvent Utilization;Surface Coating;Paper: SIC 26;Total: All Solvent Types	257	7	26	257	5	26
2401040000	Solvent Utilization;Surface Coating;Metal Cans: SIC 341;Total: All Solvent Types	253	7	26	253	5	26
2401045000	Solvent Utilization;Surface Coating;Metal Coils: SIC 3498;Total: All Solvent Types	253	7	26	253	5	26
2401050000	Solvent Utilization;Surface Coating;Miscellaneous Finished Metals: SIC 34 - (341 + 3498);Total: All Solvent Types	253	7	26	253	5	26

Table VII-4 (continued)

SCC	SCC description	SMOKE Default profile			New MANE-VU profile		
		Monthly	Weekly	Diurnal	Monthly	Weekly	Diurnal
2401055000	Solvent Utilization;Surface Coating;Machinery and Equipment: SIC 35;Total: All Solvent Types	253	7	26	253	5	26
2401060000	Solvent Utilization;Surface Coating;Large Appliances: SIC 363;Total: All Solvent Types	262	7	26	262	5	26
2401065000	Solvent Utilization;Surface Coating;Electronic and Other Electrical: SIC 36 - 363;Total: All Solvent Types	253	7	26	253	5	26
2401070000	Solvent Utilization;Surface Coating;Motor Vehicles: SIC 371;Total: All Solvent Types	140	7	26	140	5	26
2401075000	Solvent Utilization;Surface Coating;Aircraft: SIC 372;Total: All Solvent Types	169	7	26	169	5	26
2401080000	Solvent Utilization;Surface Coating;Marine: SIC 373;Total: All Solvent Types	266	7	26	266	5	26
2401085000	Solvent Utilization;Surface Coating;Railroad: SIC 374;Total: All Solvent Types	169	7	26	169	5	26
2401090000	Solvent Utilization;Surface Coating;Miscellaneous Manufacturing;Total: All Solvent Types	260	7	26	260	5	26
2401090999	Solvent Utilization;Surface Coating;Miscellaneous Manufacturing;Solvents: NEC	260	7	26	260	5	26
2401200000	Solvent Utilization;Surface Coating;Other Special Purpose Coatings;Total: All Solvent Types	260	7	26	260	5	26
2401990000	Solvent Utilization;Surface Coating;All Surface Coating Categories;Total: All Solvent Types	260	7	26	260	5	26
2401990999	Solvent Utilization;Surface Coating;All Surface Coating Categories;Solvents: NEC	260	7	26	260	5	26
2415000000	Solvent Utilization;Degreasing;All Processes/All Industries;Total: All Solvent Types	253	7	26	253	5	26
2415020000	Solvent Utilization;Degreasing;Fabricated Metal Products (SIC 34): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415025000	Solvent Utilization;Degreasing;Industrial Machinery and Equipment (SIC 35): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415030000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415035000	Solvent Utilization;Degreasing;Transportation Equipment (SIC 37): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415045000	Solvent Utilization;Degreasing;Miscellaneous Manufacturing (SIC 39): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415055000	Solvent Utilization;Degreasing;Automotive Dealers (SIC 55): All Processes;Total: All Solvent Types	253	7	26	253	5	12
2415060000	Solvent Utilization;Degreasing;Miscellaneous Repair Services (SIC 76): All Processes;Total: All Solvent Types	253	7	26	253	5	12

Table VII-4 (continued)

SCC	SCC description	SMOKE Default profile			New MANE-VU profile		
		Monthly	Weekly	Diurnal	Monthly	Weekly	Diurnal
2415065000	Solvent Utilization;Degreasing;Auto Repair Services (SIC 75): All Processes;Total: All Solvent Types	253	7	26	253	6	12
2415100000	Solvent Utilization;Degreasing;All Industries: Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415105000	Solvent Utilization;Degreasing;Furniture and Fixtures (SIC 25): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415110000	Solvent Utilization;Degreasing;Primary Metal Industries (SIC 33): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415120000	Solvent Utilization;Degreasing;Fabricated Metal Products (SIC 34): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415125000	Solvent Utilization;Degreasing;Industrial Machinery and Equipment (SIC 35): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415130000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415135000	Solvent Utilization;Degreasing;Transportation Equipment (SIC 37): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415140000	Solvent Utilization;Degreasing;Instruments and Related Products (SIC 38): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415145000	Solvent Utilization;Degreasing;Miscellaneous Manufacturing (SIC 39): Open Top Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415200000	Solvent Utilization;Degreasing;All Industries: Conveyerized Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415230000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): Conveyerized Degreasing;Total: All Solvent Types	253	7	26	253	5	12
2415300000	Solvent Utilization;Degreasing;All Industries: Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415305000	Solvent Utilization;Degreasing;Furniture and Fixtures (SIC 25): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415310000	Solvent Utilization;Degreasing;Primary Metal Industries (SIC 33): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415320000	Solvent Utilization;Degreasing;Fabricated Metal Products (SIC 34): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415325000	Solvent Utilization;Degreasing;Industrial Machinery and Equipment (SIC 35): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415330000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12

Table VII-4 (continued)

SCC	SCC description	SMOKE Default profile			New MANE-VU profile		
		Monthly	Weekly	Diurnal	Monthly	Weekly	Diurnal
2415335000	Solvent Utilization;Degreasing;Transportation Equipment (SIC 37): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415340000	Solvent Utilization;Degreasing;Instruments and Related Products (SIC 38): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415345000	Solvent Utilization;Degreasing;Miscellaneous Manufacturing (SIC 39): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415355000	Solvent Utilization;Degreasing;Automotive Dealers (SIC 55): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2415360000	Solvent Utilization;Degreasing;Auto Repair Services (SIC 75): Cold Cleaning;Total: All Solvent Types	253	7	26	253	6	12
2415365000	Solvent Utilization;Degreasing;Miscellaneous Repair Services (SIC 76): Cold Cleaning;Total: All Solvent Types	253	7	26	253	5	12
2425000000	Solvent Utilization;Graphic Arts;All Processes;Total: All Solvent Types	257	7	26	257	5	26
2425010000	Solvent Utilization;Graphic Arts;Lithography;Total: All Solvent Types	257	7	26	257	5	26
2425020000	Solvent Utilization;Graphic Arts;Letterpress;Total: All Solvent Types	257	7	26	257	5	26
2425030000	Solvent Utilization;Graphic Arts;Rotogravure;Total: All Solvent Types	262	7	26	262	5	26
2425040000	Solvent Utilization;Graphic Arts;Flexography;Total: All Solvent Types	257	7	26	257	5	26
2430000000	Solvent Utilization;Rubber/Plastics;All Processes;Total: All Solvent Types	200	7	26	200	5	26
2601010000	Waste Disposal, Treatment, and Recovery;On-site Incineration;Industrial;Total	262	7	26	262	5	12
2601020000	Waste Disposal, Treatment, and Recovery;On-site Incineration;Commercial/Institutional;Total	262	7	26	262	5	12
2610010000	Waste Disposal, Treatment, and Recovery;Open Burning;Industrial;Total	262	7	26	262	5	12
2610020000	Waste Disposal, Treatment, and Recovery;Open Burning;Commercial/Institutional;Total	262	7	26	262	5	12
2805020000	Miscellaneous Area Sources;Agriculture Production - Livestock;Cattle and Calves Waste Emissions;Total	489	7	26	1500	7	26
2805025000	Miscellaneous Area Sources;Agriculture Production - Livestock;Hogs and Pigs Waste Emissions;Total	489	7	26	1500	7	26
2805030000	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Total	489	7	26	1500	7	26

Table VII-4 (continued)

SCC	SCC description	SMOKE Default profile			New MANE-VU profile		
		Monthly	Weekly	Diurnal	Monthly	Weekly	Diurnal
2805035000	Miscellaneous Area Sources;Agriculture Production - Livestock;Horses and Ponies Waste Emissions;Total	262	7	26	1500	7	26
2805040000	Miscellaneous Area Sources;Agriculture Production - Livestock;Sheep and Lambs Waste Emissions;Total	489	7	26	1500	7	26
2805045001	Miscellaneous Area Sources;Agriculture Production - Livestock;Goats Waste Emissions;Total	489	7	26	262	7	24
2810015000	Miscellaneous Area Sources;Other Combustion;Prescribed Burning for Forest Management;Total	14	7	24	3	11	13

Table VII-5. Area Source Temporal Cross-Reference Additions

SCC	Description	Month	Week	Diurnal
2104008002	Stationary Source Fuel Combustion;Residential;Wood;Fireplaces: Insert; non-EPA certified	485	7	26
2104008003	Stationary Source Fuel Combustion;Residential;Wood;Fireplaces: Insert; EPA certified; non-catalytic	485	7	26
2104008004	Stationary Source Fuel Combustion;Residential;Wood;Fireplaces: Insert; EPA certified; catalytic	485	7	26
2302002100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Conveyorized Charbroiling	262	7	26
2302002200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Under-fired Charbroiling	262	7	26
2302003000	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Total	262	7	26
2302003100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Flat Griddle Frying	262	7	26
2302003200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Clamshell Griddle Frying	262	7	26
2302080002	Industrial Processes;Food and Kindred Products: SIC 20;Miscellaneous Food and Kindred Products;Refrigeration	262	7	26
2401002000	Solvent Utilization;Surface Coating;Architectural Coatings - Solvent-based;Total: All Solvent Types	467	7	26
2401003000	Solvent Utilization;Surface Coating;Architectural Coatings - Water-based;Total: All Solvent Types	467	7	26
2401102000	Solvent Utilization;Surface Coating;Industrial Maintenance Coatings-Solvent-based;Total: All Solvent Types	500	5	26
2401103000	Solvent Utilization;Surface Coating;Industrial Maintenance Coatings-Water-based;Total: All Solvent Types	500	5	26
2415270000	Solvent Utilization;Degreasing;All Manufacturing (except SIC 36): Vapor and In-Line Cleaning;Total: All Solvent Types	253	5	12
2415280000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): Vapor and In-Line Cleaning;Total: All Solvent Types	253	5	12
2415370000	Solvent Utilization;Degreasing;Transportation Equipment Repair Services: Cold Cleaning;Total: All Solvent Types	253	5	12
2415380000	Solvent Utilization;Degreasing;All Manufacturing: Cold Cleaning;Total: All Solvent Types	253	5	12
2610000400	Waste Disposal, Treatment, and Recovery;Open Burning;All Categories;Yard Waste - Brush Species Unspecified	262	7	26
2610000500	Waste Disposal, Treatment, and Recovery;Open Burning;All Categories;Land Clearing Debris (use 28-10-005-000 for Logging Debris Burning)	262	7	26
2610040400	Waste Disposal, Treatment, and Recovery;Open Burning;Municipal (collected from residences, parks,other for central burn);Yard Waste - Total	262	7	26
2630020010	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Wastewater Treatment Processes Total	262	7	24

Table VII-5 (continued)

SCC	Description	Month	Week	Diurnal
2630020020	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Biosolids Processes Total	262	7	24
2630020030	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Land Application - Digested Sludge	262	7	24
2630050000	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Land Application - Digested Sludge	262	7	24
2680001000	Waste Disposal, Treatment, and Recovery;Composting;100% Biosolids (e.g., sewage sludge, manure, mixtures of these matls);All Processes	262	7	26
2680002000	Waste Disposal, Treatment, and Recovery;Composting;Mixed Waste (e.g., a 50:50 mixture of biosolids and green wastes);All Processes	262	7	26
2801700011	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Calcium Ammonium Nitrate	998	7	26
2801700012	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Potassium Nitrate	998	7	26
2801700013	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Diammonium Phosphate	998	7	26
2801700014	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Monoammonium Phosphate	998	7	26
2801700015	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Liquid Ammonium Polyphosphate	998	7	26
2801700099	Miscellaneous Area Sources;Agriculture Production - Crops;Fertilizer Application;Miscellaneous Fertilizers	998	7	26
2805001100	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Confinement	1500	7	26
2805001200	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Manure handling and storage	1500	7	26
2805001300	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Land application of manure	1500	7	26
2805002000	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef Cattle Composite; Not Elsewhere Classified	1500	7	26
2805003100	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on pasture/range;Confinement	1500	7	26
2805007100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with dry manure management systems;Confinement	1500	7	26
2805007200	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with dry manure management systems;Management	1500	7	26
2805007300	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with dry manure management systems;Land application of manure	262	7	24
2805007330	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with dry manure management systems; Land application	1500	7	26
2805007340	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with dry manure management systems; Land application	1500	7	26

Table VII-5 (continued)

SCC	Description	Month	Week	Diurnal
2805008100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with wet manure management systems;Confinement	1500	7	26
2805008200	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with wet manure management systems;Manure handling and storage	1500	7	26
2805008300	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with wet manure management systems;Land application of manure	1500	7	26
2805009100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - broilers;Confinement	1500	7	26
2805009300	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - broilers;Land application of manure	1500	7	26
2805010100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - turkeys;Confinement	262	7	24
2805010200	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - turkeys;Manure handling and storage	262	7	24
2805010300	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - turkeys;Land application of manure	1500	7	26
2805018000	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle composite; Not Elsewhere Classified	1501	7	26
2805019100	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Confinement	1500	7	26
2805019200	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Manure handling and storage	1500	7	26
2805019300	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Land application of manure	1500	7	26
2805020001	Miscellaneous Area Sources;Agriculture Production - Livestock;Cattle and Calves Waste Emissions;Milk Cows	1500	7	26
2805020002	Miscellaneous Area Sources;Agriculture Production - Livestock;Cattle and Calves Waste Emissions;Beef Cows	1500	7	26
2805020003	Miscellaneous Area Sources;Agriculture Production - Livestock;Cattle and Calves Waste Emissions;Heifers and Heifer Calves	1500	7	26
2805021300	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - scrape dairy;Land application of manure	1500	7	26
2805022100	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - deep pit dairy;Confinement	1500	7	26
2805022200	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - deep pit dairy;Manure handling and storage	1500	7	26
2805022300	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - deep pit dairy;Land application of manure	1500	7	26
2805023300	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - drylot/pasture dairy;Land application of manure	1500	7	26
2805030001	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Pullet Chicks and Pullets less than 13 weeks old	1500	7	26

Table VII-5 (continued)

SCC	Description	Month	Week	Diurnal
2805030002	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Pullets 13 weeks old and older but less than 20 weeks	1500	7	26
2805030003	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Layers	1500	7	26
2805030004	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Broilers	1500	7	26
2805030008	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry Waste Emissions;Geese	1500	7	26
2805039100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons;Confinement	1500	7	26
2805039200	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons;Manure handling and storage	1500	7	26
2805039300	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons;Land application of manure	1500	7	26
2805045000	Miscellaneous Area Sources;Agriculture Production - Livestock;Goats Waste Emissions;Not Elsewhere Classified	1500	7	26
2805045002	Miscellaneous Area Sources;Agriculture Production - Livestock;Goats Waste Emissions;Angora Goats	1500	7	26
2805045003	Miscellaneous Area Sources;Agriculture Production - Livestock;Goats Waste Emissions;Milk Goats	1500	7	26
2805047100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - deep-pit house operations;Confinement	1500	7	26
2805047300	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - deep-pit house operations;Land application of manure	1500	7	26
2805053100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - outdoor operations; Confinement	1500	7	26
2805054000	Miscellaneous Area Sources;Agricultural Production - Livestock;"Mules; Donkeys; and Burros Waste Emissions";Not Elsewhere Classified	262	7	24
2806010000	Miscellaneous Area Sources;Domestic Animals Waste Emissions;Cats;Total	262	7	24
2806015000	Miscellaneous Area Sources;Domestic Animals Waste Emissions;Dogs;Total	262	7	24
2807020001	Miscellaneous Area Sources;Wild Animals Waste Emissions;Bears;Black Bears	262	7	26
2807020002	Miscellaneous Area Sources;Wild Animals Waste Emissions;Bears;Grizzly Bears	262	7	26
2807025000	Miscellaneous Area Sources;Wild Animals Waste Emissions;Elk;Total	262	7	26
2807030000	Miscellaneous Area Sources;Wild Animals Waste Emissions;Deer;Total	262	7	26
2807040000	Miscellaneous Area Sources;Wild Animals Waste Emissions;Birds;Total	262	7	26
2810060100	Miscellaneous Area Sources;Other Combustion;Cremation;Humans	262	7	24
2870000001	Miscellaneous Area Sources;Humans;Respiration and Perspiration;Total	262	7	24
2870000002	Miscellaneous Area Sources;Humans;Infant Diapered Waste;Total	262	7	24
2870000011	Miscellaneous Area Sources;Domestic Activity;Household Products;Total	262	7	24

Table VII-5 (continued)

SCC	Description	Month	Week	Diurnal
2870000015	Miscellaneous Area Sources;Domestic Activity;Non-agricultural Fertilizers;Total	3	7	24
2870000021	Miscellaneous Area Sources;Domestic Animals;Dogs;Total	262	7	24
2870000022	Miscellaneous Area Sources;Domestic Animals;Cats;Total	262	7	24
2870000031	Miscellaneous Area Sources;Wild Animals;Deer;Total	262	7	24

Table VII-6. Area Source Temporal Cross-Reference and Profile Additions for the MANE-VU Inventory

SCC	Description	Month	Week	Diurnal	FIPS
2102002000	Stationary Source Fuel Combustion;Industrial;Bituminous/Subbituminous Coal;Total: All Boiler Types	1726	8	26	10000
2102006000	Stationary Source Fuel Combustion;Industrial;Natural Gas;Total: Boilers and IC Engines	1727	8	26	10000
2102007000	Stationary Source Fuel Combustion;Industrial;Liquified Petroleum Gas (LPG);Total: All Boiler Types	1727	8	26	10000
2103001000	Stationary Source Fuel Combustion;Commercial/Institutional;Anthracite Coal;Total: All Boiler Types	1720	8	26	10000
2103004000	Stationary Source Fuel Combustion;Commercial/Institutional;Distillate Oil;Total: Boilers and IC Engines	1721	8	26	10000
2103006000	Stationary Source Fuel Combustion;Commercial/Institutional;Natural Gas;Total: Boilers and IC Engines	1722	8	26	10000
2103007000	Stationary Source Fuel Combustion;Commercial/Institutional;Liquified Petroleum Gas (LPG);Total: All Combustor Types	1723	8	26	10000
2104002000	Stationary Source Fuel Combustion;Residential;Bituminous/Subbituminous Coal;Total: All Combustor Types	1732	7	26	10000
2104004000	Stationary Source Fuel Combustion;Residential;Distillate Oil;Total: All Combustor Types	1733	7	26	10000
2104006000	Stationary Source Fuel Combustion;Residential;Natural Gas;Total: All Combustor Types	1734	7	26	10000
2104007000	Stationary Source Fuel Combustion;Residential;Liquified Petroleum Gas (LPG);Total: All Combustor Types	1735	7	26	10000
2104008000	Stationary Source Fuel Combustion;Residential;Wood;Total: Woodstoves and Fireplaces	1740	2007	2014	10001
2104008000	Stationary Source Fuel Combustion;Residential;Wood;Total: Woodstoves and Fireplaces	1741	2008	2015	10003
2104008000	Stationary Source Fuel Combustion;Residential;Wood;Total: Woodstoves and Fireplaces	1742	2009	2016	10005
2104008000	Stationary Source Fuel Combustion;Residential;Wood;Total: Woodstoves and Fireplaces	1742	2009	2016	10005
2104008070	Stationary Source Fuel Combustion;Residential;Wood;Outdoor Wood Burning Equipment;	1743	2010	2017	10001
2104008070	Stationary Source Fuel Combustion;Residential;Wood;Outdoor Wood Burning Equipment;	1744	2011	2017	10003
2104008070	Stationary Source Fuel Combustion;Residential;Wood;Outdoor Wood Burning Equipment;	1745	2012	2017	10005
2104011000	Stationary Source Fuel Combustion;Residential;Kerosene;Total: All Heater Types	1736	7	26	10000
2294000000	Mobile Sources;Paved Roads;All Paved Roads;Total: Fugitives	1729	7	26	10000
2302002100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Conveyorized Charbroiling	262	7	26	10000
2302002100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Conveyorized Charbroiling	262	7	26	10000
2302002200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Under-fired Charbroiling	262	7	26	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2302002200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Charbroiling;Under-fired Charbroiling	262	7	26	10000
2302003000	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Total	262	7	26	10000
2302003000	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Total	262	7	26	10000
2302003100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Flat Griddle Frying	262	7	26	10000
2302003100	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Flat Griddle Frying	262	7	26	10000
2302003200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Clamshell Griddle Frying	262	7	26	10000
2302003200	Industrial Processes;Food and Kindred Products: SIC 20;Commercial Deep Fat Frying;Clamshell Griddle Frying	262	7	26	10000
2311030000	Industrial Processes;Construction: SIC 15 - 17;Road Construction;Total	262	7	9	10000
2401002000	Solvent Utilization;Surface Coating;Architectural Coatings - Solvent-based;Total: All Solvent Types	467	7	26	-9
2401002000	Solvent Utilization;Surface Coating;Architectural Coatings - Solvent-based;Total: All Solvent Types	500	20	27	10000
2401003000	Solvent Utilization;Surface Coating;Architectural Coatings - Water-based;Total: All Solvent Types	467	7	26	-9
2401003000	Solvent Utilization;Surface Coating;Architectural Coatings - Water-based;Total: All Solvent Types	500	20	27	10000
2401005000	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Total: All Solvent Types	1702	5	27	10000
2401005500	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Surface Preparation Solvents	1702	5	27	10000
2401005600	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Primers	1702	5	27	10000
2401005700	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Top Coats	1702	5	27	10000
2401005800	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Clean-up Solvents	1702	5	27	10000
2401005800	Solvent Utilization;Surface Coating;Auto Refinishing: SIC 7532;Clean-up Solvents	1702	5	27	10001
2401008000	Solvent Utilization;Surface Coating;Traffic Markings;Total: All Solvent Types	1700	7	26	-9
2401008000	Solvent Utilization;Surface Coating;Traffic Markings;Total: All Solvent Types	1700	5	26	10000
2401008999	Solvent Utilization;Surface Coating;Traffic Markings;Solvents: NEC	1700	7	26	-9
2401102000	Solvent Utilization;Surface Coating;Industrial Maintenance Coatings-Solvent-based;Total: All Solvent Types	500	5	26	10000
2401103000	Solvent Utilization;Surface Coating;Industrial Maintenance Coatings-Water-based;Total: All Solvent Types	500	5	26	10000
2415100000	Solvent Utilization;Degreasing;All Industries: Open Top Degreasing;Total: All Solvent Types	262	6	5	10000
2415130000	Solvent Utilization;Degreasing;Electronic and Other Elec. (SIC 36): Open Top Degreasing;Total: All Solvent Types	262	6	5	10000
2415300000	Solvent Utilization;Degreasing;All Industries: Cold Cleaning;Total: All Solvent Types	262	6	5	10000
2415360000	Solvent Utilization;Degreasing;Auto Repair Services (SIC 75): Cold Cleaning;Total: All Solvent Types	262	5	5	10000
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1712	7	26	10001
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1714	7	26	10001
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1713	7	26	10003

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1712	7	26	10003
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1714	7	26	10005
2461021000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Cutback Asphalt;Total: All Solvent Types	1713	7	26	10005
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1709	7	26	10001
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1711	7	26	10001
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1710	7	26	10003
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1709	7	26	10003
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1711	7	26	10005
2461022000	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Emulsified Asphalt;Total: All Solvent Types	1710	7	26	10005
2461850001	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Herbicides, Corn	536	7	26	10000
2461850005	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Herbicides, Soy Beans	536	7	26	10000
2461850006	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Herbicides, Hay & Grains	536	7	26	10000
2461850051	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Other Pesticides, Corn	536	7	26	10000
2461850055	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Other Pesticides, Soy Beans	536	7	26	10000
2461850056	Solvent Utilization;Miscellaneous Non-industrial: Commercial;Pesticide Application: Agricultural;Other Pesticides, Hay & Grains	536	7	26	10000
2501011010	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Vapor Losses	1701	7	26	10000
2501011010	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Vapor Losses	1701	7	26	10000
2501011011	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Permeation	1701	7	26	10000
2501011011	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Permeation	1701	7	26	10000
2501011012	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Diurnal	1701	7	26	10000
2501011012	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Diurnal	1701	7	26	10000
2501011015	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Spillage	1701	7	26	10000
2501011015	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Spillage	1701	7	26	10000
2501011016	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Transport	1701	7	26	10000
2501011016	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Residential;Transport	1701	7	26	10000
2501012010	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Vapor Losses	1701	7	26	10000
2501012010	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Vapor Losses	1701	7	26	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2501012011	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Permeation	1701	7	26	10000
2501012011	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Permeation	1701	7	26	10000
2501012012	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Diurnal	1701	7	26	10000
2501012012	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Diurnal	1701	7	26	10000
2501012015	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Spillage	1701	7	26	10000
2501012015	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Spillage	1701	7	26	10000
2501012016	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Transport	1701	7	26	10000
2501012016	Storage and Transport;Petroleum and Petroleum Product Storage;Portable Containers: Commercial;Transport	1701	7	26	10000
2501060000	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Total: All Gasoline/All Processes	1701	7	26	-9
2501060050	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 1: Total	1701	7	26	-9
2501060051	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 1: Submerged Filling	1701	7	26	-9
2501060052	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 1: Splash Filling	1701	7	26	-9
2501060053	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 1: Balanced Submerged Filling	1701	7	26	-9
2501060100	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Total	1701	7	26	-9
2501060100	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Total	1724	7	26	10000
2501060101	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Displacement Loss/Uncontrolled	1701	7	26	-9
2501060102	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Displacement Loss/Controlled	1701	7	26	-9
2501060103	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Spillage	1701	7	26	-9
2501060201	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Underground Tank: Breathing and Emptying	1701	7	26	-9
2501060204	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Off-Highway Equipment Displacement Loss/Controlled	1701	7	26	10000
2501060205	Storage and Transport;Petroleum and Petroleum Product Storage;Gasoline Service Stations;Stage 2: Off-Highway Equipment Spillage	1701	7	26	10000
2501080050	Storage and Transport;Petroleum and Petroleum Product Storage;Airports : Aviation Gasoline;Stage 1: Total	1701	7	26	10000
2501080102	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Aviation Gasoline;Stage 2: Displacement Loss	1701	7	26	10000
2501080103	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Aviation Gasoline;Stage 2: Spillage	1701	7	26	10000
2501080201	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Aviation Gasoline;Underground Tank: Breathing and Emptying	1701	7	26	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2501090050	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Jet A or JP-8;Stage 1: Total	1701	7	26	10000
2501090060	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Jet A or JP-8;Stage 2: Total	1701	7	26	10000
2501090070	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Jet Naphtha or JP-4;Stage 1: Total	1701	7	26	10000
2501090080	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Jet Naphtha or JP-4;Stage 2: Total	1701	7	26	10000
2501090101	Storage and Transport;Petroleum and Petroleum Product Storage;Airports: Jet A or JP-8;Stage 2: Total	1701	7	26	10000
2501090102	Storage and Transport;Petroleum and Petroleum Product Storage;Marinas: Gasoline;Stage 2: Displacement Loss	1701	7	26	10000
2501090103	Storage and Transport;Petroleum and Petroleum Product Storage;Marinas: Gasoline;Stage 2: Spillage	1701	7	26	10000
2501090201	Storage and Transport;Petroleum and Petroleum Product Storage;Marinas: Gasoline;Underground Tank: Emptying and Breathing	1701	7	26	10000
2505000000	Storage and Transport;Petroleum and Petroleum Product Transport;All Transport Types;Total: All Products	1701	7	26	-9
2610010000	Waste Disposal, Treatment, and Recovery;Open Burning;Industrial;Total	262	9	2013	10000
2630020000	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Total Processed	262	7	24	10000
2630020010	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Wastewater Treatment Processes Total	262	7	24	10000
2630020020	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Biosolids Processes Total	262	7	24	10000
2630020030	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Land Application - Digested Sludge	262	7	24	10000
2630050000	Waste Disposal, Treatment, and Recovery;Wastewater Treatment;Public Owned;Land Application - Digested Sludge	262	7	24	10000
2680001000	Waste Disposal, Treatment, and Recovery;Composting;100% Biosolids (e.g., sewage sludge, manure, mixtures of these matls);All Processes	262	7	26	10000
2730100000	Natural Sources;Geogenic;Wind Erosion;Total	1704	7	26	10000
2801001001	Miscellaneous Area Sources;Agriculture Production - Crops;Corn;Land preparation and cultivation	1703	20	132	10000
2801001005	Miscellaneous Area Sources;Agriculture Production - Crops;Wheat;Land preparation and cultivation	1703	20	132	10000
2801001009	Miscellaneous Area Sources;Agriculture Production - Crops;Barley;Land preparation and cultivation	1703	20	132	10000
2801001013	Miscellaneous Area Sources;Agriculture Production - Crops;Soybeans;Land preparation and cultivation	1703	20	132	10000
2801001017	Miscellaneous Area Sources;Agriculture Production - Crops;Hay/Alfalfa;Land preparation and cultivation	1703	20	132	10000
2801001021	Miscellaneous Area Sources;Agriculture Production - Crops;Vegetables;Land preparation and cultivation	1703	20	132	10000
2801002001	Miscellaneous Area Sources;Agriculture Production - Crops;Corn;Harvesting	1703	20	132	10000
2801002002	Miscellaneous Area Sources;Agriculture Production - Crops;Wheat;Harvesting	1703	20	132	10000
2801002003	Miscellaneous Area Sources;Agriculture Production - Crops;Barley;Harvesting	1703	20	132	10000
2801002004	Miscellaneous Area Sources;Agriculture Production - Crops;Soybeans;Harvesting	1703	20	132	10000
2801002005	Miscellaneous Area Sources;Agriculture Production - Crops;Hay/Alfalfa;Harvesting	1703	20	132	10000
2801002006	Miscellaneous Area Sources;Agriculture Production - Crops;Vegetables;Harvesting	1703	20	132	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2801700020	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Corn	1705	7	26	10000
2801700021	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Sorghum	1705	7	26	10000
2801700022	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Wheat	1705	7	26	10000
2801700023	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Barley	1705	7	26	10000
2801700024	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Soybeans	1705	7	26	10000
2801700025	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Hay/Alfalfa	1705	7	26	10000
2801700026	Miscellaneous Area Sources;Agricultural Production - Crops;Fertilizer Application;Vegetables	1705	7	26	10000
2805001100	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Confinement	1706	7	24	10000
2805001200	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Manure handling	1706	7	24	10000
2805001300	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef cattle - finishing operations on feedlots (drylots);Land application of	1706	7	24	10000
2805001310	Miscellaneous Area Sources;Agricultural Production - Livestock;Beef Cattle - finishing operations on feedlots (drylots);Land Appl	1706	7	24	10000
2805001320	Miscellaneous Area Sources;Agricultural Production - Livestock;Beef Cattle - finishing operations on feedlots (drylots);Land Appl	1706	7	24	10000
2805001330	Miscellaneous Area Sources;Agricultural Production - Livestock;Beef Cattle - finishing operations on feedlots (drylots);Land Appl	1706	7	24	10000
2805001340	Miscellaneous Area Sources;Agricultural Production - Livestock;Beef Cattle - finishing operations on feedlots (drylots);Land Appl	1706	7	24	10000
2805002000	Miscellaneous Area Sources;Agriculture Production - Livestock;Beef Cattle Composite; Total	1706	7	24	10000
2805007100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with dry manure management systems;Confinement	262	7	24	10000
2805007200	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with dry manure management systems;Man	262	7	24	10000
2805007300	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with dry manure management systems;Land applicati	262	7	24	10000
2805007340	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with dry manure management systems;Lan	262	7	24	10000
2805008100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with wet manure management systems;Confinement	262	7	24	10000
2805008200	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - layers with wet manure management systems;Manure handlin	262	7	24	10000
2805008310	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with wet manure management systems;Lan	1708	7	24	10000
2805008320	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - layers with wet manure management systems;Lan	1708	7	24	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2805009100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - broilers;Confinement	262	7	24	10000
2805009200	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - broilers;Manure handling and storage	262	7	24	10000
2805009330	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - broilers;Land Application of solid manure wit	1708	7	24	10000
2805009340	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - broilers;Land Application of solid manure wit	1708	7	24	10000
2805010100	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - turkeys;Confinement	262	7	24	10000
2805010200	Miscellaneous Area Sources;Agriculture Production - Livestock;Poultry production - turkeys;Manure handling and storage	262	7	24	10000
2805010330	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - turkeys;Land Application of solid manure with	1708	7	24	10000
2805010340	Miscellaneous Area Sources;Agricultural Production - Livestock;Poultry Production - turkeys;Land Application of solid manure with	1708	7	24	10000
2805019100	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Confinement	1706	7	24	10000
2805019200	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Manure handling and storage	1706	7	24	10000
2805019300	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - flush dairy;Land application of manure	1706	7	24	10000
2805019310	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - flush dairy;Land Application of liquid manure with	1706	7	24	10000
2805019320	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - flush dairy;Land Application of liquid manure witho	1706	7	24	10000
2805019330	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - flush dairy;Land Application of solid manure with i	1706	7	24	10000
2805019340	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - flush dairy;Land Application of solid manure withou	1706	7	24	10000
2805021100	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - scrape dairy;Confinement	1706	7	24	10000
2805021200	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - scrape dairy;Manure handling and storage	1706	7	24	10000
2805021310	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - scrape dairy;Land Application of liquid manure with	1706	7	24	10000
2805021320	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - scrape dairy;Land Application of liquid manure with	1706	7	24	10000
2805021330	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - scrape dairy;Land Application of solid manure with	1706	7	24	10000
2805021340	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - scrape dairy;Land Application of solid manure witho	1706	7	24	10000
2805023100	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - drylot/pasture dairy;Confinement	1706	7	24	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2805023200	Miscellaneous Area Sources;Agriculture Production - Livestock;Dairy cattle - drylot/pasture dairy;Manure handling and storage	1706	7	24	10000
2805023310	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - drylot/pasture dairy;Land Application of liquid man	1706	7	24	10000
2805023320	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - drylot/pasture dairy;Land Application of liquid man	1706	7	24	10000
2805023330	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - drylot/pasture dairy;Land Application of solid manu	1706	7	24	10000
2805023340	Miscellaneous Area Sources;Agricultural Production - Livestock;Dairy Cattle - drylot/pasture dairy;Land Application of solid manu	1706	7	24	10000
2805035000	Miscellaneous Area Sources;Agriculture Production - Livestock;Horses and Ponies Waste Emissions;Total	262	7	24	10000
2805038100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons (unspecified animal age);Confineme	1707	7	24	10000
2805038200	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons (unspecified animal age);Manure ha	1707	7	24	10000
2805038300	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons (unspecified animal age);Land appl	1707	7	24	10000
2805039100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons;Confinement	1707	7	24	10000
2805039200	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - operations with lagoons;Manure handling and storage	1707	7	24	10000
2805039310	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - operations with lagoon (unspecified animal age)	1707	7	24	10000
2805039320	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - operations with lagoon (unspecified animal age)	1707	7	24	10000
2805039330	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - operations with lagoon (unspecified animal age)	1707	7	24	10000
2805039340	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - operations with lagoon (unspecified animal age)	1707	7	24	10000
2805040000	Miscellaneous Area Sources;Agriculture Production - Livestock;Sheep and Lambs Waste Emissions;Total	262	7	24	10000
2805045001	Miscellaneous Area Sources;Agriculture Production - Livestock;Goats Waste Emissions;Total	262	7	24	10000
2805046100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - deep-pit house operations (unspecified animal age);Confine	1707	7	24	10000
2805046300	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - deep-pit house operations (unspecified animal age);Land ap	1707	7	24	10000
2805047100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - deep-pit house operations;Confinement	1707	7	24	10000
2805047200	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - deep pit house operations (unspecified animal a	1707	7	24	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2805047310	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - deep pit house operations (unspecified animal a	1707	7	24	10000
2805047320	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - deep pit house operations (unspecified animal a	1707	7	24	10000
2805047330	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - deep pit house operations (unspecified animal a	1707	7	24	10000
2805047340	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - deep pit house operations (unspecified animal a	1707	7	24	10000
2805052100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - outdoor operations (unspecified animal age);Confinement	1707	7	24	10000
2805053100	Miscellaneous Area Sources;Agriculture Production - Livestock;Swine production - outdoor operations; Confinement	1707	7	24	10000
2805053200	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - outdoor operations (unspecified animal age);Man	1707	7	24	10000
2805053310	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - outdoor operations (unspecified animal age);Lan	1707	7	24	10000
2805053320	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - outdoor operations (unspecified animal age);Lan	1707	7	24	10000
2805053330	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - outdoor operations (unspecified animal age);Lan	1707	7	24	10000
2805053340	Miscellaneous Area Sources;Agricultural Production - Livestock;Swine Production - outdoor operations (unspecified animal age);Lan	1707	7	24	10000
2805054000	Miscellaneous Area Sources;Agricultural Production - Livestock;"Mules; Donkeys; and Burros Waste Emissions";Not Elsewhere Classif	262	7	24	10000
2806010000	Miscellaneous Area Sources;Domestic Animals Waste Emissions;Cats;Total	262	7	24	10000
2806015000	Miscellaneous Area Sources;Domestic Animals Waste Emissions;Dogs;Total	262	7	24	10000
2807030000	Miscellaneous Area Sources;Wild Animals Waste Emissions;Deer;Total	262	7	24	10000
2807040000	Miscellaneous Area Sources;Wild Animals Waste Emissions;Birds;Total	262	7	24	10000
2810010000	Miscellaneous Area Sources;Other Combustion;Human Perspiration and Respiration;Total	1739	2006	24	10000
2810015000	Miscellaneous Area Sources;Other Combustion;Prescribed Burning for Forest Management;Total	1731	7	24	10000
2810030000	Miscellaneous Area Sources;Other Combustion;Structure Fires;Total	1715	7	24	10000
2810035000	Miscellaneous Area Sources;Other Combustion;Firefighting Training;Total	1716	2004	24	10000
2870000001	Miscellaneous Area Sources;Humans;Respiration and Perspiration;Total	262	7	24	10000
2870000002	Miscellaneous Area Sources;Humans;Infant Diapered Waste;Total	262	7	24	10000
2870000011	Miscellaneous Area Sources;Domestic Activity;Household Products;Total	262	7	24	10000
2870000015	Miscellaneous Area Sources;Domestic Activity;Non-agricultural Fertilizers;Total	3	7	24	10000

Table VII-6 (continued)

SCC	Description	Month	Week	Diurnal	FIPS
2870000021	Miscellaneous Area Sources;Domestic Animals;Dogs;Total	262	7	24	10000
2870000022	Miscellaneous Area Sources;Domestic Animals;Cats;Total	262	7	24	10000
2870000031	Miscellaneous Area Sources;Wild Animals;Deer;Total	262	7	24	10000
2870000032	Miscellaneous Area Sources;Wild Animals;Birds;Total	1728	7	24	10000

Table VII-7. Point Source Speciation Profiles Added to Speciation Cross-reference File for CB-IV with PM Mechanism

State	FIPS	SCC	Recommended Profiles VOC	Recommended Profiles $PM_{2.5}$	Method of Assignment	SCC Description (Complete description not always available)
VT	50005	10200908	1084	NWWAS	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50019	10200908	1084	NWWAS	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50021	10200908	1084	NWWAS	Use SCC=102009XX profiles	External Combustion Boilers;Industrial;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
VT	50017	10300908	1084	NWWAS	Use SCC=103009XX profiles	External Combustion Boilers;Commercial/Institutional;Wood/Bark Waste;Wood-fired Boiler - Dry Wood (<20% moisture)
PA	42009	20200299	0007	22004	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42029	20200299	0007	22004	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42045	20200299	0007	22004	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42061	20200299	0007	22004	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42067	20200299	0007	22004	Use SCC=202002XX profiles	Internal Combustion Engines;Industrial;Natural Gas;Unknown
PA	42015	20300299	0007	22004	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42029	20300299	0007	22004	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42037	20300299	0007	22004	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42071	20300299	0007	22004	Use SCC=203002XX profiles	Internal Combustion Engines;Commercial/Institutional;Natural Gas;Unknown
PA	42011	28888899	9002	35602	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42123	28888899	9002	35602	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42123	28888899	9002	35602	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
PA	42129	28888899	9002	35602	Use SCC=288888XX profiles	Internal Combustion Engines;Fugitive Emissions;Other Not Classified;Specify in Comments
MD	24031	30500261	0025	22035	Use SCC=30500260 profile	Industrial Processes;Mineral Products;Asphalt Concrete;Drum Mix Plant: Rotary Drum Dryer/Mixer, Waste/Drain/#6 Oil-Fired
PA	Numerous counties	39000698	0000	22004	Use SCC=39000699 profile	Industrial Processes;In-process Fuel Use;Natural Gas;Unknown
NJ	Numerous counties	39999901	9003	22054	Use SCC=399999XX profiles	Industrial Processes;Miscellaneous Manufacturing Industries;Miscellaneous Industrial Processes;Unknown
PA	42015	40202598	1003	99999	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42017	40202598	1003	99999	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42091	40202598	1003	99999	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42095	40202598	1003	99999	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42097	40202598	1003	99999	Use SCC=40202599 profile	Petroleum and Solvent Evaporation;Surface Coating Operations;Miscellaneous Metal Parts;Unknown
PA	42013	40400299	1014	22042	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown
PA	42041	40400299	1014	22042	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown
PA	42045	40400299	1014	22042	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown
PA	42071	40400299	1014	22042	Use SCC=404002XX profiles	Petroleum and Solvent Evaporation;Petroleum Liquids Storage (non-Refinery);Bulk Plants;Unknown

Table VII-8. Point Source SCCs Lacking Speciation Profile Assignments for CB-IV with PM Mechanism

State	FIPS	SCC	Description
NY	36055	31603001	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Substrate Preparation;Extrusion Operations
NY	36055	31603002	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Substrate Preparation;Film Support Operations
NY	36055	31604001	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Chemical Manufacturing
NY	36055	31604002	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Emulsion Making Operations
NY	36055	31604003	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Chemical Preparation;Chemical Mixing Operations
NY	36055	31605001	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Surface Coating Operations
NY	36055	31605002	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Grid Ionizers
NY	36055	31605003	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Surface Treatments;Corona Discharge Treatment
NY	36055	31606001	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;General Film Manufacturing
NY	36055	31606002	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;Cutting/Slitting Operations
PA	42101	31606002	Industrial Processes;Photographic Film Manufacturing;Product Manufacturing - Finishing Operations;Cutting/Slitting Operations
NY	36055	31612001	Industrial Processes;Photographic Film Manufacturing;Support Activities - Cleaning Operations;Tank Cleaning Operations
NY	36055	31612002	Industrial Processes;Photographic Film Manufacturing;Support Activities - Cleaning Operations;General Cleaning Operations
NY	36055	31613002	Industrial Processes;Photographic Film Manufacturing;Support Activities - Storage Operations;General Storage Operations
NY	36055	31614001	Industrial Processes;Photographic Film Manufacturing;Support Activities - Material Transfer Operations;Filling Operations (non petroleum)
NY	36055	31614002	Industrial Processes;Photographic Film Manufacturing;Support Activities - Material Transfer Operations;Transfer of Chemicals
NY	36055	31615001	Industrial Processes;Photographic Film Manufacturing;Support Activities - Separation Processes;Recovery Operations
NY	36055	31615003	Industrial Processes;Photographic Film Manufacturing;Support Activities - Separation Processes;Distillation Operations
NY	36055	31616002	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;General Process Tank Operations
NY	36055	31616003	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Miscellaneous Manufacturing Operations
NY	36055	31616004	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Paint Spraying Operations
NY	36055	31616006	Industrial Processes;Photographic Film Manufacturing;Support Activities - Other Operations;Chemical Weighing Operations

Table VII-9. Summary of Version 3 Mass Emissions and SMOKE Input Files

S/L Agencies Included in Files	NIF 3.0 File Name Containing Mass Emissions Inventory (Access 2000 Database Files)	Temporal Period of Mass Emissions Inventory	SMOKE Input File Name	Temporal Period of Emissions in SMOKE/IDA File
Point Source Inventory				
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA (state and Philadelphia, and Allegheny Counties), RI, VT	MANEVU_2002_Pt_Version 3_040706.mdb	Annual, Summer Day, and Winter Day	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt	Annual and Summer Day
"	"	"	MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_042706.txt	Annual and Winter Day
Area Source Inventory				
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT	MANEVU_2002_Area_040606.mdb	Annual, Summer Day, Winter Day, and Average Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt	Annual, Summer Day, and Average Day
"	"	"	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt	Annual, Winter Day, and Average Day
Nonroad Source Inventory				
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT	MANEVU_NRD2002_NIF_030306.mdb	Annual	MANEVU_NRD2002_SMOKE_030306.ida	Annual
Onroad Source Inventory				
CT	CT2002MANEVUORCAP_122004.mdb	Annual		
DE	DE2002MANEVUORCAP_072004.mdb	Annual		
DC	DC2002MANEVUORCAP_072004.mdb	Annual		
ME	ME2002MANEVUORCAP_072004.mdb	Annual		
MD	MD2002MANEVUORCAP_072004.mdb	Annual		
MA	MA2002MANEVUORCAP_022006_Access2000.mdb MA2002MANEVUORCAP_022006_Access97.mdb	Annual		
NH	NH2002MANEVUORCAP_072004.mdb	Annual		
NJ	NJ2002MANEVUORCAP_022006_Access2000.mdb NJ2002MANEVUORCAP_022006_Access97.mdb	Annual		
NY	NY2002MANEVUORCAP_072004.mdb	Annual		
PA	PA2002MANEVUORCAP_072004.mdb	Annual		
RI	DRI2002MANEVUORCAP_072004.mdb	Annual		
VT	VT2002MANEVUORCAP_122004.mdb	Annual		
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT			MANEVU_2002_mbinv_02022006.txt	
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT			MANEVU_2002_mcref_02022006.txt	

S/L Agencies Included in Files	NIF 3.0 File Name Containing Mass Emissions Inventory (Access 2000 Database Files)	Temporal Period of Mass Emissions Inventory	SMOKE Input File Name	Temporal Period of Emissions in SMOKE/IDA File
DE, MA, MD, NJ, NY, PA, VT			MANEVU_2002_mtpro_02022006.txt	
DE, MA, MD, NJ, NY, PA, VT			MANEVU_2002_mtref_02022006.txt	
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT			MANEVU_2002_mvref_02022006.txt	
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT			MANEVU_2002_vmtmix_02022006.txt	
			MANEVU_2002_mcodes.txt	
CT, NY			MANEVU_2002_spdpro.txt	
CT, NY			MANEVU_2002_spdref.txt	
CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT			SMOKE MOBILE6 input files—too numerous to list individually	

Table VII-10. Unique List of Start Date, End Date, and Emission Type Combinations for Daily Emissions in the MANE-VU 2002 Point and Area Source Inventories, Version 3

Start Date	End Date	Emission Type	Emission Type Period	Season Designation	SMOKE File
Point Source Inventory					
20011201	20020228	27	NONANNUAL	Winter	MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_042706.txt
20011201	20020228	29	NONANNUAL	Winter	MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_042706.txt
20020101	20020331	27	NONANNUAL	Winter	MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_042706.txt
20020101	20021231	29	NONANNUAL	MD-Winter	MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_042706.txt
				VT-Summer	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt
20020501	20020930	29	NONANNUAL	Summer	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt
20020601	20020831	27	NONANNUAL	Summer	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt
20020601	20020831	29	NONANNUAL	Summer	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt
20020601	20020831	30	NONANNUAL	Summer	MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_042706.txt
Area Source Inventory					
20020101	20020831	27	Daily	Average Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt and MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20020101	20021231	29	Daily	Average Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt and MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20020401	20020930	29	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020401	20021031	29	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020512	20020512	27	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020601	20020831	27	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020601	20020831	29	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020601	20020929	29	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20020629	20020629	27	Daily	Summer Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt
20011201	20020228	27	Daily	Winter Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20011201	20020228	29	Daily	Winter Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20021029	20021029	27	Daily	Winter Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20021104	20021104	27	Daily	Winter Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt
20021205	20021205	27	Daily	Winter Day	MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt

CHAPTER VIII. METHODS FOR AREAS OUTSIDE OF THE MANE-VU REGION

Figure VIII-1 shows the geographic area for which the 12-kilometer (km) CMAQ modeling domain was used to support air quality modeling for the MANE-VU region. The 36-km domain definition was used for geographical areas outside of the area shown in Figure VIII-1.
Table VIII-1 identifies the geographic region as well as the types of emissions inventory and ancillary data used to in modeling for the MANE-VU region. The geographic areas for which data were obtained include the Visibility Improvement State and Tribal Association of the Southeast (VISTAS), Central Regional Air Planning Organization (CENRAP), and WRAP RPOs, the Midwest RPO, Canada, and Mexico.

Figure VIII-1. MANE-VU 12-Kilometer CMAQ Modeling Domain

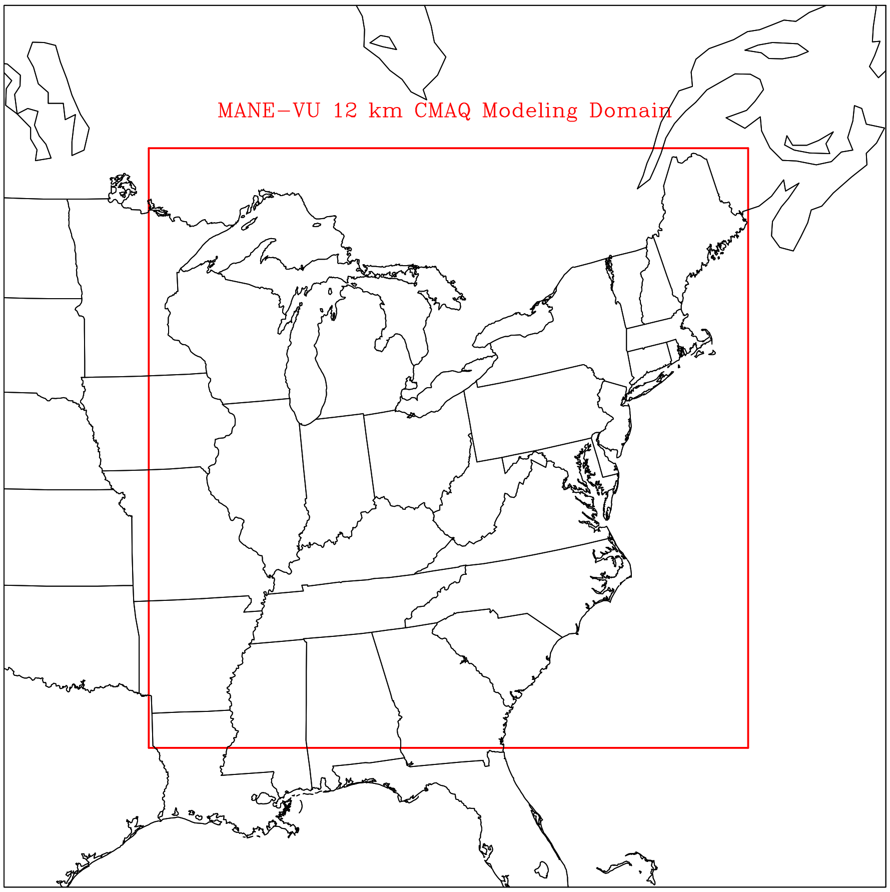


Table VIII-1. Description of Non-MANE-VU Region Inventory Data Used for MANE-VU BaseB Modeling

Geographical Region/RPO	Raw Data	Time Period and Version Number	Raw Data Format	Source of Data	Source of Ancillary Data	Date Data and Summaries Obtained by MANE-VU Modelers
VISTAS	Point, area, nonroad, and mobile	2002 BaseG	SMOKE IDA	Gregory Stella, Alpine Geophysics	Gregory Stella, Alpine Geophysics	June/July 2006
MRPO	Point, area, nonroad, and mobile	2002 BaseK	SMOKE IDA	NIF files provided by Mark Janssen, MRPO, and converted to IDA format by Gregory Stella, Alpine Geophysics	Part of VISTAS 2002 BaseD provided by Gregory Stella, Alpine Geophysics	May 2006
CENRAP	Point, area, nonroad, and mobile	2002 BaseB	SMOKE IDA	CENRAP ftp site Lee Warden, Oklahoma DEQ	CENRAP ftp site Lee Warden, Oklahoma DEQ	March 2006
WRAP *	Point, area, nonroad, and mobile	Part of VISTAS 2002 BaseD	SMOKE IDA	Part of VISTAS 2002 BaseD provided by Gregory Stella, Alpine Geophysics	Part of VISTAS 2002 BaseD provided by Gregory Stella, Alpine Geophysics	January 2005
Canada	Area, nonroad and mobile	2000	SMOKE IDA	ftp://ftp.epa.gov/EmisInventory/canada_2000inventory	SMOKE 2.1 defaults	February 2005
	Point	2002	SMOKE IDA created by NYSDEC from Canadian NPRI database	http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm	SMOKE 2.1 defaults	May 2005
Mexico *	Point, area, nonroad and mobile	1999	SMOKE IDA	EPA CAIR NODA	SMOKE 2.1 defaults	February 2005

* Only utilized for 2002 BaseA 36-km modeling to generate boundary conditions for BaseA/BaseA1/BaseB current and future year 12-km modeling.

CHAPTER IX. REFERENCES

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APPENDIX A

POINT SOURCE INVENTORY, VERSION 3:
DATA SOURCES BY SCC, EMISSION TYPE PERIOD, AND POLLUTANT

[*NOTE: The Appendix A table for each State is provided in a separate MS Word file because of the large size of each table. The Word files are provided in the zip file named "Appendix A.zip"; this zip file also includes an Excel Workbook file that contains the spreadsheet from which the Word file was created for each State.]*

APPENDIX B

AREA SOURCE INVENTORY, VERSION 3:
DATA SOURCES BY SCC, EMISSION TYPE PERIOD, AND POLLUTANT

[*NOTE: The Appendix B table for each State is provided in a separate MS Word file because of the large size of each table. The Word files are provided in the zip file named "Appendix B.zip"; this zip file also includes an Excel Workbook file that contains the spreadsheet from which the Word file was created for each State.]*

APPENDIX C

NONROAD SOURCE INVENTORY, VERSION 3: FINAL COUNTY, MONTHLY NATIONAL MOBILE INVENTORY MODEL (NMIM) INPUTS

CONTENTS

Table C-1. MANE-VU County, Monthly NMIM/NONROAD Inputs

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
09	**CONNECTICUT**														
RVP, psi															
		001	Fairfield County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		003	Hartford County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		005	Litchfield County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		007	Middlesex County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		009	New Haven County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		011	New London County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		013	Tolland County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
		015	Windham County	12.3	12.3	10.0	10.0	6.9	6.9	6.9	6.9	6.9	10.0	10.0	12.3
Oxygen Weight Percent															
		001	Fairfield County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		003	Hartford County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		005	Litchfield County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		007	Middlesex County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		009	New Haven County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		011	New London County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		013	Tolland County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
		015	Windham County	1.5667	1.5667	1.6068	1.6068	1.6596	1.6596	1.6596	1.6596	1.6596	1.6068	1.6068	1.5667
Gasoline Sulfur, ppm															
		001	Fairfield County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		003	Hartford County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		005	Litchfield County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		007	Middlesex County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		009	New Haven County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		011	New London County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		013	Tolland County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
		015	Windham County	135.0	135.0	135.0	135.0	106.0	106.0	106.0	106.0	106.0	135.0	135.0	135.0
10	**DELAWARE**														
RVP, psi															
		001	Kent County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		003	New Castle County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		005	Sussex County	13.4	13.4	10.4	10.4	6.4	6.4	6.4	6.4	6.4	10.4	10.4	13.4
Oxygen Weight Percent															
		001	Kent County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		003	New Castle County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		005	Sussex County	1.4645	1.4645	1.5538	1.5538	1.6431	1.6431	1.6431	1.6431	1.6431	1.5538	1.5538	1.4645
Gasoline Sulfur, ppm															
		001	Kent County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		003	New Castle County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		005	Sussex County	225.0	225.0	186.0	186.0	134.0	134.0	134.0	134.0	134.0	186.0	186.0	225.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
11	**DISTRICT OF COLUMBIA**														
RVP, psi															
		001	District of Columbia	13.1	13.1	10.4	10.4	6.8	6.8	6.8	6.8	6.8	6.8	10.4	13.1
Oxygen Weight Percent															
		001	District of Columbia	1.7681	1.7681	1.8217	1.8217	1.8932	1.8932	1.8932	1.8932	1.8932	1.8932	1.8217	1.7681
Gasoline Sulfur, ppm															
		001	District of Columbia	230.0	230.0	199.6	199.6	159.0	159.0	159.0	159.0	159.0	159.0	199.6	230.0
23	**MAINE**														
RVP, psi															
		001	Androscoggin County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		003	Aroostook County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		005	Cumberland County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		007	Franklin County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		009	Hancock County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		011	Kennebec County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		013	Knox County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		015	Lincoln County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		017	Oxford County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		019	Penobscot County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		021	Piscataquis County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		023	Sagadahoc County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
		025	Somerset County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		027	Waldo County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		029	Washington County	12.3	11.1	11.2	8.4	8.6	8.6	8.4	8.4	9.7	10.7	10.3	11.6
		031	York County	12.3	11.1	11.2	8.4	7.5	7.5	7.7	7.3	9.7	10.7	10.3	11.6
Oxygen Weight Percent															
		001	Androscoggin County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		003	Aroostook County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		005	Cumberland County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		007	Franklin County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		009	Hancock County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		011	Kennebec County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		013	Knox County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		015	Lincoln County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		017	Oxford County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		019	Penobscot County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		021	Piscataquis County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		023	Sagadahoc County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
		025	Somerset County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		027	Waldo County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		029	Washington County	0.4334	0.6510	0.5390	0.3235	0.3786	0.5845	0.8545	0.5448	0.5895	0.6930	0.3560	0.2080
		031	York County	0.4334	0.6510	0.5390	0.3235	0.2420	0.1753	0.7061	0.6868	0.5895	0.6930	0.3560	0.2080
Gasoline Sulfur, ppm															
		001	Androscoggin County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		003	Aroostook County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		005	Cumberland County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		007	Franklin County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		009	Hancock County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
23	***MAINE (cont'd)***	011	Kennebec County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		013	Knox County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		015	Lincoln County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		017	Oxford County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		019	Penobscot County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		021	Piscataquis County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		023	Sagadahoc County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
		025	Somerset County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		027	Waldo County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		029	Washington County	151.5	236.1	221.1	145.4	170.1	290.9	128.6	299.4	159.9	279.8	190.9	171.0
		031	York County	151.5	236.1	221.1	145.4	319.7	268.1	101.1	83.4	159.9	279.8	190.9	171.0
24	**MARYLAND**														
RVP, psi															
		003	Anne Arundel County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		005	Baltimore County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		009	Calvert County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		011	Caroline County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		013	Carroll County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		015	Cecil County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		017	Charles County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		019	Dorchester County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		021	Frederick County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		023	Garrett County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		025	Harford County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		027	Howard County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		029	Kent County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		031	Montgomery County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		033	Prince George's County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		035	Queen Anne's County	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
		037	St. Mary's County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		039	Somerset County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		041	Talbot County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		043	Washington County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		045	Wicomico County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		047	Worcester County	12.6	12.6	9.6	9.6	9.6	8.2	8.2	8.2	9.3	9.3	9.3	12.6
		510	Baltimore city	12.6	12.6	9.6	9.6	9.6	6.6	6.6	6.6	9.3	9.3	9.3	12.6
Oxygen Weight Percent															
		001	Allegany County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		003	Anne Arundel County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		005	Baltimore County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		009	Calvert County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		011	Caroline County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		013	Carroll County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		015	Cecil County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		017	Charles County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		019	Dorchester County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		021	Frederick County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
		023	Garrett County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
24	***MARYLAND (cont'd)***	025	Harford County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		027	Howard County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		029	Kent County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		031	Montgomery County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		033	Prince George's County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		035	Queen Anne's County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		037	St. Mary's County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		039	Somerset County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		041	Talbot County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		043	Washington County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		045	Wicomico County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		047	Worcester County	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
		510	Baltimore city	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075	2.1075
Gasoline Sulfur, ppm															
		001	Allegany County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		003	Anne Arundel County	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0
		005	Baltimore County	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0
		009	Calvert County	230.0	230.0	199.6	129.0	129.0	129.0	129.0	129.0	129.0	159.0	199.6	230.0
		011	Caroline County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		013	Carroll County	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0
		015	Cecil County	174.0	174.0	155.1	129.0	129.0	129.0	129.0	129.0	129.0	130.0	155.1	174.0
		017	Charles County	230.0	230.0	199.6	129.0	129.0	129.0	129.0	129.0	129.0	159.0	199.6	230.0
		019	Dorchester County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		021	Frederick County	230.0	230.0	199.6	129.0	129.0	129.0	129.0	129.0	129.0	159.0	199.6	230.0
		023	Garrett County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		025	Harford County	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0
		027	Howard County	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0
		029	Kent County	174.0	174.0	155.1	129.0	129.0	129.0	129.0	129.0	129.0	130.0	155.1	174.0
		031	Montgomery County	230.0	230.0	199.6	129.0	129.0	129.0	129.0	129.0	129.0	159.0	199.6	230.0
		033	Prince George's County	230.0	230.0	199.6	129.0	129.0	129.0	129.0	129.0	129.0	159.0	199.6	230.0
		035	Queen Anne's County	174.0	174.0	155.1	129.0	129.0	129.0	129.0	129.0	129.0	130.0	155.1	174.0
		037	St. Mary's County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		039	Somerset County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		041	Talbot County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		043	Washington County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		045	Wicomico County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		047	Worcester County	207.9	207.9	191.9	191.9	170.5	170.5	170.5	170.5	170.5	170.5	191.9	207.9
		510	Baltimore city	211.0	211.0	184.0	129.0	129.0	129.0	129.0	129.0	129.0	148.0	184.0	211.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
25	MASSACHUSETTS														
RVP, psi															
		001	Barnstable County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		003	Berkshire County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		005	Bristol County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		007	Dukes County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		009	Essex County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		011	Franklin County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		013	Hampden County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		015	Hampshire County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		017	Middlesex County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		019	Nantucket County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		021	Norfolk County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		023	Plymouth County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		025	Suffolk County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
		027	Worcester County	13.5	13.5	13.5	13.5	6.7	6.7	6.7	6.7	6.7	13.5	13.5	13.5
Oxygen Weight Percent															
		001	Barnstable County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		003	Berkshire County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		005	Bristol County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		007	Dukes County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		009	Essex County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		011	Franklin County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		013	Hampden County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		015	Hampshire County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		017	Middlesex County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		019	Nantucket County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		021	Norfolk County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		023	Plymouth County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		025	Suffolk County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
		027	Worcester County	1.5002	1.5002	1.5002	1.5002	2.1075	2.1075	2.1075	2.1075	2.1075	1.5002	1.5002	1.5002
Gasoline Sulfur, ppm															
		001	Barnstable County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		003	Berkshire County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		005	Bristol County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		007	Dukes County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		009	Essex County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		011	Franklin County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		013	Hampden County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		015	Hampshire County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		017	Middlesex County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		019	Nantucket County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		021	Norfolk County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		023	Plymouth County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		025	Suffolk County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		027	Worcester County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
33	NEW HAMPSHIRE														
RVP, psi															
		001	Belknap County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
		003	Carroll County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
		005	Cheshire County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
		007	Coos County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
		009	Grafton County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
		011	Hillsborough County	12.9	12.9	10.2	10.2	6.7	6.7	6.7	6.7	6.7	10.2	10.2	12.9
		013	Merrimack County	12.9	12.9	10.2	10.2	6.7	6.7	6.7	6.7	6.7	10.2	10.2	12.9
		015	Rockingham County	12.9	12.9	10.2	10.2	6.7	6.7	6.7	6.7	6.7	10.2	10.2	12.9
		017	Strafford County	12.9	12.9	10.2	10.2	6.7	6.7	6.7	6.7	6.7	10.2	10.2	12.9
		019	Sullivan County	13.6	13.6	11.2	11.2	7.9	7.9	7.9	7.9	7.9	11.2	11.2	13.6
Oxygen Weight Percent															
		001	Belknap County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
		003	Carroll County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
		005	Cheshire County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
		007	Coos County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
		009	Grafton County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
		011	Hillsborough County	1.8217	1.8217	1.9110	1.9110	2.0182	2.0182	2.0182	2.0182	2.0182	1.9110	1.9110	1.8217
		013	Merrimack County	1.8217	1.8217	1.9110	1.9110	2.0182	2.0182	2.0182	2.0182	2.0182	1.9110	1.9110	1.8217
		015	Rockingham County	1.9825	1.9825	2.0539	2.0539	2.1432	2.1432	2.1432	2.1432	2.1432	2.0539	2.0539	1.9825
		017	Strafford County	1.9825	1.9825	2.0539	2.0539	2.1432	2.1432	2.1432	2.1432	2.1432	2.0539	2.0539	1.9825
		019	Sullivan County	0.1786	0.1786	0.2322	0.2322	0.2858	0.2858	0.2858	0.2858	0.2858	0.2322	0.2322	0.1786
Gasoline Sulfur, ppm															
		001	Belknap County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
		003	Carroll County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
		005	Cheshire County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
		007	Coos County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
		009	Grafton County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
		011	Hillsborough County	121.0	121.0	101.3	101.3	75.0	75.0	75.0	75.0	75.0	101.3	101.3	121.0
		013	Merrimack County	121.0	121.0	101.3	101.3	75.0	75.0	75.0	75.0	75.0	101.3	101.3	121.0
		015	Rockingham County	148.0	148.0	121.0	121.0	85.0	85.0	85.0	85.0	85.0	121.0	121.0	148.0
		017	Strafford County	148.0	148.0	121.0	121.0	85.0	85.0	85.0	85.0	85.0	121.0	121.0	148.0
		019	Sullivan County	228.1	228.1	208.6	208.6	182.5	182.5	182.5	182.5	182.5	208.6	208.6	228.1
34	NEW JERSEY														
RVP, psi															
		001	Atlantic County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		003	Bergen County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		005	Burlington County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		007	Camden County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		009	Cape May County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		011	Cumberland County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		013	Essex County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		015	Gloucester County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		017	Hudson County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		019	Hunterdon County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		021	Mercer County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		023	Middlesex County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
34	***NEW JERSEY***	025	Monmouth County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
	(cont'd)	027	Morris County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		029	Ocean County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		031	Passaic County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		033	Salem County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
		035	Somerset County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		037	Sussex County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		039	Union County	12.5	12.5	10.1	10.1	6.8	6.8	6.8	6.8	6.8	10.1	10.1	12.5
		041	Warren County	13.4	13.4	10.6	10.6	6.8	6.8	6.8	6.8	6.8	10.6	10.6	13.4
Oxygen Weight Percent															
		001	Atlantic County	1.6922	1.6922	1.8499	1.8499	2.0718	2.0718	2.0718	2.0718	2.0718	1.8499	1.8499	1.6922
		003	Bergen County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		005	Burlington County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		007	Camden County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		009	Cape May County	1.6922	1.6922	1.8499	1.8499	2.0718	2.0718	2.0718	2.0718	2.0718	1.8499	1.8499	1.6922
		011	Cumberland County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		013	Essex County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		015	Gloucester County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		017	Hudson County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		019	Hunterdon County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		021	Mercer County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		023	Middlesex County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		025	Monmouth County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		027	Morris County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		029	Ocean County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		031	Passaic County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		033	Salem County	1.8442	1.8442	1.9457	1.9457	2.0896	2.0896	2.0896	2.0896	2.0896	1.9457	1.9457	1.8442
		035	Somerset County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		037	Sussex County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		039	Union County	1.7172	1.7172	1.7660	1.7660	1.8234	1.8234	1.8234	1.8234	1.8234	1.7660	1.7660	1.7172
		041	Warren County	1.8753	1.8753	1.9110	1.9110	1.9825	1.9825	1.9825	1.9825	1.9825	1.9110	1.9110	1.8753
Gasoline Sulfur, ppm															
		001	Atlantic County	207.0	207.0	174.0	174.0	130.0	130.0	130.0	130.0	130.0	174.0	174.0	207.0
		003	Bergen County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		005	Burlington County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		007	Camden County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		009	Cape May County	207.0	207.0	174.0	174.0	130.0	130.0	130.0	130.0	130.0	174.0	174.0	207.0
		011	Cumberland County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		013	Essex County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		015	Gloucester County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		017	Hudson County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		019	Hunterdon County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		021	Mercer County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		023	Middlesex County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		025	Monmouth County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		027	Morris County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		029	Ocean County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		031	Passaic County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
34	***NEW JERSEY (cont'd)***	033	Salem County	174.0	174.0	155.1	155.1	130.0	130.0	130.0	130.0	130.0	155.1	155.1	174.0
		035	Somerset County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		037	Sussex County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		039	Union County	141.0	141.0	129.4	129.4	114.0	114.0	114.0	114.0	114.0	129.4	129.4	141.0
		041	Warren County	125.0	125.0	123.7	123.7	122.0	122.0	122.0	122.0	122.0	123.7	123.7	125.0
36	**NEW YORK**														
RVP, psi															
		001	Albany County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		003	Allegany County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		005	Bronx County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		007	Broome County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		009	Cattaraugus County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		011	Cayuga County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		013	Chautauqua County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		015	Chemung County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		017	Chenango County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		019	Clinton County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		021	Columbia County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		023	Cortland County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		025	Delaware County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		027	Dutchess County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		029	Erie County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		031	Essex County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		033	Franklin County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		035	Fulton County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		037	Genesee County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		039	Greene County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		041	Hamilton County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		043	Herkimer County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		045	Jefferson County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		047	Kings County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		049	Lewis County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		051	Livingston County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		053	Madison County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		055	Monroe County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		057	Montgomery County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		059	Nassau County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		061	New York County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		063	Niagara County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		065	Oneida County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		067	Onondaga County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		069	Ontario County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		071	Orange County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		073	Orleans County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		075	Oswego County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		077	Otsego County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		079	Putnam County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		081	Queens County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
36	***NEW YORK***	083	Rensselaer County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
	(cont'd)	085	Richmond County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		087	Rockland County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		089	St. Lawrence County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		091	Saratoga County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		093	Schenectady County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		095	Schoharie County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		097	Schuyler County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		099	Seneca County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		101	Steuben County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		103	Suffolk County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		105	Sullivan County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		107	Tioga County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		109	Tompkins County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		111	Ulster County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		113	Warren County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		115	Washington County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		117	Wayne County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		119	Westchester County	12.8	12.6	12.1	9.0	6.8	6.7	6.6	6.7	6.9	10.3	11.7	12.5
		121	Wyoming County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
		123	Yates County	12.7	12.7	12.6	10.9	8.6	8.3	8.3	8.2	8.2	9.6	10.7	11.4
Oxygen Weight Percent															
		001	Albany County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		003	Allegany County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		005	Bronx County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		007	Broome County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		009	Cattaraugus County	0.8965	1.0344	0.8275	0.6551	0.8965	0.5862	0.8275	0.9654	0.6551	0.6896	0.9310	0.8965
		011	Cayuga County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		013	Chautauqua County	0.8965	1.0344	0.8275	0.6551	0.8965	0.5862	0.8275	0.9654	0.6551	0.6896	0.9310	0.8965
		015	Chemung County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		017	Chenango County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		019	Clinton County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		021	Columbia County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		023	Cortland County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		025	Delaware County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		027	Dutchess County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		029	Erie County	0.8965	1.0344	0.8275	0.6551	0.8965	0.5862	0.8275	0.9654	0.6551	0.6896	0.9310	0.8965
		031	Essex County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		033	Franklin County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		035	Fulton County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		037	Genesee County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		039	Greene County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		041	Hamilton County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		043	Herkimer County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		045	Jefferson County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		047	Kings County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		049	Lewis County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		051	Livingston County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		053	Madison County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
36	***NEW YORK***	055	Monroe County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
	(cont'd)	057	Montgomery County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		059	Nassau County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		061	New York County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		063	Niagara County	0.8965	1.0344	0.8275	0.6551	0.8965	0.5862	0.8275	0.9654	0.6551	0.6896	0.9310	0.8965
		065	Oneida County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		067	Onondaga County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		069	Ontario County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		071	Orange County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		073	Orleans County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		075	Oswego County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		077	Otsego County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		079	Putnam County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		081	Queens County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		083	Rensselaer County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		085	Richmond County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		087	Rockland County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		089	St. Lawrence County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		091	Saratoga County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		093	Schenectady County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		095	Schoharie County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		097	Schuyler County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		099	Seneca County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		101	Steuben County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		103	Suffolk County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		105	Sullivan County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		107	Tioga County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		109	Tompkins County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		111	Ulster County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		113	Warren County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		115	Washington County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		117	Wayne County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		119	Westchester County	1.8932	1.9467	1.8932	1.8753	1.9646	1.9467	1.9646	1.8217	1.9646	1.8217	1.8574	1.6431
		121	Wyoming County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
		123	Yates County	0.8751	1.0180	0.8216	0.6430	0.8930	0.5894	0.8216	0.9466	0.6787	0.6965	0.9466	0.8930
Gasoline Sulfur, ppm															
		001	Albany County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		003	Allegany County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		005	Bronx County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		007	Broome County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		009	Cattaraugus County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		011	Cayuga County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		013	Chautauqua County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		015	Chemung County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		017	Chenango County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		019	Clinton County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		021	Columbia County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		023	Cortland County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		025	Delaware County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
36	***NEW YORK***	027	Dutchess County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
	(cont'd)	029	Erie County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		031	Essex County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		033	Franklin County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		035	Fulton County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		037	Genesee County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		039	Greene County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		041	Hamilton County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		043	Herkimer County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		045	Jefferson County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		047	Kings County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		049	Lewis County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		051	Livingston County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		053	Madison County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		055	Monroe County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		057	Montgomery County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		059	Nassau County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		061	New York County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		063	Niagara County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		065	Oneida County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		067	Onondaga County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		069	Ontario County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		071	Orange County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		073	Orleans County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		075	Oswego County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		077	Otsego County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		079	Putnam County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		081	Queens County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		083	Rensselaer County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		085	Richmond County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		087	Rockland County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		089	St. Lawrence County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		091	Saratoga County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		093	Schenectady County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		095	Schoharie County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		097	Schuyler County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		099	Seneca County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		101	Steuben County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		103	Suffolk County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		105	Sullivan County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		107	Tioga County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		109	Tompkins County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		111	Ulster County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		113	Warren County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		115	Washington County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		117	Wayne County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		119	Westchester County	210.0	220.0	180.0	200.0	220.0	210.0	220.0	190.0	190.0	220.0	200.0	240.0
		121	Wyoming County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0
		123	Yates County	260.0	250.0	250.0	230.0	310.0	320.0	340.0	290.0	270.0	250.0	250.0	210.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
42	**PENNSYLVANIA**														
RVP, psi															
		001	Adams County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		003	Allegheny County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		005	Armstrong County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		007	Beaver County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		009	Bedford County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		011	Berks County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		013	Blair County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		015	Bradford County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		017	Bucks County	13.5	13.5	10.6	10.6	6.7	6.7	6.7	6.7	6.7	10.6	10.6	13.5
		019	Butler County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		021	Cambria County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		023	Cameron County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		025	Carbon County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		027	Centre County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		029	Chester County	13.5	13.5	10.6	10.6	6.7	6.7	6.7	6.7	6.7	10.6	10.6	13.5
		031	Clarion County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		033	Clearfield County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		035	Clinton County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		037	Columbia County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		039	Crawford County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		041	Cumberland County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		043	Dauphin County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		045	Delaware County	13.5	13.5	10.6	10.6	6.7	6.7	6.7	6.7	6.7	10.6	10.6	13.5
		047	Elk County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		049	Erie County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		051	Fayette County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		053	Forest County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		055	Franklin County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		057	Fulton County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		059	Greene County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		061	Huntingdon County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		063	Indiana County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		065	Jefferson County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		067	Juniata County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		069	Lackawanna County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		071	Lancaster County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		073	Lawrence County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		075	Lebanon County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		077	Lehigh County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		079	Luzerne County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		081	Lycoming County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		083	McKean County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		085	Mercer County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		087	Mifflin County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		089	Monroe County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		091	Montgomery County	13.5	13.5	10.6	10.6	6.7	6.7	6.7	6.7	6.7	10.6	10.6	13.5
		093	Montour County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
42	***PENNSYLVANIA (cont'd)***	095	Northampton County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		097	Northumberland County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		099	Perry County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		101	Philadelphia County	13.5	13.5	10.6	10.6	6.7	6.7	6.7	6.7	6.7	10.6	10.6	13.5
		103	Pike County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		105	Potter County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		107	Schuylkill County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		109	Snyder County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		111	Somerset County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		113	Sullivan County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		115	Susquehanna County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		117	Tioga County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		119	Union County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		121	Venango County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		123	Warren County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		125	Washington County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		127	Wayne County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		129	Westmoreland County	13.5	13.5	11.0	11.0	7.8	7.8	7.8	7.8	7.8	11.0	11.0	13.5
		131	Wyoming County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
		133	York County	13.5	13.5	11.0	11.0	8.7	8.7	8.7	8.7	8.7	11.0	11.0	13.5
Oxygen Weight Percent															
		001	Adams County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		003	Allegheny County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		005	Armstrong County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		007	Beaver County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		009	Bedford County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		011	Berks County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		013	Blair County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		015	Bradford County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		017	Bucks County	2.5303	2.5303	2.5303	2.5303	2.1075	2.1075	2.1075	2.1075	2.1075	2.5303	2.5303	2.5303
		019	Butler County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		021	Cambria County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		023	Cameron County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		025	Carbon County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		027	Centre County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		029	Chester County	2.5303	2.5303	2.5303	2.5303	2.1075	2.1075	2.1075	2.1075	2.1075	2.5303	2.5303	2.5303
		031	Clarion County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		033	Clearfield County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		035	Clinton County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		037	Columbia County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		039	Crawford County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		041	Cumberland County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		043	Dauphin County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		045	Delaware County	2.5303	2.5303	2.5303	2.5303	2.1075	2.1075	2.1075	2.1075	2.1075	2.5303	2.5303	2.5303
		047	Elk County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		049	Erie County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		051	Fayette County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		053	Forest County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		055	Franklin County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
42	***PENNSYLVANIA***	057	Fulton County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
	(cont'd)	059	Greene County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		061	Huntingdon County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		063	Indiana County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		065	Jefferson County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		067	Juniata County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		069	Lackawanna County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		071	Lancaster County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		073	Lawrence County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		075	Lebanon County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		077	Lehigh County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		079	Luzerne County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		081	Lycoming County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		083	McKean County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		085	Mercer County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		087	Mifflin County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		089	Monroe County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		091	Montgomery County	2.5303	2.5303	2.5303	2.5303	2.1075	2.1075	2.1075	2.1075	2.1075	2.5303	2.5303	2.5303
		093	Montour County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		095	Northampton County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		097	Northumberland County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		099	Perry County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		101	Philadelphia County	2.5303	2.5303	2.5303	2.5303	2.1075	2.1075	2.1075	2.1075	2.1075	2.5303	2.5303	2.5303
		103	Pike County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		105	Potter County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		107	Schuylkill County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		109	Snyder County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		111	Somerset County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		113	Sullivan County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		115	Susquehanna County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		117	Tioga County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		119	Union County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		121	Venango County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		123	Warren County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		125	Washington County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		127	Wayne County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		129	Westmoreland County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		131	Wyoming County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
		133	York County	0.1965	0.1965	0.2322	0.2322	0.2679	0.2679	0.2679	0.2679	0.2679	0.2322	0.2322	0.1965
Gasoline Sulfur, ppm															
		001	Adams County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		003	Allegheny County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		005	Armstrong County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		007	Beaver County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		009	Bedford County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		011	Berks County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		013	Blair County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		015	Bradford County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		017	Bucks County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
42	***PENNSYLVANIA (cont'd)***	019	Butler County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		021	Cambria County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		023	Cameron County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		025	Carbon County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		027	Centre County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		029	Chester County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		031	Clarion County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		033	Clearfield County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		035	Clinton County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		037	Columbia County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		039	Crawford County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		041	Cumberland County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		043	Dauphin County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		045	Delaware County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		047	Elk County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		049	Erie County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		051	Fayette County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		053	Forest County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		055	Franklin County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		057	Fulton County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		059	Greene County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		061	Huntingdon County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		063	Indiana County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		065	Jefferson County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		067	Juniata County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		069	Lackawanna County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		071	Lancaster County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		073	Lawrence County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		075	Lebanon County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		077	Lehigh County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		079	Luzerne County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		081	Lycoming County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		083	McKean County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		085	Mercer County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		087	Mifflin County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		089	Monroe County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		091	Montgomery County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		093	Montour County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		095	Northampton County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		097	Northumberland County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		099	Perry County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		101	Philadelphia County	279.0	279.0	279.0	279.0	129.0	129.0	129.0	129.0	129.0	279.0	279.0	279.0
		103	Pike County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		105	Potter County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		107	Schuylkill County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		109	Snyder County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		111	Somerset County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		113	Sullivan County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		115	Susquehanna County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
42	***PENNSYLVANIA (cont'd)***	117	Tioga County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		119	Union County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		121	Venango County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		123	Warren County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		125	Washington County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		127	Wayne County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		129	Westmoreland County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		131	Wyoming County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
		133	York County	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0	279.0
44	**RHODE ISLAND**														
RVP, psi															
		001	Bristol County	12.5	12.5	10.1	10.1	6.9	6.9	6.9	6.9	6.9	10.1	10.1	12.5
		003	Kent County	12.5	12.5	10.1	10.1	6.9	6.9	6.9	6.9	6.9	10.1	10.1	12.5
		005	Newport County	12.5	12.5	10.1	10.1	6.9	6.9	6.9	6.9	6.9	10.1	10.1	12.5
		007	Providence County	12.5	12.5	10.1	10.1	6.9	6.9	6.9	6.9	6.9	10.1	10.1	12.5
		009	Washington County	12.5	12.5	10.1	10.1	6.9	6.9	6.9	6.9	6.9	10.1	10.1	12.5
Oxygen Weight Percent															
		001	Bristol County	1.7110	1.7110	1.6801	1.6801	1.6745	1.6745	1.6745	1.6745	1.6745	1.6801	1.6801	1.7110
		003	Kent County	1.7110	1.7110	1.6801	1.6801	1.6745	1.6745	1.6745	1.6745	1.6745	1.6801	1.6801	1.7110
		005	Newport County	1.7110	1.7110	1.6801	1.6801	1.6745	1.6745	1.6745	1.6745	1.6745	1.6801	1.6801	1.7110
		007	Providence County	1.7110	1.7110	1.6801	1.6801	1.6745	1.6745	1.6745	1.6745	1.6745	1.6801	1.6801	1.7110
		009	Washington County	1.7110	1.7110	1.6801	1.6801	1.6745	1.6745	1.6745	1.6745	1.6745	1.6801	1.6801	1.7110
Gasoline Sulfur, ppm															
		001	Bristol County	193.0	193.0	166.4	166.4	131.0	131.0	131.0	131.0	131.0	166.4	166.4	193.0
		003	Kent County	193.0	193.0	166.4	166.4	131.0	131.0	131.0	131.0	131.0	166.4	166.4	193.0
		005	Newport County	193.0	193.0	166.4	166.4	131.0	131.0	131.0	131.0	131.0	166.4	166.4	193.0
		007	Providence County	193.0	193.0	166.4	166.4	131.0	131.0	131.0	131.0	131.0	166.4	166.4	193.0
		009	Washington County	193.0	193.0	166.4	166.4	131.0	131.0	131.0	131.0	131.0	166.4	166.4	193.0

Table C-1 (continued)

FIPS_State	State	FIPS_County	County	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
50	**VERMONT**														
RVP, psi															
		001	Addison County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		003	Bennington County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		005	Caledonia County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		007	Chittenden County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		009	Essex County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		011	Franklin County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		013	Grand Isle County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		015	Lamoille County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		017	Orange County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		019	Orleans County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		021	Rutland County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		023	Washington County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		025	Windham County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
		027	Windsor County	9.5	9.5	9.5	9.5	8.5	8.5	8.5	8.5	8.5	9.5	9.5	9.5
Oxygen Weight Percent															
		001	Addison County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		003	Bennington County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		005	Caledonia County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		007	Chittenden County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		009	Essex County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		011	Franklin County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		013	Grand Isle County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		015	Lamoille County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		017	Orange County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		019	Orleans County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		021	Rutland County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		023	Washington County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		025	Windham County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
		027	Windsor County	0.1786	0.1786	0.2143	0.2143	0.2679	0.2679	0.2679	0.2679	0.2679	0.2143	0.2143	0.1786
Gasoline Sulfur, ppm															
		001	Addison County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		003	Bennington County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		005	Caledonia County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		007	Chittenden County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		009	Essex County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		011	Franklin County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		013	Grand Isle County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		015	Lamoille County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		017	Orange County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		019	Orleans County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		021	Rutland County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		023	Washington County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		025	Windham County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3
		027	Windsor County	209.3	209.3	209.3	209.3	183.1	183.1	183.1	183.1	183.1	209.3	209.3	209.3

Appendix 8I

Development of Emission Projections For 2009, 2012, and 2018 For NonEGU Point, Area, and Nonroad Source In the MANE-VU Region

Mid-Atlantic Regional Air Management Association

Development of Emission Projections For 2009, 2012, and 2018 For NonEGU Point, Area, and Nonroad Source In the MANE-VU Region

Final Report

February, 2007

About MARAMA

The Mid-Atlantic Regional Air Management Association is an association of ten state and local air pollution control agencies. MARAMA's mission is to strengthen the skills and capabilities of member agencies and to help them work together to prevent and reduce air pollution impacts in the Mid-Atlantic Region.

MARAMA provides cost-effective approaches to regional collaboration by pooling resources to develop and analyze data, share ideas, and train staff to implement common requirements.

The following State and Local governments are MARAMA members: Delaware, the District of Columbia, Maryland, New Jersey, North Carolina, Pennsylvania, Virginia, West Virginia, Philadelphia, and Allegheny County, Pennsylvania.

For copies of this report contact:

MARAMA
Mid-Atlantic Regional Air Management Association
711 West 40th Street
Suite 312
Baltimore, MD 21211
phone 410.467.0170
fax 410.467.1737

http://www.marama.org/

About MACTEC Federal Programs, Inc.

MACTEC, Inc. is a leader in the engineering, environmental and remedial construction industries. MACTEC provides premier management, technical, and professional services to help clients successfully manage complex businesses, projects, and facilities. MACTEC Federal Programs, Inc. is a division of MACTEC that provides these same services tailored to meet the unique needs of government agencies, including state/local agencies and federal agencies.

Development of Emission Projections for 2009, 2012, and 2018 for NonEGU Point, Area, and Nonroad Sources in the MANE-VU Region

Final Technical Support Document

Prepared for:

Mid-Atlantic Regional Air Management Association (MARAMA)

Prepared by:

MACTEC Federal Programs, Inc.

February 28, 2007

Edward Sabo
Principal Scientist

Douglas A. Toothman
Principal Engineer

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Acronyms and Abbreviations

Acronym	Description
AEO	Annual Energy Outlook
BOTW	Beyond-on-the-Way emission controls
CAIR	Clean Air Interstate Rule
EGAS 5.0	Economic Growth Analysis System Version 5.0
EGU	Electric Generating Unit
EIA	Energy Information Agency
EPA	U.S. Environmental Protection Agency
IDA	Inventory Data Analyzer (data format used by SMOKE modeling system)
IPM	Integrated Planning Model
MANE-VU	Mid-Atlantic/Northeast Visibility Union
MARAMA	Mid-Atlantic Regional Air Management Association
MOBILE6	U.S. EPA's emission model for onroad sources
NESCAUM	Northeast States for Coordinated Air Use Management
NH3	Ammonia
NIF3.0	National Emission Inventory Input Format Version 3.0
NMIM	National Mobile Inventory Model
NONROAD	U.S. EPA's emission model for certain types of nonroad equipment
NOx	Oxides of nitrogen
OTB/OTW	On-the-Books/On-the-Way
OTC	Ozone Transport Commission
PM10-PRI	Particulate matter less than or equal to 10 microns in diameter that includes both the filterable and condensable components of particulate matter
PM25-PRI	Particulate matter less than or equal to 2.5 microns in diameter that includes both the filterable and condensable components of particulate matter
SIC	Standard Industrial Classification code
SIP	State Implementation Plan
SCC	Source Classification Code
SMOKE	Sparse Matrix Operator Kernel Emissions Modeling System
SO2	Sulfur dioxide
VOC	Volatile organic compounds

1.0 EXECUTIVE SUMMARY

This report was prepared for the Mid-Atlantic Regional Air Management Association (MARAMA) as part of an effort to assist states in developing State Implementation Plans (SIPs) for ozone, fine particles, and regional haze. It describes the data sources, methods, and results for emission forecasts for three years, three emission sectors, two emission control scenarios; seven pollutants, and 11 states plus the District of Columbia. The following is a summary of the future year inventories that were developed:

- The three projection years are 2009, 2012, and 2018.
- The three source sectors are non-Electric Generating Units (non-EGUs), area sources, and nonroad mobile sources. (Note: under separate efforts, MANE-VU prepared EGU projections using the Integrated Planning Model {IPM} and onroad mobile source projections using the SMOKE emission modeling system).
- The two emission control scenarios are: a) a combined "on-the-books/on-the-way" (OTB/W) control strategy accounting for emission control regulations already in place as well as emission control regulations that are not yet finalized but are likely to achieve additional reductions by 2009; and b) a "beyond-on-the-way" (BOTW) scenarios to account for controls from potential new regulations that may be necessary to meet attainment and other regional air quality goals.
- The seven pollutants are sulfur dioxide (SO2), oxides of nitrogen (NOx), volatile organic compounds (VOC), carbon monoxide (CO), particulate matter less than or equal to 10 microns in diameter that includes both the filterable and condensable components of particulate matter (PM10-PRI), particulate matter less than or equal to 2.5 microns in diameter that includes both the filterable and condensable components of particulate matter (PM25-PRI), and ammonia (NH3).
- The states are those that comprise the Mid-Atlantic/Northeast Visibility Union (MANE-VU) region. In addition to the District of Columbia, the 11 MANE-VU states are Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

The results of the emission projections are summarized in Table 1-1 and Figures 1-1 to 1-7.

Section 2 of this report describes how the nonEGU OTB/W emission projections were made. Section 3 describes the methods for the area source emission projections. Section 4 describes the methods for the nonroad section, including sources accounted for by the NONROAD model as well as aircraft, locomotives, and marine vessels. Section 5 describes the development of the BOTW emission projections.

Table 1-1 Summary of MANE-VU Area, NonEGU, and Nonroad Emission Inventory by Pollutant, Sector, and Year Annual Emissions (tons per year)

Pollutant	Sector	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CO	Area	1,326,796	1,283,959	1,283,959	1,260,627	1,260,627	1,211,727	1,211,727
	NonEGU	295,577	328,546	328,546	346,090	346,090	412,723	412,723
	Nonroad	4,553,124	4,969,925	4,969,925	5,099,538	5,099,538	5,401,353	5,401,353
		6,175,497	6,582,430	6,582,430	6,706,255	6,706,255	7,025,803	7,025,803
NH3	Area	249,795	294,934	294,934	312,419	312,419	341,746	341,746
	NonEGU	3,916	4,301	4,301	4,448	4,448	4,986	4,986
	Nonroad	287	317	317	337	337	369	369
		253,998	299,552	299,552	317,204	317,204	347,101	347,101
NOx	Area	265,400	278,038	265,925	281,659	261,057	284,535	263,030
	NonEGU	207,048	210,522	185,658	218,137	184,527	237,802	199,732
	Nonroad	431,631	354,850	354,850	321,935	321,935	271,185	271,185
		904,079	843,410	806,433	821,731	767,519	793,522	733,947
PM10	Area	1,452,309	1,527,586	1,527,586	1,556,316	1,550,400	1,614,476	1,607,602
	NonEGU	51,280	55,869	55,869	57,848	57,624	63,757	63,524
	Nonroad	40,114	34,453	34,453	32,445	32,445	27,059	27,059
		1,543,703	1,617,908	1,617,908	1,646,609	1,640,469	1,705,292	1,698,185
PM2.5	Area	332,521	340,049	340,049	341,875	336,779	345,419	339,461
	NonEGU	33,077	36,497	36,497	37,625	37,444	41,220	41,029
	Nonroad	36,084	30,791	30,791	28,922	28,922	23,938	23,938
		401,682	407,337	407,337	408,422	403,145	410,577	404,428
SO2	Area	286,921	304,018	304,018	305,339	202,058	305,437	190,431
	NonEGU	264,377	249,658	249,658	255,596	253,638	270,433	268,330
	Nonroad	57,257	15,651	15,651	8,731	8,731	8,643	8,643
		608,555	569,327	569,327	569,666	464,427	584,513	467,404
VOC	Area	1,528,269	1,398,982	1,363,278	1,382,803	1,339,851	1,387,882	1,334,039
	NonEGU	91,278	92,279	91,718	96,887	96,260	110,524	109,762
	Nonroad	572,751	460,922	460,922	424,257	424,257	380,080	380,080
		2,192,298	1,952,183	1,915,918	1,903,947	1,860,368	1,878,486	1,823,881

OTB/W – on-the-books/way scenario; BOTW – beyond-on-the-way scenario

Figure 1-1 2002 Base Year, OTB/OTW AND BOTW Annual CO Emissions (tons per year)

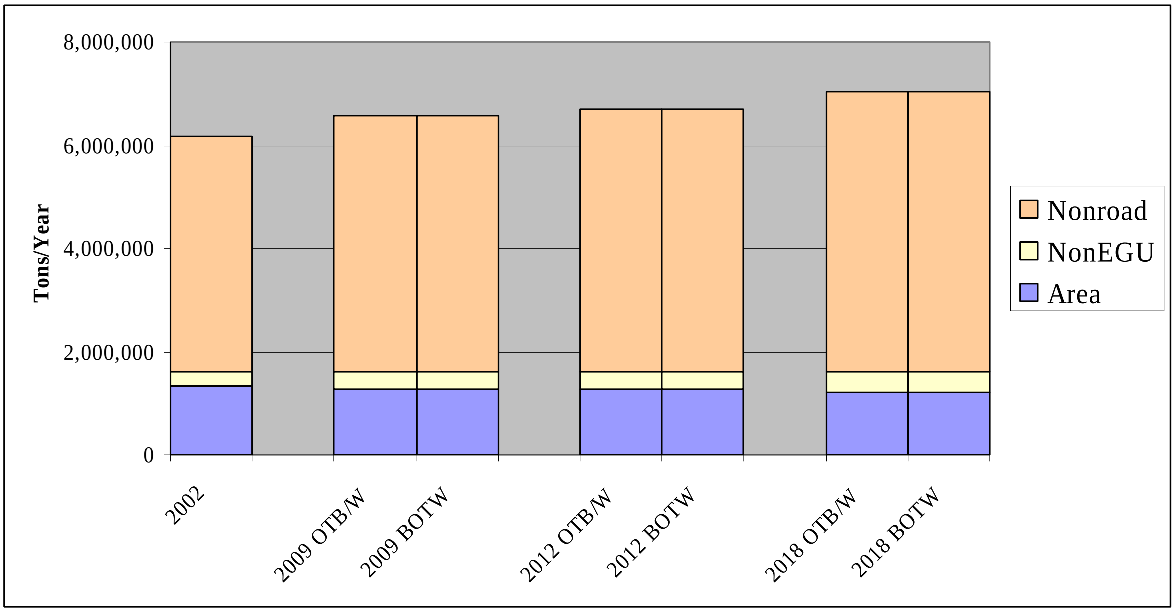


Figure 1-2 2002 Base Year, OTB/OTW AND BOTW Annual NH3 Emissions (tons per year)

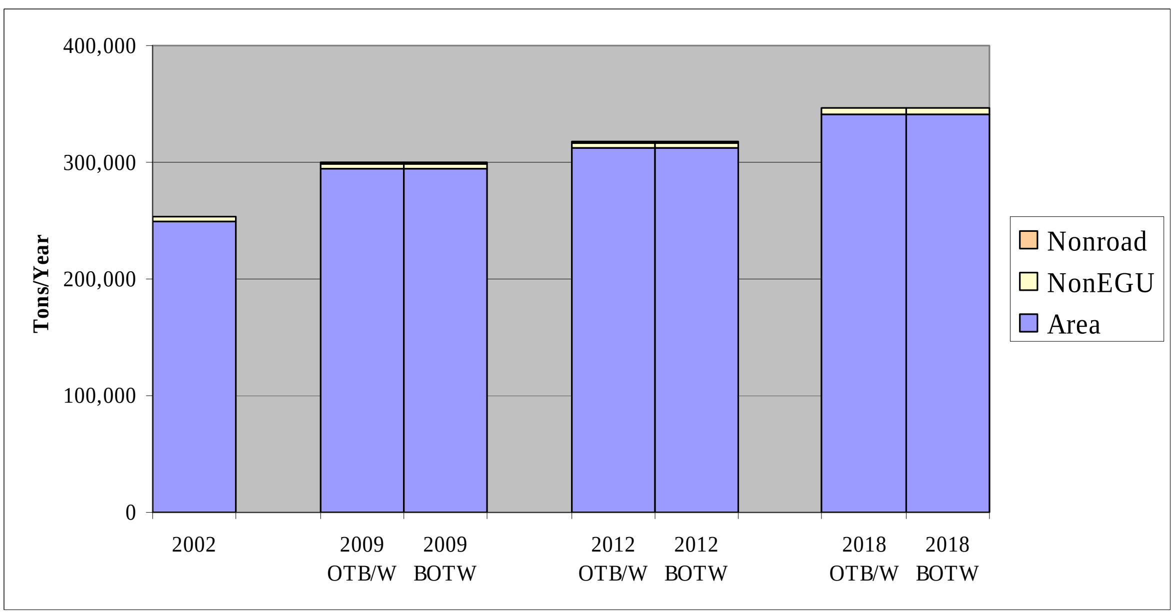


Figure 1-3 2002 Base Year, OTB/OTW AND BOTW Annual NOx Emissions (tons per year)

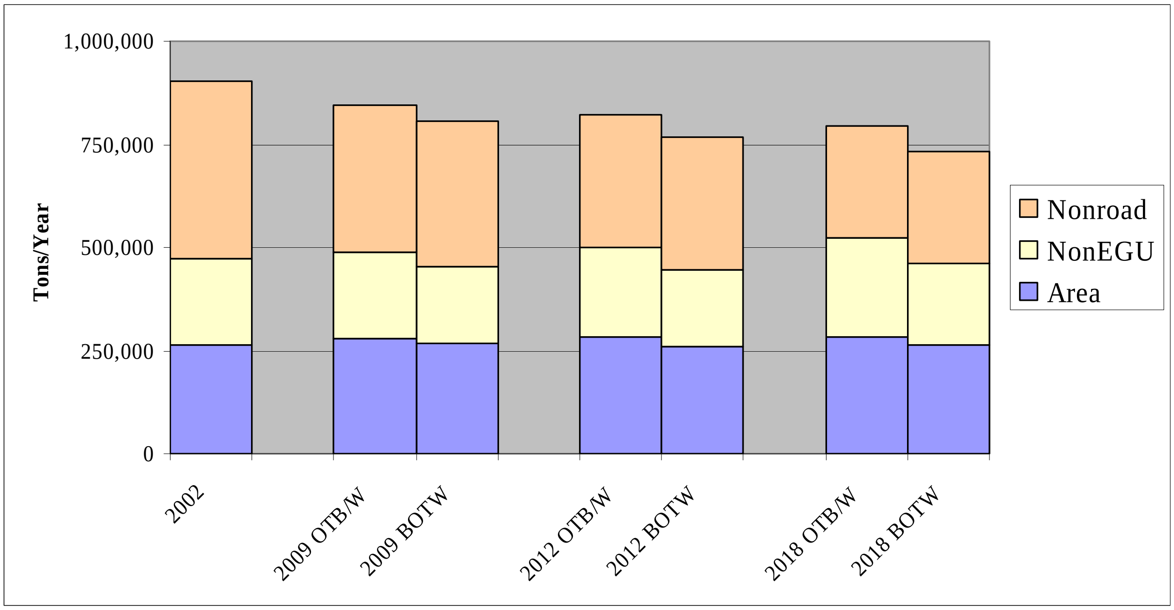


Figure 1-4 2002 Base Year, OTB/OTW AND BOTW Annual SO2 Emissions (tons per year)

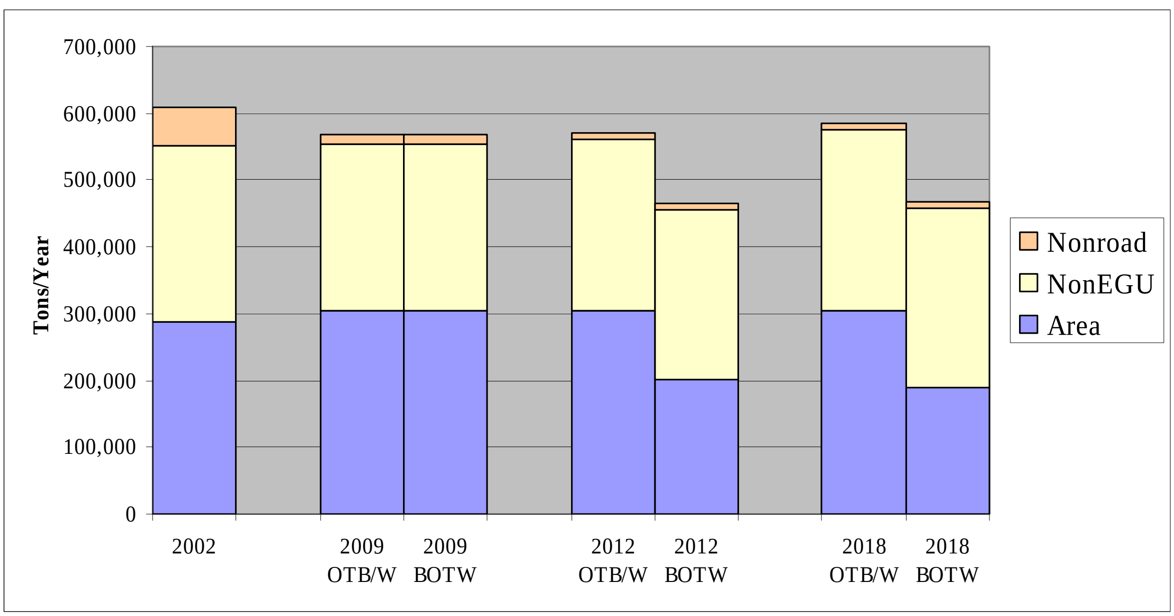


Figure 1-5 2002 Base Year, OTB/OTW AND BOTW Annual PM10 Emissions (tons per year)

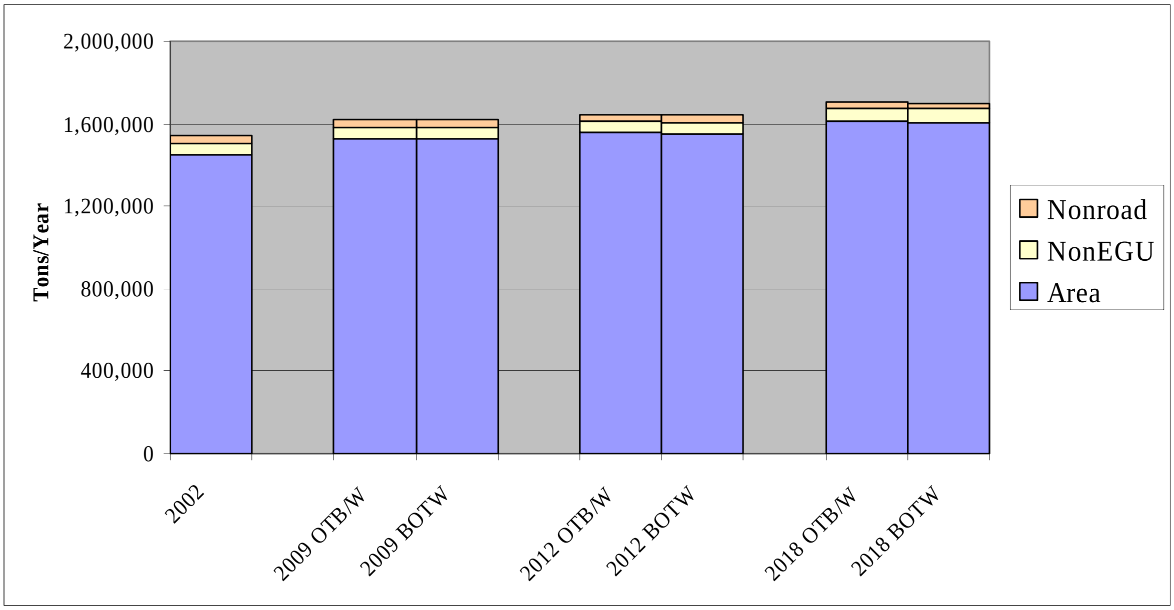


Figure 1-6 2002 Base Year, OTB/OTW AND BOTW Annual PM2.5 Emissions (tons per year)

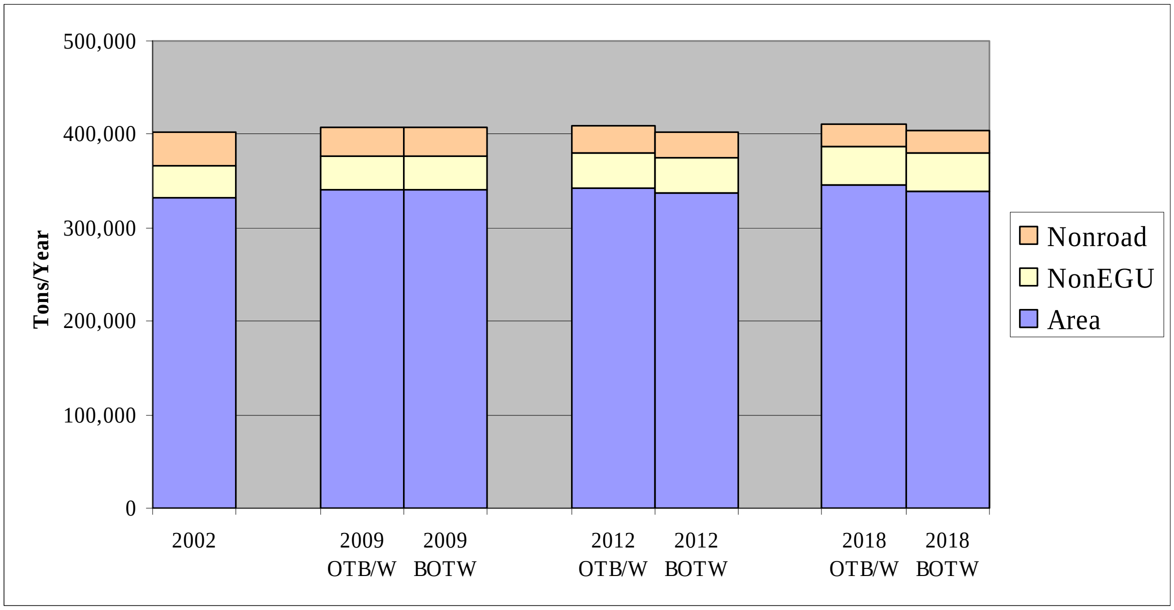
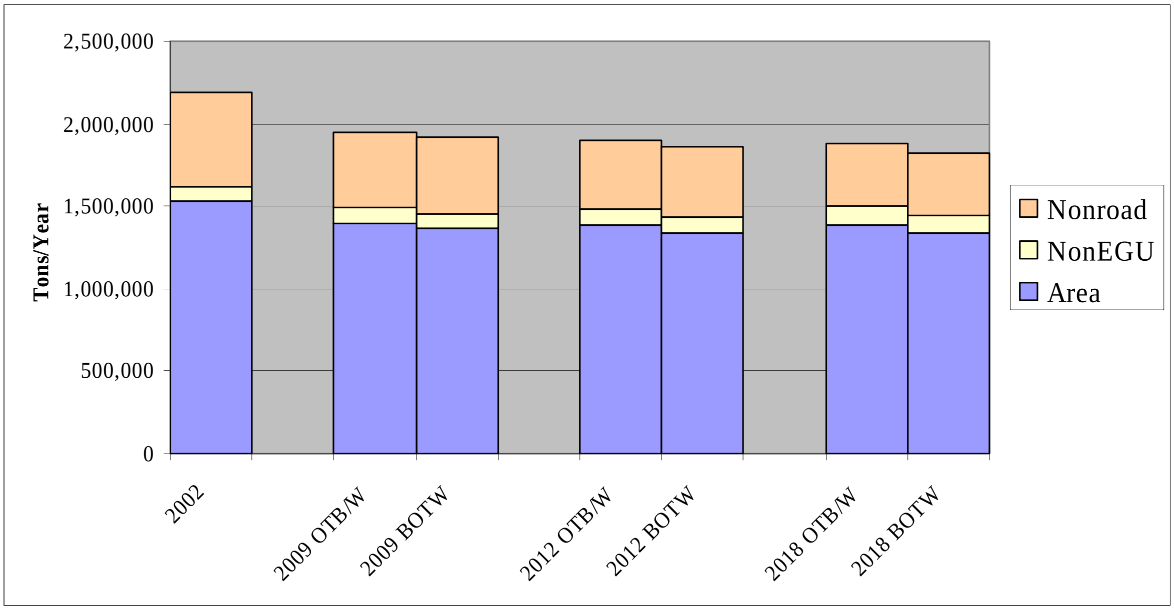


Figure 1-7 2002 Base Year, OTB/OTW AND BOTW Annual VOC Emissions (tons per year)



2.0 NONEGU POINT SOURCES

Under ideal circumstances, all stationary sources would be considered point sources for purposes of emission inventories. In practical applications, however, only sources that emit more than a specified cutoff level of pollutant are considered point sources. In general, the MANE-VU point source inventory includes only major sources (i.e., those required to obtain a Title V operating permit). Some states may include additional stationary sources that emit below the major source thresholds.

For emission projection purposes, the point source inventory is divided into two sub-sectors – the Electric Generating Unit (EGU) sector and the non-EGU sector – because different projections methods are used for these two sectors. For EGUs, MANE-VU used the Integrated Planning Model (IPM) to project future generation as well as to calculate the impact of future control programs on future emission levels.

The procedures for projecting emissions for non-EGUs are described in this section. We started with the MANE-VU 2002 point source emission inventory, which contains data for both EGUs and nonEGUs. We implemented a procedure to split the 2002 point source inventory into two components – and EGU inventory for those units accounted for in IPM, and a nonEGU inventory for those point sources not accounted for in IPM. For the nonEGU sources, we first applied growth factors to account for changes in economic activity. Next, we applied control factors to account for future emission reductions from on-the-books (OTB) control regulations and on-the-way (OTW) control regulations. The OTB control scenario accounts for post-2002 emission reductions from promulgated federal, State, local, and site-specific control programs as of June 15, 2005. The OTW control scenario accounts for proposed (but not final) control programs that are reasonably anticipated to result in post-2002 emission reductions. We then conducted a series of quality assurance steps to ensure the development of complete, accurate, and consistent emission inventories. We provided the inventories in three formats – the National Emission Inventory Input Format (NIF), SMOKE Inventory Data Analyzer (IDA) format, and SMOKE growth/control packets. We also prepared emission summary tables by state and pollutant. Each of these activities is discussed in this section.

2.1 INITIAL 2002 POINT SOURCE EMISSION INVENTORY

The starting point for the nonEGU projections was Version 3 of the MANE-VU 2002 point source emission inventory (MANE-VU_2002_Pt_Version 3_040706.MDB). Since this file contains both EGUs and nonEGU point sources, and EGU emissions are projected using the IPM, it was necessary to split the 2002 point source file into two components.

The first component contains those emission units accounted for in the IPM forecasts. The second component contains all other point sources not accounted for in IPM.

The MANE-VU 2002 point source inventory contains a cross-reference table (xwalk {MANE-VU}) that matches IPM emission unit identifiers (ORISPL plant code and BLRID emission unit code) to MANE-VU NIF emission unit identifiers (FIPSST state code, FIPSCNTY county code, State Plant ID, State Point ID). Initially, we used this cross-reference table to split the point source file into the EGU and nonEGU components. When there was a match between the IPM ORISPL/BLRID and the MANE-VU emission unit ID, the unit was assigned to the EGU inventory; all other emission units were assigned to the nonEGU inventory. The exception to this rule was for the State of New York. The cross-reference table only contained matches at the plant level, not the emission unit level. So for New York EGUs accounted for in IPM, all emission units at a plant were assigned to the MANE-VU EGU file (including ancillary emission units not accounted for in IPM).

After performing this initial splitting of the MANE-VU point source inventory into EGU and nonEGU components, we prepared several ad-hoc QA/QC queries to verify that there was no double-counting of emissions in the EGU and nonEGU inventories:

- We reviewed the IPM parsed files {VISTASII_PC_1f_AllUnits_2009 (To Client).xls and VISTASII_PC_1f_AllUnits_2018 (To Client).xls} to identify EGUs accounted for in IPM. We compared this list of emission units to the nonEGU inventory derived from the MANE-VU cross-reference table to verify that units accounted for in IPM were not double-counted in the nonEGU inventory. As a result of this comparison, we made a few adjustments in the cross-reference table to add emission units for four plants to ensure these units accounted for in IPM were moved to the EGU inventory.

- We reviewed the nonEGU inventory to identify remaining emission units with an Standard Industrial Classification (SIC) code of “4911 Electrical Services” or Source Classification Code of “1-01-xxx-xx External Combustion Boiler, Electric Generation”. We compared the list of sources meeting these selection criteria to the IPM parsed file to ensure that these units were not double-counted.

- We compared the number of records for each NIF table in the original 2002 point source file to the 2002 EGU and 2002 nonEGU files. We determined that the sum of the number of records in the EGU file and the number of records in the nonEGU file equaled the number of records in the original 2002 point source file.

- We compared the emissions by pollutant and state in the original 2002 point source file to the 2002 EGU file and 2002 nonEGU files. We determined that the sum of the emissions in the EGU file and the emissions in the nonEGU file equaled the emissions in the original 2002 point source file.

As a result of this procedure, we created separate sets of NIF tables for 2002 for EGUs (i.e., units accounted for in IPM) and nonEGUs. The nonEGU set of 2002 NIF tables were used in all subsequent projections for 2009/2012/2018.

After release of Version 3 of the MANE-VU 2002 inventory, New Jersey discovered that fugitive emissions from petroleum refineries were missing from Version 3. New Jersey supplied MACTEC with the emission unit identifiers for the fugitive releases, and the appropriate records were added to the 2002 NIF files.. MACTEC used these revised fugitive estimates for projecting emissions to 2009/2012/2018.

2.2 NONEGU POINT SOURCE GROWTH FACTORS

The nonEGU growth factors were developed using three sets of data:

- The U.S. EPA's Economic Growth and Analysis System Version 5.0 (EGAS 5.0) using the default SCC configuration. EGAS 5.0 generates growth factors from REMI's 53 Sector Policy Insight Model Version 5.5, the U.S. Department of Energy (DOE) Annual Energy Outlook 2004 (AEO2004) fuel use projections, and national vehicle mile travel projections from EPA's MOBILE 4.1 Fuel Combustion Model;

- The DOE's Annual Energy Outlook 2005 (AEO2005) fuel consumption forecasts were used to replace the AEO2004 forecasts that are used as the default values in EGAS 5.0; and

- State-supplied population, employment, and other emission projection data.

The priority for applying these growth factors was to first use the state-supplied projection data (if available). If no state-supplied data are available, then we used the AEO2005 projection factors for fuel consumption sources. If data from these two sources were not available, we used the EGAS 5.0 default SCC configuration. Appendix A lists the nonEGU point source growth factors used for this study.

2.2.1 EGAS 5.0 Growth Factors

EGAS is an EPA-developed economic and activity forecast tool that provides credible growth factors for developing emission inventory projections. Growth factors are generated using national- and regional-economic forecasts. For nonEGUs, the primary economic activity data sets in EGAS 5.0 are:

- State-specific growth rates from the Regional Economic Model, Inc. (REMI) Policy Insight® model, version 5.5. The REMI socioeconomic data (output by industry sector, population, farm sector value added, and gasoline and oil expenditures) are available by 4-digit SIC code at the State level.
- Energy consumption data from the DOE's Energy Information Administration's (EIA) *Annual Energy Outlook 2004, with Projections through 2025* for use in generating growth factors for non-EGU fuel combustion sources. These data include regional or national fuel-use forecast data that were mapped to specific SCCs for the non-EGU fuel use sectors (e.g., commercial coal, industrial natural gas). Growth factors are reported at the Census division level. These Census divisions represent a group of States (e.g., the South Atlantic division includes Delaware, the District of Columbia, and Maryland; the Middle Atlantic division includes New Jersey, New York, and Pennsylvania; the New England division includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont). Although one might expect different growth rates in each of these States due to unique demographic and socioeconomic trends, all States within each division received the same growth rate.

EGAS uses these economic activity datasets and a set of cross-reference files to generate growth factors by Standard Industrial Classification (SIC) code, Source Classification Code (SCC), or Maximum Achievable Control Technology (MACT) codes. Growth factors for 2009, 2012, and 2018 were calculated using 2002 as the base year at the State and SCC level. County-specific growth factors are not available in EGAS 5.0.

There were several SCCs in the MANE-VU 2002 inventory that are not included in the EGAS 5.0 files. As a result, EGAS did not generate growth factors for those SCCs. MACTEC assigned growth factors for the missing SCCs by assigning a surrogate SCC that best represented the missing SCC.

2.2.2 AEO2005 Growth Factors

The default version of EGAS 5.0 uses the DOE's AEO2004 forecasts. We replaced these data with the more recent AEO2005 forecasts to improve the emissions growth factors produced. Using ACCESS, we created a copy of the "DOE EGAS 5" dataset. The dataset includes three tables. One table contains the projection data values from 2001-2025. The other two tables are the MACT and SCC crosswalk tables. The crosswalk tables are linked to the projection table via a "model code". Using the copy of AEO2004 data, we updated the corresponding projection tables with data from the AEO2005 located at: http://www.eia.doe.gov/oiaf/aeo/supplement/supref.html . Using the data and descriptions from the new tables, we matched the projection data to the appropriate model codes and then built a table identical to the DOE EGAS 5 dataset with the new 2005 AEO data. The resulting ACCESS dataset contains a projection data table with the exact same structure as the original except with the new data. The SCC and MACT crosswalks did not require any updates since the model code assignments were not changed in the new data table.

2.2.3 State Specific Growth Factors

In addition to the growth data described above, we received growth projections from several MANE-VU states to be used instead of the default EGAS or AEO2005 growth factors. The following paragraphs describe the growth factors used for each state.

2.2.3.1 Connecticut

Connecticut provided state-level employment-based growth factors for various SIC categories derived from CT Department of Labor (CTDOL) projections. For many manufacturing sectors, employment is projected to decline, indicating the likelihood of reduced activity levels and emissions for those sectors. Associated growth factors are less than one. To ensure consistency within a facility, CTDEP indicated that the employment-based growth factors be used wherever possible, as matched by SIC. MACTEC used the growth factors by SIC code for all sources in CT, including those fuel combustion sources that would otherwise have been projected using the AEO2005 forecasts.

2.2.3.2 Delaware

Delaware provided state-level employment data from the Department of Labor by NAICS codes for 2002 and 2012. We used these data to calculate the growth factor from 2002 to 2012 and interpolated these data to derive growth factors for 2009 and 2018. We matched these industry NAICS groupings to SCC codes in order to create SCC specific growth factors for non-EGU point sources.

2.2.3.3 District of Columbia

DC indicated that it preferred to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

2.2.3.4 Maine

Maine indicated that it preferred to use the EGAS 5.0 growth factors and the DOE's 2005 Annual Energy Outlook data for combustion sources.

2.2.3.5 Maryland

Maryland provided growth factors by SCC for all counties in the State. These growth factors were derived from a variety source sources, including the MWCOG Cooperative Forecast 7.0, the BMC Round 6A Cooperative Forecast (prepared by the MD Dept. of Planning, May 2004), and EGAS 5.0.

2.2.3.6 Massachusetts

Massachusetts also provided a link to employment projections for 2000-2010 for very narrow occupational categories that are not directly correlated with SIC or SCC codes. Since we could not match the occupational titles in the Massachusetts employment projections with SIC or SCC codes, MACTEC used the EGAS 5.0 growth factors (with the AEO2005 enhancement for combustion sources) for projecting emissions from nonEGU sources.

2.2.3.7 New Hampshire

New Hampshire indicated that it preferred to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

2.2.3.8 New Jersey

New Jersey indicated that it preferred to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

2.2.3.9 New York

New York provided county-level employment data for 12 counties in the New York City metro area for 2002, 2009, 2012, and 2018. The employment projections are for broad industry categories not directly correlated with SIC or SCC codes. Since we could not match the 12-county employment projections with SIC or SCC codes, MACTEC used the EGAS 5.0 growth factors (with the AEO2005 enhancement for combustion sources) for projecting emissions from nonEGU sources for both the 12-county area and all other counties in the state.

2.2.3.10 Pennsylvania

Pennsylvania provided total employment projections for a subset of counties. These employment projections do not have enough detail regarding specific industrial groupings to be correlated with SIC or SCC codes. MACTEC used the EGAS 5.0 growth factors (with the AEO2005 enhancement for combustion sources) for projecting emissions from nonEGU sources

2.2.3.11 Rhode Island

Rhode Island provided state-level employment data from the Department of Labor and Training by 3-digit NAICS codes for 2002 and 2012. We used these data to calculate the growth factor from 2002 to 2012 and interpolated these data to derive growth factors for 2009 and 2018. We matched these industry NAICS groupings to SCC codes in order to create SCC specific growth factors for non-EGU point sources.

2.2.3.12 Vermont

Vermont indicated that it preferred to use the EGAS 5.0 growth factors, with the enhancement of using the DOE’s 2005 Annual Energy Outlook data for combustion sources.

2.3 NONEGU POINT SOURCE CONTROL FACTORS

The following sections document how the OTB/OTW control factors were developed for the MANE-VU future year inventories. We developed control factors to estimate emission reductions that will result from on-the-books regulations that will result in post-2002 emission reductions and proposed regulations or actions that will result in post-2002 emission reductions. Control factors were developed for the following national, regional, or state control measures:

- NOx SIP Call Phase I (NOx Budget Trading Program)
- NOx SIP Call Phase II
- NOx RACT in 1-hour Ozone SIPs
- NOx OTC 2001 Model Rule for ICI Boilers
- 2-, 4-, 7-, and 10-year MACT Standards
- Combustion Turbine and RICE MACT
- Industrial Boiler/Process Heater MACT
- Refinery Enforcement Initiative
- Source Shutdowns

In addition, states provided specific control measure information about specific sources or regulatory programs in their state. We used the state-specific data to the extent it was available.

2.3.1 NOx SIP Call Phase I

Compliance with the NOx SIP Call in the Ozone Transport Commission (OTC) states was scheduled for May 1, 2003. The requirements applied to all MANE-VU states except Maine, New Hampshire, and Vermont. While the program applies primarily to electric generating units (EGUs), the NOx SIP Call applies to non-EGUs such as large industrial boilers and turbines. The NOx SIP Call did not mandate which sources must reduce emissions; rather, it required states to meet an overall emission budget and gave them flexibility to develop control strategies to meet that budget. All states in the MANE-VU region affected by the NOx SIP Call chose to meet their NOx SIP Call requirements by participating in the NOx Budget Trading Program. We reviewed the available state rules and guidance documents to determine the affected nonEGU sources and ozone season NOx allowances for each source. Future year emissions for non-EGU boilers/turbines were capped at the allowance levels. Since the allowances are given in terms of tons per ozone season (5 months May to September), we calculated annual emissions by multiplying the ozone season allowances by a factor of 12 (annual) / 5 (ozone season). Table B-1 identifies those units included in the NOx SIP Call Phase I budget program.

Cement kilns were also included in Phase I of the NO_x SIP call. There is a cement kiln in Maine, but it is not subject to the NOx SIP call. For the cement kilns in Maryland and New York, a default control efficiency value of 25 percent was applied. For the cement kilns in Pennsylvania, the state provided their best estimates of the actual control efficiency expected for each kiln after the NOx SIP Call. Table B-2 identifies the cement kilns affected by the NOx SIP Call.

2.3.2 NOx SIP Call Phase II

The final Phase II NOx SIP Call rule was promulgated on April 21, 2004. States had until April 21, 2005, to submit SIPs meeting the Phase II NOx budget requirements. The Phase II rule applies to large IC engines, which are primarily used in pipeline transmission service at compressor stations. We have identified affected units using the same methodology as was used by EPA in the proposed Phase II rule (i.e., a large IC engine is one that emitted, on average, more than 1 ton per day during 2002). The final rule reflects a control level of 82 percent for natural gas-fired IC engines and 90 percent for diesel or dual fuel categories. Pennsylvania identified large IC engines affected by the rule. Table B-3 identifies those units included in the NOx SIP Call Phase II.

2.3.3 NOx RACT in 1-hour Ozone SIPs

Emission reductions requirements from NOx reasonably available control technology (RACT) requirements in 1-hour Ozone SIP areas were implemented in or prior to 2002.

These reductions should already be accounted for in the MANE-VU 2002 inventory since the 2002 inventory was based on 2002 actual emissions which includes any reductions due to NOx RACT.

2.3.4 NOx OTC 2001 Model Rule for ICI Boilers

The Ozone Transport Commission (OTC) developed control measures for industrial, commercial, and institutional (ICI) boilers in 2001. Information about the proposed OTC NOx emission limits by fuel type and size range was obtained from Table III-1 of *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules* (E.H. Pechan & Associates, Inc., March 31, 2001). Information about the emission limits contained in the existing state rules (prior to adoption of the OTC 2001 model rule) were obtained from Tables III-2 through III-9 of the Pechan document. Information about the emission limits contained in the current state rules (as they existed in June 2006) were obtained from the individual states regulations. The percent reduction for ICI boilers was estimated by state, fuel type, and size range by comparing the current state emission limits (as they existed in June 2006) with the state emission limits as they existed in 2001. Pennsylvania adopted the OTC 2001 model rule in five southeastern counties (Bucks, Chester, Delaware, Montgomery, and Philadelphia) for boilers in the 100 to 250 million Btu/hour range. New Jersey adopted the OTC 2001 model rule for natural gas-fired boilers with a maximum heat rate of at least 100 million Btu/hour. For other states, it did not appear that the emission limits in 2006 had changed from the emission limits in 2001.

2.3.5 2-, 4-, 7-, and 10-year MACT Standards

Maximum achievable control technology (MACT) requirements were also applied, as documented in the report entitled *Control Packet Development and Data Sources*, dated July 14, 2004 (available at http://www.epa.gov/air/interstateairquality/pdfs/Non-EGU_nonpoint_Control_Development.pdf). The point source MACTs and associated emission reductions were designed from Federal Register (FR) notices and discussions with EPA's Emission Standards Division (ESD) staff. These MACT requirements apply only to units located at a major source of hazardous air pollutants (HAP). We did not apply reductions for MACT standards with an initial compliance date of 2002 or earlier, assuming that the effects of these controls are already accounted for in the inventories supplied by the States. Emission reductions were applied only for MACT standards with an initial compliance date of 2003 or greater.

Because the MANE-VU inventory does not identify HAP major sources, the reductions from post-2002 MACT standards were applied on a more general scale to all sources with certain SCCs. Every source with an SCC determined to be affected by a post-2002 MACT standard was assigned an incremental percent reduction for the applicable MACT standard. Table B-4 shows the SCCs affected and the incremental control efficiencies applied for post-2002 MACT standards.

2.3.6 Combustion Turbine and RICE MACT

The MANE-VU projection inventory does not include the NOx co-benefit effects of the MACT regulations for Gas Turbines or stationary Reciprocating Internal Combustion Engines, which EPA estimates to be small compared to the overall inventory.

2.3.7 Industrial Boiler/Process Heater MACT

EPA anticipates ancillary reductions in PM and SO2 as a result of the Industrial Boiler/Process Heater MACT standard. The MACT applies to industrial, commercial, and institutional units firing solid fuel (coal, wood, waste, biomass) which have a design capacity greater than 10 mmBtu/hr and are located at a major source of hazardous air pollutants (HAP). The boiler design capacity field in many cases was missing from the MANE-VU emission inventory. In lieu of boiler design capacity, we identified boilers with the following SCCs that emitted greater than 10 tons/year of either SO2 or PM10

- 1-02-001-xx Industrial, Anthracite Coal
- 1-02-002-xx Industrial, Bituminous/subbituminous Coal
- 1-02-008-xx Industrial, Petroleum Coke
- 1-02-009-xx Industrial, Wood/Bark Waste
- 1-03-001-xx Commercial/Institutional, Anthracite Coal
- 1-03-002-xx Commercial/Institutional, Bituminous/subbituminous Coal
- 1-03-009-xx Commercial/Institutional, Wood/Bark Waste
- 3-90-002-89 In-Process Fuel Use, Bituminous Coal
- 3-90-002-99 In-Process Fuel Use, Bituminous Coal
- 3-90-008-89 In-Process Fuel Use, Coke
- 3-90-008-99 In-Process Fuel Use, Coke
- 3-90-009-99 In-Process Fuel Use, Wood

For these sources, we applied the average MACT control efficiencies of 4% for SO2 and 40% for PM.

2.3.8 Refinery Enforcement Initiative

Both EPA and State/local agencies have negotiated (or are in the process of negotiating) Consent Decrees that will require significant investment in pollution control technology and will result in significant emission reductions in the future. There are eight refineries in the MANE-VU inventory impacted by the settlements. The five major refinery processes that are affected by the judicial settlements are:

- Fluid Catalytic Cracking Units (FCCUs) and Fluid Coking Units (FCUs)
- Process Heaters and Boilers
- Flare Gas Recovery
- Leak Detection and Repair
- Benzene/Wastewater

As part of the development of the *Assessment of Control Technology Options for Petroleum Refineries in the Mid-Atlantic Region* (Draft Final, October 2006), MACTEC coordinated with State and local agencies to develop estimates of future year emissions based upon the settlements and recent permits that implement the provisions of those settlements.

For FCCUs/FCUs, the Consent Decree control requirements generally require the installation of wet gas scrubbers for SO2 control. Some of the units have already been permitted to include the control requirements. In those cases, specific emission limits for SO2 have already been established and were used as the best estimate of emission in 2009. In cases where specific emission limitation have not yet been specified in permits, a 90 percent SO2 control efficiency was assumed as a conservative estimate of the SO2 reductions from the installation of a wet gas scrubber.

For NOx control at FCCUs/FCUs, the Consent Decrees require selective catalytic reduction (SCR), selective non-catalytic reduction (SCNR), or optimization studies to reduce NOx emissions. Some of the units have already been permitted to include the control requirements. In those cases, specific emission limits for NOx have already been established and were used as the best estimate of emission in 2009. In cases where specific emission limitation have not yet been specified in permits, a 90 percent NOx control efficiency was assumed for SCR, and a 60 percent reduction was assumed from the installation of SNCR.

For SO2 emissions from boilers/heaters, the control requirements generally require the elimination of burning solid/liquid fuels. We identified all boilers and heaters at the eight affected refineries that burn solid or liquid fuels. For these units, we set the SO2 emissions to zero in the future year inventories.

For NOx emissions from boilers/heaters, control requirements generally apply to units greater than 40 million British thermal units (MMBtu) per hour capacity or larger. In many cases, the consent decrees establish NO_x emission reduction objectives across a number of refineries that are owned by the same firm. Therefore, the companies have some discretion in deciding which individual boilers/heaters to control as well as the control techniques to apply. Also, the consent decrees have various phase-in dates which make it difficult to determine the exact date when the reductions will be fully realized. As part of the development of the *Assessment of Control Technology Options for Petroleum Refineries in the Mid-Atlantic Region* (Draft Final, October 2006), MACTEC coordinated with State and local agencies to develop estimates of future year emissions based upon the settlements and recent permits that implement the provisions of those settlements. Heater/boiler NOx controls for the units to which they are applied were determined to be equivalent to meeting a 0.04 lbs per million Btu NOx emission rate. Meeting this emission reduction requirement is expected to provide an average NOx emission reduction of 50 percent from 2002 levels in 2009.

The Consent Decrees also included enhanced LDAR programs (e.g., reducing the defined leak concentration, increasing the monitoring frequency, other requirements. Our best estimate is a 50% reduction in VOC emissions as a result of implementing enhanced LDAR programs similar to those required in the recent Consent Decrees. This is based on a study (http://www.rti.org/pubs/ertc_enviro_2002_final1.pdf) that estimated an enhanced LDAR program could result in a 50% reduction in fugitive VOCs.

The settlements are expected to produce additional SO2, NOx, and VOC emission reductions for flare gas recovery and wastewater operations. These emission reductions were not quantified as they are expected to produce less significant changes in the MANE-VU inventory because of the magnitude and uncertainty associated with the emissions from these units in the 2002 MANE-VU inventory.

2.3.9 Source Shutdowns

A few states indicated that significant source shutdowns have occurred since 2002 and that emissions from these sources should not be included in the future year inventories. These sources are identified in Table B-5.

2.3.10 State Specific Control Factors

Delaware provided reductions expected from the Maritrans lightering operation. VOC emissions are projected to be reduced by 34.8% by 2009, 69.3% by 2012, and 79.2% by 2018.

2.4 NONEGU POINT SOURCE QA/QC REVIEW

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, and to ensure that a full and complete inventory was developed. Quality assurance was an important component to the inventory development process and MACTEC performed the following QA steps on the nonEGU point source component of the MANE-VU future year inventories:

1. State agencies reviewed the draft growth and control factors in the summer of 2005. Changes based on these comments were implemented in the files.
2. Compared, at the emission unit-level, emissions from the IPM parsed files and the MANE-VU NIF files to verify that the splitting of the MANE-VU point source inventory into the EGU and nonEGU sectors did not result in any double county of emissions or cause units to be missing from both inventories.
3. SCC level emission summaries were prepared and evaluated to ensure that emissions were consistent and that there were no missing sources. Tier comparisons (by pollutant) were developed between the revised 2002 base year inventory and the 2009/2012/2018 projection inventories.
4. State level emission summaries were prepared and evaluated to ensure that emissions were consistent and reasonable. The summaries included base year 2002 emissions, 2009/2012/2018 projected emissions accounting only for growth, 2009/2012/2018 projected emissions accounting for both growth and emission reductions from OTB and OTW controls.
5. Emission inventory files in NIF format were provided for state agency review and comment. Changes based on these comments were implemented.
6. All final files were run through EPA's Format and Content checking software.
7. Version numbering was used for all inventory files developed. The version numbering process used a decimal system to track major and minor changes. For example, a major change would result in a version going from 1.0 to 2.0 for example. A minor change would cause a version number to go from 1.0 to 1.1. Minor changes resulting from largely editorial changes would result in a change from 1.00 to 1.01 for example.

Final QA checks were run on the revised projection inventory data set to ensure that all corrections provided by the S/L agencies and stakeholders were correctly incorporated into the S/L inventories and that there were no remaining QA issues that could be addressed during the duration of the project. After exporting the inventory to ASCII text files in NIF 3.0, the EPA QA program was run on the ASCII files and the QA output was reviewed to verify that all QA issues that could be addressed were resolved

2.5 NONEGU POINT SOURCE NIF AND SMOKE FILES

The Version 3 file names and descriptions delivered to MARAMA are shown in Table 2-1.

2.6 NONEGU POINT SOURCE EMISSION SUMMARIES

Emission summaries by state, year, and pollutant are presented in Tables 2-2 through 2-8 for CO, NH3, NOx, PM10-PRI, PM25-PRI, SO2, and VOC, respectively.

Table 2-1 NonEGU Point Source NIF, IDA, and Summary File Names

File Name	Date	Description
MANEVU_OTB2009_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2009 OTB NonEGU source NIF inventory
MANEVU_OTB2012_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2012 OTB NonEGU source NIF inventory
MANEVU_OTB2018_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2018 OTB NonEGU source NIF inventory
MANEVU_OTB2009_NonEGU_IDAV3_1.txt	Nov. 22, 2006	Version 3.1 of 2009 OTB NonEGU source inventory in SMOKE IDA format
MANEVU_OTB2012_NonEGU_IDAV3_1.txt	Nov. 22, 2006	Version 3.1 of 2012 OTB NonEGU source inventory in SMOKE IDA format
MANEVU_OTB2018_NonEGU_IDA3V_2.txt	Nov. 22, 2006	Version 3.1 of 2018 OTB NonEGU source inventory in SMOKE IDA format
MANEVU OTB BOTW NonEGU V3_1 State Summary.xls	Nov. 22, 2006	Spreadsheet with state totals by pollutant for all NonEGU sources
MANEVU OTB BOTW NonEGU V3_1 State SCC Summary.xls	Dec. 4, 2006	Spreadsheet with SCC totals by state and pollutant for all NonEGU sources.

Table 2-2 NonEGU Point Sources
OTB/OTW Annual CO Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	2,157	2,251	2,306	2,415
DE	8,812	9,037	8,748	8,651
DC	247	283	299	327
ME	9,043	10,147	10,467	11,433
MD	94,536	104,012	111,174	141,342
MA	10,793	12,027	12,552	13,426
NH	774	858	871	907
NJ	8,209	10,076	10,806	12,244
NY	53,259	61,411	65,541	78,876
PA	105,815	116,430	121,251	140,909
RI	1,712	1,764	1,821	1,927
VT	220	250	254	267
Total	**295,577**	**328,546**	**346,090**	**412,724**

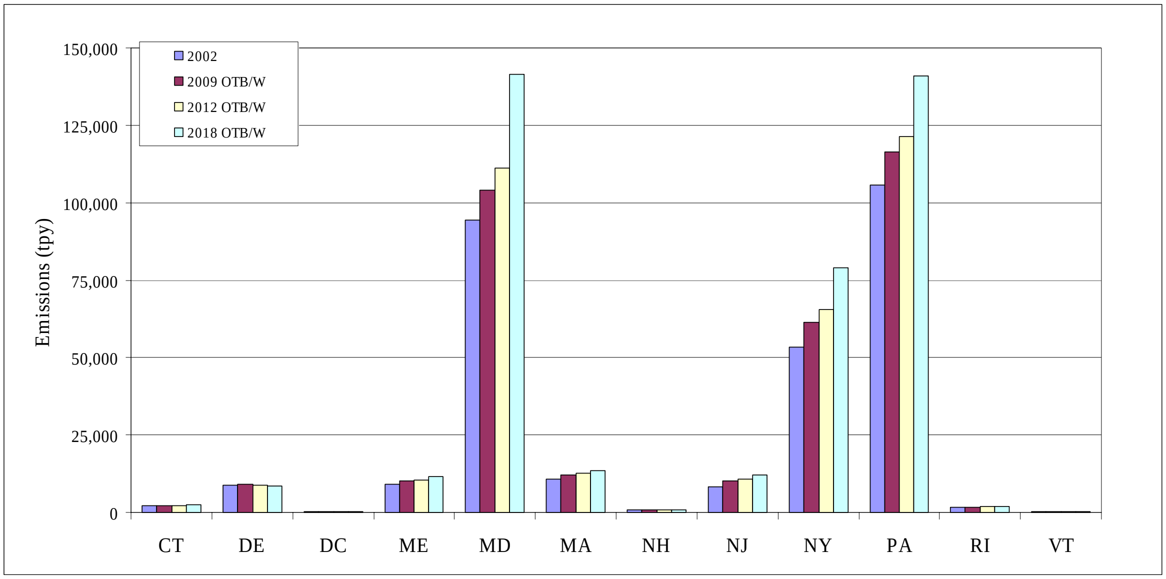


Table 2-3 NonEGU Point Sources
OTB/OTW Annual NH3 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	0	0	0	0
DE	153	145	138	134
DC	4	5	5	5
ME	700	796	809	859
MD	305	347	366	410
MA	462	510	521	563
NH	37	46	50	60
NJ	0	0	0	0
NY	1,027	1,081	1,128	1,296
PA	1,170	1,307	1,363	1,591
RI	58	64	68	68
VT	0	0	0	0
Total	**3,916**	**4,301**	**4,448**	**4,986**

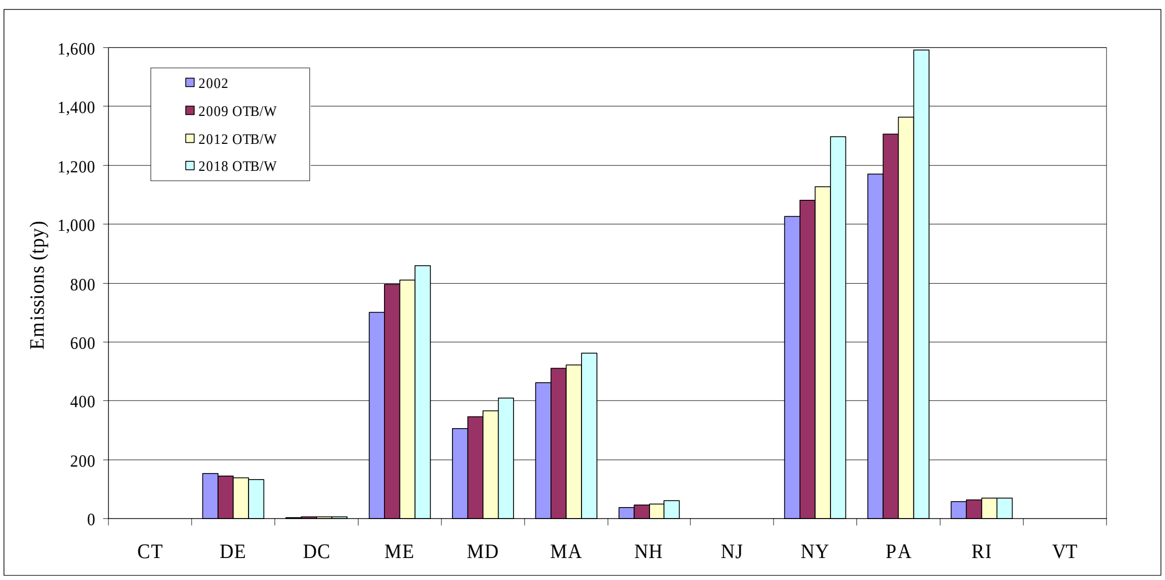


Table 2-4 NonEGU Point Sources
OTB/OTW Annual NOx Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	6,773	7,236	7,465	7,921
DE	4,372	4,076	4,135	4,246
DC	480	548	577	627
ME	12,108	14,285	14,661	15,753
MD	21,940	19,401	20,399	22,797
MA	18,292	20,603	21,372	23,040
NH	1,188	1,384	1,394	1,435
NJ	15,812	16,498	17,091	18,805
NY	34,253	33,648	34,586	37,133
PA	89,136	89,932	93,526	103,137
RI	2,308	2,449	2,471	2,442
VT	386	462	460	466
Total	**207,048**	**210,522**	**218,137**	**237,802**

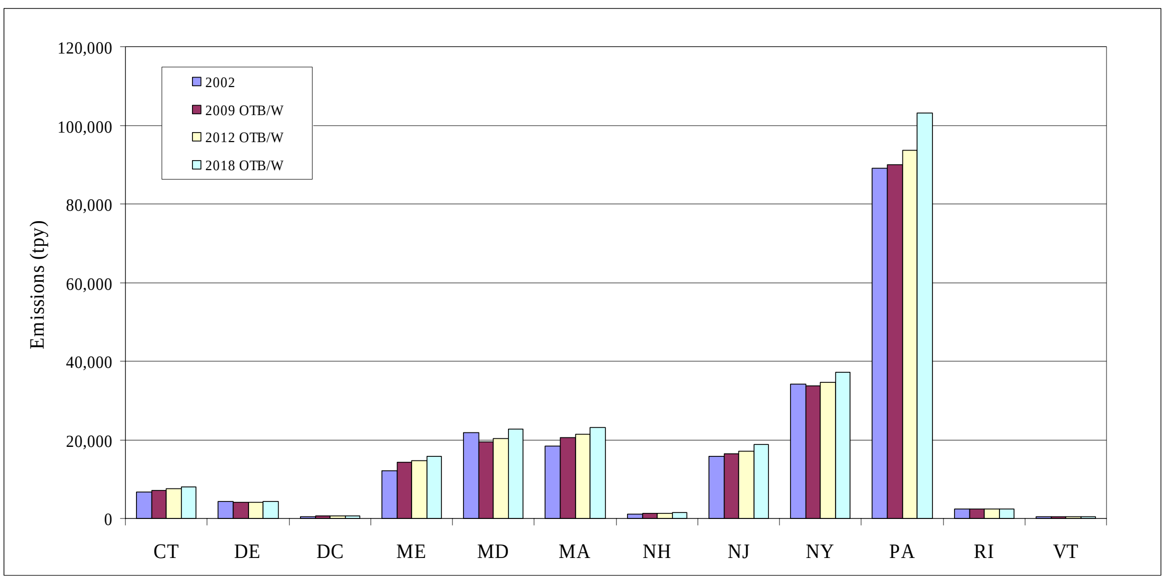


Table 2-5 NonEGU Point Sources
OTB/OTW Annual PM10-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	990	1,035	1,058	1,106
DE	1,820	1,486	1,475	1,487
DC	157	178	186	198
ME	6,120	7,088	7,133	7,496
MD	4,739	4,797	5,040	5,828
MA	4,212	5,006	5,088	5,314
NH	918	1,084	1,097	1,129
NJ	3,439	4,205	4,417	4,959
NY	5,072	5,221	5,444	6,098
PA	23,282	25,169	26,307	29,516
RI	296	333	331	330
VT	235	267	272	296
Total	**51,280**	**55,869**	**57,848**	**63,757**

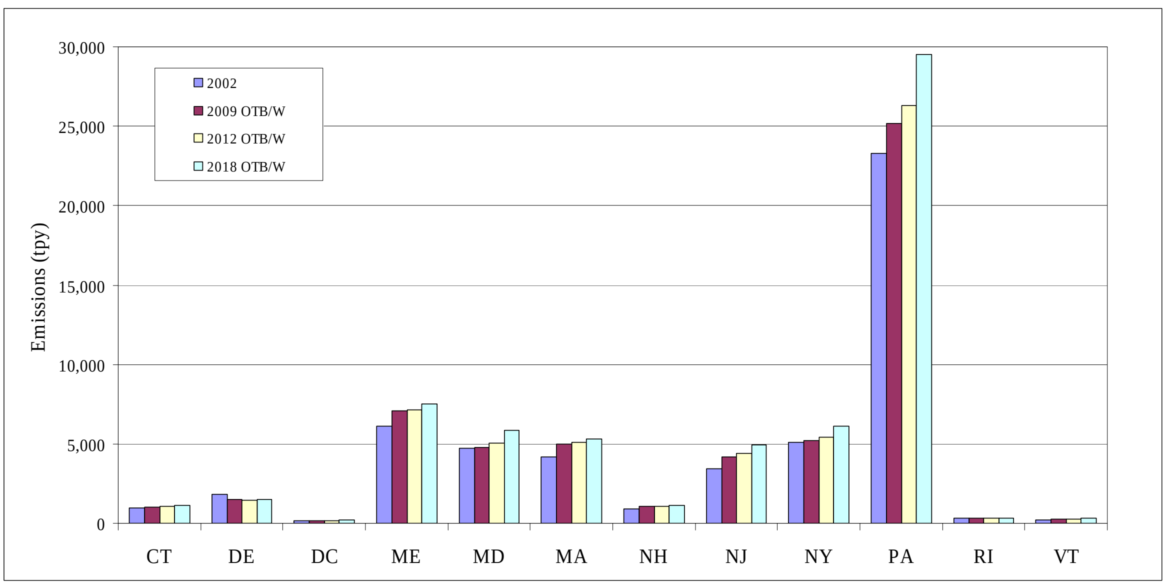


Table 2-6 NonEGU Point Sources
OTB/OTW Annual PM25-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	822	871	894	939
DE	1,606	1,256	1,245	1,254
DC	128	145	152	164
ME	4,899	5,675	5,690	5,935
MD	2,772	2,861	3,011	3,503
MA	2,953	3,554	3,574	3,660
NH	857	1,008	1,021	1,052
NJ	2,947	3,588	3,764	4,234
NY	3,355	3,535	3,688	4,161
PA	12,360	13,578	14,159	15,878
RI	180	200	198	194
VT	198	226	229	246
Total	**33,077**	**36,497**	**37,625**	**41,220**

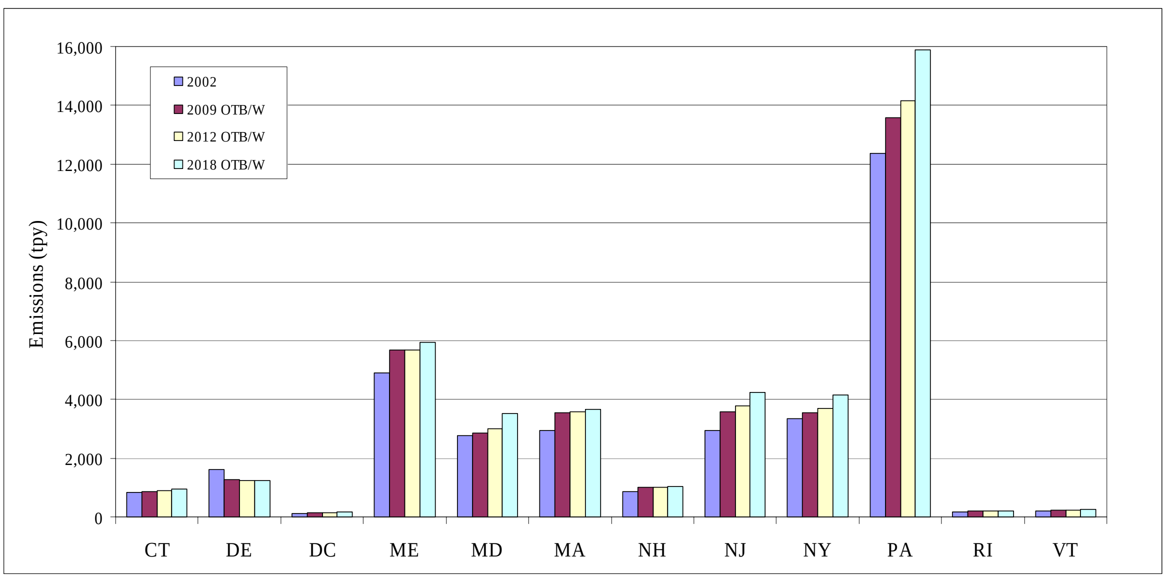


Table 2-7 NonEGU Point Sources
OTB/OTW Annual SO2 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	2,438	2,528	2,567	2,644
DE	35,706	7,117	7,401	7,610
DC	618	707	735	780
ME	14,412	18,656	18,492	18,794
MD	34,193	34,223	35,373	38,921
MA	14,766	18,185	18,442	18,955
NH	2,436	3,099	3,098	3,114
NJ	9,797	7,141	7,234	7,856
NY	58,227	62,922	64,484	67,545
PA	88,259	90,735	93,441	99,924
RI	2,651	3,163	3,182	3,164
VT	874	1,182	1,147	1,127
Total	**264,377**	**249,658**	**255,596**	**270,434**

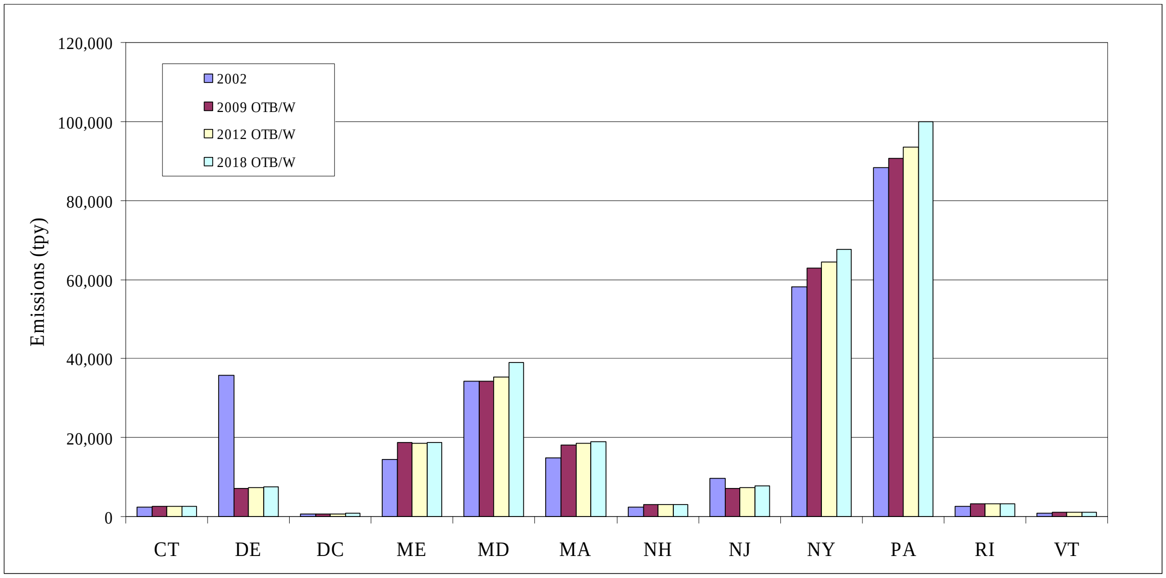
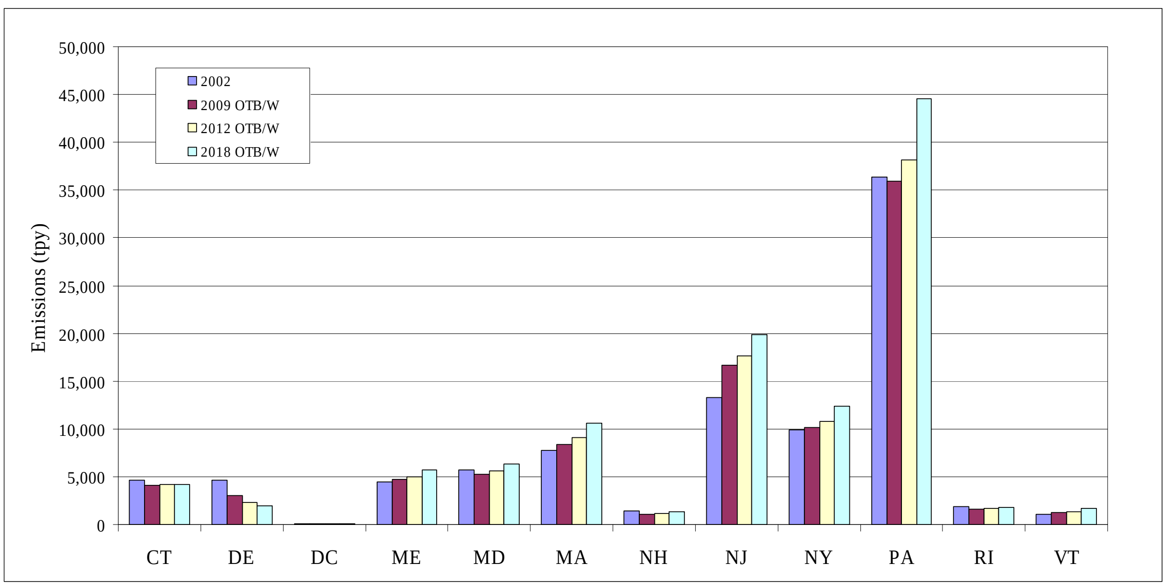


Table 2-8 NonEGU Point Sources
OTB/OTW Annual VOC Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	4,604	4,114	4,152	4,230
DE	4,645	2,987	2,311	1,993
DC	69	72	75	85
ME	4,477	4,740	4,985	5,709
MD	5,676	5,297	5,578	6,301
MA	7,794	8,381	9,061	10,564
NH	1,459	1,060	1,132	1,294
NJ	13,318	16,702	17,621	19,915
NY	9,933	10,157	10,750	12,354
PA	36,326	35,875	38,162	44,537
RI	1,898	1,640	1,695	1,812
VT	1,079	1,254	1,365	1,730
Total	**91,278**	**92,279**	**96,887**	**110,524**



3.0 AREA SOURCES

The area source sector is comprised of stationary sources that are small and numerous, and that have not been inventoried individually as specific point, mobile, or biogenic sources. Individual sources are typically grouped with other like sources into area source categories and the emissions are calculated on a county-by-county basis. Area source categories include residential/commercial/industrial fuel combustion; small industrial processes; solvent utilization (such as architectural coatings and consumer products); petroleum product storage and transport (such as gasoline service stations); waste disposal; and agricultural activities.

The procedures for projecting emissions for area sources are described in this section. We started with the MANE-VU 2002 area source emission inventory. We first applied growth factors to account for changes in population and economic activity. Next, we applied control factors to account for future emission reductions from on-the-books (OTB) control regulations and on-the-way (OTW) control regulations. The OTB control scenario accounts for post-2002 emission reductions from promulgated federal, State, local, and site-specific control programs as of June 15, 2005. The OTW control scenario accounts for proposed (but not final) control programs that are reasonably anticipated to result in post-2002 emission reductions. We then conducted a series of quality assurance steps to ensure the development of complete, accurate, and consistent emission inventories. We provided the inventories in three formats – the National Emission Inventory Input Format (NIF), SMOKE Inventory Data Analyzer (IDA) format, and SMOKE growth/control packets. We also prepared emission summary tables by state and pollutant. Each of these activities is discussed in this section.

3.1 INITIAL 2002 AREA SOURCE EMISSION INVENTORY

The starting point for the area source projections was Version 3 of the MANE-VU 2002 area source emission inventory (MANE-VU_2002_Area_040606.MDB). There were two updates to this version of the 2002 inventory in response to requests from the District of Columbia and Massachusetts. These changes, described in the following paragraphs, were used in preparing the 2009/2012/2018 projections.

After release of Version 3 of the MANE-VU 2002 inventory, the District of Columbia discovered a gross error in the 2002 residential, non-residential and roadway construction. They requested that the following values be used for the 2002 base year and as the basis for the 2009/2012/2018 projections:

SCC	Pollutant Code	2002 Annual Emissions (tpy)
2311010000	PM10-PRI	8.2933
	PM25-PRI	1.6587
2311020000	PM10-PRI	486.1951
	PM25-PRI	97.239
2311030000	PM10-PRI	289.8579
	PM25-PRI	57.9716

After release of Version 3 of the MANE-VU 2002 inventory, Massachusetts revised their inventory of area source heating oil emissions due to two changes: (1) SO2 emission factors were adjusted for the sulfur content from 1.0 to 0.03; and (2) use of the latest DOE-EIA 2002 fuel use data instead of the previous version used 2001. These two changes significantly altered the 2002 SO2 emissions for area source heating oil combustion. Massachusetts provided revised 2002 PE and EM tables, which MACTEC used in preparing the 2009/2012/2018 projection inventories.

3.2 AREA SOURCE GROWTH FACTORS

The area source growth factors were developed using three sets of data:

- The U.S. EPA's Economic Growth and Analysis System Version 5.0 (EGAS 5.0) using the default SCC configuration. EGAS 5.0 generates growth factors from REMI's 53 Sector Policy Insight Model Version 5.5, the U.S. Department of Energy (DOE) Annual Energy Outlook 2004 (AEO2004) fuel use projections, and national vehicle mile travel projections from EPA's MOBILE 4.1 Fuel Combustion Model;

- The DOE's Annual Energy Outlook 2005 (AEO2005) fuel consumption forecasts were used to replace the AEO2004 forecasts that are used as the default values in EGAS 5.0; and

- State-supplied population, employment, and other emission projection data.

The priority for applying these growth factors was to first use the state-supplied projection data (if available). If no state-supplied data are available, then we used the AEO2005 projection factors for fuel consumption sources. If data from these two sources were not available, we used the EGAS 5.0 default SCC configuration. Appendix C lists the area source growth factors used for this study.

3.2.1 EGAS 5.0 Growth Factors

EGAS is an EPA-developed economic and activity forecast tool that provides credible growth factors for developing emission inventory projections. Growth factors are generated using national- and regional-economic forecasts. For nonEGUs, the primary economic activity data sets in EGAS 5.0 are:

- State-specific growth rates from the Regional Economic Model, Inc. (REMI) Policy Insight® model, version 5.5. The REMI socioeconomic data (output by industry sector, population, farm sector value added, and gasoline and oil expenditures) are available by 4-digit SIC code at the State level.
- Energy consumption data from the DOE's Energy Information Administration's (EIA) *Annual Energy Outlook 2004, with Projections through 2025* for use in generating growth factors for non-EGU fuel combustion sources. These data include regional or national fuel-use forecast data that were mapped to specific SCCs for the non-EGU fuel use sectors (e.g., commercial coal, industrial natural gas). Growth factors are reported at the Census division level. These Census divisions represent a group of States (e.g., the South Atlantic division includes Delaware, the District of Columbia, and Maryland; the Middle Atlantic division includes New Jersey, New York, and Pennsylvania; the New England division includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont). Although one might expect different growth rates in each of these States due to unique demographic and socioeconomic trends, all States within each division received the same growth rate.

EGAS uses these economic activity datasets and a set of cross-reference files to generate growth factors by Standard Industrial Classification (SIC) code, Source Classification Code (SCC), or Maximum Achievable Control Technology (MACT) codes. Growth factors for 2009, 2012, and 2018 were calculated using 2002 as the base year at the State and SCC level. County-specific growth factors are not available in EGAS 5.0.

There were several SCCs in the MANE-VU 2002 inventory that are not included in the EGAS 5.0 files. As a result, EGAS did not generate growth factors for those SCCs. MACTEC assigned growth factors for the missing SCCs by assigning a surrogate SCC that best represented the missing SCC.

3.2.2 AEO2005 Growth Factors

The default version of EGAS 5.0 uses the DOE's AEO2004 forecasts. We replaced these data with the more recent AEO2005 forecasts to improve the emissions growth factors produced. Using ACCESS, we created a copy of the "DOE EGAS 5" dataset. The dataset includes three tables. One table contains the projection data values from 2001-2025. The other two tables are the MACT and SCC crosswalk tables. The crosswalk tables are linked to the projection table via a "model code". Using the copy of AEO2004 data, we updated the corresponding projection tables with data from the AEO2005 located at: http://www.eia.doe.gov/oiaf/aeo/supplement/supref.html . Using the data and descriptions from the new tables, we matched the projection data to the appropriate model codes and then built a table identical to the DOE EGAS 5 dataset with the new 2005 AEO data. The resulting ACCESS dataset contains a projection data table with the exact same structure as the original except with the new data. The SCC and MACT crosswalks did not require any updates since the model code assignments were not changed in the new data table.

3.2.3 State Specific Growth Factors

In addition to the growth data described above, we received growth projections from several MANE-VU states to be used instead of the default EGAS or AEO2005 growth factors. The following paragraphs describe the area source growth factors used for each state.

3.2.3.1 Connecticut

Connecticut provided state-level population projections for 2009, 2012, and 2018. We created growth factors for those SCCs that are population based using the state-supplied data. Connecticut also provided state-level employment projections for industry categories analogous to 2-digit SIC codes. Projections were provided for 2009, 2012, and 2018. We matched these industry groupings to SCC codes in order to create SCC specific growth factors for area sources. Emissions from area source fuel combustion were projected using the AEO2005 forecasts.

3.2.3.2 Delaware

Delaware provided county-level population projections (*Delaware Population Consortium Annual Population Projections*, Oct 18, 2001 Version 2001.0) for 2000, 2005, 2010, 2015, and 2020. We interpolated these data to get growth factors for projection from 2002 to 2009, 2012, and 2018 for those SCCs that are population based. Delaware also provided state-level employment data by NAICS codes for 2002 and 2012. We interpolated values for 2009 and 2018. We matched these industry groupings to SCC codes in order to create SCC specific growth factors for selected area sources. Emissions from area source fuel combustion were projected using the AEO2005 forecasts.

3.2.3.3 District of Columbia

DC provided local growth factors for projecting emissions from 2002 to 2009, 2012, and 2018 for all area source SCCs except fuel combustion sources. Emissions from area source fuel combustion were projected using the AEO2005 forecasts.

3.2.3.4 Maine

Maine indicated that it preferred to use the EGAS 5.0 growth factors and the DOE's 2005 Annual Energy Outlook data for combustion sources.

3.2.3.5 Maryland

Maryland provided growth factors by SCC for all counties in the State. These growth factors were derived from a variety source sources, including the MWCOG Cooperative Forecast 7.0, the BMC Round 6A Cooperative Forecast (prepared by the MD Dept. of Planning, May 2004), and EGAS 5.0.

3.2.3.6 Massachusetts

Massachusetts provided county-level population data for the years 2000, 2010, and 2020. We interpolated these data to get growth factors for projection from 2002 to 2009, 2012, and 2018 for those SCCs that are population based. Massachusetts also provided growth factors for several SCCs based on employment data for the years 2000 and 2010. We interpolated these data to get growth factors for projection from 2002 to 2009, 2012, and 2018. Massachusetts agreed on the use of the AEO2005 forecasts for projecting emissions from area source fuel combustion.

3.2.3.7 New Hampshire

New Hampshire agreed to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

3.2.3.8 New Jersey

New Jersey provided growth factors for most SCCs for all counties in the State. When state-specific growth factors were not available, we used the AEO2005 forecasts for projecting emissions from area source fuel combustion and EGAS default factors for any remaining categories.

3.2.3.9 New York

New York provided county-level population data for 2002 and projections/growth factors for 2009, 2012, and 2018. We used these growth factors for those SCCs that are population based. We used the AEO2005 forecasts for projecting emissions from area source fuel combustion and EGAS default factors for any remaining categories.

3.2.3.10 Pennsylvania

Pennsylvania provided county-level population data for 2000 and projections for 2010 and 2020. We interpolated these data to get growth factors for projecting from 2002 to 2009, 2012, and 2018 for those SCCs that are population based. Pennsylvania also provided general employment data for 21 counties or area for 2000 and projections for 2010 and 2020. We interpolated these data to get growth factors for projecting from 2002 to 2009, 2012, and 2018 for nine area source categories identified by Pennsylvania. For all other area source categories, we used the AEO2005 forecasts for projecting emissions from area source fuel combustion and EGAS default factors for any remaining categories.

3.2.3.11 Rhode Island

Rhode Island provided county-level population projections for 2000, 2005, 2010, 2015, and 2020. We interpolated these data to get growth factors for projection from 2002 to 2009, 2012, and 2018 for those SCCs that are population based. Rhode Island provided state-level employment data from the Department of Labor and Training by 3-digit NAICS codes for 2002 and 2012. We used these data to calculate the growth factor from 2002 to 2012 and interpolated these data to derive growth factors for 2009 and 2018. We matched these industry NAICS groupings to SCC codes in order to create SCC specific growth factors for area sources. Rhode Island agreed on the use of the AEO2005 forecasts for projecting emissions from area source fuel combustion.

3.2.3.12 Vermont

Vermont agreed to use the EGAS 5.0 growth factors, with the enhancement of using the DOE's 2005 Annual Energy Outlook data for combustion sources.

3.3 AREA SOURCE CONTROL FACTORS

We developed control factors to estimate emission reductions that will result from on-the-books regulations that will result in post-2002 emission reductions and proposed regulations or actions that will result in post-2002 reductions. Control factors were developed for the following national or regional control measures:

- OTC VOC Model Rules
- Federal On-board Vapor Recovery
- New Jersey Post-2002 Area Source Controls
- Residential Woodstove NSPS

3.3.1 OTC 2001 VOC Model Rules

Most of the MANE-VU States have adopted (or will soon adopt) the Ozone Transport Commission (OTC) model rules for five area source VOC categories: consumer products, architectural and industrial maintenance (AIM) coatings, portable fuel containers, mobile equipment repair and refinishing (MERR), and solvent cleaning. Information on the percent reduction anticipated by each model rule was obtained from Table II-6 of *Control Measure Development Support Analysis of Ozone Transport Commission Model Rules* (E.H. Pechan & Associates, Inc., March 31, 2001). This set of model rules will be referred to as the "OTC 2001 model rules" in this document. Information as to whether a particular state has adopted (or will soon adopt) a particular measure was obtained form the Status Report on OTC States' Efforts to Promulgate Regulations Based on OTC Model Rules (As of June 1, 2005, as posted on the OTC web site). For all categories, except portable fuel containers (see discussion below), we assumed that the rules would be fully implemented by <u>all states by 2009</u>. Some states had already adopted some the OTC 2001 Model Rules in 2002 or already had similar rules in place in 2002. The 2002 emission inventory for those states already reflected the emission reductions expected from the OTC 2001 Model Rule level of control. For those states and categories, no incremental reductions were applied for to the future year projections, as indicated Table 3-1.

For consumer products, the 2001 OTC model rule was estimated to provide a 14.2 percent VOC emissions reductions from the Federal Part 59 rule. Most, but not all, states in the OTR have adopted the OTC 2001 model rule for consumer products. For this inventory, it was assumed that all OTC states would adopt the 2001 OTC model rule prior to 2009. Thus, the 14.2 percent control factor was applied uniformly to all states in the 2009, 2012, and 2018 projection inventories.

For AIM coatings, the 2001 OTC model rule was estimated to provide a 31 percent VOC emissions reduction from the Federal Part 59 rule. Most, but not all, states in the OTR have adopted the OTC 2001 model rule for AIM coatings. For this inventory, it was assumed that all OTC states would adopt the 2001 OTC model rule prior to 2009. Thus, this control factor was applied uniformly to all states, with one exception. Maine adopted the OTC model rule with an alternative VOC content limit for varnishes and interior wood clear and semitransparent wood stains. As a result, Maine estimated that reductions from AIM coatings should be modeled using a 29.5 percent control factor instead of the 31 percent estimated for the OTC 2001 model rule.

For portable fuel containers, the 2001 OTC model rule was estimated to provide a 75 percent reduction in VOC emissions at the end of an assumed 10-year phase-in period as

Table 3-1 Adoption Matrix for 2001 OTC Model Rules

State	Consumer Products	AIM Coatings	Portable Fuel Containers	Mobile Equipment Repair and Refinishing	Solvent Cleaning
CT	Yes	Yes	Yes	Yes	Yes
DE	Yes	Yes	Yes	Yes	No
DC	Yes	Yes	Yes	Yes	No
ME	Yes	Yes	Yes	Yes	Yes
MD	Yes	Yes	Yes	No	No
MA	Yes	Yes	Yes	No	* (7%)
NH	Yes	Yes	Yes	Yes	Yes
NJ	Yes	Yes	Yes	Yes	** (17%)
NY	Yes	Yes	Yes	Yes	Yes
PA	Yes	Yes	Yes	No	No
RI	Yes	Yes	Yes	Yes	Yes
VT	Yes	Yes	Yes	Yes	No

Yes – apply incremental reductions in future years
No – OTC Model Rule reductions already accounted for in 2002 inventory; no incremental reductions applied to future years.
* MA is amending its existing Solvent/Degreasing rule and anticipates a 7% reduction from 2002 levels.
** NJ amended its existing Solvent/Degreasing rule and anticipates a 17% reduction from 2002 levels

older non-compliant containers are replaced with new compliant containers. The rule penetration (RP) depends on the assumed PFC estimated useful life and how quickly old non-compliant containers are replaced with new compliant containers. For the 2001 OTC model rule, the turnover from old to new containers is expected to be 10 percent per year. The MANEVU states have adopted the OTC 2001 model rule at different times, so the rule penetration will vary by State depending upon when the rule became effective in a given state. For example, compliant containers were required in Pennsylvania beginning on January 1, 2003. By the 2009 ozone season, there will be a 6.5 year turnover period for compliant PFCs in Pennsylvania. By contrast, compliant containers in New Jersey were not required until January 1, 2005. Thus, by the 2009 ozone season, there will be a 4.5 year turnover period for compliant PFCs. Table 3.2 shows the effective date for compliant containers by state, along with the rule penetration factors and overall control efficiency. There are different rule penetration factors for the three inventory years because of the increased penetration of compliant containers into the marketplace. By 2018, 100 percent compliance is assumed.

Table 3-2 Rule Penetration and Control Efficiency Values for 2001 OTC Model Rule for PFCs

Rule Compliance Date	States with this Compliance Date	Control Efficiency (%)	Rule Penetration (%)	Overall Control Efficiency (%)
Control Factor for 2009 Inventory				
2003	MD, NY, PA	75	65	48.8
2004	CT, DE, DC, ME	75	55	41.3
2005	NJ	75	45	33.8
2006	NH	75	35	26.3
2007*	MA, RI, VT	75	25	18.8
Control Factor for 2012 Inventory				
2003	MD, NY, PA	75	95	71.3
2004	CT, DE, DC, ME	75	85	63.8
2005	NJ	75	75	56.3
2006	NH	75	65	48.8
2007*	MA, RI, VT	75	55	41.3
Control Factor for 2018 Inventory				
2003	MD, NY, PA	75	100	75.0
2004	CT, DE, DC, ME	75	100	75.0
2005	NJ	75	100	75.0
2006	NH	75	100	75.0
2007*	MA, RI, VT	75	100	75.0

* The 2001 OTC model rule is not yet effective. It was assumed to become effective January 1, 2007 for the MANEVU modeling inventory. Massachusetts' rule actually will not become effective until 2009 and is based only on the OTC 2006 model rule; Massachusetts will not adopt the OTC 2001 model rule.

The emission reductions from the 2001 OTC PFC model rule were calculated only for the emissions accounted for in the area source inventory. Additional benefits (not estimated for this report) would be expected from equipment refueling vapor displacement and spillage that is accounted for in the nonroad inventory.

For mobile equipment repair and refinishing, the 2001 OTC model rule was estimated to provide a 38 percent VOC emissions reductions from the Federal Part 59 rule (35% for paint application and 3% for cleaning operations). Most, but not all, states in the OTR have adopted the OTC 2001 model rule for MERR or already had similar rules in effect in

2002. For this inventory, it was assumed that all OTC states would adopt the 2001 OTC model rule prior to 2009 or have similar rules in effect. For those states (MD, MA, PA) that had similar rules in effect in 2002 or earlier, no incremental reductions were applied since it was assumed that the effects of the state rule were already accounted for in the 2002 inventory. New Jersey indicated that a 19 percent control factor should be used for VOC emissions from MERR in New Jersey. For all other states, the OTC 2001 Model Rule control factor of 38 percent was applied.

For solvent cleaning, the 2001 OTC model rule was estimated to provide a 66 percent VOC emissions reductions. Most, but not all, states in the OTR have adopted the OTC 2001 model rule for solvent cleaning or already had similar rules in effect in 2002. For this inventory, it was assumed that all OTC states would adopt the 2001 OTC model rule prior to 2009 or have similar rules in effect. For those states (DE, DC, MD, PA, VT) that had similar rules in effect in 2002 or earlier, no incremental reductions were applied since it was assumed that the effects of the state rule were already accounted for in the 2002 inventory. Massachusetts indicated that some portion of the reductions resulting from the OTC 2001 model rule were already accounted for in their 2002 emissions, but that the state anticipated an additional 7 percent reduction from anticipated amendments. New Jersey indicated that a 17 percent control factor should be used for VOC emissions from solvent cleaning in New Jersey. For all other states (CT, ME, NH, NY, RI), the OTC 2001 Model Rule control factor of 66 percent was applied.

Table D-1 in Appendix D shows the anticipated percent reductions by state, SCC, and year from implementation of the OTC 2001 VOC Model Rules.

3.3.2 On-Board Vapor Recovery

The U.S. EPA issued regulations requiring onboard vapor recovery (ORVR) standards for the control of vehicle refueling emissions in 1994. ORVR works by routing refueling vapors to a carbon canister on the vehicle and are expected to achieve from 95-98 percent reduction in VOC emissions for those vehicles equipped with ORVR. ORVR is required to be installed on some new light-duty gasoline vehicles in 1998, and all new light-and medium-duty automobiles and trucks will be required to have ORVR installed by 2006.

For the Lake Michigan Air Directors Consortium, E.H. Pechan made estimates of emission reductions as they grow over time due to increased rule penetration. The following discussion describes how the on-board vapor recovery control factors were developed (email from Maureen Mullen, E.H. Pechan):

> "Onroad refueling control factors were calculated based on the percentage difference between the projection year (2007, 2008, 2009, 2012, and 2018) MOBILE6 refueling emission factors and the 2002 MOBILE6 refueling emission factors.
>
> MOBILE6 emission factors were calculated at January and July temperature and fuel conditions. July emission factors were used as the surrogate for the five-month ozone season (May through September) and the January emission factors were used as the surrogates for the remaining seven months. Temperatures modeled were the January and July average daily monthly maximum and minimum temperatures for each State, based on 30-year average temperature data, as used in EPA's second Section 812 Prospective analysis. Within a State, MOBILE6 input files were created for each unique combination of: January and July RVP, RFG, oxygenated fuel, and Stage II control programs. Fuel data was based on 2002 data, also as used in the Section 812 analysis. Information on Stage II control programs and control efficiencies were provided by EPA, as included in the draft 2002 NEI. Using these same temperature inputs, fuel inputs, and Stage II control inputs (where applicable), Pechan calculated MOBILE6 emission factors for calendar years 2002, 2007, 2008, 2009, 2012, and 2018.
>
> The resulting MOBILE6 emission factors were first weighted according to the default MOBILE6 VMT mix to determine the weighted average refueling emission factor for all gasoline vehicle types. The resulting January and July emission factors were weighted together according to the number of days in the seven-month season (212 days) and the five-month ozone season (153). After this was done for all of the modeled years and State or sub-State areas, the overall control efficiency for refueling, due to fleet turnover, was calculated based on the percentage difference between the 2002 and corresponding projection year emission factors. These control efficiencies were then assigned to individual counties, based on the mapping of fuel and Stage II control parameters to those modeled in the MOBILE6 files."

These projections were made on a county-by-county basis. Table D-2 shows the anticipated percent reductions by county, SCC, and year.

3.3.3 Post-2002 Area Source Controls in New Jersey

New Jersey made gasoline transfer provision amendments at N.J.A.C. 7:27-16.3. The Stage I portion of the amendments are expected to result in emissions reductions of 23.2 percent from the 2002 baseline. This is based on a control efficiency of 29 percent and a rule effectiveness of 80 percent. The State II portion of the amendments are already incorporated into the inventory through the MOBILE6 inputs.

New Jersey also made amendments to ICI boiler provisions at N.J.A.C. The amendments require any ICI boiler has a maximum gross heat input rate of at least 5 mmBTU/hour, whether or not it is located at a major NO_x facility, to conduct annual tune-ups. In the support documentation for this rule amendment, New Jersey estimated that the tune-ups would result in a 25 percent reduction in NOx emissions.

3.3.4 Residential Wood Combustion

Control factors were evaluated to account for the replacement of retired woodstoves that emit at pre-new source performance standard (NSPS) levels. We used EPA's latest methodology provided by Marc Houyoux of EPA/OAQPS. This methodology uses a combination growth and control factor and is based on activity not pollutant. The growth and control are accounted for in a single factor the SCCs split out the controlled and uncontrolled equipment. The control is indirectly incorporated based on which stove is used. The combined growth and control rates are as follows:

- Fireplaces increase 1%/yr
- Old woodstoves (non-EPA certified) decrease 2%/yr
- New woodstoves (EPA certified) increase 2%/yr

The data to support these rates were collected as part of the woodstove change-out program development in OAQPS. Table D-3 shows the anticipated percent changes by SCC and year.

3.4 AREA SOURCE QA/QC REVIEW

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, to ensure that a full and complete inventory was developed for MANE-VU, and to make sure that projection calculations were working correctly. Quality assurance was an important component to the inventory development process and MACTEC performed the following QA steps on the area source components of the 2009/2012/2018 projection inventories:

1. State agencies reviewed the draft growth and control factors in the summer of 2005. Changes based on these comments were implemented in the files.
2. SCC level emission summaries were prepared and evaluated to ensure that emissions were consistent and that there were no missing sources. Tier comparisons (by pollutant) were developed between the revised 2002 base year inventory and the 2009/2012/2018 projection inventories.
3. Emission inventory files in NIF format were provided for state agency review and comment. Changes based on these comments were implemented.
4. All final files were run through EPA's Format and Content checking software.

3.5 AREA SOURCE NIF, SMOKE AND SUMMARY FILES

The Version 3 file names and descriptions delivered to MARAMA are shown in Table 3-3.

3.6 AREA SOURCE EMISSION SUMMARIES

Emission summaries by state, year, and pollutant are presented in Tables 3-4 through 3-10 for CO, NH3, NOx, PM10-PRI, PM25-PRI, SO2, and VOC, respectively.

Table 3-3 Area Source NIF, IDA, and Summary File Names

File Name	Date	Description
MANEVU_OTB2009_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2009 OTB area source NIF inventory
MANEVU_OTB2012_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2012 OTB area source NIF inventory
MANEVU_OTB2018_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2018 OTB area source NIF inventory
MANEVU_OTB2009_Area_IDAV3_2.txt	Nov. 20, 2006	Version 3.2 of 2009 OTB area source inventory in SMOKE IDA format
MANEVU_OTB2012_Area_IDAV3_2.txt	Nov. 20, 2006	Version 3.2 of 2012 OTB area source inventory in SMOKE IDA format
MANEVU_OTB2018_Area_IDA3V_2.txt	Nov. 20, 2006	Version 3.2 of 2018 OTB area source inventory in SMOKE IDA format
MANEVU OTB BOTW Area V3_2 State Summary.xls	Nov. 8, 2006	Spreadsheet with state totals by pollutant for all area sources
MANEVU OTB BOTW Area V3_2 State SCC Summary.xls	Nov. 8, 2006	Spreadsheet with SCC totals by state and pollutant for all area sources.

Table 3-4 Area Sources
OTB/OTW Annual CO Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	70,198	65,865	63,874	59,797
DE	14,052	15,395	15,233	14,864
DC	2,300	2,417	2,460	2,512
ME	109,223	102,743	99,877	94,181
MD	141,178	143,653	144,233	144,649
MA	137,496	132,797	130,255	125,205
NH	79,647	76,504	75,319	73,038
NJ	97,657	90,432	88,048	83,119
NY	356,254	336,576	327,118	307,659
PA	266,935	266,887	264,012	257,396
RI	8,007	8,007	8,026	8,024
VT	43,849	42,683	42,172	41,283
Total	**1,326,796**	**1,283,959**	**1,260,627**	**1,211,727**

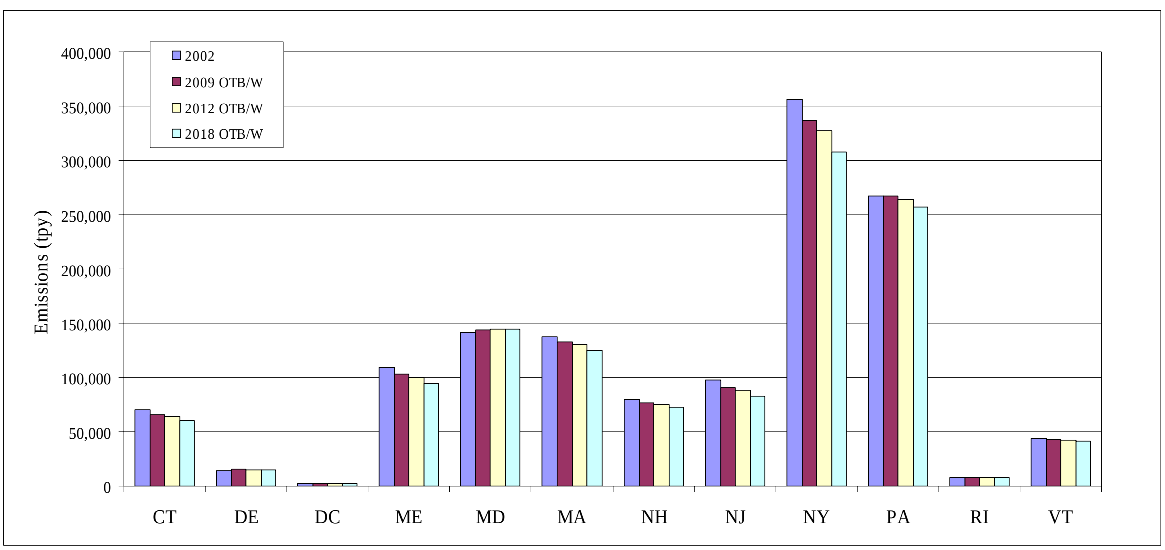


Table 3-5 Area Sources
OTB/OTW Annual NH3 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	5,318	5,208	5,156	5,061
DE	13,279	13,316	13,328	13,342
DC	14	16	16	17
ME	8,747	10,453	11,116	12,312
MD	25,834	31,879	34,222	38,155
MA	18,809	19,131	19,275	19,552
NH	2,158	2,466	2,584	2,789
NJ	17,572	19,457	20,154	21,435
NY	67,422	81,626	87,116	96,078
PA	79,911	98,281	105,418	117,400
RI	883	945	972	1,025
VT	9,848	12,156	13,062	14,580
Total	**249,795**	**294,934**	**312,419**	**341,746**

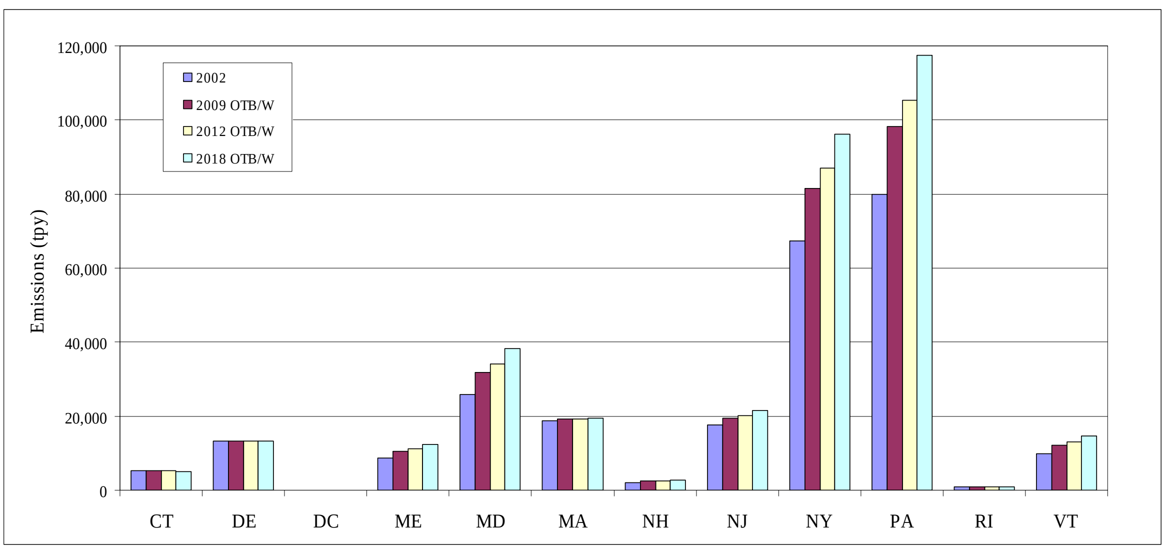


Table 3-6 Area Sources
OTB/OTW Annual NOx Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	12,689	13,173	13,342	13,388
DE	2,608	2,821	2,913	3,014
DC	1,644	1,961	2,081	2,259
ME	7,360	7,477	7,486	7,424
MD	15,678	16,858	17,315	18,073
MA	34,281	35,732	36,331	37,187
NH	10,960	11,879	12,055	12,430
NJ	26,692	24,032	23,981	23,660
NY	98,803	106,375	107,673	108,444
PA	47,591	50,162	50,793	50,829
RI	3,886	4,149	4,260	4,397
VT	3,208	3,419	3,429	3,430
Total	**265,400**	**278,038**	**281,659**	**284,535**

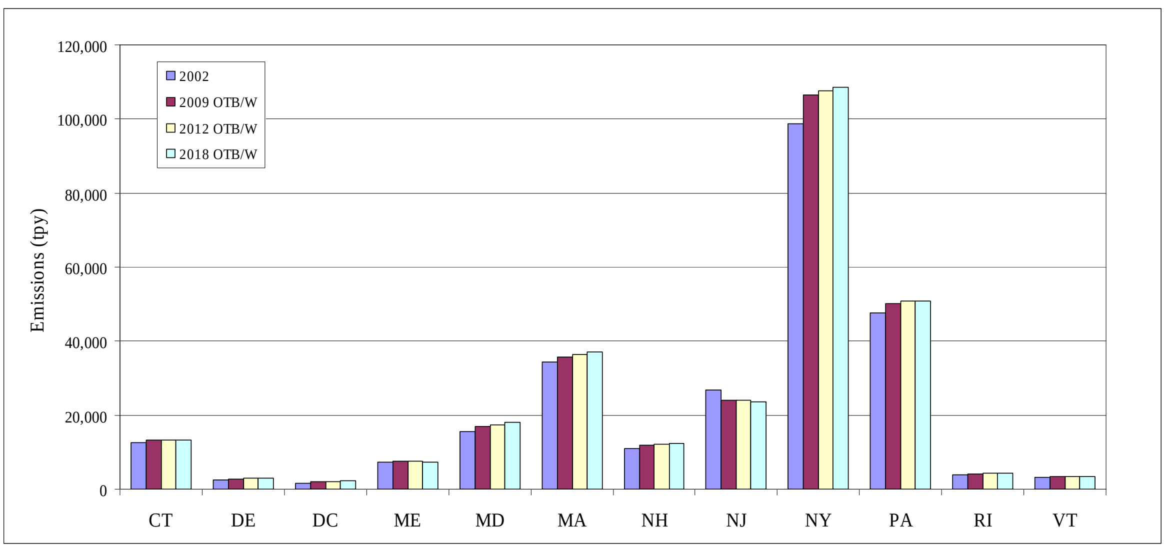


Table 3-7 Area Sources
OTB/OTW Annual PM10-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	48,281	48,970	49,004	49,479
DE	13,039	13,928	14,236	14,844
DC	3,269	3,511	3,605	3,825
ME	168,953	175,979	179,689	189,619
MD	95,060	105,944	110,141	117,396
MA	192,860	198,668	200,692	204,922
NH	43,328	46,060	47,187	49,801
NJ	61,601	61,684	61,284	60,880
NY	369,595	382,124	385,925	392,027
PA	391,897	421,235	432,844	454,970
RI	8,295	8,962	9,244	9,797
VT	56,131	60,521	62,465	66,916
Total	**1,452,309**	**1,527,586**	**1,556,316**	**1,614,476**

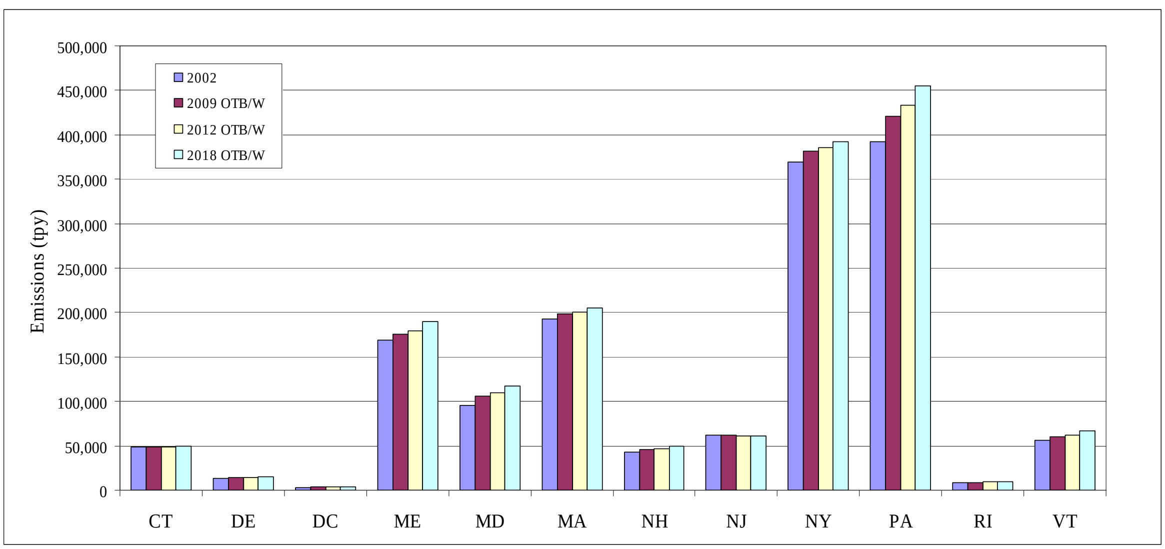


Table 3-8 Area Sources
OTB/OTW Annual PM25-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	14,247	13,766	13,517	13,033
DE	3,204	3,387	3,403	3,426
DC	805	860	879	917
ME	32,774	33,026	33,189	33,820
MD	27,318	28,923	29,508	30,449
MA	42,083	43,121	43,186	43,438
NH	17,532	17,965	18,050	18,316
NJ	19,350	18,590	18,271	17,653
NY	87,154	87,576	87,260	86,422
PA	74,925	79,169	80,728	83,570
RI	2,064	2,184	2,232	2,316
VT	11,065	11,482	11,652	12,059
Total	**332,521**	**340,049**	**341,875**	**345,419**

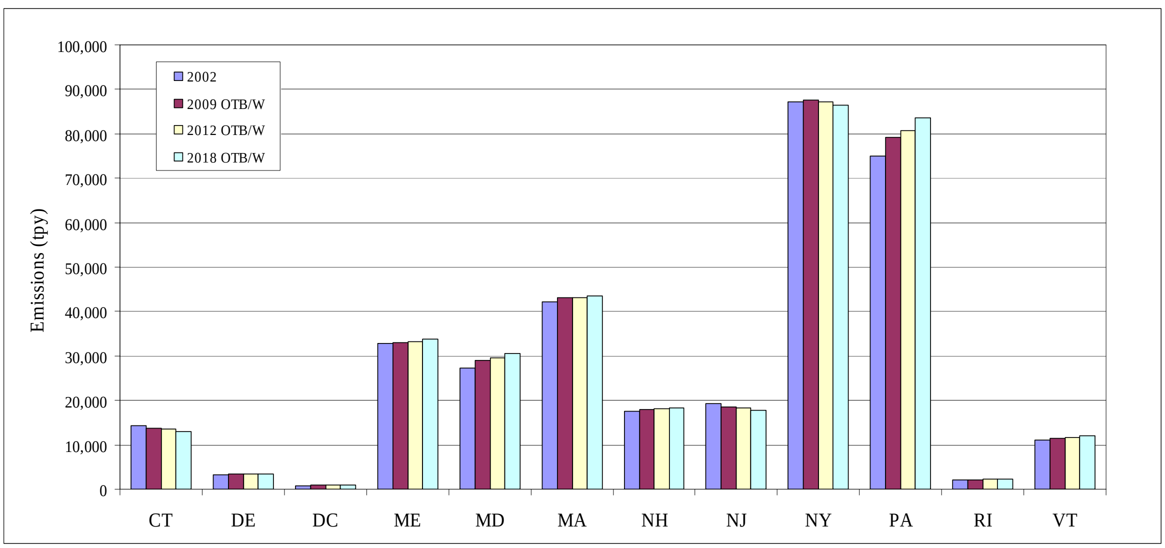


Table 3-9 Area Sources
OTB/OTW Annual SO2 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	12,418	12,581	12,604	12,184
DE	1,588	1,599	1,602	1,545
DC	1,337	1,487	1,541	1,632
ME	13,149	13,776	13,846	13,901
MD	12,393	13,685	14,074	14,741
MA	25,488	25,961	26,029	25,570
NH	7,072	7,463	7,470	7,421
NJ	10,744	10,672	10,697	10,510
NY	130,409	139,589	140,154	141,408
PA	63,679	67,535	67,446	66,363
RI	4,557	5,024	5,189	5,398
VT	4,087	4,646	4,687	4,764
Total	**286,921**	**304,018**	**305,339**	**305,437**

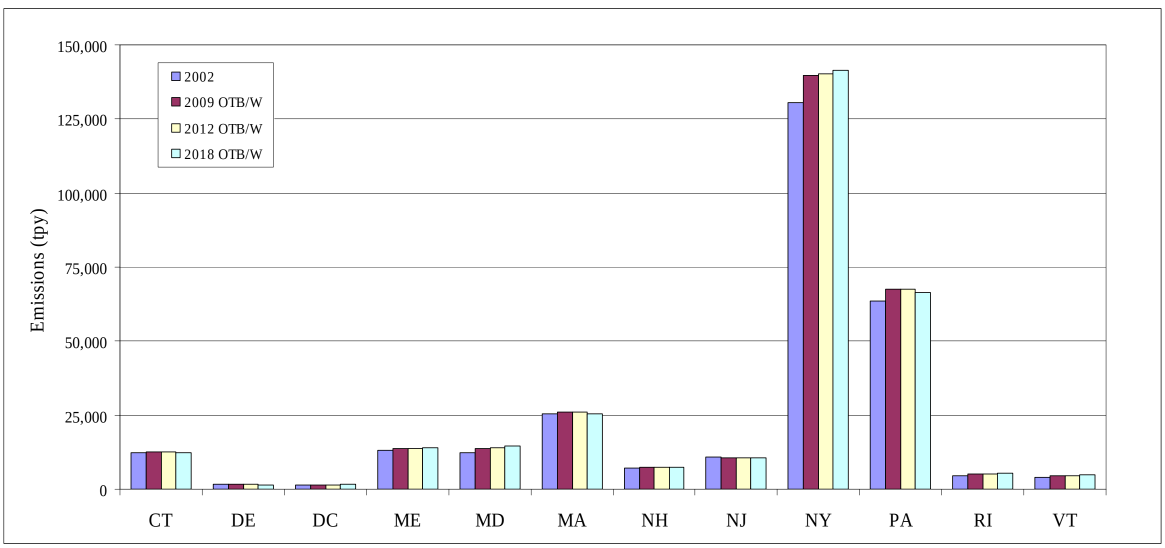
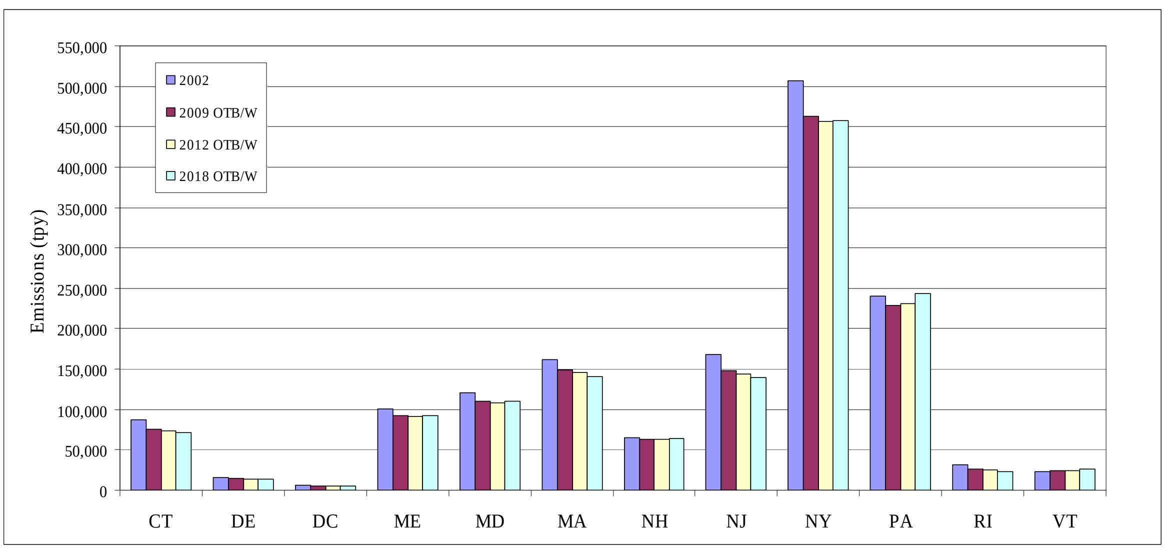


Table 3-10 Area Sources
OTB/OTW Annual VOC Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	87,302	75,693	73,560	71,274
DE	15,519	14,245	13,943	13,744
DC	6,432	5,420	5,352	5,255
ME	100,621	91,910	91,667	92,410
MD	120,254	110,385	108,067	110,046
MA	162,145	148,625	145,674	140,558
NH	65,370	63,069	63,356	64,368
NJ	167,882	147,617	143,752	139,626
NY	507,292	462,811	456,856	457,421
PA	240,785	228,444	230,393	243,421
RI	31,402	26,695	25,548	23,561
VT	23,265	24,068	24,635	26,198
Total	**1,528,269**	**1,398,982**	**1,382,803**	**1,387,882**



4.0 NONROAD SOURCES

The nonroad source sector is comprised of nonroad engines included in EPA's NONROAD model, as well as other nonroad engines not accounted for in the NONROAD model, including aircraft, commercial marine vessels, and locomotive engines. The sections that follow describe the projection process used to develop 2009/2012/2018 nonroad projection estimates for sources found in the NONROAD model and those sources estimated outside of the model (locomotives, airplanes and commercial marine vessels).

4.1 NONROAD MODEL SOURCES

NONROAD model source categories include equipment such as recreational boats and watercraft; recreational vehicles; farm, industrial, mining, and construction machinery; and lawn and garden equipment. Also included are aircraft ground support equipment and rail maintenance equipment. These equipment types are powered by engines using diesel, gasoline, compressed natural gas (CNG), and liquefied petroleum gas (LPG).

EPA released a revised version of NONROAD during December 2005 called NONROAD 2005. EPA's National Mobile Inventory Model (NMIM) is a consolidated modeling system that incorporates the NONROAD and MOBILE models, along with a county database of inputs. EPA also released an updated version of NMIM called NMIM2005, which incorporates the NONROAD2005 model.

MACTEC utilized the NMIM2005 model to develop projections for nonroad engines included in the NONROAD2005 model. Projected emission estimates were calculated using NMIM default data. Prior to starting the NMIM2005 runs, MACTEC confirmed with U.S. EPA's Office of Transportation and Air Quality (OTAQ) that the database used for fuel sulfur content, gas Reid Vapor Pressure (RVP) values and reformulated fuel programs was current and up to date for the MANE-VU region. The information received from OTAQ indicated that these values were the most current.

NMIM2005 runs were then developed for each projection year. These included 2009, 2012 and 2018. Emission calculations were made at the monthly level and consolidated to provide annual values. This enabled monthly temperatures and changes in reformulated gas to be captured by the program.

The NMIM/NONROAD2005 results in NIF 3.0, and ran EPA's QA checker program to verify that the NIF 3.0 files were properly constructed.

4.2 AIRCRAFT, COMMERCIAL MARINE, AND LOCOMOTIVES

Since aircraft, commercial marine vessels, and locomotives are not included in the NONROAD model, emission projections for these sources were developed separately. The starting point for the emission projections was Version 3 of the MANE-VU 2002 Nonroad emission inventory (*Documentation of the MANE-VU 2002 Nonroad Sector Emission Inventory, Version 3, Draft Technical Memorandum*, March 2006).

MACTEC's approach to developing emission projections for these sources was to use combined growth and control factors developed from emission projections for U.S. EPA's Clean Air Interstate Rule (CAIR) development effort. MACTEC obtained emission projections developed for the CAIR rule. We then calculated the combined growth and control factors by determining the ratio of emissions between 2002 and each of the MANE-VU projection years (2009, 2012, and 2018). The CAIR emissions were available for 2001, 2010, 2015 and 2020. Thus, we developed intermediate year estimates using linear interpolation between the actual CAIR years and the MANE-VU years.

Using this approach we developed State/county/SCC/pollutant growth/control factors for use in projecting the MANE-VU base year data to the year of interest. These values were then used to multiply times the base year value to obtain the projected values. Since the development of the CAIR factors included both growth and controls, no separate control factors were developed for these sources except where exceptions to this method were used for States that requested alternative growth/control methods (see below).

Once the CAIR factors were developed, MACTEC compared the SCCs contained in the CAIR inventory with those used in MANE-VU. In some cases there were differences. In cases where a similar SCC in the CAIR inventory could be assigned to the SCC in the MANE-VU inventory the State/County/SCC/pollutant growth and control factor for the substitute was assigned to the MANE-VU SCC. If no corresponding county SCC substitution could be found, a State or MANE-VU regional average value for the substitute SCC was developed and assigned for use in projecting emissions. The substitution scheme was to use State values first, then MANE-VU regional values if the State value couldn't be used.

This projection method was used with three exceptions. These exceptions were: 1) Maryland sources, 2) DC locomotive growth and controls and 3) Logan (Boston) airport. Each of these sources used alternative growth and/or controls provided by the States or developed from current Federal rules for these sources (applies to controls only). Each of these is discussed below.

4.2.1 Maryland Non-NONROAD Source Emissions

Maryland indicated that they would prefer to use EGAS growth factors coupled with Federal controls to determine projected emissions for these source categories. Maryland provided EGAS growth factors for use with these categories. Control values were developed based on Federal rules that were on the books.

For CMV, controls were developed based on data contained in Table 1.1-2 of the document "Final Regulatory Support Document: Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters per Cylinder," EPA420-R-03-004, January 2003. Values in that table were interpolated to develop emission estimates with and without controls for the MANE-VU years (and base year) and then control factors were calculated for those values. Only Category 3 marine engines were identified in the Maryland inventory and thus only NOx controls for those engines were developed.

For locomotives, control factors for different types of locomotives were developed using Tables 6-2 through 6-5 of the document "Locomotive Emission Standards: Regulatory Support Document," United States Environmental Protection Agency, Office of Mobile Sources, April 1998. Since these tables only showed PM controls, we assumed the same level of control for both PM-10 and PM-2.5. Controls for VOC, NOx and PM were developed using these tables.

In addition to engine specification controls for both CMV and locomotives, we also developed control factors resulting from changes to diesel fuel sulfur contents. The diesel fuel sulfur regulations were utilized to develop controls for SO2 and PM due solely to changing fuel sulfur requirements. Data from Tables 3.1-6a and 3.4-8a of the document "Final Regulatory Analysis: Control of Emissions from Nonroad Diesel Engines," EPA420-R-04-007, May 2004 were used to develop control levels created due to changes in fuel sulfur content. In cases where there were controls due to both engine technology and fuel sulfur reduction, we added the control efficiencies together to create a combined control efficiency. All control values are considered to be "additive". In other words, the controls applied are above those found in the base year. Thus the controls were used on the base year emission values without back-calculation to determine uncontrolled levels since the controls are in addition to those controls.

The control values were then applied along with the growth factors to the base year emissions for Maryland to produce the required emission projections.

4.2.2 DC Locomotive Emissions

The District of Columbia emission contact provided MACTEC with alternative growth factors for locomotive emissions. The growth factors provided were:

2002-2009	6.9%
2002-2012	9.9%
2002-2018	13.7%

Since the CAIR factors were combined growth and controls, the control factors developed for locomotives for Maryland (based on Federal control programs) were used to apply controls to the DC locomotive emissions. As was the case for Maryland, the control factors were "additive" and were used on the base year emission without back-calculating uncontrolled emissions since the control levels were relative to controls in place for 2002.

4.2.3 Logan (Boston) Airport Emissions

Massachusetts supplied historic and future year projections of operations at Logan Airport. The data covered the period 2000-2010. Since only one year of the period required for MANE-VU projections was included in that interval (2009), MACTEC developed estimates for 2012 and 2018 from those data by linear interpolation. Two linear interpolations were developed. The first used the entire data set (2000-2010) to develop a linear projection for 2012 and 2018 and a second using just the 2002-2010 data. For the final growth factors, MACTEC used the average of the two. These growth factors were then applied to commercial aircraft operations for Suffolk County (FIPS = 25025). The growth factors developed were:

2002-2009	1.184
2002-2012	1.22
2002-2018	1.33

No controls that would come on board for aircraft for the projection years were identified from a review of Federal programs.

4.3 NONROAD QA/QC REVIEW

Throughout the inventory development process, quality assurance steps were performed to ensure that no double counting of emissions occurred, to ensure that a full and complete inventory was developed for MANE-VU, and to make sure that projection calculations were working correctly. MACTEC performed the following QA steps on nonroad source projection inventories: (1) All final files (NONROAD only) were run through EPA's Format and Content checking software; SCC level emission summaries were prepared and evaluated to ensure that emissions were consistent with the 2002 projections and that there were no missing source categories or geographical areas.

4.4 NONROAD NIF, SMOKE, AND SUMMARY FILES

The Version 3.1 files delivered to MARAMA are shown in Table 4-1.

4.5 NONROAD EMISSION SUMMARIES

Table 4-2a shows the CO emissions by state and year for the entire nonroad sector. Table 4-2b presents the CO emission results for NONROAD model equipment only. Table 4-2c presents the CO emission results for only the aircraft, commercial marine vessel, and locomotive categories. Tables 4-3 to 4-8 present the emission results for the other criteria pollutants of interest.

Table 4-1 Nonroad Source NIF, IDA, and Summary File Names

File Name	Date	Description
MANEVU_OTB2009_NR_NIFV3_1.mdb	Oct. 23, 2006	Version 3.1 of 2009 nonroad source NIF inventory
MANEVU_OTB2012_NR_NIFV3_1.mdb	Oct. 23, 2006	Version 3.1 of 2012 nonroad source NIF inventory
MANEVU_OTB2018_NR_NIFV3_1.mdb	Oct. 23, 2006	Version 3.1 of 2018 nonroad source NIF inventory
MANEVU_OTB2009_NR_IDAV3_1.txt	Oct. 26, 2006	Version 3.1 of 2009 nonroad source inventory in SMOKE IDA format
MANEVU_OTB2012_NR_IDAV3_1.txt	Oct. 26, 2006	Version 3.1 of 2012 nonroad source inventory in SMOKE IDA format
MANEVU_OTB2018_NR_IDA3V_1.txt	Oct. 26, 2006	Version 3.1 of 2018 nonroad source inventory in SMOKE IDA format
MANEVU OTB Nonroad V3_1 State Summary.xls	Oct. 23, 2006	Spreadsheet with state totals by pollutant for all nonroad sources, NONROAD model sources, and aircraft, locomotives, and commercial marine vessels
MANEVU OTB Nonroad V3_1 State SCC Summary.xls	Oct. 23, 2006	Spreadsheet with SCC totals by state and pollutant for all nonroad sources, NONROAD model sources

Table 4-2a All Nonroad Sources
OTB/OTW Annual CO Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	276,773	282,788	288,061	303,764
DE	68,782	74,856	76,491	80,646
DC	18,845	20,746	21,306	22,429
ME	153,424	163,782	165,273	166,679
MD	437,400	497,276	513,737	550,795
MA	461,514	504,400	516,019	546,373
NH	130,782	142,318	143,804	147,544
NJ	704,396	753,916	777,069	831,880
NY	1,233,968	1,349,439	1,388,406	1,474,727
PA	931,978	1,031,816	1,058,256	1,119,247
RI	73,013	80,228	82,113	87,195
VT	62,248	68,360	69,003	70,074
Total	**4,553,124**	**4,969,925**	**5,099,538**	**5,401,353**

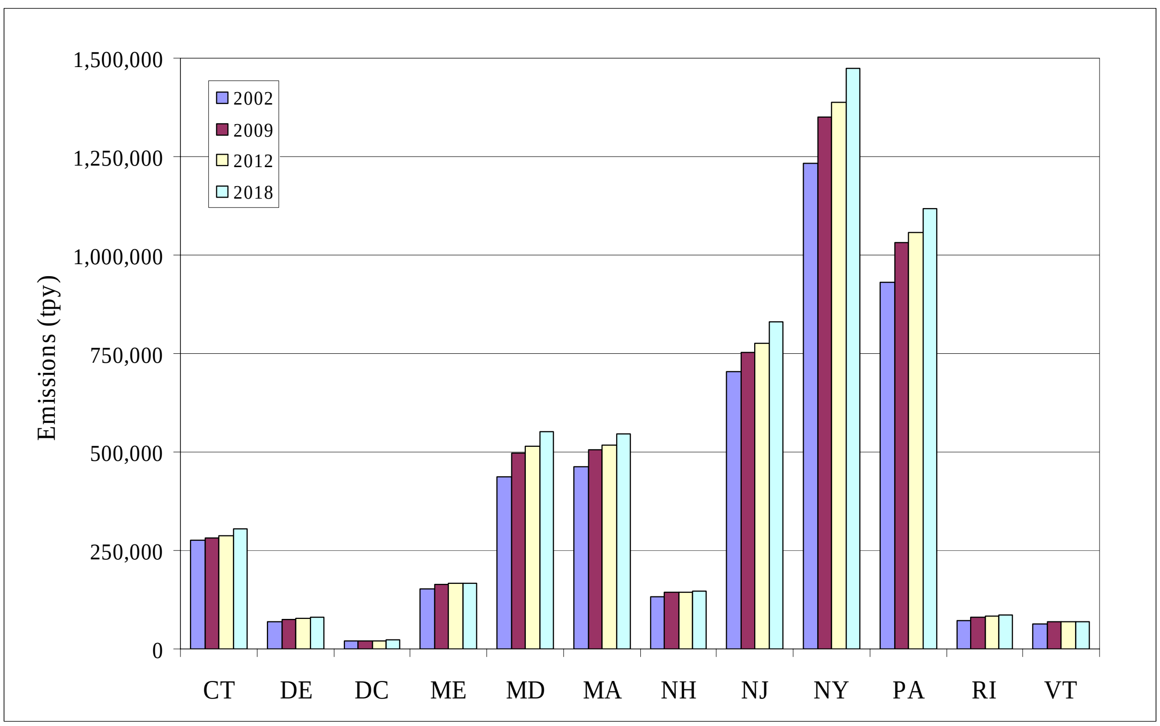


**Table 4-2b NONROAD Model Sources
OTB/OTW Annual CO Emission Projections
(tons per year)**

State	2002	2009	2012	2018
CT	274,388	280,253	285,415	300,931
DE	65,954	71,877	73,397	77,356
DC	18,775	20,671	21,229	22,350
ME	148,555	158,715	160,043	161,215
MD	424,777	482,312	497,806	532,970
MA	448,399	490,895	501,684	530,686
NH	128,572	139,288	140,655	144,191
NJ	692,548	741,792	764,424	818,519
NY	1,219,309	1,333,923	1,372,164	1,457,277
PA	903,168	1,003,480	1,029,045	1,088,614
RI	71,573	78,764	80,607	85,618
VT	61,732	67,802	68,421	69,456
Total	**4,457,748**	**4,869,771**	**4,994,890**	**5,289,186**

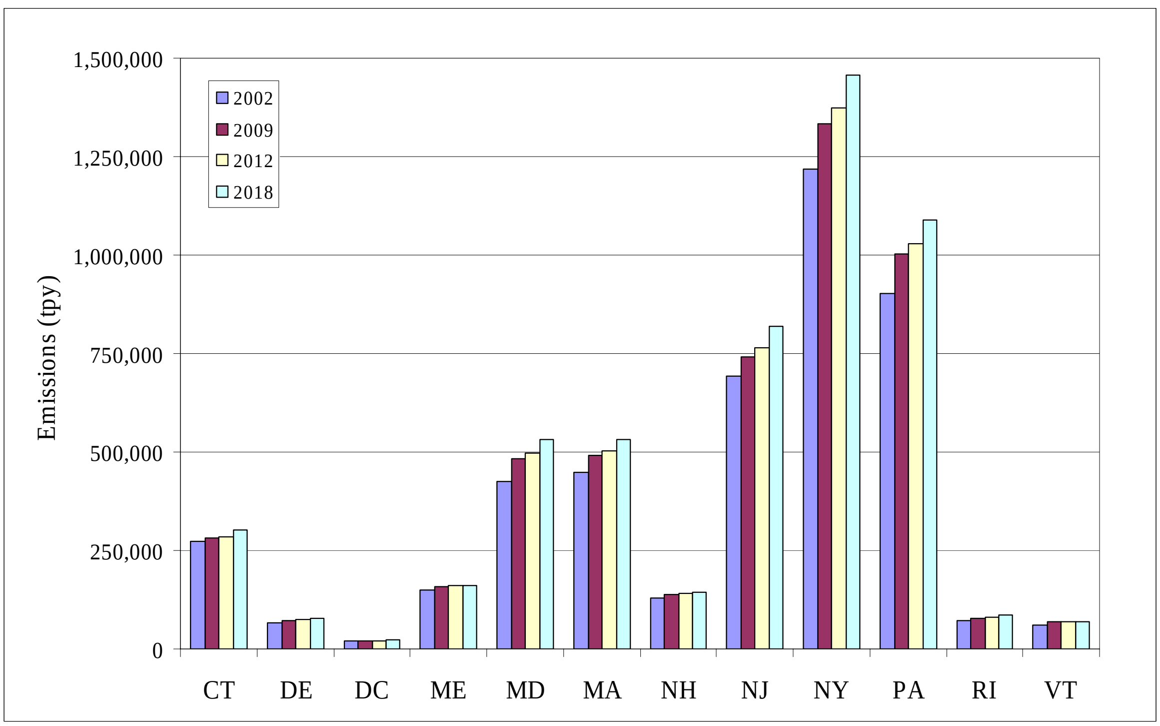


Table 4-2c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual CO Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	2,385	2,535	2,646	2,833
DE	2,828	2,979	3,094	3,290
DC	70	75	77	79
ME	4,868	5,067	5,230	5,464
MD	12,624	14,964	15,931	17,825
MA	13,116	13,505	14,335	15,687
NH	2,211	3,030	3,149	3,353
NJ	11,849	12,124	12,645	13,361
NY	14,660	15,516	16,242	17,450
PA	28,810	28,336	29,211	30,633
RI	1,440	1,464	1,506	1,577
VT	516	558	582	618
Total	**95,375**	**100,154**	**104,648**	**112,167**

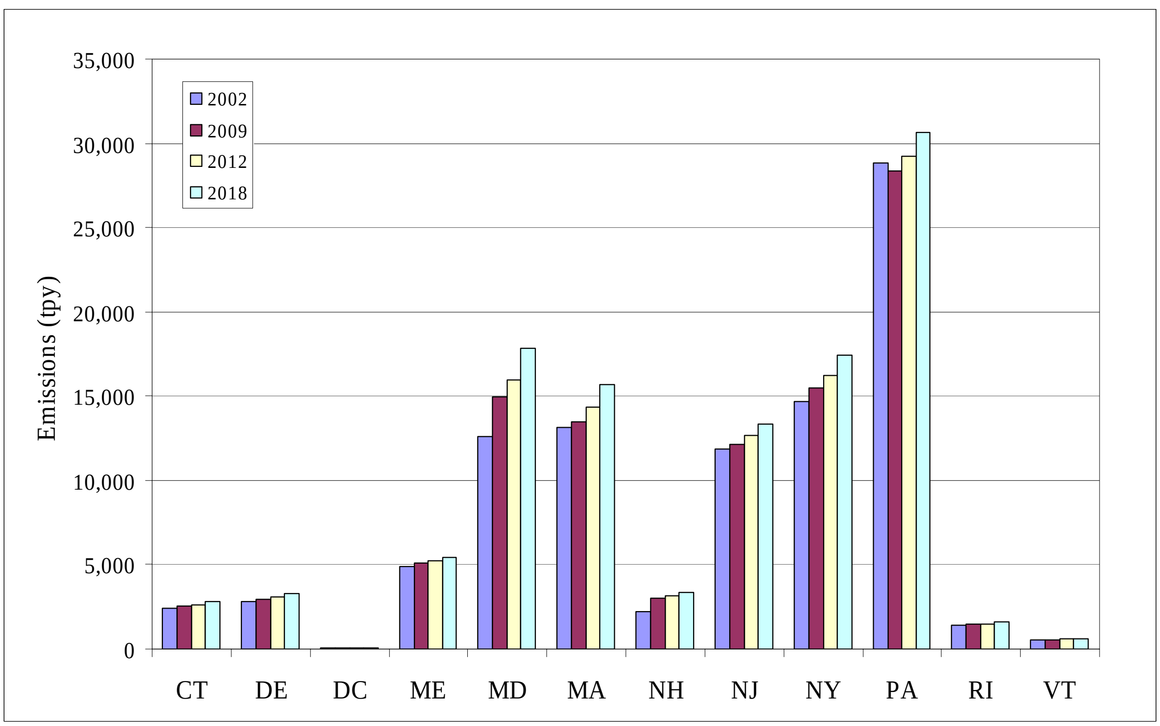


Table 4-3a All Nonroad Sources
OTB/OTW Annual NH3 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	17	18	19	21
DE	5	6	6	7
DC	2	3	3	3
ME	11	13	14	15
MD	28	31	33	36
MA	28	31	33	36
NH	9	10	11	12
NJ	43	45	47	52
NY	79	89	94	103
PA	55	62	66	73
RI	4	4	5	5
VT	5	5	6	6
Total	**287**	**317**	**337**	**369**

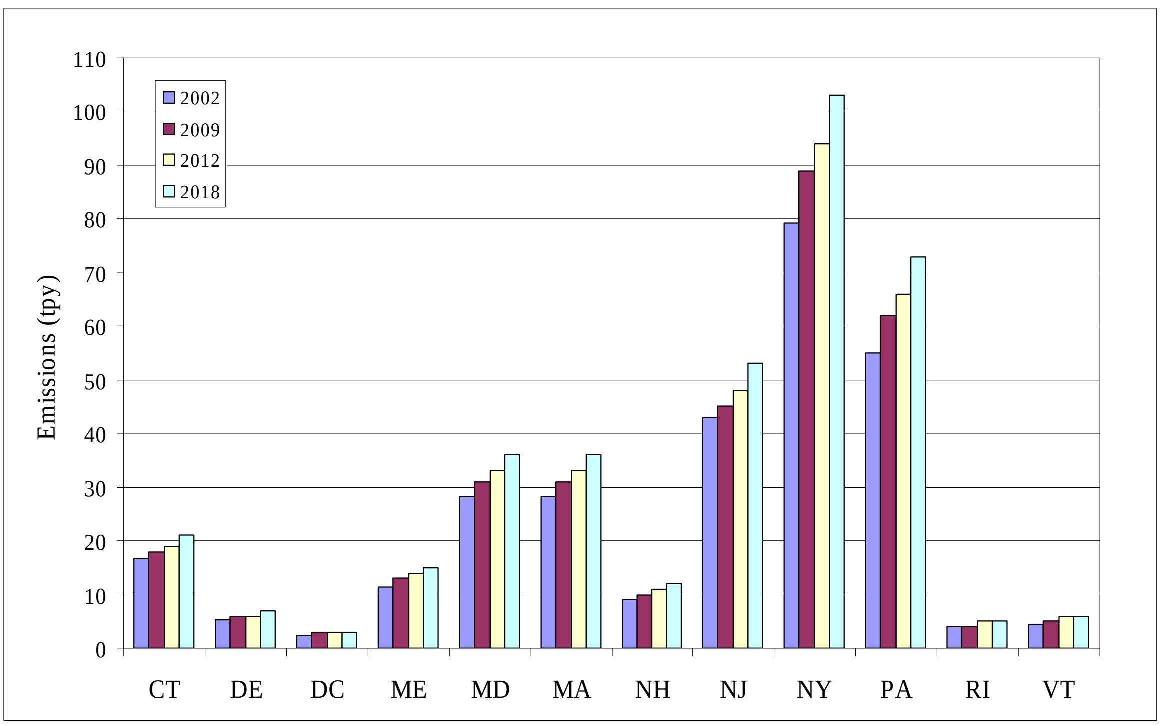


Table 4-3b NONROAD Model Sources
OTB/OTW Annual NH3 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	17	18	19	21
DE	5	6	6	6
DC	2	3	3	3
ME	11	13	14	15
MD	28	31	33	36
MA	28	31	33	36
NH	9	10	11	12
NJ	43	45	47	52
NY	79	89	94	103
PA	55	62	66	73
RI	4	4	5	5
VT	5	5	6	6
Total	**287**	**318**	**335**	**369**

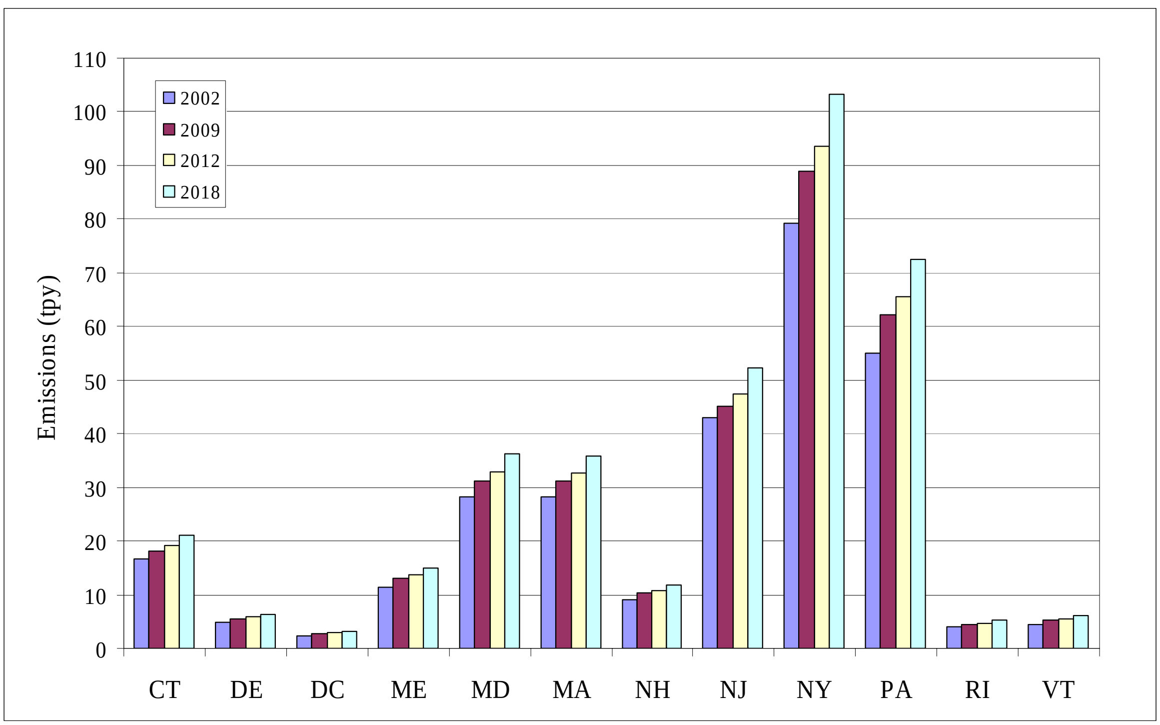


**Table 4-3c Aircraft, Locomotive, and Commercial Marine Sources
OTB/OTW Annual NH3 Emission Projections
(tons per year)**

State	2002	2009	2012	2018
CT	0	0	0	0
DE	0	0	0	0
DC	0	0	0	0
ME	0	0	0	0
MD	0	0	0	0
MA	0	0	0	0
NH	0	0	0	0
NJ	0	0	0	0
NY	0	0	0	0
PA	0	0	0	0
RI	0	0	0	0
VT	0	0	0	0
Total	**<1**	**<1**	**<1**	**<1**

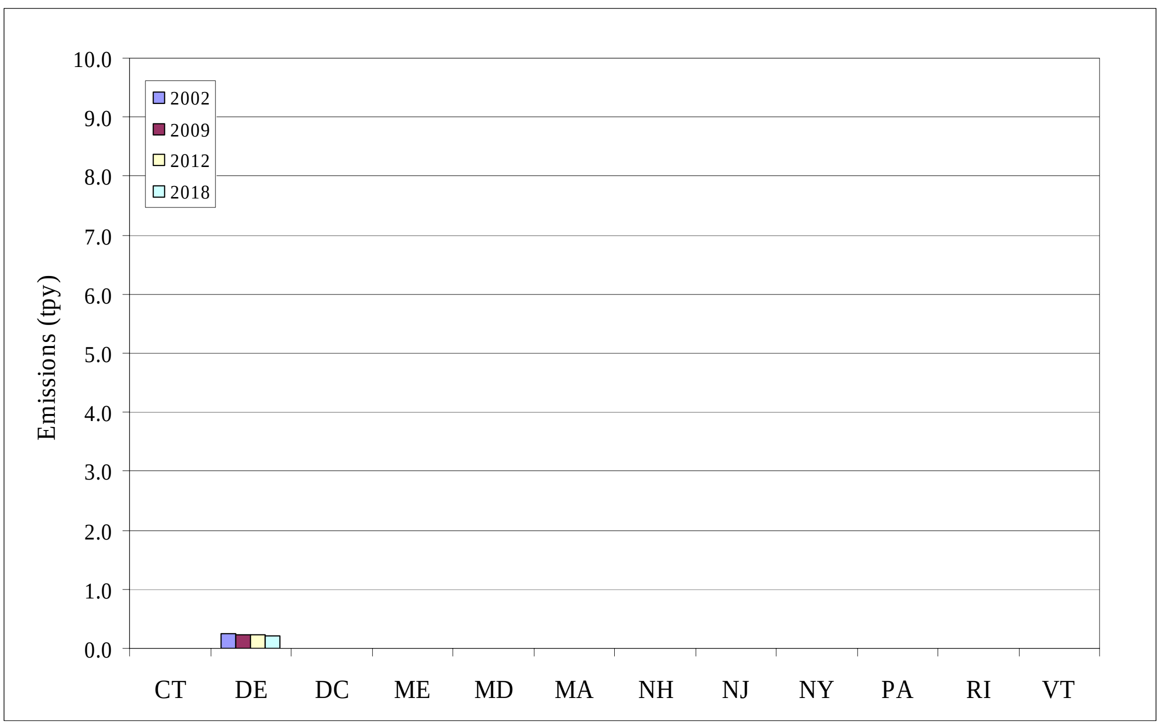


Table 4-4a All Nonroad Sources
OTB/OTW Annual NOx Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	25,460	21,512	19,316	16,233
DE	16,227	15,439	15,081	14,631
DC	3,571	2,981	2,620	1,815
ME	9,820	8,500	7,752	6,543
MD	37,472	31,762	29,058	24,257
MA	42,769	35,703	32,118	27,040
NH	9,912	8,485	7,624	6,344
NJ	63,479	52,703	48,234	41,166
NY	109,878	94,186	85,852	72,400
PA	103,824	76,105	67,818	55,771
RI	5,002	4,022	3,470	2,723
VT	4,217	3,452	2,992	2,262
Total	**431,631**	**354,850**	**321,935**	**271,185**

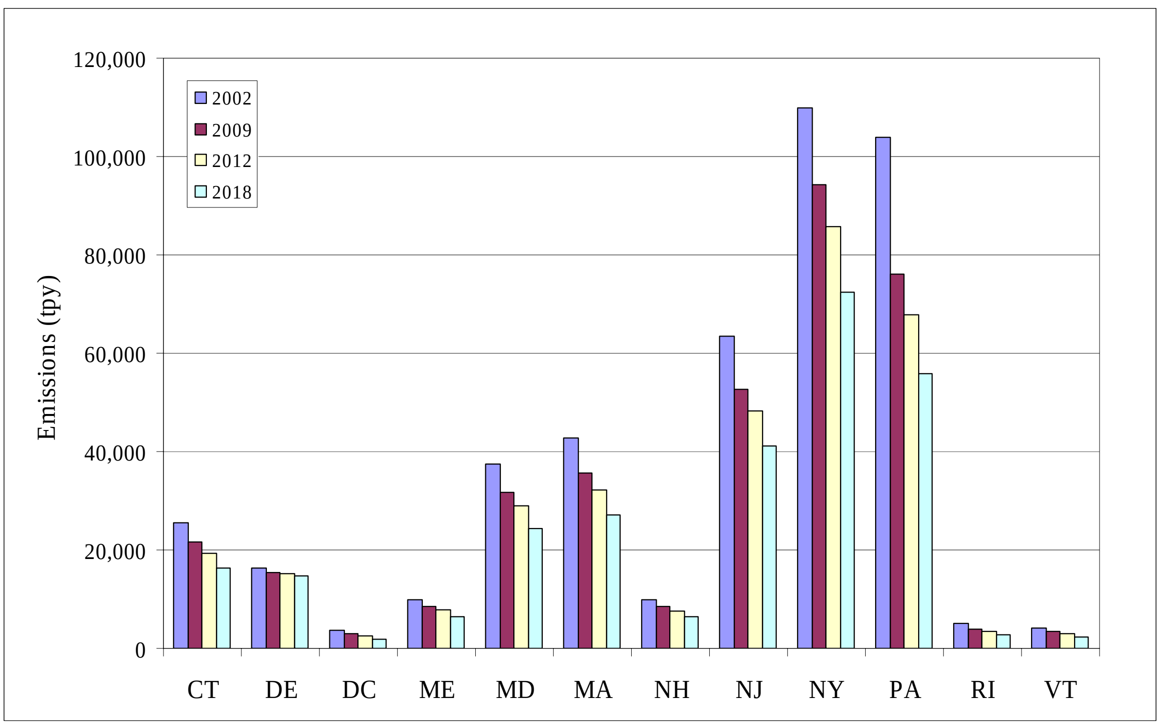


Table 4-4b NONROAD Model Sources
OTB/OTW Annual NOx Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	17,897	14,849	12,811	9,784
DE	5,798	4,755	4,108	2,966
DC	3,066	2,561	2,221	1,444
ME	8,229	6,957	6,211	4,970
MD	27,789	23,431	20,839	15,745
MA	30,047	24,606	21,274	16,096
NH	8,150	6,749	5,893	4,583
NJ	43,515	34,447	30,416	23,594
NY	78,648	66,645	58,900	45,400
PA	62,265	49,982	42,571	30,797
RI	4,564	3,624	3,066	2,294
VT	4,170	3,403	2,941	2,205
Total	**294,138**	**242,009**	**211,252**	**159,877**

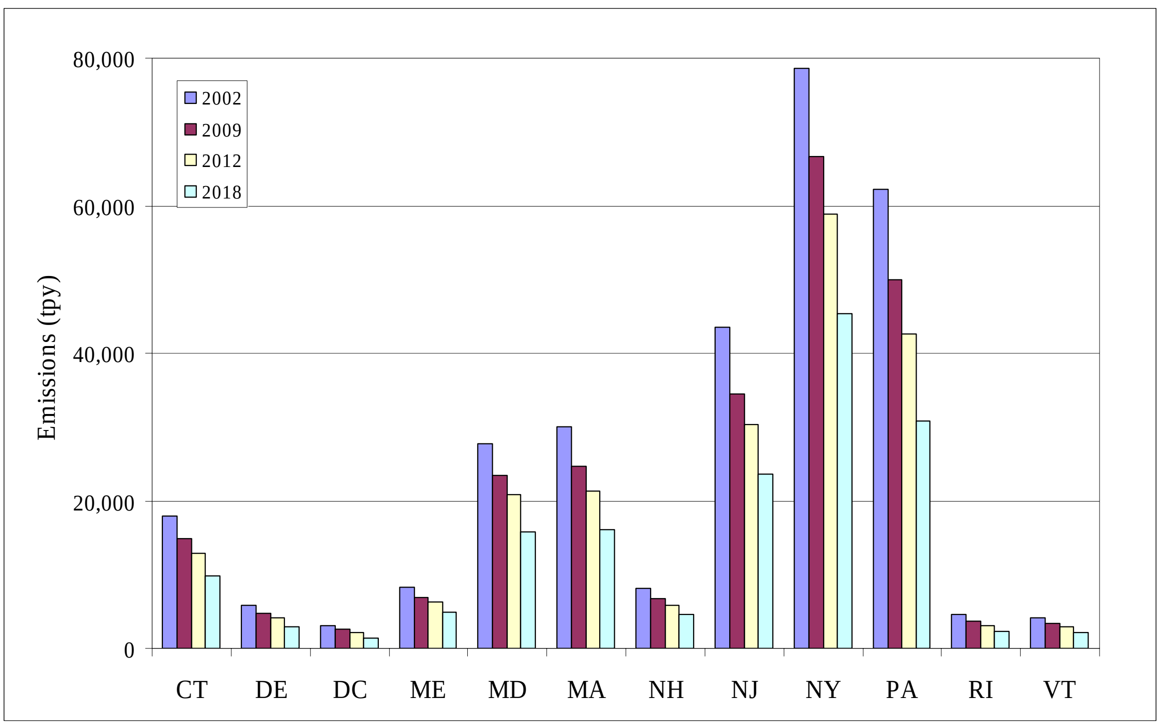


Table 4-4c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual NOx Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	7,563	6,663	6,505	6,449
DE	10,428	10,684	10,973	11,665
DC	505	420	399	371
ME	1,592	1,543	1,541	1,573
MD	9,683	8,331	8,219	8,512
MA	12,722	11,097	10,844	10,944
NH	1,763	1,736	1,731	1,761
NJ	19,964	18,256	17,818	17,572
NY	31,230	27,541	26,952	27,000
PA	41,559	26,123	25,247	24,974
RI	438	398	404	429
VT	47	49	51	57
Total	**137,493**	**112,841**	**110,683**	**111,308**

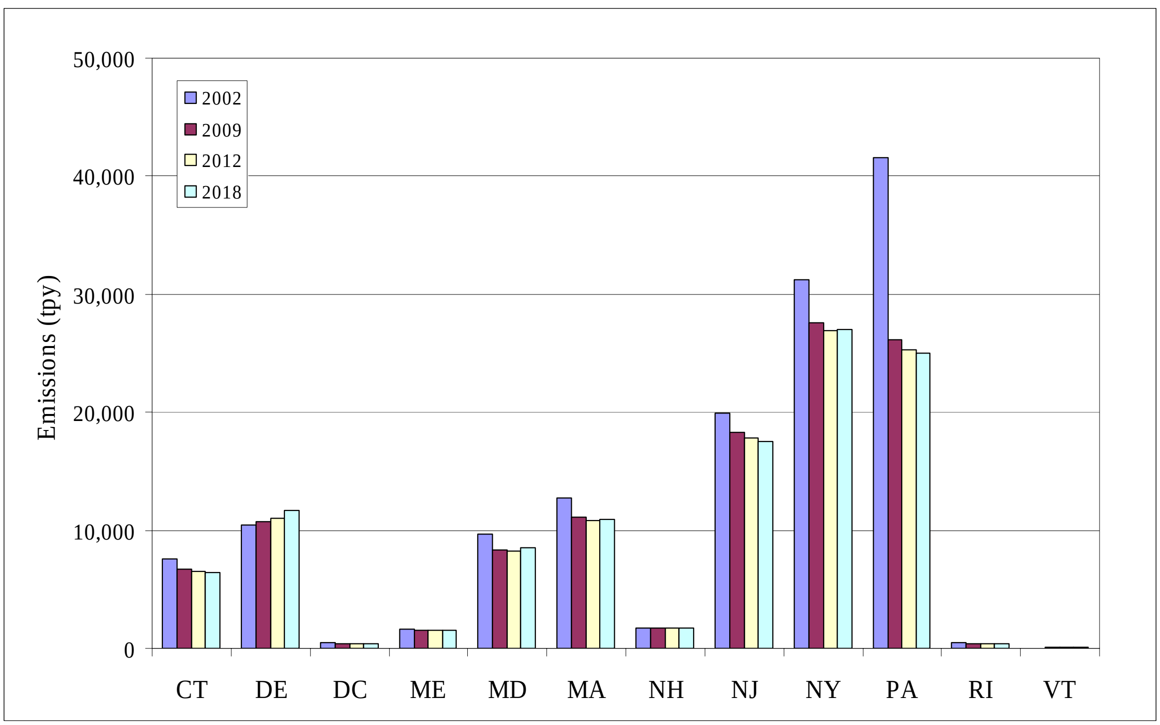


Table 4-5a All Nonroad Sources
OTB/OTW Annual PM10-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	1,952	1,642	1,532	1,236
DE	1,021	947	940	897
DC	310	235	209	135
ME	1,437	1,367	1,301	1,086
MD	4,936	4,353	4,191	3,814
MA	3,531	2,964	2,768	2,246
NH	1,058	944	881	698
NJ	5,495	4,539	4,233	3,489
NY	9,605	8,050	7,425	5,830
PA	9,738	8,501	8,112	6,949
RI	500	435	414	348
VT	530	476	439	331
Total	**40,114**	**34,453**	**32,445**	**27,059**

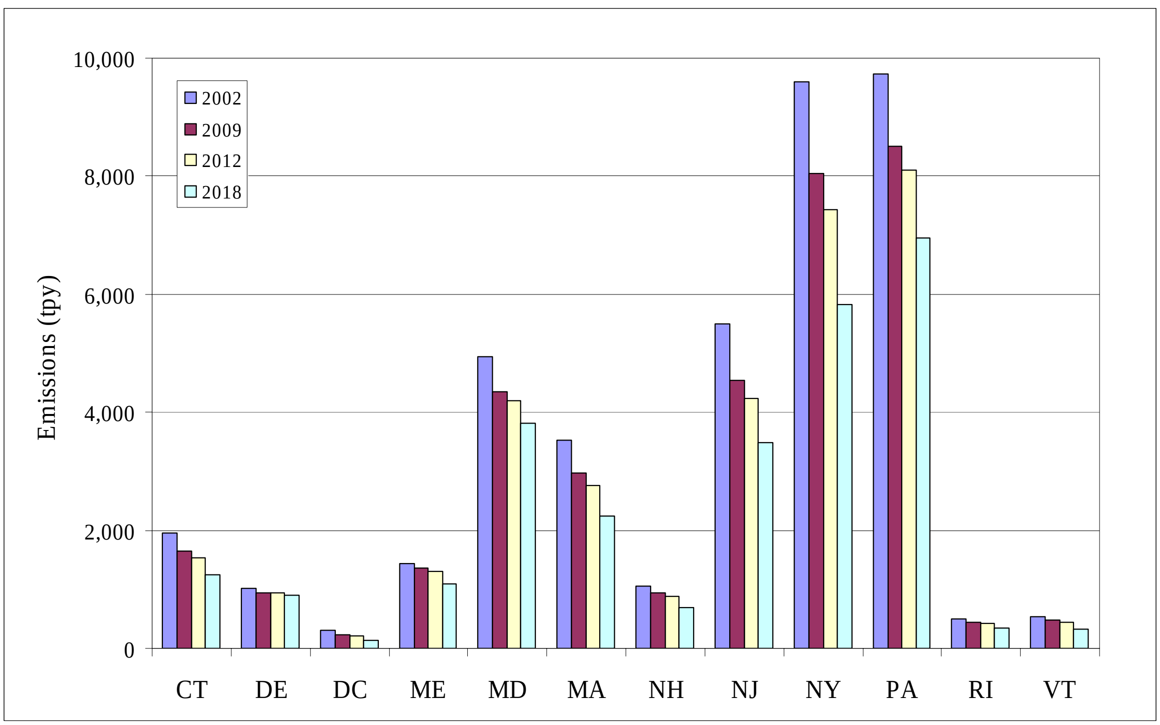


Table 4-5b NONROAD Model Sources
OTB/OTW Annual PM10-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	1,713	1,407	1,295	987
DE	570	456	414	301
DC	298	226	200	127
ME	1,204	1,119	1,039	797
MD	3,119	2,534	2,321	1,782
MA	2,887	2,370	2,176	1,640
NH	947	834	769	581
NJ	4,285	3,424	3,143	2,411
NY	8,339	6,871	6,248	4,624
PA	6,282	5,282	4,839	3,574
RI	403	337	314	244
VT	518	462	425	316
Total	**30,565**	**25,321**	**23,182**	**17,385**

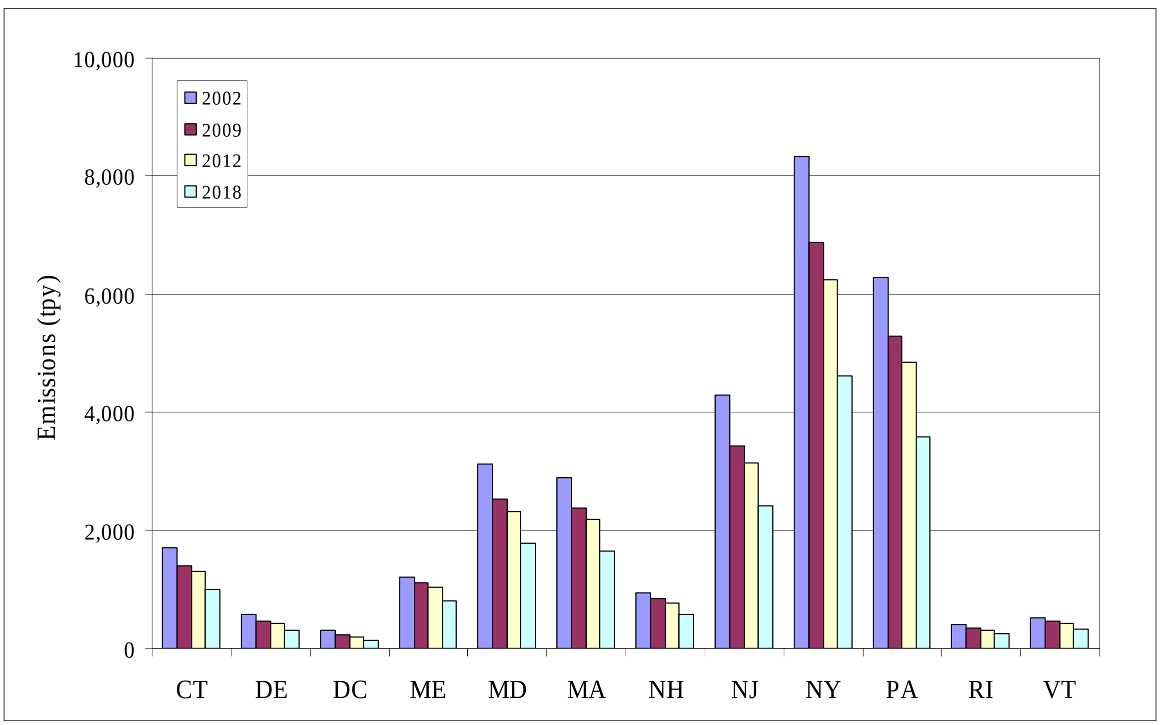


Table 4-5c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual PM10-PRI Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	239	235	237	249
DE	451	491	526	596
DC	12	9	9	8
ME	233	248	262	289
MD	1,817	1,819	1,870	2,032
MA	644	594	592	606
NH	111	110	112	117
NJ	1,210	1,115	1,090	1,078
NY	1,266	1,179	1,177	1,206
PA	3,456	3,219	3,273	3,375
RI	97	98	100	104
VT	12	14	14	15
Total	**9,549**	**9,132**	**9,263**	**9,674**

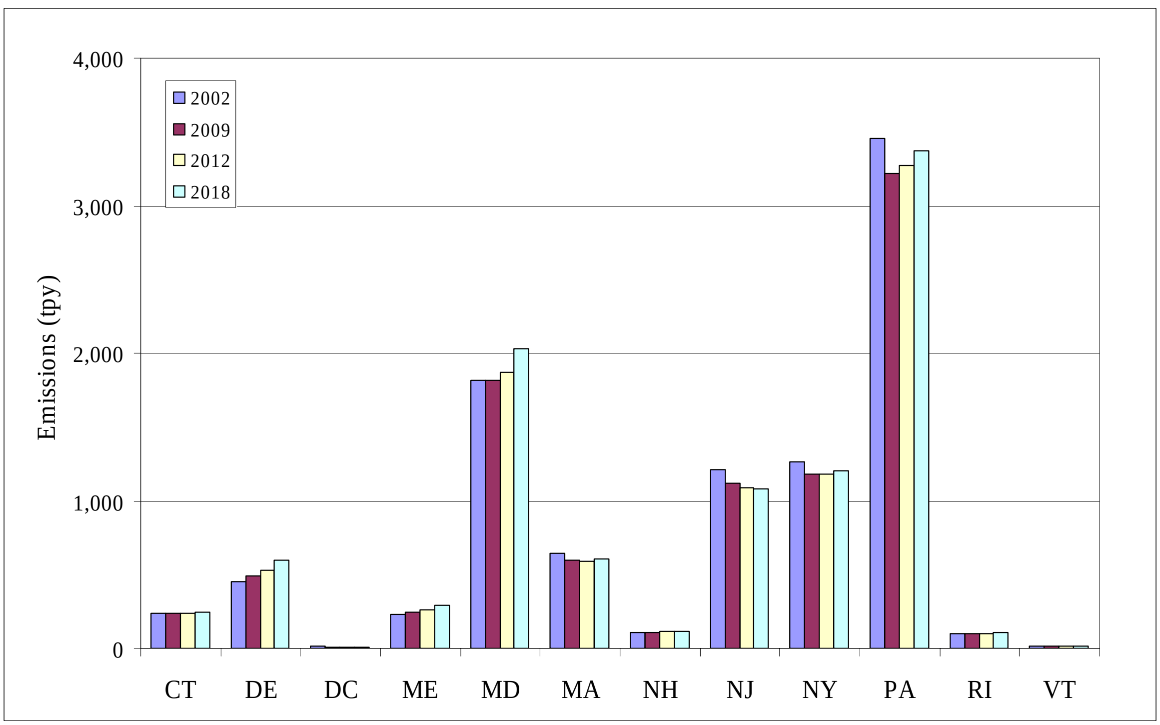


**Table 4-6a All Nonroad Sources
OTB/OTW Annual PM25-PRI Emission Projections
(tons per year)**

State	2002	2009	2012	2018
CT	1,794	1,508	1,408	1,135
DE	926	856	849	808
DC	299	216	192	124
ME	1,329	1,238	1,177	978
MD	4,357	3,806	3,653	3,301
MA	3,226	2,710	2,531	2,052
NH	965	861	802	634
NJ	4,997	4,113	3,829	3,143
NY	8,821	7,390	6,815	5,349
PA	8,440	7,274	6,900	5,808
RI	443	383	364	303
VT	486	436	402	303
Total	**36,084**	**30,791**	**28,922**	**23,938**

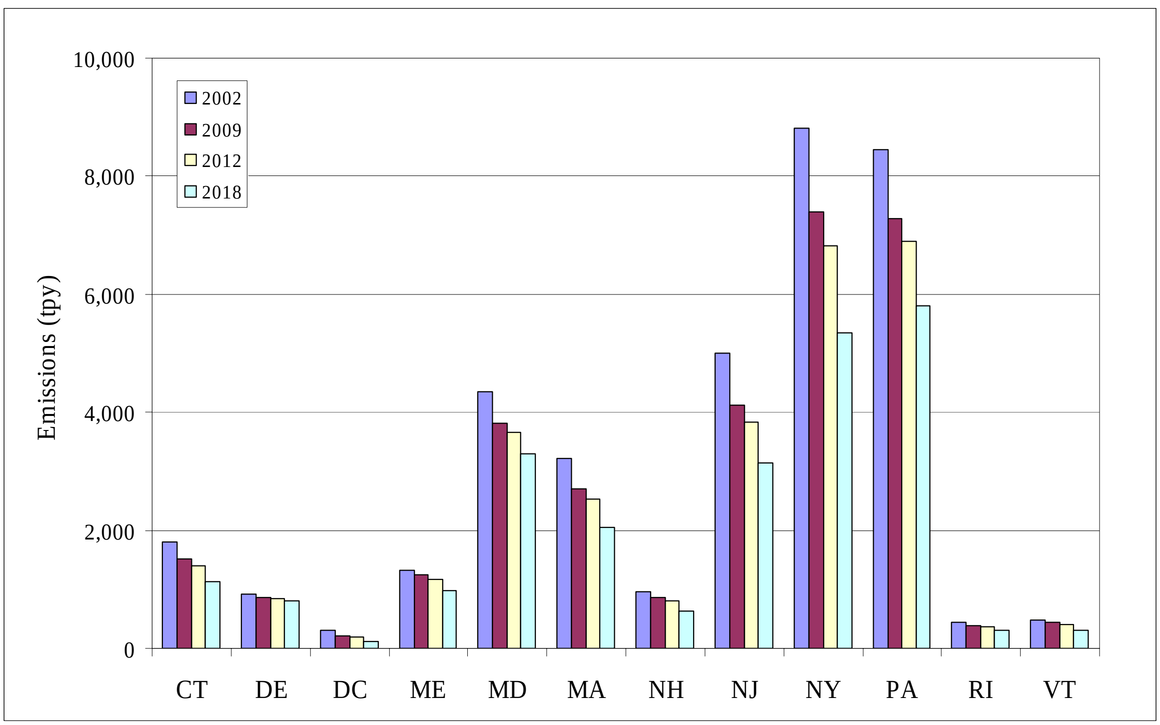


Table 4-6b NONROAD Model Sources
OTB/OTW Annual PM25-PRI Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	1,578	1,296	1,193	911
DE	525	420	381	277
DC	288	208	184	117
ME	1,135	1,030	956	734
MD	2,870	2,333	2,137	1,641
MA	2,659	2,184	2,005	1,512
NH	872	768	708	536
NJ	3,951	3,154	2,896	2,223
NY	7,677	6,327	5,755	4,262
PA	5,784	4,866	4,459	3,296
RI	371	311	290	226
VT	477	426	391	292
Total	**28,186**	**23,321**	**21,356**	**16,027**

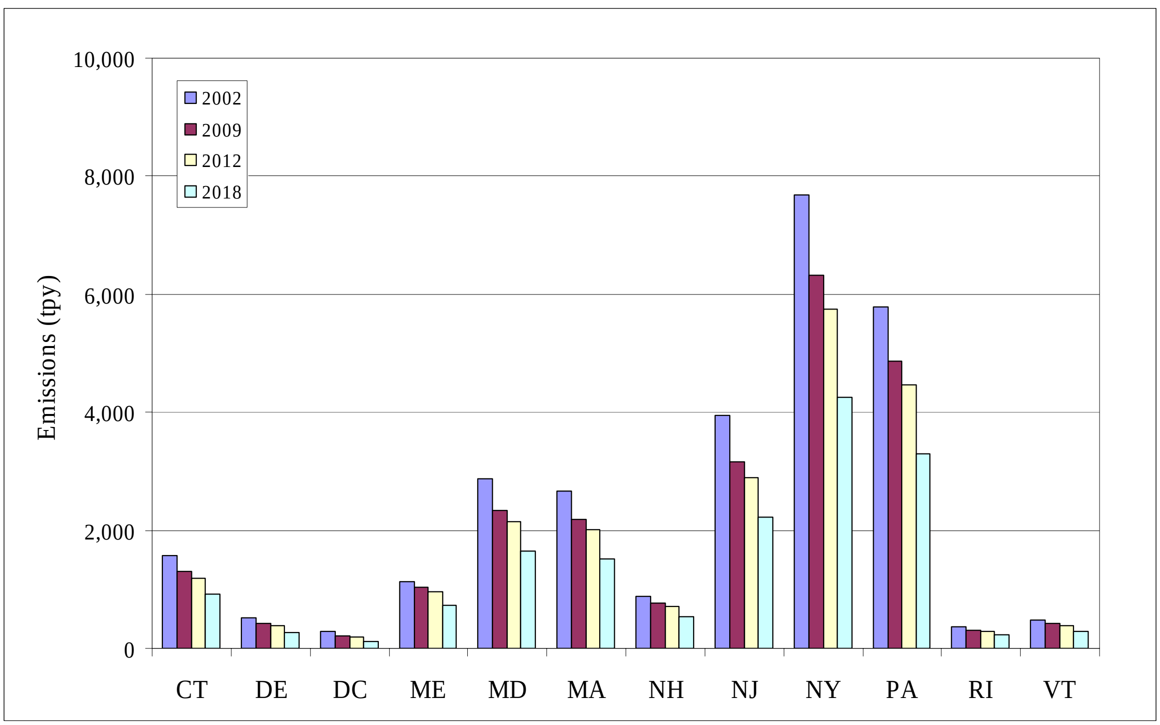


Table 4-6c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual PM25-PRI Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	216	212	215	224
DE	401	436	468	531
DC	11	8	8	7
ME	194	208	221	244
MD	1,487	1,473	1,516	1,660
MA	568	526	526	540
NH	94	93	94	98
NJ	1,047	959	933	920
NY	1,144	1,063	1,060	1,087
PA	2,656	2,408	2,441	2,512
RI	72	72	74	77
VT	9	10	11	11
Total	**7,898**	**7,470**	**7,566**	**7,911**

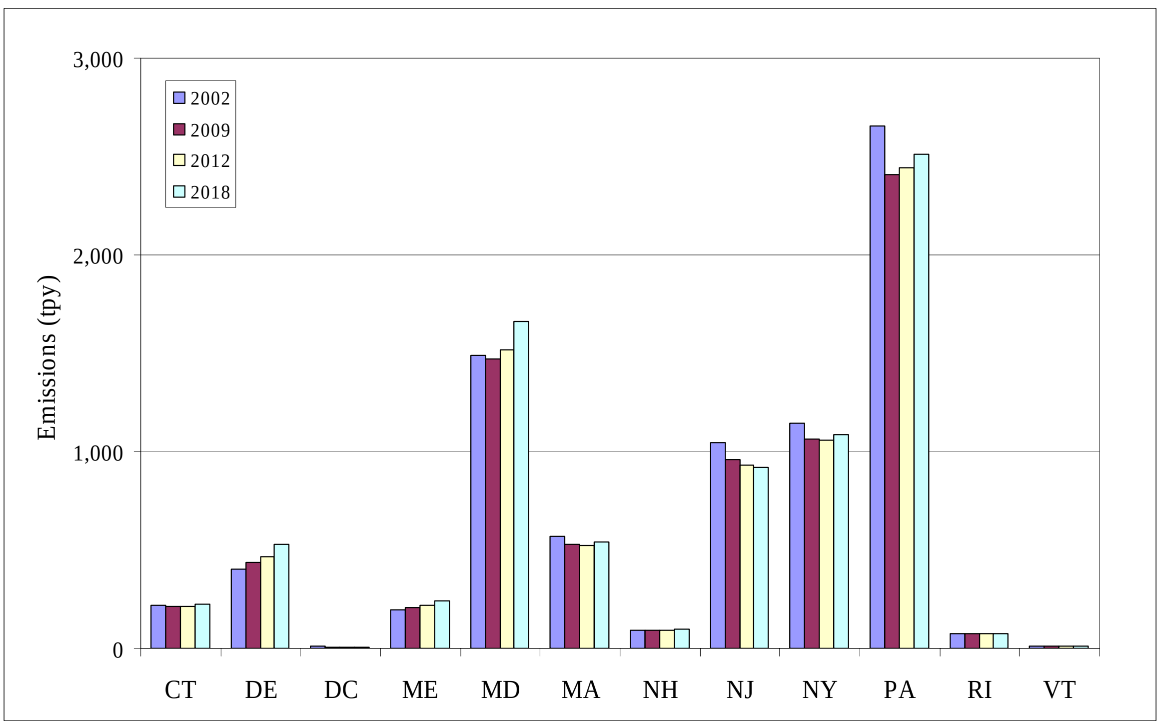


Table 4-7a All Nonroad Sources
OTB/OTW Annual SO2 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	2,087	887	711	815
DE	3,983	2,851	2,834	3,296
DC	375	66	9	5
ME	917	201	82	82
MD	7,942	1,638	706	577
MA	3,791	983	470	442
NH	891	310	218	246
NJ	15,686	3,508	1,253	832
NY	12,920	3,387	1,724	1,686
PA	7,915	1,659	667	607
RI	377	93	42	42
VT	372	68	15	13
Total	**57,257**	**15,651**	**8,731**	**8,643**

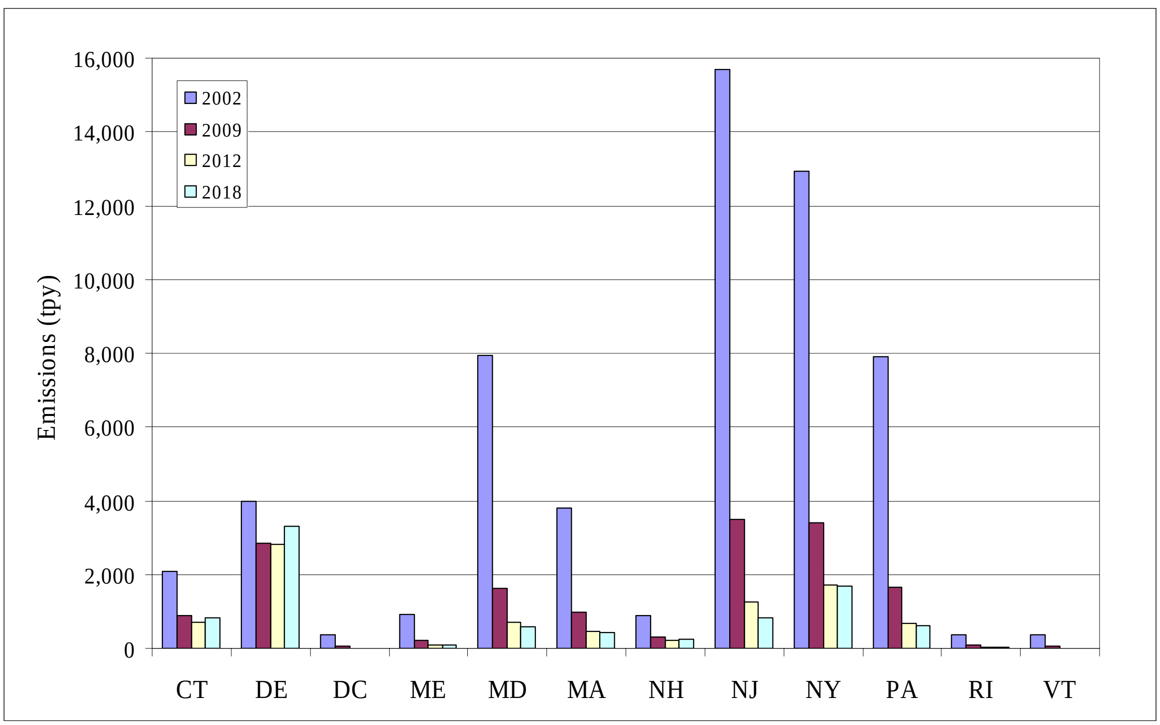


Table 4-7b NONROAD Model Sources
OTB/OTW Annual SO2 Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	1,377	249	39	28
DE	513	90	12	8
DC	341	59	6	3
ME	772	132	24	19
MD	2,569	452	63	42
MA	2,428	429	66	47
NH	673	119	20	16
NJ	3,525	607	93	67
NY	6,966	1,208	182	130
PA	5,292	917	135	92
RI	336	60	10	7
VT	368	64	10	8
Total	**25,159**	**4,387**	**661**	**467**

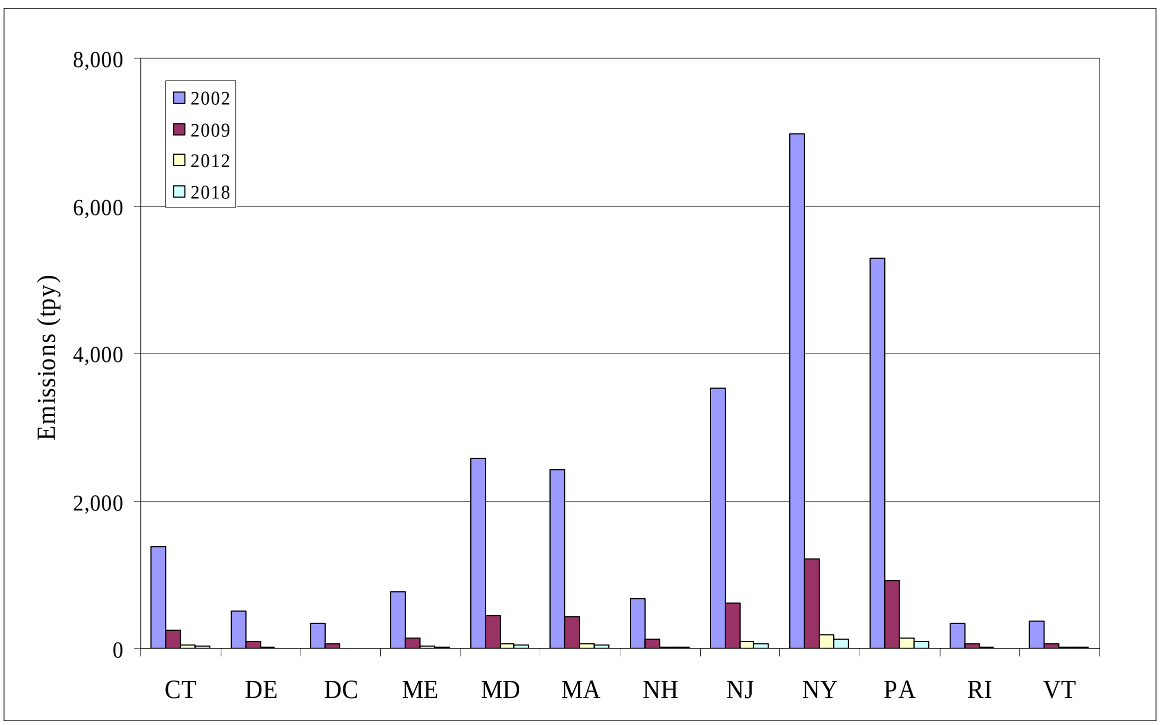


Table 4-7c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual SO2 Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	711	638	672	787
DE	3,470	2,761	2,822	3,288
DC	34	7	3	2
ME	145	69	58	63
MD	5,372	1,186	643	535
MA	1,363	554	404	395
NH	218	191	198	230
NJ	12,161	2,901	1,160	765
NY	5,953	2,179	1,542	1,556
PA	2,623	742	532	515
RI	42	33	32	35
VT	5	4	5	5
Total	**32,097**	**11,264**	**8,070**	**8,176**

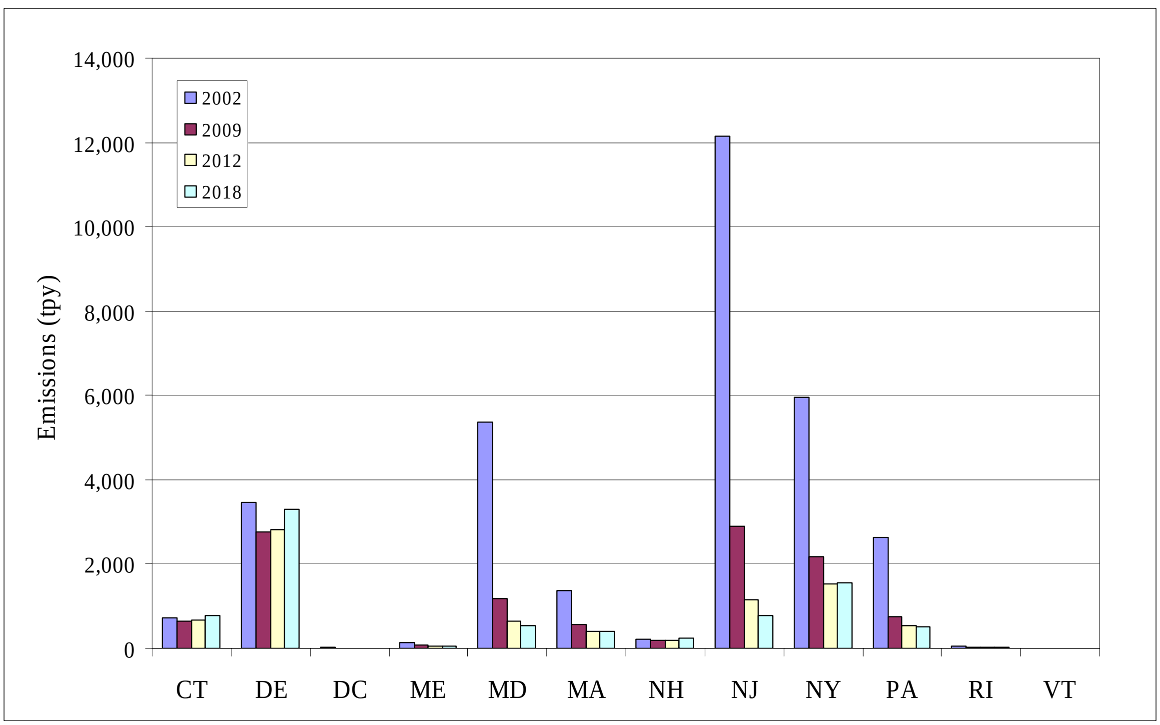


Table 4-8a All Nonroad Sources
OTB/OTW Annual VOC Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	33,880	24,910	22,657	20,694
DE	8,010	6,440	6,044	5,653
DC	2,073	1,559	1,438	1,369
ME	31,144	29,445	27,093	21,988
MD	56,330	43,260	40,266	37,969
MA	56,749	43,429	39,713	36,306
NH	22,377	19,651	17,933	15,003
NJ	83,919	62,920	57,769	53,625
NY	157,612	128,421	117,770	104,562
PA	102,331	84,744	78,630	69,956
RI	7,780	6,038	5,640	5,389
VT	10,548	10,105	9,304	7,566
Total	**572,751**	**460,922**	**424,257**	**380,080**

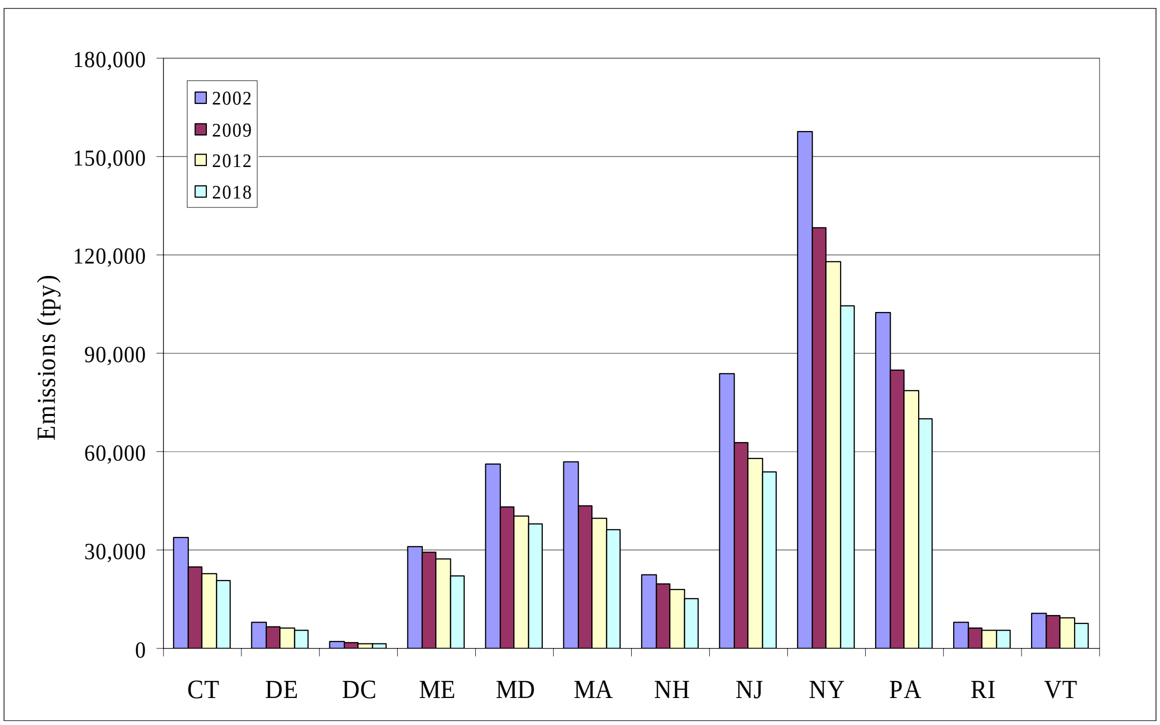


Table 4-8b NONROAD Model Sources
OTB/OTW Annual VOC Emission Projections
(tons per year)

State	2002	2009	2012	2018
CT	33,519	24,546	22,286	20,308
DE	7,531	5,943	5,533	5,115
DC	2,053	1,540	1,419	1,351
ME	30,741	29,030	26,669	21,547
MD	53,035	39,731	36,638	34,106
MA	54,836	41,473	37,706	34,185
NH	22,238	19,476	17,752	14,810
NJ	81,900	60,878	55,682	51,451
NY	155,475	126,265	115,553	102,224
PA	99,241	82,094	75,941	67,186
RI	7,699	5,956	5,556	5,302
VT	10,520	10,076	9,273	7,533
Total	**558,788**	**447,006**	**410,009**	**365,117**

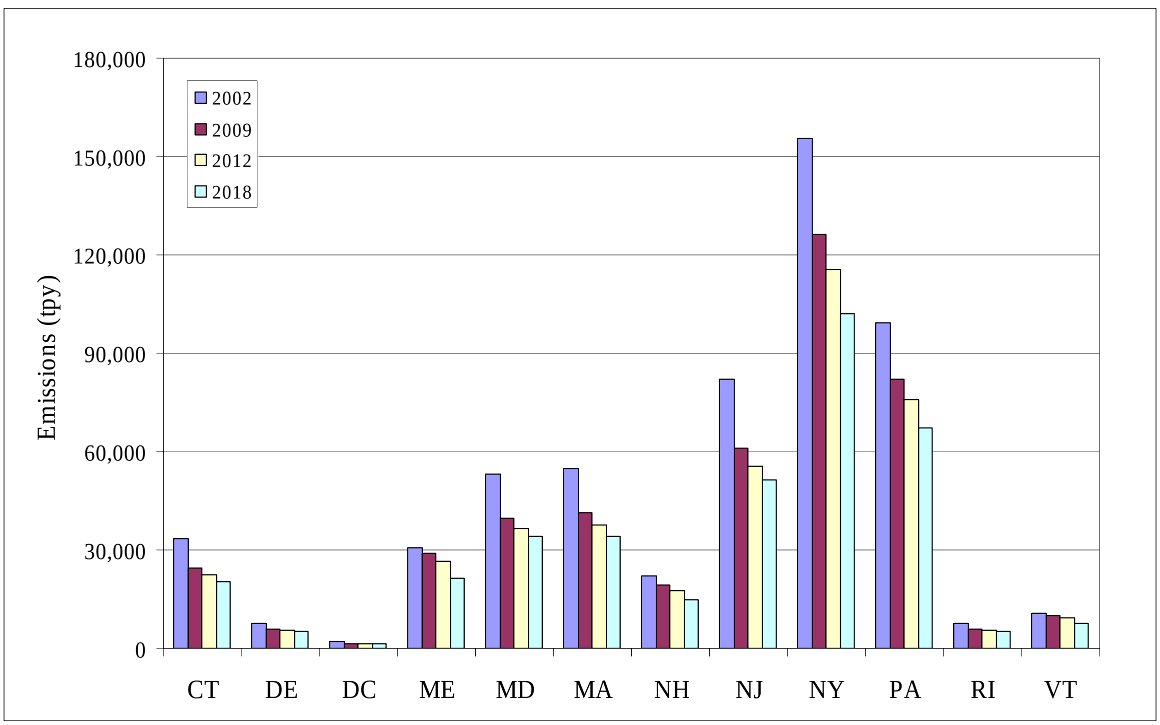
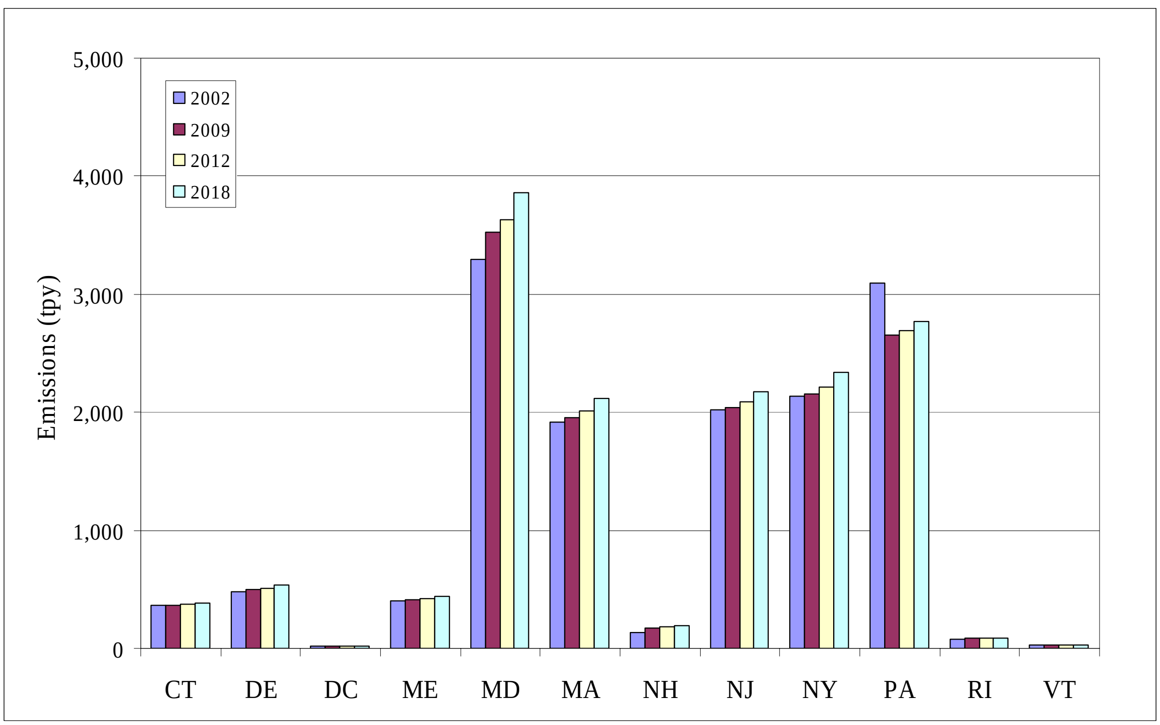


Table 4-8c Aircraft, Locomotive, and Commercial Marine Sources OTB/OTW Annual VOC Emission Projections (tons per year)

State	2002	2009	2012	2018
CT	361	364	371	386
DE	480	497	511	538
DC	20	19	19	18
ME	403	415	424	441
MD	3,295	3,529	3,628	3,863
MA	1,913	1,956	2,007	2,121
NH	139	175	181	193
NJ	2,019	2,042	2,087	2,174
NY	2,137	2,156	2,217	2,338
PA	3,090	2,650	2,689	2,770
RI	81	82	84	87
VT	27	29	31	33
Total	**13,964**	**13,916**	**14,248**	**14,963**



5.0 BEYOND-ON-THE-WAY EMISSION INVENTORY

The States are considering additional control measures as part of their planning to achieve regional haze goals and to attain the ozone and PM2.5 National Ambient Air Quality Standards (NAAQS). To accomplish this, many of the states will need to implement additional measures to reduce emissions. As such, the Ozone Transport Commission (OTC) undertook an exercise to identify a suite of additional control measures that could be used by the states in the Ozone Transport Region (OTR) in attaining their air quality goals.

Based on the analyses conducted by various OTC Workgroups, the OTC Commissioners made several recommendations at the Commissioner's meeting in Boston on June 7, 2006:

- *Memorandum of Understanding Among the States of the Ozone Transport Commission on a Regional Strategy Concerning the Integrated Control of Ozone Precursors from Various Sources*
- *Resolution 06-02 of the Ozone Transport Commission Concerning Coordination and Implementation of Regional Ozone Control Strategies for Certain Source Categories*
- *Statement of the Ozone Transport Commission Concerning Multi-Pollutant Emission Control of Electric Generating Units*
- *Resolution 06-03 of the Ozone Transport Commission Concerning Federal Guidance and Rulemaking for Nationally-Relevant Ozone Control Measures*

The Commissioners recommended that States consider emission reductions from the following source categories:

- Consumer Products
- Portable Fuel Containers
- Adhesives and Sealants Application
- Diesel Engine Chip Reflash
- Cutback and Emulsified Asphalt Paving
- Asphalt Production Plants
- Cement Kilns
- Glass Furnaces
- Industrial, Commercial, and Institutional (ICI) Boilers
- Regional Fuels
- Electric Generating Units (EGUs)

This suite of controls for the above source categories constitutes a "beyond-on-the-way" (BOTW) scenario to be used in modeling ozone, fine particles, and regional haze in the OTR and MANE-VU regions.

For the MANE-VU modeling inventory, each state was asked to complete a matrix to identify which of the above source category control measures to include and in which years the control measure should be applied. This section documents the emission reductions anticipated to result from the implementation of the above control measures based on the state recommendations for measures to include for each state, source category, and projection year. There are five subsections discussing the control measure and emission reductions for the five source category sectors: nonEGU point sources, area sources, EGUs, onroad mobile sources, and nonroad mobile sources.

5.1 NONEGU POINT SOURCES

This Section describes the analysis of the control measures to reduce emissions from non-EGU point sources. The control measures included in this analysis reduce emissions for the following pollutants and nonEGU point source categories:

- NOx measures: asphalt production plants; cement kilns; glass and fiberglass furnaces; low sulfur heating oil for commercial and institutional units; and ICI boilers (natural gas, #2 fuel oil, #4/#6 fuel oil, and coal);
- Primary PM10 and PM2.5 measure: commercial heating oil;
- SO2 measures: commercial heating oil and ICI boilers (#2 fuel oil, #4/#6 fuel oil, and coal); and
- VOC measure: adhesives and sealants application;

For the MANE-VU modeling inventory, each state was asked to complete a matrix to identify which nonEGU control measures to include and in which years the control measure should be applied. Table 5.1 summarizes the staff recommendations for NOx control measures to include in the BOTW regional modeling inventory for non-EGU source categories (except ICI boilers). Table 5.2 summarizes the staff recommendations for NOx emission reductions for ICI boilers. Tables 5.3 and 5.4 summarize the staff recommendations for control measures to include in the BOTW regional modeling inventory for SO2 and VOC emissions, respectively. The following subsections describe the emission reductions anticipated for each of the control measures.

Table 5.1 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – NOx Emissions from NonEGU Point Sources

	Asphalt Production Plants			Cement Kilns			Glass and Fiberglass Furnaces			Commercial & Institutional Heating Oil		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	No	No	Yes
DE	No	No	No	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No
DC	Yes	Yes	Yes	N/A	N/A	N/A	N/A	N/A	N/A	No	Yes	Yes
ME	No	No	No	Yes	Yes	Yes	N/A	N/A	N/A	No	Yes	Yes
MD	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
MA	No	No	No	N/A	N/A	N/A	Yes	Yes	Yes	No	Yes	Yes
NH	No	No	No	N/A	N/A	N/A	N/A	N/A	N/A	No	No	Yes
NJ	No	Yes	Yes	N/A	N/A	N/A	No	Yes[2]	Yes[2]	No	Yes	Yes
NY	Yes	Yes	Yes	Yes[1]	Yes[1]	Yes[1]	Yes[2]	Yes[3]	Yes[3]	No	Yes	Yes
PA	No	No	No	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
RI	No	No	No	N/A	N/A	N/A	No	No	No	No	Yes	Yes
VT	No	No	No	N/A	N/A	N/A	N/A	N/A	N/A	No	No	No

Yes - Include emission reductions from control measure in modeling inventory
No - Do not include emission reduction from control measure in modeling inventory
N/A – No facilities of this type located in the state

1) New York specified that a 40 percent NOx reduction from cement kilns should be used.
2) New Jersey specified a 20 percent NOx reduction from glass furnaces in 2012 and a 35 percent reduction in 2018.
3) New York specified a 70 percent NOx reduction from glass furnaces beginning in 2009.

Table 5.2 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – NOx Emissions from ICI Boilers

	ICI Boilers < 25 mmBTU/hour			ICI Boilers 25-50 mmBtu/hour			ICI Boilers 50-100 mmBtu/hour			ICI Boilers 100-250 mmBtu/hour			ICI Boilers >250 mmBtu/hour (see note 7)		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	Yes[1]	No	No	No
DE	No	No	No	No	No	No	No	No	No	Yes[4]	Yes[4]	Yes[4]	No	No	No
DC	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
ME	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
MD	No	No	No	No	No	No	No	No	No	Yes	Yes	Yes	No	No	No
MA	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
NH	No	No	No	Yes[5]	Yes[5]	Yes[5]	Yes	Yes	Yes	Yes[5]	Yes[5]	Yes[5]	No	No	No
NJ	Yes[2]	Yes[2]	Yes[2]	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	No
NY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
PA	No[3]	No[3]	No[3]	No[3]	No[3]	No[3]	No[3]	No[3]	No[3]	No[6]	No[6]	No[6]	No	No	No
RI	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
VT	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No

Yes - Include emission reductions from control measure in modeling inventory
No - Do not include emission reduction from control measure in modeling inventory
N/A – No facilities of this type located in the state
1) Connecticut is now pursuing adoption of model rule for boilers of all sizes at major and non-major sources
2) New Jersey specified a 5 percent reduction in 2009, 10 percent in 2012, and 10 percent in 2018
3) Pennsylvania specified no reductions since sources already covered by statewide NOx RACT regulation
4) Delaware is developing regulation for ICI boilers greater than 200 mmBtu/hour – no plans for regulating smaller units
5) New Hampshire specified a 40 percent reduction for 25-50 mmBtu/hour boilers, and a 10 percent reduction for natural gas-fired 100-250 mmBtu/hour boilers
6) Pennsylvania specified no reductions since sources in the 5-county Philadelphia area are already covered by the Small Sources of NOx regulation and do not plan on expanding the regulation outside of the corridor at this time
7) Resolution 06-02 specified the reduction for > 250mmBtu/hour boilers to be the "same as EGUs of similar size." The OTC Commissioners have not yet recommended an emission rate or percent reduction for EGUs. As a result, no reductions for ICI boilers > 250 mmBtu/hour were included in the BOTW inventory.

Table 5.3 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – SO2 Emissions from NonEGU Point Sources

	Commercial & Institutional Heating Oil			ICI Boilers (low sulfur fuel)		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	No	No	Yes	No	No	No
DE	No	No	No	No	No	No
DC	No	Yes	Yes	No	No	No
ME	No	Yes	Yes	No	No	No
MD	No	Yes	Yes	No	No	No
MA	No	Yes	Yes	No	No	No
NH	No	No	Yes	No	No	No
NJ	No	Yes	Yes	No	No	No
NY	No	Yes	Yes	No	No	No
PA	No	Yes	Yes	No	No	No
RI	No	Yes	Yes	No	No	No
VT	No	No	No	No	No	No

Yes - Include emission reductions from control measure in modeling inventory
No - Do not include emission reduction from control measure in modeling inventory

Table 5.4 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – VOC Emissions from NonEGU Point Sources

	Adhesives and Sealants Application		
State	**2009**	**2012**	**2018**
CT	Yes	Yes	Yes
DE	Yes	Yes	Yes
DC	Yes	Yes	Yes
ME	Yes	Yes	Yes
MD	Yes	Yes	Yes
MA	Yes	Yes	Yes
NH	No	Yes	Yes
NJ	No[1]	No[1]	No[1]
NY	Yes	Yes	Yes
PA	Yes	Yes	Yes
RI	Yes	Yes	Yes
VT	No	No	No

Yes - Include emission reductions from control measure in modeling inventory
No - Do not include emission reduction from control measure in modeling inventory
1) New Jersey indicated that the reductions from the adhesives and sealants application control measure should only apply to area source - no reductions for point sources (SCC 4-02-007-xx) were included due to inventory double-counting issues, not due to rule change issues.

5.1.1 Adhesives and Sealants Application

The OTC 2006 model rule for adhesives and sealants is based on the reasonably available control technology (RACT) and best available retrofit control technology (BARCT) determination by the California Air Resources Board (CARB) developed in 1998. Adhesive and sealant emission sources are classified as both point sources and area sources. About 96 percent of adhesive and sealant VOC emissions in the OTC states fall into the area source category. The remaining four percent of the VOC emissions are included in the point source inventory.

The emission reduction benefit estimation methodology is based on information developed and used by CARB for their RACT/BARCT determination in 1998. For point sources, we first identified those sources that were applying adhesives and sealants (using the source classification code of 4-02-007-xx, adhesives application). Next, we reviewed the MANEVU inventory to determine whether these sources had existing capture and control systems. Most of the sources did not have control information in the NIF database. However, several sources reported capture and destruction efficiencies in the 70 to 99 percent range, with a few sources reporting capture and destruction efficiencies of 99+ percent. Sources with existing control systems that exceeded an 85 percent overall capture and destruction efficiency would comply with the OTC 2006 model rule provision for add-on air pollution control equipment; therefore, no additional reductions were calculated for these sources. For point sources without add-on control equipment, we used the 64.4 percent reduction based on the CARB determination.

5.1.2 Asphalt Production Plants

In Resolution 06-02, the OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that would result in about a 35 percent reduction in NOx emissions. The reductions estimated for this category only include emissions included in the MANE-VU point source emission inventory. Only emissions from major point sources are typically included in the MANE-VU point source database. Emissions from non-major sources are not explicitly contained in the area source inventory; rather, the emissions from non-major asphalt plants are likely lumped together in the general area source industrial and commercial fuel use category. Therefore, there is some uncertainty regarding the actual reductions that will occur as since minor sources are not specifically identified in the MANE-VU inventory.

5.1.3 Cement Kilns

In Resolution 06-02, the OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that would result in about a 60 percent reduction in NOx emissions from uncontrolled levels. Cement kilns were already included in Phase I of the NO_x SIP call. Emission reductions resulting from the NOx SIP call were accounted for in the 2009 OTB inventory. For the cement kilns in Maryland and New York, a default control efficiency value of 25 percent was applied to account for the reductions expected from the NOx SIP call. For the cement kilns in Pennsylvania, the state provided their best estimates of the actual control efficiency expected for each kiln after the NOx SIP Call. There is a cement kiln in Maine, but it is not subject to the NOx SIP call. To calculate the additional reductions from the OTC 2006 Control Measure, MACTEC back calculated uncontrolled emissions from the 2009 base year inventory based on the controls applied to account for the NOx SIP Call. Once the uncontrolled emissions were calculated, MACTEC applied the 60 percent emission reduction guideline recommended by the OTC Commissioners, except for the kilns in New York. Staff from New York indicated that a 40 percent emission reduction should be used for modeling purposes.

5.1.4 Glass and Fiberglass Furnaces

In Resolution 06-02, the OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies that would result in about an 85 percent reduction in NOx emissions from uncontrolled levels. The NOx emission reduction benefit was calculated by applying an 85 percent reduction to the projected 2009 base inventory, except in New Jersey and New York. New Jersey specified a 20 percent NOx reduction from glass furnaces in 2012 and a 35 percent reduction in 2018. New York specified a 70 percent NOx reduction from glass furnaces beginning in 2009. The estimated 85% reductions does not take into account existing controls at the facilities. The OTC states are currently working with the glass industry to obtain additional data to better identify the controls already in place. This will allow for a better calculation of the emission reduction benefits.

5.1.5 Industrial, Commercial, and Institutional Boilers

In Resolution 06-02, the OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies for ICI boilers based on guidelines that varied by boiler size and fuel type. Specifically, the following guidelines were provided:

	NOx Reduction from 2009 Base Emissions by Fuel Type			
Boiler Size (mmBtu/hour)	**Natural Gas**	**#2 Fuel Oil**	**#4/#6 Fuel Oil**	**Coal**
< 25	10	10	10	10
25 to 50	50	50	50	50*
50 to 100	10	10	10	10*
100 to 250	75	40	40	40*
>250	**	**	**	**

* Resolution 06-02 did not specify a percent reduction for coal; for modeling purposes, the same percent reduction specified for #4/#6 fuel oil was used for coal

** Resolution 06-02 specified the reduction for > 250mmBtu/hour boilers to be the "same as EGUs of similar size." The OTC Commissioners have not yet recommended an emission rate or percent reduction for EGUs. As a result, no reductions for ICI boilers > 250 mmBtu/hour were included in the BOTW inventory.

Since the above guidelines vary by boiler size and fuel type, the specific percent reduction applied to an individual source depends on the SCC and design capacity of the source. The SCC identifies the fuel type, while the design capacity identifies the boiler size. In many cases, the design capacities in the MANE-VU NIF database were missing. MACTEC used the following hierarchy in filling in gaps where design capacities were missing.

- Use the design capacity field from the NIF EU table, if available;
- Use the design capacities provided by State/local agencies to fill in the data gaps (Allegheny County, District of Columbia, Maryland, New Jersey, Philadephia County);
- Use design capacity as reported either the Unit Description field in the NIF EU table or the Process Description field from the NIF EP table, if available;
- Use design capacity from the source's Title V permit, if the Title V permit was on-line;
- Use the SCC description to determine the design capacity (for example, SCC 1-02-006-01 describes a >100 mmBtu/hr natural gas-fired boiler, SCC 1-02-006-02 describes a 10-100 mmBtu/hr natural gas-fired boiler)

After performing this gap-filling exercise, MACTEC was able to assign over 97 percent of the NOx emissions to a specific boiler size range. For the remaining sources where MACTEC could not determine the boiler size (which accounted for only 3 percent of the NOx emissions), MACTEC assumed that these boilers were < 25 mmBtu/hr.

5.1.6 Commercial and Institutional Heating Oil

The BOTW control measure for heating oil is based on NESCAUM's report entitled "Low Sulfur Heating Oil in the Northeast States: An Overview of Benefits, Costs and Implementation Issues." NESCAUM estimates that reducing the sulfur content of heating oil from 2,500 ppm to 500 ppm lowers SO2 emissions by 75 percent, PM emissions by 80 percent, NOx emissions by 10 percent. The 500 ppm sulfur heating oil is not expected to available on a widespread basis until 2012 at the earliest. These percent reductions were applied to commercial distillate oil category (SCC 1-03-005-xx and 1-05-002-05). These percent reductions were applied based on the state's recommendations in the matrix which identifies control measures to include and in which years the control measure should be accounted for in the modeling inventory.

5.1.7 BOTW NonEGU Point Source NIF, SMOKE, and Summary Files

The Version 3.1 file names and descriptions delivered to MARAMA are shown in Table 5-5.

Table E-1 shows the anticipated percent reductions by SCC and year for the nonEGU point source BOTW control measures.

5.1.8 BOTW NonEGU Point Source Emission Summaries

Emission summaries by state, year, and pollutant are presented in Tables 5-6 through 5-12 for CO, NH3, NOx, PM10-PRI, PM25-PRI, SO2, and VOC, respectively.

Table 5-5 BOTW NonEGU Point Source NIF, IDA, and Summary File Names

File Name	Date	Description
MANEVU_BOTW2009_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2009 BOTW nonEGU source NIF inventory
MANEVU_BOTW2012_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2012 BOTW nonEGU source NIF inventory
MANEVU_BOTW2018_NonEGU_NIFV3_1.mdb	Dec. 4, 2006	Version 3.1 of 2018 BOTW nonEGU source NIF inventory
MANEVU_BOTW2009_NonEGU_IDAV3_1.txt	Nov. 22, 2006	Version 3.1 of 2009 BOTW nonEGU source inventory in SMOKE IDA format
MANEVU_BOTW2012_NonEGU_IDAV3_1.txt	Nov. 22, 2006	Version 3.1 of 2012 BOTW nonEGU source inventory in SMOKE IDA format
MANEVU_BOTW2018_NonEGU_IDA3V_1.txt	Nov. 22, 2006	Version 3.1 of 2018 BOTW nonEGU source inventory in SMOKE IDA format
MANEVU OTB BOTW NonEGU V3_1 State Summary.xls	Nov. 22, 2006	Spreadsheet with state totals by pollutant for all nonEGU sources
MANEVU OTB BOTW NonEGU V3_1 State SCC Summary.xls	Dec. 4, 2006	Spreadsheet with SCC totals by state and pollutant for all nonEGU sources.

Table 5-6 NonEGU Point Sources
OTB/OTW and BOTW Annual CO Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	2,157	2,251	2,251	2,306	2,306	2,415	2,415
DE	8,812	9,037	9,037	8,748	8,748	8,651	8,651
DC	247	283	283	299	299	327	327
ME	9,043	10,147	10,147	10,467	10,467	11,433	11,433
MD	94,536	104,012	104,012	111,174	111,174	141,342	141,342
MA	10,793	12,027	12,027	12,552	12,552	13,426	13,426
NH	774	858	858	871	871	907	907
NJ	8,209	10,076	10,076	10,806	10,806	12,244	12,244
NY	53,259	61,411	61,411	65,541	65,541	78,876	78,876
PA	105,815	116,430	116,430	121,251	121,251	140,908	140,908
RI	1,712	1,764	1,764	1,821	1,821	1,927	1,927
VT	220	250	250	254	254	267	267
Total	**295,577**	**328,546**	**328,546**	**346,090**	**346,090**	**412,723**	**412,723**

No BOTW controls were considered for CO.

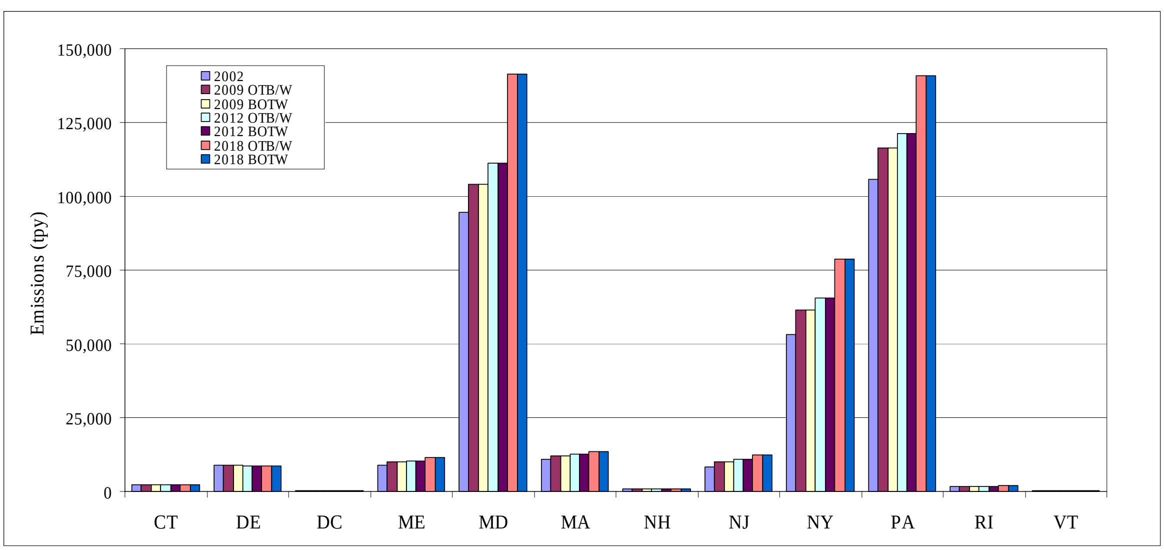


Table 5-7 NonEGU Point Sources
OTB/OTW and BOTW Annual NH3 Emission Projections
(tons per year)

	2002	**2009 OTB/W**	**2009 BOTW**	**2012 OTB/W**	**2012 BOTW**	**2018 OTB/W**	**2018 BOTW**
CT	0	0	0	0	0	0	0
DE	153	145	145	138	138	134	134
DC	4	5	5	5	5	5	5
ME	700	796	796	809	809	859	859
MD	305	347	347	366	366	410	410
MA	462	510	510	521	521	563	563
NH	37	46	46	50	50	60	60
NJ	0	0	0	0	0	0	0
NY	1,027	1,081	1,081	1,128	1,128	1,296	1,296
PA	1,170	1,307	1,307	1,363	1,363	1,591	1,591
RI	58	64	64	68	68	68	68
VT	0	0	0	0	0	0	0
Total	**3,916**	**4,301**	**4,301**	**4,448**	**4,448**	**4,986**	**4,986**

No BOTW controls were considered for NH3.

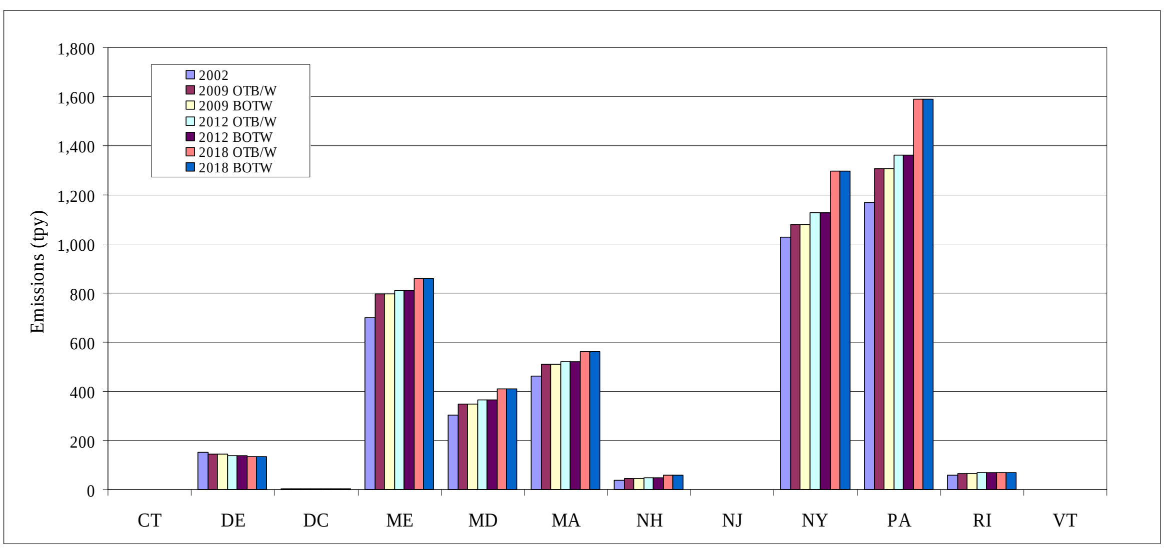


Table 5-8 NonEGU Point Sources
OTB/OTW and BOTW Annual NOx Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	6,773	7,236	6,820	7,465	7,047	7,921	7,501
DE	4,372	4,076	4,076	4,135	4,135	4,246	4,246
DC	480	548	548	577	577	627	627
ME	12,108	14,285	12,914	14,661	13,183	15,753	14,137
MD	21,940	19,401	16,015	20,399	16,819	22,797	18,888
MA	18,292	20,603	20,047	21,372	20,768	23,040	22,301
NH	1,188	1,384	1,120	1,394	1,131	1,435	1,169
NJ	15,812	16,498	16,463	17,091	15,901	18,805	17,464
NY	34,253	33,648	28,529	34,586	29,256	37,133	31,305
PA	89,136	89,932	76,215	93,526	72,779	103,137	79,186
RI	2,308	2,449	2,449	2,471	2,471	2,442	2,442
VT	386	462	462	460	460	466	466
Total	**207,048**	**210,522**	**185,658**	**218,137**	**184,527**	**237,802**	**199,732**

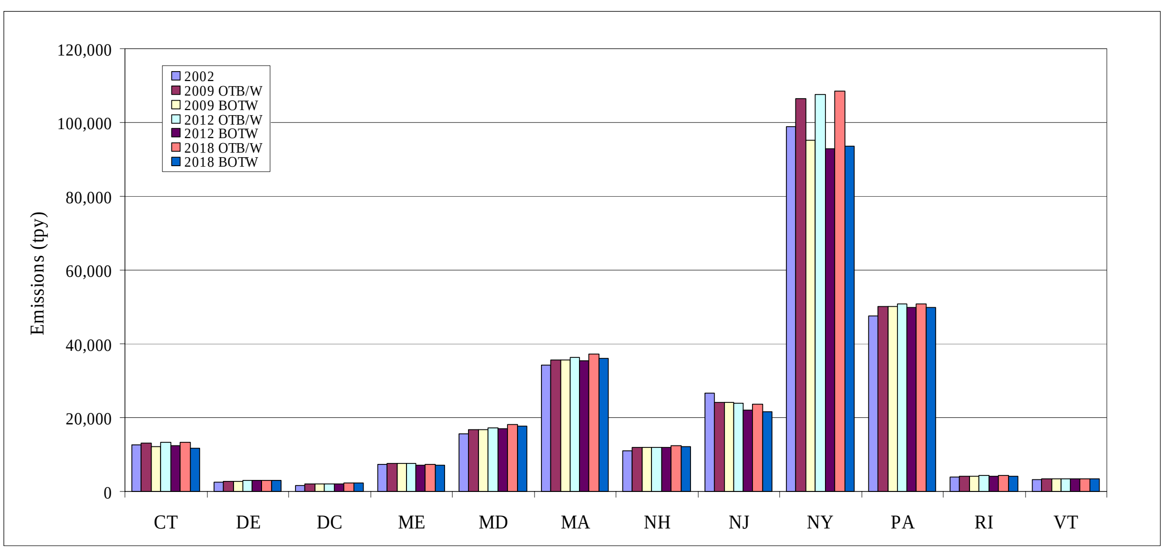


**Table 5-9 NonEGU Point Sources
OTB/OTW and BOTW Annual PM10-PRI Emission Projections
(tons per year)**

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	990	1,035	1,035	1,058	1,058	1,106	1,104
DE	1,820	1,486	1,486	1,475	1,475	1,487	1,487
DC	157	178	178	186	182	198	194
ME	6,120	7,088	7,088	7,133	7,114	7,496	7,477
MD	4,739	4,797	4,797	5,040	5,039	5,828	5,827
MA	4,212	5,006	5,006	5,088	5,004	5,314	5,227
NH	918	1,084	1,084	1,097	1,097	1,129	1,129
NJ	3,439	4,205	4,205	4,417	4,412	4,959	4,953
NY	5,072	5,221	5,221	5,444	5,395	6,098	6,048
PA	23,282	25,169	25,169	26,307	26,258	29,516	29,466
RI	296	333	333	331	318	330	316
VT	235	267	267	272	272	296	296
Total	**51,280**	**55,869**	**55,869**	**57,848**	**57,624**	**63,757**	**63,524**

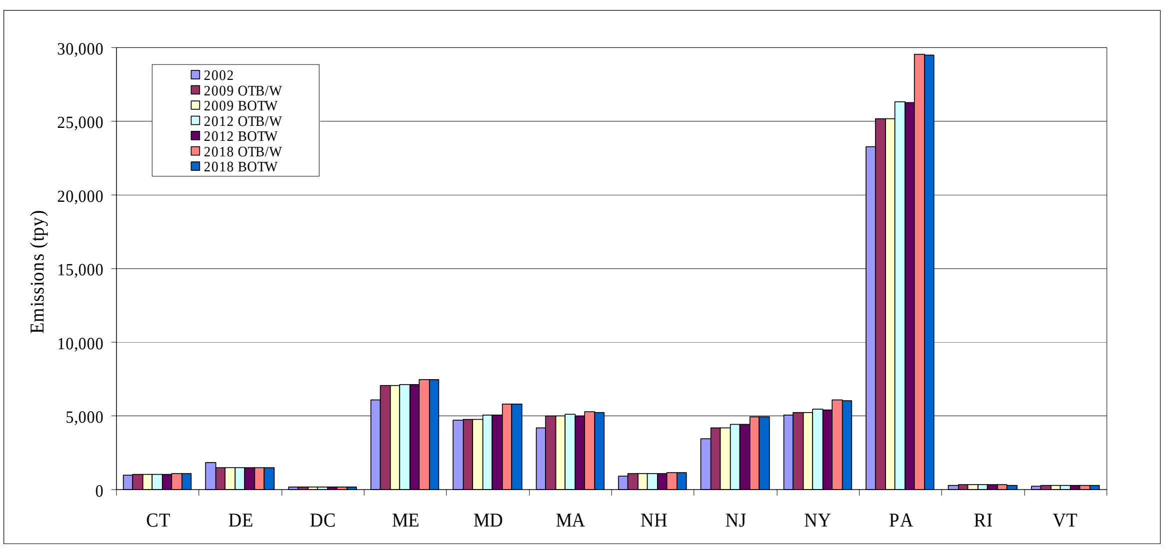


**Table 5-10 NonEGU Point Sources
OTB/OTW and BOTW Annual PM25-PRI Emission Projections
(tons per year)**

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	822	871	871	894	894	939	937
DE	1,606	1,256	1,256	1,245	1,245	1,254	1,254
DC	128	145	145	152	149	164	161
ME	4,899	5,675	5,675	5,690	5,678	5,935	5,922
MD	2,772	2,861	2,861	3,011	3,010	3,503	3,501
MA	2,953	3,554	3,554	3,574	3,510	3,660	3,594
NH	857	1,008	1,008	1,021	1,021	1,052	1,052
NJ	2,947	3,588	3,588	3,764	3,760	4,234	4,230
NY	3,355	3,535	3,535	3,688	3,646	4,161	4,117
PA	12,360	13,578	13,578	14,159	14,114	15,878	15,831
RI	180	200	200	198	188	194	184
VT	198	226	226	229	229	246	246
Total	**33,077**	**36,497**	**36,497**	**37,625**	**37,444**	**41,220**	**41,029**

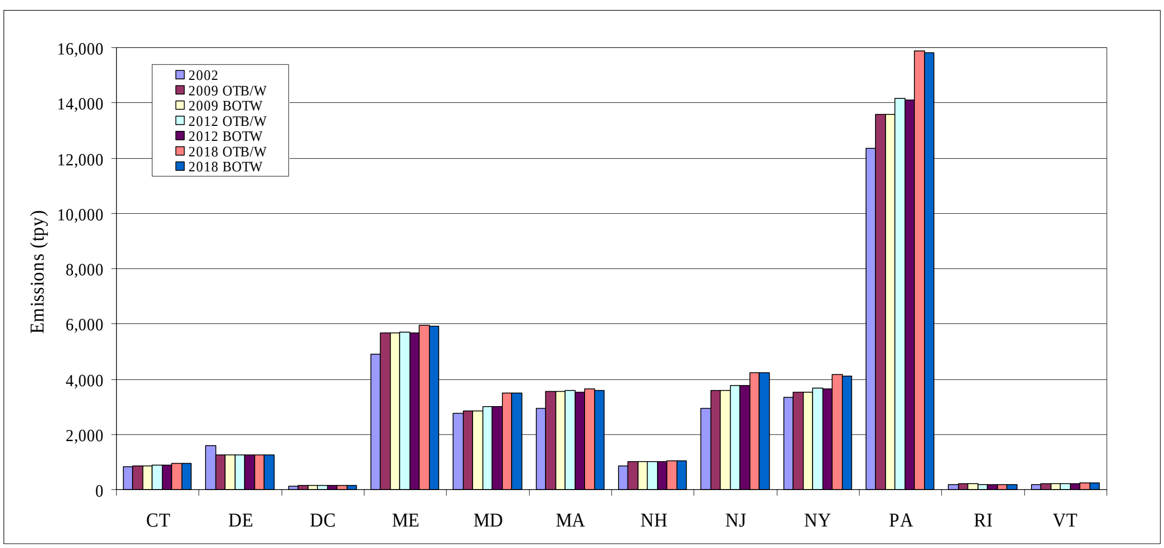


Table 5-11 NonEGU Point Sources
OTB/OTW and BOTW Annual SO2 Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	2,438	2,528	2,528	2,567	2,567	2,644	2,596
DE	35,706	7,117	7,117	7,401	7,401	7,610	7,610
DC	618	707	707	735	533	780	554
ME	14,412	18,656	18,656	18,492	18,393	18,794	18,692
MD	34,193	34,223	34,223	35,373	35,342	38,921	38,886
MA	14,766	18,185	18,185	18,442	17,305	18,955	17,778
NH	2,436	3,099	3,099	3,098	3,098	3,114	3,099
NJ	9,797	7,141	7,141	7,234	7,196	7,855	7,816
NY	58,227	62,922	62,922	64,484	64,432	67,545	67,491
PA	88,259	90,735	90,735	93,441	93,206	99,924	99,681
RI	2,651	3,163	3,163	3,182	3,018	3,164	3,000
VT	874	1,182	1,182	1,147	1,147	1,127	1,127
Total	**264,377**	**249,658**	**249,658**	**255,596**	**253,638**	**270,433**	**268,330**

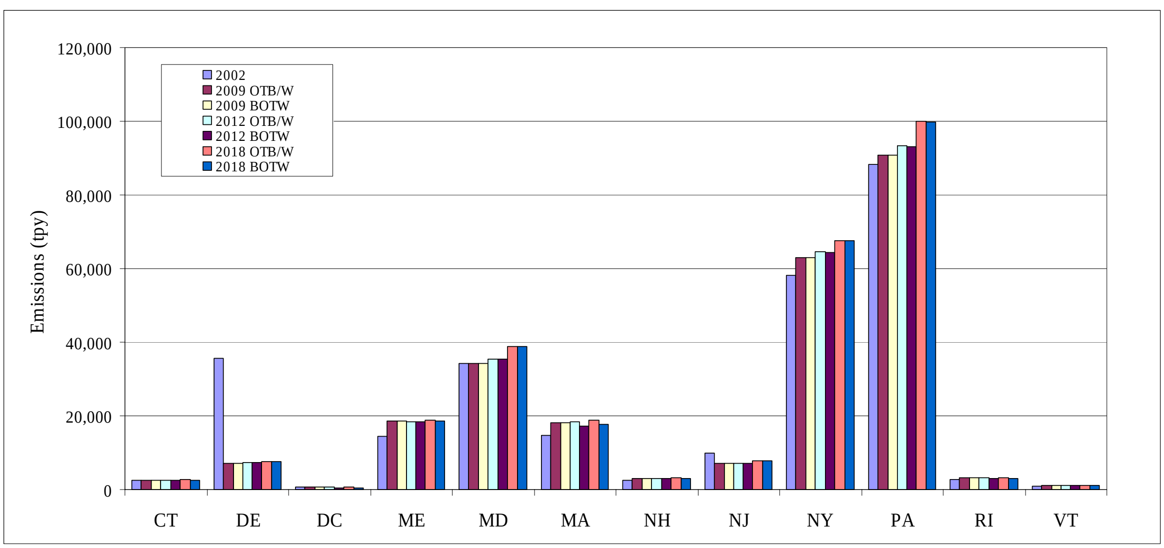
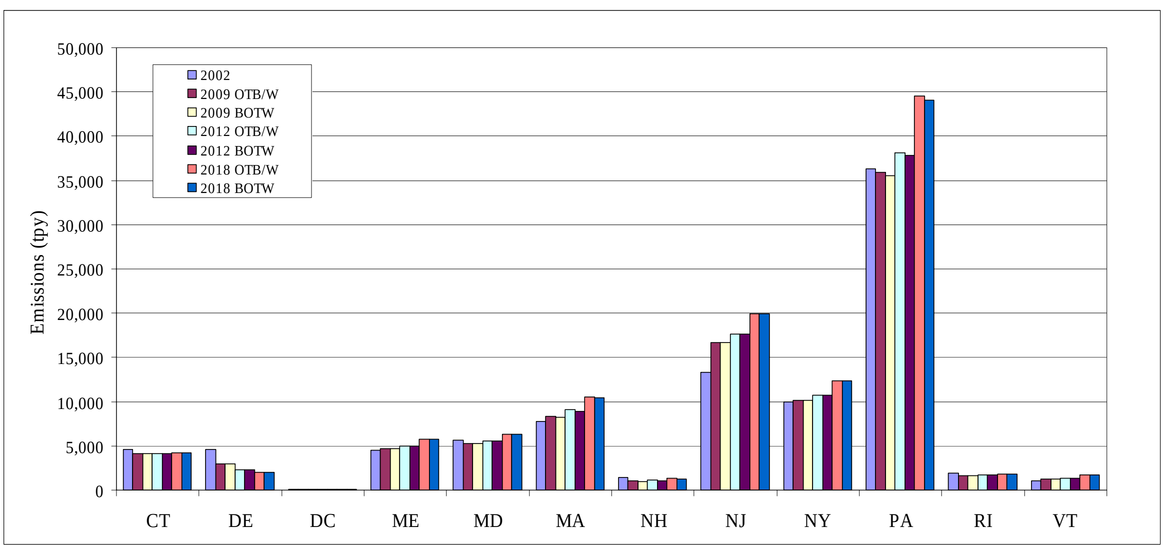


Table 5-12 NonEGU Point Sources
OTB/OTW and BOTW Annual VOC Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	4,604	4,114	4,111	4,152	4,149	4,230	4,227
DE	4,645	2,987	2,981	2,311	2,305	1,993	1,987
DC	69	72	72	75	75	85	85
ME	4,477	4,740	4,740	4,985	4,985	5,709	5,708
MD	5,676	5,297	5,279	5,578	5,559	6,301	6,279
MA	7,794	8,381	8,273	9,061	8,940	10,564	10,418
NH	1,459	1,060	1,005	1,132	1,069	1,294	1,219
NJ	13,318	16,702	16,702	17,621	17,621	19,915	19,915
NY	9,933	10,157	10,141	10,750	10,732	12,354	12,333
PA	36,326	35,875	35,548	38,162	37,795	44,537	44,085
RI	1,898	1,640	1,628	1,695	1,683	1,812	1,799
VT	1,079	1,254	1,238	1,365	1,347	1,730	1,707
Total	**91,278**	**92,279**	**91,718**	**96,887**	**96,260**	**110,524**	**109,762**



5.2 AREA SOURCES

This Section describes the analysis of the OTC and MANE-VU control measures to reduce emissions from area sources. The control measures included in this analysis reduce emissions for the following pollutants and area source categories:

- NOx measures: ICI boilers (natural gas, #2 fuel oil, #4/#6 fuel oil, and coal) and residential and commercial home heating oil;
- Primary PM10 and PM2.5 measures: residential and commercial home heating oil;
- SO2 measures: residential and commercial home heating oil, and ICI boilers (distillate oil).
- VOC measures: adhesives and sealants, emulsified and cutback asphalt paving, consumer products, and portable fuel containers;

For the MANE-VU modeling inventory, each state was asked to complete a matrix identify which control measures to include and in which years the control measure should be applied. Tables 5.13, 5.14, and 5.15 summarize the staff recommendations for control measures to include in the BOTW regional modeling inventory for NOx, SO2, and VOC respectively. The following subsections describe the emission reductions anticipated for each of the area source control measures.

5.2.1 Adhesives and Sealants

The OTC 2006 model rule for adhesives and sealants is based on the reasonably available control technology (RACT) and best available retrofit control technology (BARCT) determination by the California Air Resources Board (CARB) developed in 1998. Adhesive and sealant emission sources are classified as both point sources and area sources. About 96 percent of adhesive and sealant VOC emissions in the OTC states fall into the area source category. The remaining four percent of the VOC emissions are included in the point source inventory.

The emission reduction benefit estimation methodology for area sources is based on information developed and used by CARB for their RACT/BARCT determination in 1998. CARB estimates that the total industrial adhesive and sealant emissions in California to be about 45 tons per day (tpd). Solvent-based adhesive and sealant emissions are estimated to be about 35 tpd of VOC and water-based adhesive and sealant emissions are about 10 tpd of VOC.

Table 5.13 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – NOx Area Sources

	ICI Boilers < 25 mmBTU/hour			ICI Boilers 25-50 mmBtu/hour			ICI Boilers 50-100 mmBtu/hour			Residential and Commercial Home Heating Oil		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
DE	No	No	No	No	No	No	No	No	No	No	No	No
DC	No	No	No	No	No	No	No	No	No	No	Yes	Yes
ME	No	No	No	No	No	No	No	No	No	No	Yes	Yes
MD	No	No	No	No	No	No	No	No	No	No	Yes	Yes
MA	No	No	No	No	No	No	No	No	No	No	Yes	Yes
NH	No	No	No	No	No	No	No	No	No	No	No	Yes
NJ	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
NY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
PA	No	No	No	No	No	No	No	No	No	No	Yes	Yes
RI	No	No	No	No	No	No	No	No	No	No	Yes	Yes
VT[1]	No	No	No	No	No	No	No	No	No	No	No	No

Yes - Include emission reductions from OTC 2006 control measure in modeling inventory
No - Do not include emission reduction from OTC 2006 control measure in modeling inventory

Table 5.14 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – SO2 Area Sources

	ICI Boilers < 25 mmBTU/hour			ICI Boilers 25-50 mmBtu/hour			ICI Boilers 50-100 mmBtu/hour			Residential Home Heating Oil		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	No	No	No	No	No	No	No	No	No	No	No	Yes
DE	No	No	No	No	No	No	No	No	No	No	No	No
DC	No	No	No	No	No	No	No	No	No	No	Yes	Yes
ME	No	No	No	No	No	No	No	No	No	No	Yes	Yes
MD	No	No	No	No	No	No	No	No	No	No	Yes	Yes
MA	No	No	No	No	No	No	No	No	No	No	Yes	Yes
NH	No	No	No	No	No	No	No	No	No	No	No	Yes
NJ	No	No	No	No	No	No	No	No	No	No	Yes	Yes
NY	No	No	No	No	No	No	No	No	No	No	Yes	Yes
PA	No	No	No	No	No	No	No	No	No	No	Yes	Yes
RI	No	No	No	No	No	No	No	No	No	No	Yes	Yes
VT[1]	No	No	No	No	No	No	No	No	No	No	No	No

Yes - Include emission reductions from OTC 2006 control measure in modeling inventory
No - Do not include emission reduction from OTC 2006 control measure in modeling inventory

Table 5.15 State Staff Recommendations for Control Measures to Include in BOTW Regional Modeling – VOC Area Sources

	Adhesives and Sealants			Emulsified and Cutback Asphalt Paving			Consumer Products			Portable Fuel Containers		
State	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**	**2009**	**2012**	**2018**
CT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DE	Yes	Yes	Yes	No[2]	No[2]	No[2]	Yes	Yes	Yes	Yes	Yes	Yes
DC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ME	Yes	Yes	Yes	No[3]	No[3]	No[3]	Yes	Yes	Yes	Yes	Yes	Yes
MD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
NH	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NJ	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NY	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PA	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RI	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
VT[1]	No	No	No	No	No	No	No	No	No	No	No	No

Yes - Include emission reductions from OTC 2006 control measure in modeling inventory
No - Do not include emission reduction from OTC 2006 control measure in modeling inventory

1) Vermont indicated that the modeling inventory should not reflect anything beyond the 2002 OTC control level for these source categories in Vermont.
2) Delaware's existing asphalt paving regulations are more stringent than the OTC 2006 control measure.
3) Maine has not yet determined whether to include emission reductions from the OTC 2006 control measure for asphalt paving. Maine's inventory includes emissions only from cutback asphalt; no emissions are reported for emulsified asphalt.

CARB estimated that emission reductions achieved by statewide compliance with the VOC limits in the RACT/BARCT determination will range from approximately 29 to 35 tpd (CARB 1998, pg. 18). These emission reductions correspond to a 64.4 to 77.8 percent reduction from uncontrolled levels. For OTC modeling purposes, we used the lower end of this range (i.e., 64.4 percent reduction) to estimate the emission benefit for area sources due to the OTC 2006 model rule.

5.2.2 Asphalt Paving

The OTC current guideline for asphalt paving calls for a complete ban on the use of cutback asphalt during the ozone season and limits the VOC content of emulsified asphalt to two percent or less. The proposal is still under evaluation. A 20 percent reduction in emissions from emulsified asphalt was assumed for the modeling inventory.

The current regulations in all MANE-VU states generally ban the use of cutback asphalt during the ozone season. In some states, there are a few exemptions from the ban that allow for the use of cutback during the ozone season. It has not yet been determined whether states will modify their cutback asphalt rules to eliminate the exemptions. Since the VOC emissions from the use of cutback asphalt during the ozone season are generally very small, MACTEC assumed that there will be no additional emission reductions from the use of cutback asphalt during the ozone season.

The emission reductions resulting from the two percent VOC content limit on emulsified asphalt depend on the baseline VOC content of emulsified asphalt. The baseline VOC content may range from 0 to 12 percent. New Jersey used a VOC content of 8 percent in their baseline emission calculations (based on the 8 percent limit in their current rule). Reducing the VOC content to 2 percent in New Jersey will result in a 75 percent reduction. Delaware already bans the use of emulsified asphalt that contains any VOC, so there is no reduction in Delaware. Several other states used an average VOC content of 2.5 percent when developing their emission inventory. Thus, reducing the average VOC content from 2.5 percent to 2.0 percent results in a 20 percent reduction in VOC emissions. For States that did not supply a baseline VOC content for asphalt paving, we used the 20 percent reduction in VOC emissions from emulsified asphalt paving during the ozone season.

5.2.3 Consumer Products

The OTC 2006 model rule will modify the OTC 2001 model rule based on amendments adopted by CARB in July 2005. The emission reduction benefit estimation methodology is based on information developed by CARB. CARB estimates 6.05 tons per day of VOC reduced from their July 2005 amendments (CARB 2004, pg. 8), excluding the benefits from the two products (anti-static products and shaving gels) with compliance dates in 2008 or 2009. This equates to about 2,208 tons per year. The population of California as of July 1, 2005 is 36,132,147 (Census 2006). On a per capita basis, the emission reduction from the CARB July 2005 amendments equals 0.122 lbs/capita.

Since the OTC's 2006 control measure is very similar to the CARB July 2005 amendments (with the exclusion of the anti-static products and shaving gel 2008/2009 limits), the per capita emission reductions are expected to be the same in the OTR. The per capita factor after the implementation of the OTC 2001 model rule is 6.06 lbs/capita (Pechan 2001, pg. 8). The percentage reduction from the OTC's 2006 control measure was computed as shown below:

Current OTC Emission Factor	=	6.06 lbs/capita
Benefit from CARB 2005 amendments	=	0.122 lbs/capita
Percent Reduction	=	100%*(1 - (6.06 – 0.122)/6.06)
	=	2.0%

The 2.0% reduction will be applied to all states except Vermont, which indicated that they do not want the modeling inventory to reflect anything beyond the 2002 OTC control level for consumer products in Vermont.

5.2.4 Portable Fuel Containers

The OTC 2006 model rule will modify the OTC 2001 model rule based on amendments adopted by CARB in 2006. Estimated emission reductions were based on information compiled by CARB to support their recent amendments. CARB estimated that PFC emissions in 2015 will be 31.9 tpd in California with no additional controls or amendments to the 2000 PFC rules. CARB further estimates that the 2006 amendment will reduce emission from PFCs by 18.4 tpd in 2015 in California compared to the 2000 PFC regulations. Thus, at full implementation, the expected incremental reduction is approximately 58 percent, after an estimated 75 percent reduction from the original 2000 rule (CARB later adjusted the reduction to 65 percent due to unanticipated problems with spillage from the new cans).

The OTC calculations assume that States will adopt the rule by July 2007 and will provide manufacturers one year from the date of the rule to comply. Thus, new compliant PFCs will not be on the market until July 2008. Assuming a 10-year turnover to compliant cans, only 10 percent of the existing inventory of PFCs will comply with the new requirements in the summer of 2009. Therefore, only 10 percent of the full emission benefit estimated by CARB will occur by 2009 – the incremental reduction will be about 5.8 percent in

2009. In 2012, there will be a 40 percent turnover to compliant cans, resulting in an incremental reductions of about 23.2 percent. By 2018, the will be 100 percent penetration to compliant PFCs, resulting in an incremental reduction of 58 percent in 2018.

The emission reductions from the 2006 OTC PFC model rule were calculated only for the emissions accounted for in the area source inventory. Additional benefits (not estimated for this report) would be expected from equipment refueling vapor displacement and spillage that is accounted for in the nonroad inventory.

5.2.5 Industrial/Commercial/Institutional Boilers

In Resolution 06-02, the OTC Commissioners recommended that OTC member states pursue as necessary and appropriate state-specific rulemakings or other implementation methods to establish emission reduction percentages, emission rates or technologies for ICI boilers based on guidelines that varied by boiler size and fuel type. Specifically, the following guidelines were provided:

	NOx Reduction from 2009 Base Emissions by Fuel Type			
Boiler Size (mmBtu/hour)	**Natural Gas**	**#2 Fuel Oil**	**#4/#6 Fuel Oil**	**Coal**
< 25	10	10	10	10
25 to 50	50	50	50	50*
50 to 100	10	10	10	10*
100 to 250	75	40	40	40*
>250	**	**	**	**

* Resolution 06-02 did not specify a percent reduction for coal; for modeling purposes, the same percent reduction specified for #4/#6 fuel oil was used for coal

** Resolution 06-02 specified the reduction for > 250mmBtu/hour boilers to be the "same as EGUs of similar size." The OTC Commissioners have not yet recommended an emission rate or percent reduction for EGUs. As a result, no reductions for ICI boilers > 250 mmBtu/hour were included in the BOTW inventory.

Since the above guidelines vary by boiler size and fuel type, the specific percent reduction applied to an area source category depends on the SCC and design capacity of the source. The SCC identifies the fuel type (for example, SCC 21-02-004-xxx describes distillate oil-fired industrial boilers, SCC 21-02-006-xxx describes natural gas-fired industrial boilers). The area source inventory does not contain any information on the sizes of the units included in the inventories. To apportion area source emissions to the boiler size ranges listed above, MACTEC used data from the *Characterization of the U.S. Industrial/Commercial Boiler Population* (May 2005, Oak Ridge National Laboratory). We used the national estimates of boiler capacity by size from Table ES-1 of the Oak

Ridge report to calculate the percentage of total boiler capacity in each size range. Since the Oak Ridge report distinguished between industrial boilers and commercial/institutional boilers, we developed separate profiles for industrial boilers and for commercial/institutional boilers. We used these boiler size profiles to calculate weighted average percent reductions industrial boilers by fuel type and commercial/institutional boilers by fuel type.

5.2.6 Residential and Commercial Heating Oil

The BOTW control measure for heating oil is based on NESCAUM's report entitled "Low Sulfur Heating Oil in the Northeast States: An Overview of Benefits, Costs and Implementation Issues." NESCAUM estimates that reducing the sulfur content of heating oil from 2,000 ppm to 500 ppm lowers SO2 emissions by 75 percent, PM emissions by 80 percent, NOx emissions by 10 percent. The 500 ppm sulfur heating oil is not expected to available on a widespread basis until 2012 at the earliest. These percent reductions were applied to residential distillate oil category (SCC 21-04-004-xxx) and commercial distillate oil category (SCC 21-03-004-xxx). These percent reductions were applied based on the state's recommendations in the matrix which identifies control measures to include and in which years the control measure should be accounted for in the modeling inventory.

5.2.7 BOTW Area Source NIF, SMOKE, and Summary Files

The Version 3 file names and descriptions delivered to MARAMA are shown in Table 5-16.

Table E-1 shows the anticipated percent reductions by SCC and year for the nonEGU point source BOTW control measures.

5.2.8 BOTW Area Source Emission Summaries

Emission summaries by state, year, and pollutant are presented in Tables 5-17 through 5-23 for CO, NH3, NOx, PM10-PRI, PM25-PRI, SO2, and VOC, respectively.

Table 5-16 BOTW Area Source NIF, IDA, and Summary File Names

File Name	Date	Description
MANEVU_BOTW2009_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2009 BOTW area source NIF inventory
MANEVU_BOTW2012_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2012 BOTW area source NIF inventory
MANEVU_BOTW2018_Area_NIFV3_2.mdb	Nov. 9, 2006	Version 3.2 of 2018 BOTW area source NIF inventory
MANEVU_BOTW2009_Area_IDAV3_2.txt	Nov. 20, 2006	Version 3.2 of 2009 BOTW area source inventory in SMOKE IDA format
MANEVU_BOTW2012_Area_IDAV3_2.txt	Nov. 20, 2006	Version 3.2 of 2012 BOTW area source inventory in SMOKE IDA format
MANEVU_BOTW2018_Area_IDA3V_2.txt	Nov. 20, 2006	Version 3.2 of 2018 BOTW area source inventory in SMOKE IDA format
MANEVU OTB BOTW Area V3_2 State Summary.xls	Nov. 8, 2006	Spreadsheet with state totals by pollutant for all area sources
MANEVU OTB BOTW Area V3_2 State SCC Summary.xls	Nov. 8, 2006	Spreadsheet with SCC totals by state and pollutant for all area sources.

**Table 5-17 Area Sources
OTB/OTW and BOTW Annual CO Emission Projections
(tons per year)**

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	70,198	65,865	65,865	63,874	63,874	59,797	59,797
DE	14,052	15,395	15,395	15,233	15,233	14,864	14,864
DC	2,300	2,417	2,417	2,460	2,460	2,512	2,512
ME	109,223	102,743	102,743	99,877	99,877	94,181	94,181
MD	141,178	143,653	143,653	144,233	144,233	144,649	144,649
MA	137,496	132,797	132,797	130,255	130,255	125,205	125,205
NH	79,647	76,504	76,504	75,319	75,319	73,038	73,038
NJ	97,657	90,432	90,432	88,048	88,048	83,119	83,119
NY	356,254	336,576	336,576	327,118	327,118	307,659	307,659
PA	266,935	266,887	266,887	264,012	264,012	257,396	257,396
RI	8,007	8,007	8,007	8,026	8,026	8,024	8,024
VT	43,849	42,683	42,683	42,172	42,172	41,283	41,283
Total	**1,326,796**	**1,283,959**	**1,283,959**	**1,260,627**	**1,260,627**	**1,211,727**	**1,211,727**

No BOTW controls were considered for CO.

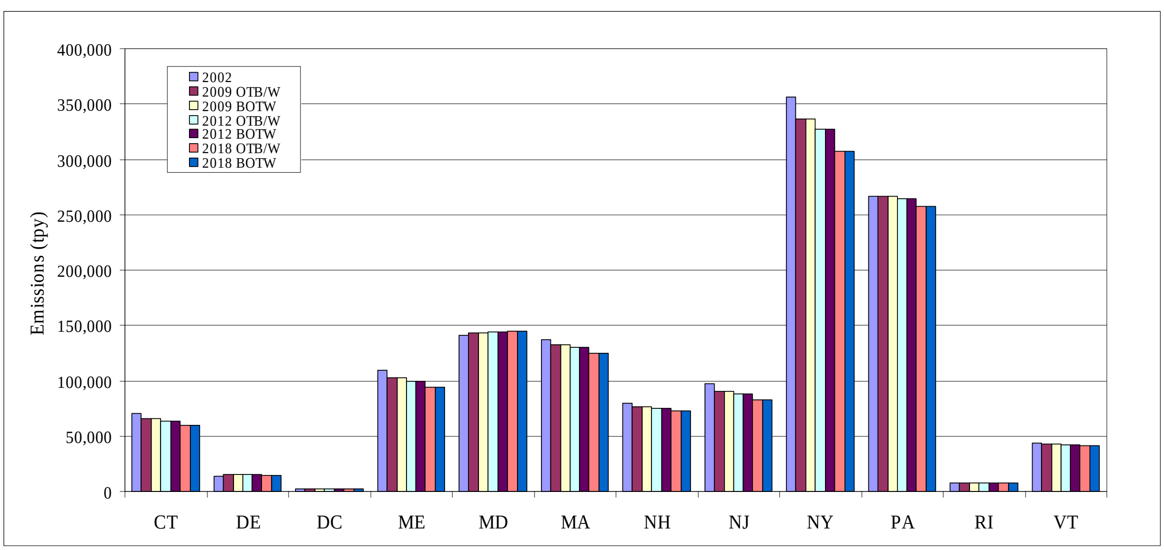


Table 5-18 Area Sources
OTB/OTW and BOTW Annual NH3 Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	5,318	5,208	5,208	5,156	5,156	5,061	5,061
DE	13,279	13,316	13,316	13,328	13,328	13,342	13,342
DC	14	16	16	16	16	17	17
ME	8,747	10,453	10,453	11,116	11,116	12,312	12,312
MD	25,834	31,879	31,879	34,222	34,222	38,155	38,155
MA	18,809	19,131	19,131	19,275	19,275	19,552	19,552
NH	2,158	2,466	2,466	2,584	2,584	2,789	2,789
NJ	17,572	19,457	19,457	20,154	20,154	21,435	21,435
NY	67,422	81,626	81,626	87,116	87,116	96,078	96,078
PA	79,911	98,281	98,281	105,418	105,418	117,400	117,400
RI	883	945	945	972	972	1,025	1,025
VT	9,848	12,156	12,156	13,062	13,062	14,580	14,580
Total	**249,795**	**294,934**	**294,934**	**312,419**	**312,419**	**341,746**	**341,746**

No BOTW controls were considered for NH3.

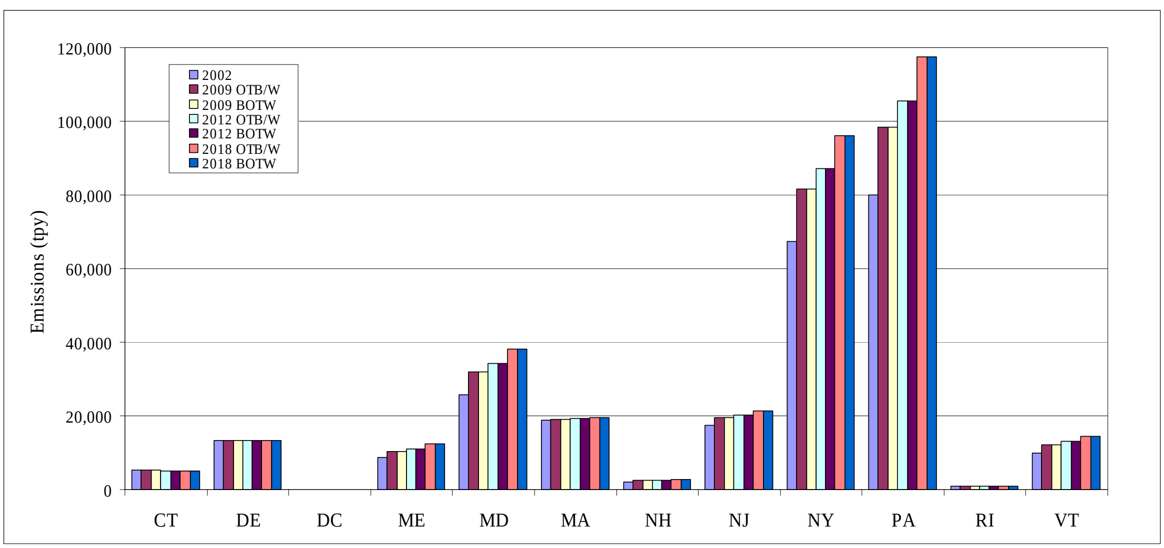


**Table 5-19 Area Sources
OTB/OTW and BOTW Annual NOx Emission Projections
(tons per year)**

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	12,689	13,173	12,245	13,342	12,389	13,388	11,795
DE	2,608	2,821	2,821	2,913	2,913	3,014	3,014
DC	1,644	1,961	1,961	2,081	2,052	2,259	2,229
ME	7,360	7,477	7,477	7,486	7,095	7,424	7,036
MD	15,678	16,858	16,858	17,315	17,007	18,073	17,746
MA	34,281	35,732	35,732	36,331	35,321	37,187	36,199
NH	10,960	11,879	11,879	12,055	12,055	12,430	12,180
NJ	26,692	24,032	24,032	23,981	21,976	23,660	21,684
NY	98,803	106,375	95,190	107,673	92,935	108,444	93,639
PA	47,591	50,162	50,162	50,793	49,773	50,829	49,829
RI	3,886	4,149	4,149	4,260	4,112	4,397	4,249
VT	3,208	3,419	3,419	3,429	3,429	3,430	3,430
Total	**265,400**	**278,038**	**265,925**	**281,659**	**261,057**	**284,535**	**263,030**

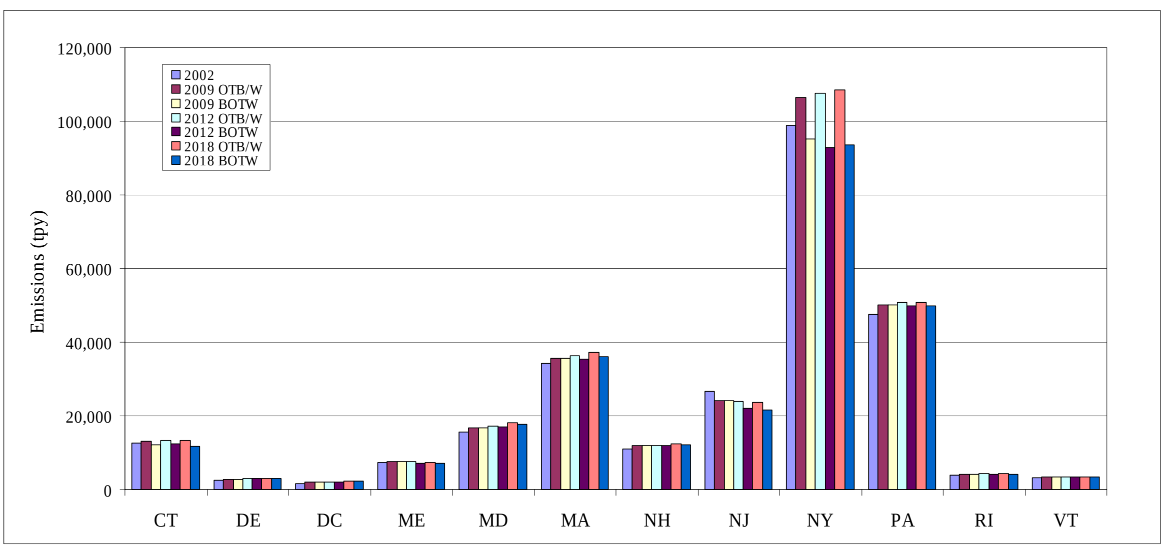


Table 5-20 Area Sources
OTB/OTW and BOTW Annual PM10-PRI Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	48,281	48,970	48,970	49,004	49,004	49,479	48,734
DE	13,039	13,928	13,928	14,236	14,236	14,844	14,844
DC	3,269	3,511	3,511	3,605	3,547	3,825	3,762
ME	168,953	175,979	175,979	179,689	179,004	189,619	188,928
MD	95,060	105,944	105,944	110,141	109,829	117,396	117,066
MA	192,860	198,668	198,668	200,692	200,215	204,922	204,456
NH	43,328	46,060	46,060	47,187	47,187	49,801	49,544
NJ	61,601	61,684	61,684	61,284	60,916	60,880	60,519
NY	369,595	382,124	382,124	385,925	383,234	392,027	389,385
PA	391,897	421,235	421,235	432,844	431,787	454,970	453,934
RI	8,295	8,962	8,962	9,244	8,976	9,797	9,514
VT	56,131	60,521	60,521	62,465	62,465	66,916	66,916
Total	**1,452,309**	**1,527,586**	**1,527,586**	**1,556,316**	**1,550,400**	**1,614,476**	**1,607,602**

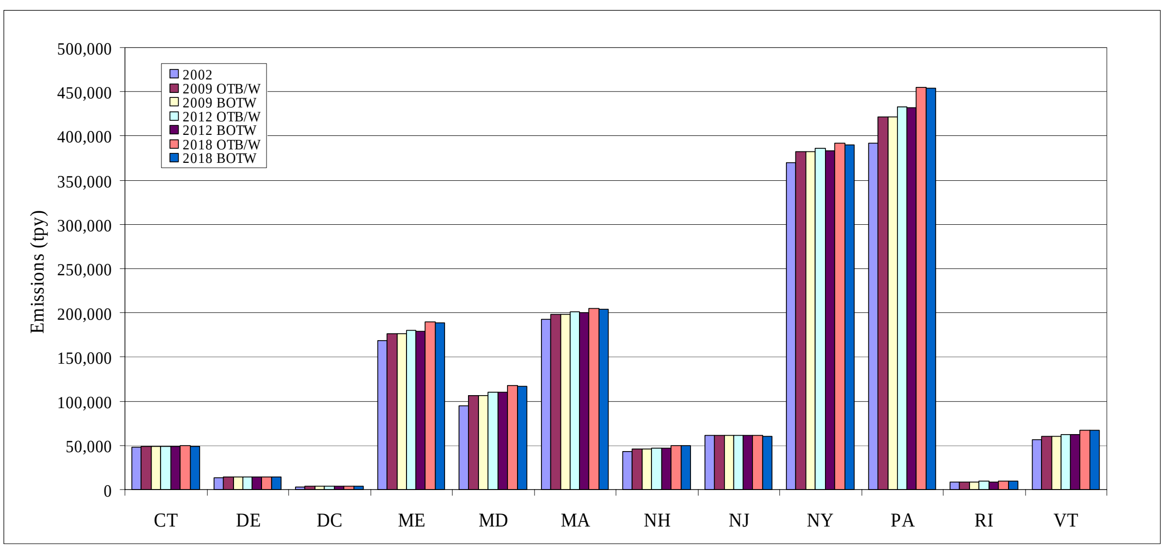


**Table 5-21 Area Sources
OTB/OTW and BOTW Annual PM25-PRI Emission Projections
(tons per year)**

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	14,247	13,766	13,766	13,517	13,517	13,033	12,366
DE	3,204	3,387	3,387	3,403	3,403	3,426	3,426
DC	805	860	860	879	827	917	860
ME	32,774	33,026	33,026	33,189	32,576	33,820	33,201
MD	27,318	28,923	28,923	29,508	29,228	30,449	30,153
MA	42,083	43,121	43,121	43,186	42,820	43,438	43,080
NH	17,532	17,965	17,965	18,050	18,050	18,316	18,087
NJ	19,350	18,590	18,590	18,271	17,924	17,653	17,313
NY	87,154	87,576	87,576	87,260	85,011	86,422	84,211
PA	74,925	79,169	79,169	80,728	79,775	83,570	82,637
RI	2,064	2,184	2,184	2,232	1,996	2,316	2,068
VT	11,065	11,482	11,482	11,652	11,652	12,059	12,059
Total	**332,521**	**340,049**	**340,049**	**341,875**	**336,779**	**345,419**	**339,461**

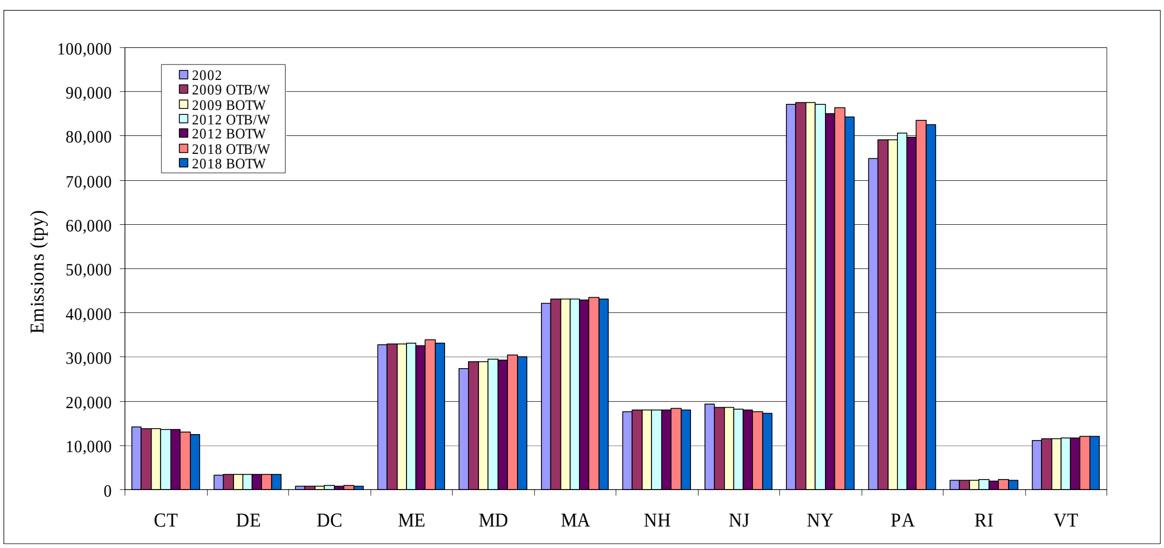


Table 5-22 Area Sources
OTB/OTW and BOTW Annual SO2 Emission Projections
(tons per year)

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	12,418	12,581	12,581	12,604	12,604	12,184	3,398
DE	1,588	1,599	1,599	1,602	1,602	1,545	1,545
DC	1,337	1,487	1,487	1,541	499	1,632	522
ME	13,149	13,776	13,776	13,846	4,897	13,901	4,940
MD	12,393	13,685	13,685	14,074	8,762	14,741	9,118
MA	25,488	25,961	25,961	26,029	8,414	25,570	8,357
NH	7,072	7,463	7,463	7,470	7,470	7,421	3,118
NJ	10,744	10,672	10,672	10,697	4,435	10,510	4,374
NY	130,409	139,589	139,589	140,154	98,160	141,408	100,452
PA	63,679	67,535	67,535	67,446	49,212	66,363	48,475
RI	4,557	5,024	5,024	5,189	1,316	5,398	1,368
VT	4,087	4,646	4,646	4,687	4,687	4,764	4,764
Total	**286,921**	**304,018**	**304,018**	**305,339**	**202,058**	**305,437**	**190,431**

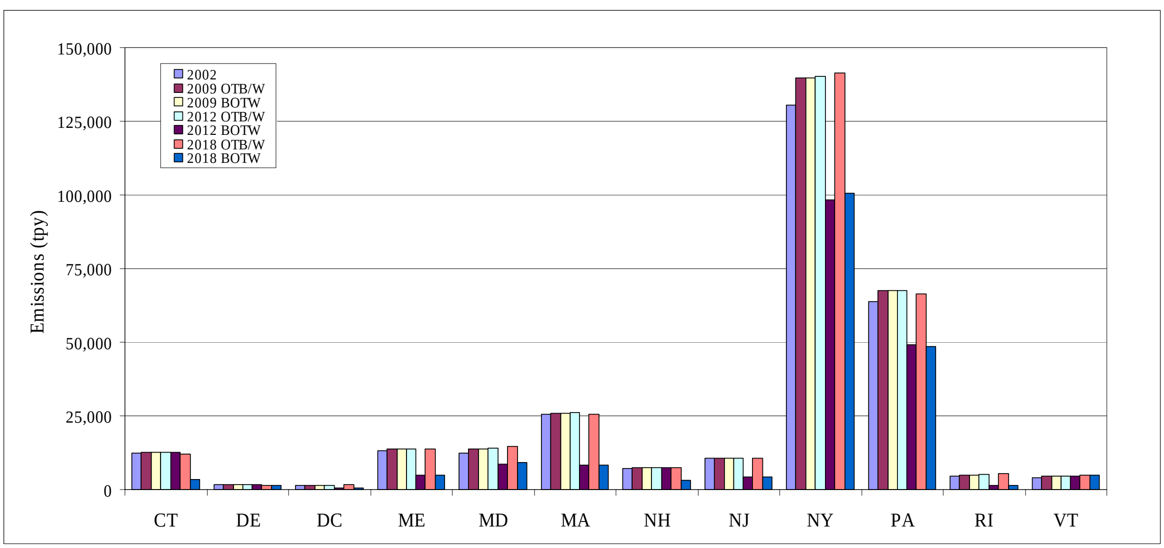
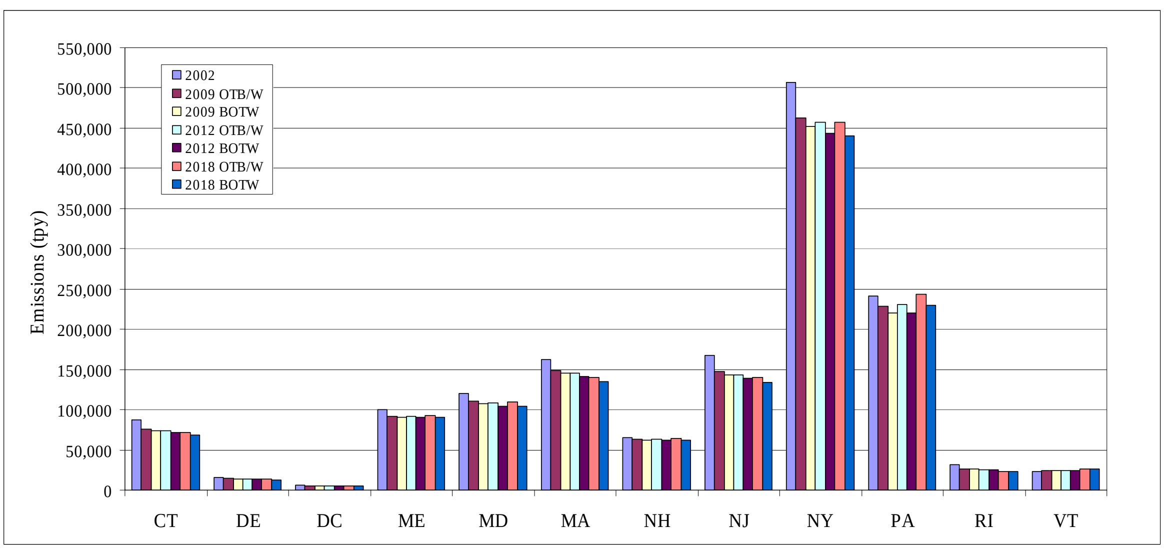


**Table 5-23 Area Sources
OTB/OTW and BOTW Annual VOC Emission Projections
(tons per year)**

	2002	2009 OTB/W	2009 BOTW	2012 OTB/W	2012 BOTW	2018 OTB/W	2018 BOTW
CT	87,302	75,693	73,738	73,560	71,249	71,274	68,395
DE	15,519	14,245	13,794	13,943	13,408	13,744	13,066
DC	6,432	5,420	5,300	5,352	5,144	5,255	4,991
ME	100,621	91,910	90,869	91,667	90,457	92,410	90,866
MD	120,254	110,385	107,527	108,067	104,400	110,046	104,615
MA	162,145	148,625	145,059	145,674	140,848	140,558	134,963
NH	65,370	63,069	61,860	63,356	61,913	64,368	62,649
NJ	167,882	147,617	143,089	143,752	138,646	139,626	134,089
NY	507,292	462,811	451,669	456,856	443,940	457,421	440,892
PA	240,785	228,444	219,733	230,393	219,897	243,421	230,011
RI	31,402	26,695	26,572	25,548	25,315	23,561	23,305
VT	23,265	24,068	24,068	24,635	24,634	26,198	26,197
Total	**1,528,269**	**1,398,982**	**1,363,278**	**1,382,803**	**1,339,851**	**1,387,882**	**1,334,039**



5.3 Nonroad Mobile Sources

In the June 2007 MOU, the OTC Commissioners recommended that states pursue state-specific rulemakings for one nonroad source categories – portable fuel containers. The OTC 2006 control measure for portable fuel containers will result in addition VOC emission reduction from the refueling of nonroad equipment. However, these reductions could not be estimated due to resource and time constraints.

5.4 Electric Generating Units

In the June 2008 Statement on EGUs, the OTC Commissioners directed OTC staff to complete an evaluation and recommendations for a program beyond CAIR that includes strategies to address the base, intermediate and peak load emissions. No specific emission reduction targets were identified. States specified that no additional reductions from EGUs be included in the BOTW inventory.

5.5 Onroad Mobile Sources

In Resolution 06-02, the OTC Commissioners recommended that the OTC member states pursue a region fuel program consistent with the Energy Act of 2005. No specific emission reduction targets were identified. States specified that no additional reductions from onroad mobile sources be included in the BOTW inventory.

In the June 2007 MOU, the OTC Commissioners recommended that states pursue state-specific rulemakings to implement a mandatory diesel engine chip reflash program. It is our understanding that the emission reductions from the diesel engine chip reflash program are already accounted for in MANE-VU's OTB emission inventory.

Appendix A – NonEGU Point Source Growth Factors

Table A-1 Connecticut Growth Factors by SIC Code

SIC	GF_02_09	GF_02_12	GF_02_18	CTDOL_CAT
0181	1.0019	1.0027	1.0042	Agricultural, Crop Production
1422	0.9400	0.9143	0.8629	Mining
1429	0.9400	0.9143	0.8629	Mining
2051	0.9355	0.9079	0.8526	Manufacturing, Food
2096	0.9355	0.9079	0.8526	Manufacturing, Food
2261	0.9254	0.8934	0.8295	Manufacturing, Textile Product Mills
2262	0.9254	0.8934	0.8295	Manufacturing, Textile Product Mills
2284	0.9254	0.8934	0.8295	Manufacturing, Textile Product Mills
2298	0.9254	0.8934	0.8295	Manufacturing, Textile Product Mills
2434	1.0679	1.0969	1.1551	Manufacturing, Wood Products
2522	1.0435	1.0621	1.0994	Manufacturing, Furniture & Related
2541	1.0679	1.0969	1.1551	Manufacturing, Wood Products
2621	0.8706	0.8152	0.7043	Manufacturing, Paper
2631	0.8706	0.8152	0.7043	Manufacturing, Paper
2652	0.8706	0.8152	0.7043	Manufacturing, Paper
2653	0.8706	0.8152	0.7043	Manufacturing, Paper
2672	0.8706	0.8152	0.7043	Manufacturing, Paper
2673	0.8706	0.8152	0.7043	Manufacturing, Paper
2711	0.8386	0.7695	0.6312	Manufacturing, Printing & Related Activ
2752	0.8386	0.7695	0.6312	Manufacturing, Printing & Related Activ
2754	0.8386	0.7695	0.6312	Manufacturing, Printing & Related Activ
2759	0.8386	0.7695	0.6312	Manufacturing, Printing & Related Activ
2821	1.1024	1.1464	1.2342	Manufacturing, Chemical
2833	1.1024	1.1464	1.2342	Manufacturing, Chemical
2869	1.1024	1.1464	1.2342	Manufacturing, Chemical
2875	1.1024	1.1464	1.2342	Manufacturing, Chemical
3052	0.9591	0.9416	0.9066	Manufacturing, Plastic & Rubber Product
3069	0.9591	0.9416	0.9066	Manufacturing, Plastic & Rubber Product
3081	0.9591	0.9416	0.9066	Manufacturing, Plastic & Rubber Product
3086	0.9591	0.9416	0.9066	Manufacturing, Plastic & Rubber Product
3087	0.9591	0.9416	0.9066	Manufacturing, Plastic & Rubber Product
3272	0.9841	0.9772	0.9636	Manufacturing, Miscellaneous
3312	0.8713	0.8162	0.7059	Manufacturing, Primary Metal
3351	0.8713	0.8162	0.7059	Manufacturing, Primary Metal
3357	0.8713	0.8162	0.7059	Manufacturing, Primary Metal
3423	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3429	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3444	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3469	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3471	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3479	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3497	0.9150	0.8786	0.8057	Manufacturing, Fabricated Metal
3562	0.8778	0.8254	0.7206	Manufacturing, Machinery

SIC	GF_02_09	GF_02_12	GF_02_18	CTDOL_CAT
3569	0.8778	0.8254	0.7206	Manufacturing, Machinery
3579	0.8452	0.7788	0.6461	Manufacturing, Computer & Electronic Eq
3634	0.9149	0.8784	0.8054	Manufacturing, Electrical Equipment, Ap
3675	0.9149	0.8784	0.8054	Manufacturing, Electrical Equipment, Ap
3714	0.9705	0.9578	0.9326	Manufacturing, Transportation Equipment
3721	0.9705	0.9578	0.9326	Manufacturing, Transportation Equipment
3724	0.9705	0.9578	0.9326	Manufacturing, Transportation Equipment
3728	0.9705	0.9578	0.9326	Manufacturing, Transportation Equipment
3731	0.9705	0.9578	0.9326	Manufacturing, Transportation Equipment
3827	0.9841	0.9772	0.9636	Manufacturing, Miscellaneous
3949	0.9841	0.9772	0.9636	Manufacturing, Miscellaneous
3951	0.9841	0.9772	0.9636	Manufacturing, Miscellaneous
4226	1.0921	1.1316	1.2106	Transportation & Warehousing, Warehousi
4911	0.9550	0.9358	0.8972	Utilities
4922	0.9550	0.9358	0.8972	Utilities
4924	0.9550	0.9358	0.8972	Utilities
4931	1.1439	1.2056	1.3290	Waste Management & Remediation Services
4952	1.1439	1.2056	1.3290	Waste Management & Remediation Services
4953	1.1439	1.2056	1.3290	Waste Management & Remediation Services
4961	0.9550	0.9358	0.8972	Utilities
5171	1.0605	1.0864	1.1382	Wholesale Trade, Nondurable Goods
6036	1.0569	1.0814	1.1302	Finance & Insurance
6512	1.0197	1.0282	1.0451	Real Estate & Rental & Leasing
6513	1.0197	1.0282	1.0451	Real Estate & Rental & Leasing
7389	1.0569	1.0814	1.1302	Finance & Insurance
8051	1.0824	1.1177	1.1883	Health Care & Social Assistance, Nursin
8062	1.0583	1.0833	1.1334	Health Care & Social Assistance, Hospit
8063	1.0583	1.0833	1.1334	Health Care & Social Assistance, Hospit
8211	1.0642	1.0918	1.1468	Educational Services
8221	1.0642	1.0918	1.1468	Educational Services
8631	1.0642	1.0918	1.1468	Educational Services
8734	1.1189	1.1699	1.2718	Professional, Scientific, and Technical
9223	1.0185	1.0264	1.0423	Government
9511	1.0185	1.0264	1.0423	Government
9621	1.0185	1.0264	1.0423	Government
9711	1.0185	1.0264	1.0423	Government
3900	0.9841	0.9772	0.9636	Manufacturing, Miscellaneous
5093	1.0527	1.0754	1.1206	Wholesale Trade, Durable Goods
4200	0.9871	0.9815	0.9705	Transportation & Warehousing, Truck Tra

Table A-2 Non-EGU Point Source Growth Factors by SCC Code

See Electronic File: MANE-VU_NonEGU_gf_scc.xls

This table contains 12,791 records with NonEGU point source growth factors by county and SCC. The format for the tables is as follows:

Column A – County FIPS code

Column B – Source Classification Code (SCC)

Column C – EGAS_02_09 this is the EGAS 5.0 factor for projecting from 2002 to 2009

Column D – AEO5_02_09 this is the DOE AEO 2005 factor for projecting from 2002 to 2009

Column E – ST_02_09 this is the state-supplied factor for projecting from 2002 to 2009

Column F – GF_02_09 this is the final factor actually used for projecting from 2002 to 2009 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column G – EGAS_02_12 this is the EGAS 5.0 factor for projecting from 2002 to 2012

Column H – AEO5_02_12 this is the DOE AEO 2005 factor for projecting from 2002 to 2012

Column I – ST_02_12 this is the state-supplied factor for projecting from 2002 to 2012

Column J – GF_02_09 this is the final factor actually used for projecting from 2002 to 2012 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column K – EGAS_02_18 this is the EGAS 5.0 factor for projecting from 2002 to 2018

Column J – AEO5_02_18 this is the DOE AEO 2005 factor for projecting from 2002 to 2018

Column M– ST_02_18 this is the state-supplied factor for projecting from 2002 to 2018

Column N – GF_02_09 this is the final factor actually used for projecting from 2002 to 2012 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column O – SCC description

Appendix B – NonEGU Point Source Control Factors

Table B-1 NonEGU Emission Units Affected by the NOx SIP Call Phase I

FIPS	SITE ID	Facility Name	EU ID	Ozone Season Allowance (tpy)	Prorated Annual Emissions (tpy)	Unit Description
09003	1509	PRATT & WHITNEY DIV UTC	P0049	11	26	FT-8 COGENERATION GAS TURBINE
09011	0604	PFIZER INC	P0001	33	79	BLR B&W FM140-97 #8
09011	0604	PFIZER INC	R0012	31	74	BLR CE #5 (101-4)
09011	3102	SPRAGUE PAPERBOARD INC	R0003	75	180	BLR B&W PFI-22-0 #1
24001	001-0011	WESTVACO FINE PAPERS	1	500	1200	001-0011-3-0018
24001	001-0011	WESTVACO FINE PAPERS	2	440	1056	001-0011-3-0019
25009	1190138	GENERAL ELECTRIC AIRCRAFT	03	29	68	BOILER #3-BABCOCK+WILCOX PPL-2897 DUAL FUEL EV99-3
25009	1190138	GENERAL ELECTRIC AIRCRAFT	05	24	58	TURBINE #1-GE G5301 DUAL FUEL BLDG 99-8
25017	1191844	MIT	02	132	317	TURBINE #1-ABB GT10 DUEL FUEL(EXHAUST TO HRSG)
25025	1190507	TRIGEN BOSTON ENERGY	01	47	113	BOILER #1-BABCOCK+WILCOX HSB8477A DUAL FUEL
25025	1190507	TRIGEN BOSTON ENERGY	02	47	113	BOILER #2-BABCOCK+WILCOX JSB8477B DUAL FUEL
25025	1190507	TRIGEN BOSTON ENERGY	03	47	113	BOILER #3-FOSTER+WHEELER SC DUAL FUEL
25025	1190507	TRIGEN BOSTON ENERGY	04	47	113	BOILER #4-BABCOCK+WILCOX HSB8608A DUAL FUEL
36031	5154800008	INTERNATIONAL PAPER TICONDEROG	POWERH	227	545	EMISSION UNIT
36055	8261400205	KODAK PARK DIVISION	U00015	1721	4130	EMISSION UNIT
36091	5412600007	INTERNATIONAL PAPER HUDSON RIV	UBOILR	124	298	EMISSION UNIT
42003	4200300022	SHENANGO INC.	005	13	31	BOILER #9, NATURAL GAS
42017	420170306	EXELON GENERATION CO/FAIRLESS	043	2	5	POWER HOUSE BOILER NO. 3

FIPS	SITE ID	Facility Name	EU ID	Ozone Season Allowance (tpy)	Prorated Annual Emissions (tpy)	Unit Description
42017	420170306	EXELON GENERATION CO/FAIRLESS	044	73	175	POWER HOUSE BOILER NO. 4
42017	420170306	EXELON GENERATION CO/FAIRLESS	045	61	146	POWER HOUSE BOILER NO. 5
42045	420450016	KIMBERLY CLARK PA LLC/CHESTER	034	2	5	
42045	420450220	FPL ENERGY MH50 LP/MARCUS HOOK	031	82	197	COGENERATION UNIT - ABB TYPE B
42047	420470005	WEYERHAEUSER/JOHNSONBURG MILL	040	85	204	BOILER #81
42047	420470005	WEYERHAEUSER/JOHNSONBURG MILL	041	86	206	BOILER #82
42091	420910028	MERCK & CO/WEST POINT	039	101	242	COGEN II GAS TURBINE
42101	4210101551	SUNOCO CHEMICALS (FORMER ALLIE	052	86	206	BL-703: BOILER #3
42131	421310009	PROCTER & GAMBLE PAPER PROD CO	035	203	482	WESTINGHOUSE 251B12
42133	421330016	PH GLATFELTER CO/SPRING GROVE	034	146	350	#4 POWER BOILER

Table B-2 Cement Kilns Affected by the NOx SIP Call Phase I

FIPS	SITE ID	Facility Name	EU ID	Control Factor	Unit Description
24013	013-0012	LEHIGH PORTLAND CEMENT	39	25.00	013-0012-6-0256 013-0012-6-0256
24021	021-0013	ESSROC CEMENT	21	25.00	021-0013-6-0465 021-0013-6-0465
24021	021-0013	ESSROC CEMENT	22	25.00	021-0013-6-0466 021-0013-6-0466
24043	043-0008	INDEPENDENT CEMENT/ST. LAWEREN	24	25.00	043-0008-6-0495 043-0008-6-0495
36001	4012400001	LAFARGE BUILDING MATERIALS INC	041000	25.00	EMISSION UNIT
36039	4192600021	ST LAWRENCE CEMENT CORP-CATSKI	U00K18	25.00	EMISSION UNIT
36113	5520500013	GLENS FALLS LEHIGH CEMENT	0UKILN	25.00	EMISSION UNIT
42011	420110039	LEHIGH CEMENT CO /EVANSVILLE	121	70.00	PORTLAND CEMENT KILN #1
42011	420110039	LEHIGH CEMENT CO /EVANSVILLE	122	70.00	PORTLAND CEMENT KILN #2
42019	420190024	ARMSTRONG CEMENT & SUPPLY	101	16.00	NO.1 KILN
42019	420190024	ARMSTRONG CEMENT & SUPPLY	121	16.00	NO.2 KILN
42073	420730024	CEMEX INC/WAMPUM CEMENT PLT	226	12.50	
42073	420730024	CEMEX INC/WAMPUM CEMENT PLT	227	0.00	
42073	420730024	CEMEX INC/WAMPUM CEMENT PLT	228	12.70	
42073	420730026	ESSROC/BESSEMER	501	8.00	
42073	420730026	ESSROC/BESSEMER	502	8.00	
42077	420770019	LAFARGE CORP/WHITEHALL PLT	101	12.28	K-2 KILN
42077	420770019	LAFARGE CORP/WHITEHALL PLT	114	100.00	K-3 KILN
42095	420950006	HERCULES CEMENT CO LP/STOCKERT	102	6.88	NO. 1 CEMENT KILN
42095	420950006	HERCULES CEMENT CO LP/STOCKERT	122	6.88	NO. 3 CEMENT KILN
42095	420950012	KEYSTONE PORTLAND CEMENT/EAST	101	27.00	CEMENT KILN NO. 1
42095	420950012	KEYSTONE PORTLAND CEMENT/EAST	102	27.00	CEMENT KILN NO. 2
42095	420950045	ESSROC/NAZARETH LOWER CEMENT	142	41.00	
42095	420950045	ESSROC/NAZARETH LOWER CEMENT	143	41.00	
42095	420950127	ESSROC/NAZARETH CEMENT PLT 3	101	41.00	
42095	420950127	ESSROC/NAZARETH CEMENT PLT 3	102	41.00	
42095	420950127	ESSROC/NAZARETH CEMENT PLT 3	103	41.00	
42095	420950127	ESSROC/NAZARETH CEMENT PLT 3	104	41.00	
42133	421330060	LEHIGH CEMENT CO/YORK OPERATION	200	27.00	

Table B-3 Large IC Engines Affected by the NOx SIP Call Phase II

FIPS	SITE ID	Facility Name	EU ID	Control Factor	Unit Description
24027	027-0223	TRANSCONTINENTAL GAS PIPE LINE	1	80.00	027-0223-5-0054 boiler
42005	420050015	DOMINION TRANS INC/SOUTH BEND	101	80.00	ENGINE #1 (2000 BHP)
42005	420050015	DOMINION TRANS INC/SOUTH BEND	102	80.00	ENGINE #2 (2000 BHP)
42005	420050015	DOMINION TRANS INC/SOUTH BEND	103	80.00	ENGINE #3 (2000 BHP)
42005	420050015	DOMINION TRANS INC/SOUTH BEND	104	80.00	ENGINE #4 (2000 BHP)
42005	420050015	DOMINION TRANS INC/SOUTH BEND	105	80.00	ENGINE #5 (2000 BHP)
42005	420050015	DOMINION TRANS INC/SOUTH BEND	106	80.00	ENGINE #6 (2000 BHP)
42029	420290047	TRANSCONTINENTAL GAS/FRAZER ST	741	80.00	#11 I-C GAS COMPRESSOR ENGINE
42029	420290047	TRANSCONTINENTAL GAS/FRAZER ST	742	80.00	#12 I-C GAS COMPRESSOR ENGINE
42029	420290047	TRANSCONTINENTAL GAS/FRAZER ST	743	80.00	#13 I-C GAS COMPRESSOR ENGINE
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	101	90.00	COOPER-BESSEMER ENGINE #1
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	101	90.00	COOPER-BESSEMER ENGINE #1
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	101	90.00	COOPER-BESSEMER ENGINE #1
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	101	90.00	COOPER-BESSEMER ENGINE #1
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	102	90.00	COOPER-BESSEMER ENGINE #2
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	102	90.00	COOPER-BESSEMER ENGINE #2
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	102	90.00	COOPER-BESSEMER ENGINE #2
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	102	90.00	COOPER-BESSEMER ENGINE #2
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	103	90.00	COOPER-BESSEMER ENGINE #3
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	103	90.00	COOPER-BESSEMER ENGINE #3
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	103	90.00	COOPER-BESSEMER ENGINE #3
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	103	90.00	COOPER-BESSEMER ENGINE #3
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	104	90.00	COOPER-BESSEMER ENGINE #4
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	104	90.00	COOPER-BESSEMER ENGINE #4
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	104	90.00	COOPER-BESSEMER ENGINE #4
42063	420630018	PA STATE SYS OF HIGHER ED/INDI	104	90.00	COOPER-BESSEMER ENGINE #4
42105	421050005	TENNESSEE GAS PIPELINE CO/313	P111	80.00	3,000HP KVT-512 ENGINE
42105	421050005	TENNESSEE GAS PIPELINE CO/313	P112	80.00	2,000HP GMVH-10C ENGINE
42133	421330053	TRANSCONTINENTAL GAS/STATION 1	036	80.00	COOPER-BESSEMER ENGINE #4
42133	421330053	TRANSCONTINENTAL GAS/STATION 1	037	80.00	COOPER-BESSEMER ENGINE #5

B-4 NonEGU Control Factors for Post-2002 MACT Categories

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
20100102	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20100202	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20100702	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20100802	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20100902	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200102	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200104	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200202	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200204	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200301	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200501	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200702	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200706	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20200902	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201001	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201002	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201012	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201014	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201602	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20201702	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20300101	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
20300301	NOX	17.000	ZZZZ	Reciprocating Internal Combustion Engines
30400101	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400102	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400103	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400104	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400105	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400106	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400107	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400108	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400109	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400110	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400111	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400112	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400113	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400114	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400115	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400116	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400117	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400118	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400120	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400121	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400130	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400131	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400132	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400133	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400150	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400160	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30400199	PM10-PRI	90.000	RRR	Secondary Aluminum Production
30500301	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30500302	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500303	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500304	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500305	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500306	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500307	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500308	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500309	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500310	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500311	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500312	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500313	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500314	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500315	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500316	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500317	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500318	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500319	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500321	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500322	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500330	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500331	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500332	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500333	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500334	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500335	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500340	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500342	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500350	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500351	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500355	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500360	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500361	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500370	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500397	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500398	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30500399	PM10-PRI	45.100	JJJJJ	Brick and Structural Clay
30501601	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501602	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501603	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501604	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501605	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501606	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501607	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501608	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501609	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501610	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501611	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501612	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501613	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501614	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501615	PM10-PRI	28.000	AAAAA	Lime Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30501616	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501617	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501618	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501619	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501620	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501621	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501622	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501623	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501624	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501625	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501626	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501627	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501628	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501629	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501630	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501631	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501632	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501633	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501640	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501650	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501660	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30501699	PM10-PRI	28.000	AAAAA	Lime Manufacturing
30400101	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400102	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400103	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400104	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400105	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400106	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400107	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400108	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400109	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400110	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400111	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400112	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400113	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400114	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400115	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400116	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400117	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400118	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400120	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400121	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400130	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400131	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400132	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400133	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400150	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400160	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30400199	PM25-PRI	90.000	RRR	Secondary Aluminum Production
30500301	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500302	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500303	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30500304	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500305	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500306	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500307	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500308	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500309	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500310	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500311	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500312	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500313	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500314	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500315	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500316	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500317	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500318	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500319	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500321	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500322	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500330	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500331	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500332	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500333	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500334	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500335	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500340	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500342	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500350	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500351	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500355	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500360	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500361	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500370	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500397	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500398	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30500399	PM25-PRI	45.100	JJJJJ	Brick and Structural Clay
30501601	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501602	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501603	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501604	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501605	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501606	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501607	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501608	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501609	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501610	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501611	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501612	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501613	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501614	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501615	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501616	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501617	PM25-PRI	28.000	AAAAA	Lime Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30501618	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501619	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501620	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501621	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501622	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501623	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501624	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501625	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501626	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501627	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501628	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501629	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501630	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501631	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501632	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501633	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501640	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501650	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501660	PM25-PRI	28.000	AAAAA	Lime Manufacturing
30501699	PM25-PRI	28.000	AAAAA	Lime Manufacturing
20100101	VOC	0.250	YYYY	Stationary Combustion Turbines
20100102	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20100201	VOC	0.250	YYYY	Stationary Combustion Turbines
20100202	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20100702	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20100802	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20100902	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200101	VOC	0.250	YYYY	Stationary Combustion Turbines
20200102	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200103	VOC	0.250	YYYY	Stationary Combustion Turbines
20200104	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200201	VOC	0.250	YYYY	Stationary Combustion Turbines
20200202	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200203	VOC	0.250	YYYY	Stationary Combustion Turbines
20200204	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200209	VOC	0.250	YYYY	Stationary Combustion Turbines
20200301	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200501	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200702	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200706	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20200902	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201001	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201002	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201012	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201014	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201602	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20201702	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20300101	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20300102	VOC	0.250	YYYY	Stationary Combustion Turbines
20300109	VOC	0.250	YYYY	Stationary Combustion Turbines
20300202	VOC	0.250	YYYY	Stationary Combustion Turbines
20300203	VOC	0.250	YYYY	Stationary Combustion Turbines

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
20300209	VOC	0.250	YYYY	Stationary Combustion Turbines
20300301	VOC	40.000	ZZZZ	Reciprocating Internal Combustion Engines
20300701	VOC	0.250	YYYY	Stationary Combustion Turbines
30100501	VOC	26.100	YY	Generic MACT (Carbon Black)
30100502	VOC	26.100	YY	Generic MACT (Carbon Black)
30100503	VOC	26.100	YY	Generic MACT (Carbon Black)
30100504	VOC	26.100	YY	Generic MACT (Carbon Black)
30100506	VOC	26.100	YY	Generic MACT (Carbon Black)
30100507	VOC	26.100	YY	Generic MACT (Carbon Black)
30100508	VOC	26.100	YY	Generic MACT (Carbon Black)
30100509	VOC	26.100	YY	Generic MACT (Carbon Black)
30100510	VOC	26.100	YY	Generic MACT (Carbon Black)
30100599	VOC	26.100	YY	Generic MACT (Carbon Black)
30101005	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101013	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101014	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101023	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101026	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101027	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101028	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101033	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101034	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101035	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101036	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101037	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101045	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101046	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101047	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101050	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101051	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101052	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101053	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101054	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101055	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101061	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101062	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101063	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101064	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101073	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101074	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101075	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101076	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101077	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30101080	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101085	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101086	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101087	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101099	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101827	VOC	55.700	OOO	Polymers and Resins III
30101837	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30101880	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101881	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101882	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101883	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101884	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101885	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101890	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101891	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101892	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101893	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101894	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30101899	VOC	67.400	MMMMM	Flexible Polyurethane Foam Fabrication Ope
30103201	VOC	87.400	UUU	Petroleum Refineries
30103202	VOC	87.400	UUU	Petroleum Refineries
30103203	VOC	87.400	UUU	Petroleum Refineries
30103204	VOC	87.400	UUU	Petroleum Refineries
30103205	VOC	87.400	UUU	Petroleum Refineries
30103299	VOC	87.400	UUU	Petroleum Refineries
30103301	VOC	64.820	MMM	Pesticide Active Ingredient
30103311	VOC	64.820	MMM	Pesticide Active Ingredient
30103312	VOC	64.820	MMM	Pesticide Active Ingredient
30103399	VOC	64.820	MMM	Pesticide Active Ingredient
30103901	VOC	44.500	YY	Generic MACT (Cyanide)
30103902	VOC	44.500	YY	Generic MACT (Cyanide)
30103903	VOC	44.500	YY	Generic MACT (Cyanide)
30105001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105101	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105105	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105108	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105110	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105112	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105114	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105116	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105118	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105120	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105122	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105124	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30105130	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110003	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110004	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110005	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110080	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30110099	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30111103	VOC	43.900	QQQQQ	Friction Products Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30111199	VOC	43.900	QQQQQ	Friction Products Manufacturing
30113001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30113003	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30113004	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30113005	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30113006	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30113007	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
30201901	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201902	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201903	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201904	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201905	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201906	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201907	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201908	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201909	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201911	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201912	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201913	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201914	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201915	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201916	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201917	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201918	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201919	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201920	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201921	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201923	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201925	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201926	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201927	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201930	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201931	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201932	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201933	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201935	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201939	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201941	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201942	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201945	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201949	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201950	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201960	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201997	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201998	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30201999	VOC	38.690	GGGG	Solvent Extraction for Vegetable Oil Produ
30203404	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203405	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203406	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203407	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203410	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203415	VOC	12.500	CCCC	Manufacturing Nutritional Yeast

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30203420	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203421	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203422	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203423	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203424	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203504	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203505	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203506	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203507	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203510	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203530	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203531	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203532	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203533	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203534	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203535	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203536	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30203540	VOC	12.500	CCCC	Manufacturing Nutritional Yeast
30300303	VOC	50.000	CCCCC	Coke Ovens: Pushing, Quenching, Battery St
30300304	VOC	50.000	CCCCC	Coke Ovens: Pushing, Quenching, Battery St
30400301	VOC	40.000	EEEEE	Iron and Steel Foundries
30400302	VOC	40.000	EEEEE	Iron and Steel Foundries
30400303	VOC	40.000	EEEEE	Iron and Steel Foundries
30400304	VOC	40.000	EEEEE	Iron and Steel Foundries
30400305	VOC	40.000	EEEEE	Iron and Steel Foundries
30400310	VOC	40.000	EEEEE	Iron and Steel Foundries
30400314	VOC	40.000	EEEEE	Iron and Steel Foundries
30400315	VOC	40.000	EEEEE	Iron and Steel Foundries
30400316	VOC	40.000	EEEEE	Iron and Steel Foundries
30400317	VOC	40.000	EEEEE	Iron and Steel Foundries
30400318	VOC	40.000	EEEEE	Iron and Steel Foundries
30400319	VOC	40.000	EEEEE	Iron and Steel Foundries
30400320	VOC	40.000	EEEEE	Iron and Steel Foundries
30400321	VOC	40.000	EEEEE	Iron and Steel Foundries
30400322	VOC	40.000	EEEEE	Iron and Steel Foundries
30400325	VOC	40.000	EEEEE	Iron and Steel Foundries
30400330	VOC	40.000	EEEEE	Iron and Steel Foundries
30400331	VOC	40.000	EEEEE	Iron and Steel Foundries
30400332	VOC	40.000	EEEEE	Iron and Steel Foundries
30400333	VOC	40.000	EEEEE	Iron and Steel Foundries
30400340	VOC	40.000	EEEEE	Iron and Steel Foundries
30400341	VOC	40.000	EEEEE	Iron and Steel Foundries
30400342	VOC	40.000	EEEEE	Iron and Steel Foundries
30400350	VOC	40.000	EEEEE	Iron and Steel Foundries
30400351	VOC	40.000	EEEEE	Iron and Steel Foundries
30400352	VOC	40.000	EEEEE	Iron and Steel Foundries
30400353	VOC	40.000	EEEEE	Iron and Steel Foundries
30400354	VOC	40.000	EEEEE	Iron and Steel Foundries
30400355	VOC	40.000	EEEEE	Iron and Steel Foundries
30400356	VOC	40.000	EEEEE	Iron and Steel Foundries
30400357	VOC	40.000	EEEEE	Iron and Steel Foundries
30400358	VOC	40.000	EEEEE	Iron and Steel Foundries

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30400360	VOC	40.000	EEEEE	Iron and Steel Foundries
30400370	VOC	40.000	EEEEE	Iron and Steel Foundries
30400371	VOC	40.000	EEEEE	Iron and Steel Foundries
30400398	VOC	40.000	EEEEE	Iron and Steel Foundries
30400399	VOC	40.000	EEEEE	Iron and Steel Foundries
30500101	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500102	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500103	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500104	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500105	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500106	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500107	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500108	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500110	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500111	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500112	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500113	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500114	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500115	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500116	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500117	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500118	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500119	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500120	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500121	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500130	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500131	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500132	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500133	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500134	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500135	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500140	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500141	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500142	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500143	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500144	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500145	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500146	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500147	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500150	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500151	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500152	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500153	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500154	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500198	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30500199	VOC	28.000	LLLLL	Asphalt Process and Asphalt Roofing
30501201	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501202	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501203	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501204	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501205	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501206	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30501207	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501208	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501209	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501211	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501212	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501213	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501214	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501215	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501221	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501222	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501223	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501224	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30501299	VOC	74.000	HHHH	Wet Formed Fiberglass Mat Production
30600201	VOC	87.400	UUU	Petroleum Refineries (FCC)
30600202	VOC	87.400	UUU	Petroleum Refineries (FCC)
30600301	VOC	87.400	UUU	Petroleum Refineries (FCC)
30600402	VOC	87.400	UUU	Petroleum Refineries (FCC)
30600901	VOC	65.630	UUU	Petroleum Refineries
30600902	VOC	65.630	UUU	Petroleum Refineries
30600903	VOC	65.630	UUU	Petroleum Refineries
30600904	VOC	65.630	UUU	Petroleum Refineries
30600905	VOC	65.630	UUU	Petroleum Refineries
30600906	VOC	65.630	UUU	Petroleum Refineries
30600999	VOC	65.630	UUU	Petroleum Refineries
30601001	VOC	65.630	UUU	Petroleum Refineries
30601101	VOC	65.630	UUU	Petroleum Refineries
30601201	VOC	65.630	UUU	Petroleum Refineries
30601301	VOC	65.630	UUU	Petroleum Refineries
30601401	VOC	65.630	UUU	Petroleum Refineries
30609901	VOC	65.630	UUU	Petroleum Refineries
30609902	VOC	65.630	UUU	Petroleum Refineries
30609903	VOC	65.630	UUU	Petroleum Refineries
30609904	VOC	65.630	UUU	Petroleum Refineries
30609905	VOC	65.630	UUU	Petroleum Refineries
30610001	VOC	65.630	UUU	Petroleum Refineries
30688801	VOC	87.400	UUU	Petroleum Refineries
30688802	VOC	87.400	UUU	Petroleum Refineries
30688803	VOC	87.400	UUU	Petroleum Refineries
30688804	VOC	87.400	UUU	Petroleum Refineries
30688805	VOC	87.400	UUU	Petroleum Refineries
30700103	VOC	7.020	MM	Comustion Sources at Kraft, Soda, and Sulf
30700104	VOC	7.020	MM	Comustion Sources at Kraft, Soda, and Sulf
30700106	VOC	7.020	MM	Comustion Sources at Kraft, Soda, and Sulf
30700110	VOC	7.020	MM	Comustion Sources at Kraft, Soda, and Sulf
30700602	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700604	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700606	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700607	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700608	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700610	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700611	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700621	VOC	41.200	DDDD	Plywood and Composite Wood Products

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30700625	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700626	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700628	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700629	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700630	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700631	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700632	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700635	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700640	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700651	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700655	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700661	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700701	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700702	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700703	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700704	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700705	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700706	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700707	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700708	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700709	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700710	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700711	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700712	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700713	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700714	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700715	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700716	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700717	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700718	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700720	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700725	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700727	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700730	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700734	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700735	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700736	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700737	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700740	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700744	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700746	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700747	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700750	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700752	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700753	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700756	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700757	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700760	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700762	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700763	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700766	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700767	VOC	41.200	DDDD	Plywood and Composite Wood Products

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30700769	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700770	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700771	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700780	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700781	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700783	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700785	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700788	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700789	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700790	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700791	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700792	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700793	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700798	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700799	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700921	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700923	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700925	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700927	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700931	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700932	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700933	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700934	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700935	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700936	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700937	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700939	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700940	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700950	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700960	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700971	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700980	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700981	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700982	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700983	VOC	41.200	DDDD	Plywood and Composite Wood Products
30700984	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701001	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701008	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701009	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701010	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701015	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701020	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701030	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701040	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701053	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701054	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701055	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701057	VOC	41.200	DDDD	Plywood and Composite Wood Products
30701199	VOC	82.050	JJJJ	Paper and Other Web Coating
30800101	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800102	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800103	VOC	47.600	XXXX	Rubber Tire Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
30800104	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800105	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800106	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800107	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800108	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800109	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800110	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800111	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800112	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800113	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800114	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800115	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800116	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800117	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800120	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800121	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800122	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800123	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800124	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800125	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800126	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800127	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800128	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800129	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800130	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800131	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800132	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800133	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800197	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800198	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800199	VOC	47.600	XXXX	Rubber Tire Manufacturing
30800701	VOC	70.000	WWWW	Reinforced Plastics
30800702	VOC	70.000	WWWW	Reinforced Plastics
30800703	VOC	70.000	WWWW	Reinforced Plastics
30800704	VOC	70.000	WWWW	Reinforced Plastics
30800705	VOC	70.000	WWWW	Reinforced Plastics
30800720	VOC	70.000	WWWW	Reinforced Plastics
30800721	VOC	70.000	WWWW	Reinforced Plastics
30800722	VOC	70.000	WWWW	Reinforced Plastics
30800723	VOC	70.000	WWWW	Reinforced Plastics
30800724	VOC	70.000	WWWW	Reinforced Plastics
30800799	VOC	70.000	WWWW	Reinforced Plastics
30801001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
31401001	VOC	43.900	QQQQQ	Friction Products Manufacturing
31401002	VOC	43.900	QQQQQ	Friction Products Manufacturing
31401501	VOC	35.790	VVVV	Boat Manufacturing
31401503	VOC	35.790	VVVV	Boat Manufacturing
31401504	VOC	35.790	VVVV	Boat Manufacturing
31401510	VOC	35.790	VVVV	Boat Manufacturing
31401511	VOC	35.790	VVVV	Boat Manufacturing
31401512	VOC	35.790	VVVV	Boat Manufacturing
31401513	VOC	35.790	VVVV	Boat Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
31401514	VOC	35.790	VVVV	Boat Manufacturing
31401515	VOC	35.790	VVVV	Boat Manufacturing
31401516	VOC	35.790	VVVV	Boat Manufacturing
31401517	VOC	35.790	VVVV	Boat Manufacturing
31401518	VOC	35.790	VVVV	Boat Manufacturing
31401525	VOC	35.790	VVVV	Boat Manufacturing
31401530	VOC	35.790	VVVV	Boat Manufacturing
31401531	VOC	35.790	VVVV	Boat Manufacturing
31401540	VOC	35.790	VVVV	Boat Manufacturing
31401541	VOC	35.790	VVVV	Boat Manufacturing
31401550	VOC	35.790	VVVV	Boat Manufacturing
31401551	VOC	35.790	VVVV	Boat Manufacturing
31401552	VOC	35.790	VVVV	Boat Manufacturing
31401553	VOC	35.790	VVVV	Boat Manufacturing
31401560	VOC	35.790	VVVV	Boat Manufacturing
31401561	VOC	35.790	VVVV	Boat Manufacturing
31401562	VOC	35.790	VVVV	Boat Manufacturing
31401563	VOC	35.790	VVVV	Boat Manufacturing
31401570	VOC	35.790	VVVV	Boat Manufacturing
31401571	VOC	35.790	VVVV	Boat Manufacturing
31604001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
31604002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
31604003	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
32099997	VOC	38.900	TTTT	Leather Finishing Operations
32099998	VOC	38.900	TTTT	Leather Finishing Operations
32099999	VOC	38.900	TTTT	Leather Finishing Operations
40201101	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201103	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201104	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201105	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201111	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201112	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201113	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201114	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201115	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201116	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201121	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201122	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201197	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201198	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201199	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201201	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201210	VOC	60.170	OOOO	Fabric Printing, Coating, & Dyeing
40201301	VOC	82.050	JJJJ	Paper and Other Web Coating
40201303	VOC	82.050	JJJJ	Paper and Other Web Coating
40201304	VOC	82.050	JJJJ	Paper and Other Web Coating
40201305	VOC	82.050	JJJJ	Paper and Other Web Coating
40201310	VOC	82.050	JJJJ	Paper and Other Web Coating
40201320	VOC	82.050	JJJJ	Paper and Other Web Coating
40201330	VOC	82.050	JJJJ	Paper and Other Web Coating
40201399	VOC	82.050	JJJJ	Paper and Other Web Coating
40201601	VOC	66.730	IIII	Auto and Light Trucks Surface Coating

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
40201602	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201603	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201604	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201605	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201606	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201607	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201608	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201609	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201619	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201620	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201621	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201622	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201623	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201624	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201625	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201626	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201627	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201628	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201629	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201630	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201631	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201632	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201699	VOC	66.730	IIII	Auto and Light Trucks Surface Coating
40201702	VOC	70.830	KKKK	Metal Can
40201703	VOC	70.830	KKKK	Metal Can
40201704	VOC	70.830	KKKK	Metal Can
40201705	VOC	70.830	KKKK	Metal Can
40201706	VOC	70.830	KKKK	Metal Can
40201721	VOC	70.830	KKKK	Metal Can
40201722	VOC	70.830	KKKK	Metal Can
40201723	VOC	70.830	KKKK	Metal Can
40201724	VOC	70.830	KKKK	Metal Can
40201725	VOC	70.830	KKKK	Metal Can
40201726	VOC	70.830	KKKK	Metal Can
40201727	VOC	70.830	KKKK	Metal Can
40201728	VOC	70.830	KKKK	Metal Can
40201729	VOC	70.830	KKKK	Metal Can
40201731	VOC	70.830	KKKK	Metal Can
40201732	VOC	70.830	KKKK	Metal Can
40201733	VOC	70.830	KKKK	Metal Can
40201734	VOC	70.830	KKKK	Metal Can
40201735	VOC	70.830	KKKK	Metal Can
40201736	VOC	70.830	KKKK	Metal Can
40201737	VOC	70.830	KKKK	Metal Can
40201738	VOC	70.830	KKKK	Metal Can
40201739	VOC	70.830	KKKK	Metal Can
40201799	VOC	70.830	KKKK	Metal Can
40201801	VOC	53.060	SSSS	Metal Coil
40201802	VOC	53.060	SSSS	Metal Coil
40201803	VOC	53.060	SSSS	Metal Coil
40201804	VOC	53.060	SSSS	Metal Coil
40201805	VOC	53.060	SSSS	Metal Coil

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
40201806	VOC	53.060	SSSS	Metal Coil
40201807	VOC	53.060	SSSS	Metal Coil
40201899	VOC	53.060	SSSS	Metal Coil
40202001	VOC	73.070	RRRR	Metal Furniture
40202002	VOC	73.070	RRRR	Metal Furniture
40202003	VOC	73.070	RRRR	Metal Furniture
40202004	VOC	73.070	RRRR	Metal Furniture
40202005	VOC	73.070	RRRR	Metal Furniture
40202010	VOC	73.070	RRRR	Metal Furniture
40202011	VOC	73.070	RRRR	Metal Furniture
40202012	VOC	73.070	RRRR	Metal Furniture
40202013	VOC	73.070	RRRR	Metal Furniture
40202014	VOC	73.070	RRRR	Metal Furniture
40202015	VOC	73.070	RRRR	Metal Furniture
40202020	VOC	73.070	RRRR	Metal Furniture
40202021	VOC	73.070	RRRR	Metal Furniture
40202022	VOC	73.070	RRRR	Metal Furniture
40202023	VOC	73.070	RRRR	Metal Furniture
40202024	VOC	73.070	RRRR	Metal Furniture
40202025	VOC	73.070	RRRR	Metal Furniture
40202031	VOC	73.070	RRRR	Metal Furniture
40202032	VOC	73.070	RRRR	Metal Furniture
40202033	VOC	73.070	RRRR	Metal Furniture
40202034	VOC	73.070	RRRR	Metal Furniture
40202035	VOC	73.070	RRRR	Metal Furniture
40202036	VOC	73.070	RRRR	Metal Furniture
40202037	VOC	73.070	RRRR	Metal Furniture
40202038	VOC	73.070	RRRR	Metal Furniture
40202039	VOC	73.070	RRRR	Metal Furniture
40202099	VOC	73.070	RRRR	Metal Furniture
40202101	VOC	74.000	QQQQ	Wood Building Products
40202103	VOC	74.000	QQQQ	Wood Building Products
40202104	VOC	74.000	QQQQ	Wood Building Products
40202105	VOC	74.000	QQQQ	Wood Building Products
40202106	VOC	74.000	QQQQ	Wood Building Products
40202107	VOC	74.000	QQQQ	Wood Building Products
40202108	VOC	74.000	QQQQ	Wood Building Products
40202109	VOC	74.000	QQQQ	Wood Building Products
40202110	VOC	74.000	QQQQ	Wood Building Products
40202111	VOC	74.000	QQQQ	Wood Building Products
40202117	VOC	74.000	QQQQ	Wood Building Products
40202118	VOC	74.000	QQQQ	Wood Building Products
40202131	VOC	74.000	QQQQ	Wood Building Products
40202132	VOC	74.000	QQQQ	Wood Building Products
40202133	VOC	74.000	QQQQ	Wood Building Products
40202140	VOC	74.000	QQQQ	Wood Building Products
40202199	VOC	74.000	QQQQ	Wood Building Products
40202201	VOC	77.000	PPPP	Plastic Parts Coating
40202202	VOC	77.000	PPPP	Plastic Parts Coating
40202203	VOC	77.000	PPPP	Plastic Parts Coating
40202204	VOC	77.000	PPPP	Plastic Parts Coating
40202205	VOC	77.000	PPPP	Plastic Parts Coating

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
40202206	VOC	77.000	PPPP	Plastic Parts Coating
40202207	VOC	77.000	PPPP	Plastic Parts Coating
40202208	VOC	77.000	PPPP	Plastic Parts Coating
40202209	VOC	77.000	PPPP	Plastic Parts Coating
40202210	VOC	77.000	PPPP	Plastic Parts Coating
40202211	VOC	77.000	PPPP	Plastic Parts Coating
40202212	VOC	77.000	PPPP	Plastic Parts Coating
40202213	VOC	77.000	PPPP	Plastic Parts Coating
40202214	VOC	77.000	PPPP	Plastic Parts Coating
40202215	VOC	77.000	PPPP	Plastic Parts Coating
40202220	VOC	77.000	PPPP	Plastic Parts Coating
40202229	VOC	77.000	PPPP	Plastic Parts Coating
40202230	VOC	77.000	PPPP	Plastic Parts Coating
40202239	VOC	77.000	PPPP	Plastic Parts Coating
40202240	VOC	77.000	PPPP	Plastic Parts Coating
40202249	VOC	77.000	PPPP	Plastic Parts Coating
40202250	VOC	77.000	PPPP	Plastic Parts Coating
40202259	VOC	77.000	PPPP	Plastic Parts Coating
40202270	VOC	77.000	PPPP	Plastic Parts Coating
40202280	VOC	77.000	PPPP	Plastic Parts Coating
40202299	VOC	77.000	PPPP	Plastic Parts Coating
40202501	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202502	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202503	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202504	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202505	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202510	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202511	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202512	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202515	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202520	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202521	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202522	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202523	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202524	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202525	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202531	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202532	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202533	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202534	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202535	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202536	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202537	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202542	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202543	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202544	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202545	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202546	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202599	VOC	47.930	MMMM	Misc. Metal Parts and Products
40202601	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202602	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202603	VOC	66.200	HHHHH	Misc. Coating Manufacturing

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
40202604	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202605	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202606	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202607	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40202699	VOC	66.200	HHHHH	Misc. Coating Manufacturing
40388801	VOC	65.630	UUU	Petroleum Refineries
40388802	VOC	65.630	UUU	Petroleum Refineries
40388803	VOC	65.630	UUU	Petroleum Refineries
40388804	VOC	65.630	UUU	Petroleum Refineries
40388805	VOC	65.630	UUU	Petroleum Refineries
40399999	VOC	65.630	UUU	Petroleum Refineries
50400101	VOC	50.080	GGGGG	Site Remediation
50400102	VOC	50.080	GGGGG	Site Remediation
50400103	VOC	50.080	GGGGG	Site Remediation
50400104	VOC	50.080	GGGGG	Site Remediation
50400150	VOC	50.080	GGGGG	Site Remediation
50400151	VOC	50.080	GGGGG	Site Remediation
50400201	VOC	50.080	GGGGG	Site Remediation
50400202	VOC	50.080	GGGGG	Site Remediation
50410001	VOC	50.080	GGGGG	Site Remediation
50410002	VOC	50.080	GGGGG	Site Remediation
50410003	VOC	50.080	GGGGG	Site Remediation
50410004	VOC	50.080	GGGGG	Site Remediation
50410005	VOC	50.080	GGGGG	Site Remediation
50410010	VOC	50.080	GGGGG	Site Remediation
50410020	VOC	50.080	GGGGG	Site Remediation
50410021	VOC	50.080	GGGGG	Site Remediation
50410022	VOC	50.080	GGGGG	Site Remediation
50410030	VOC	50.080	GGGGG	Site Remediation
50410040	VOC	50.080	GGGGG	Site Remediation
50410101	VOC	50.080	GGGGG	Site Remediation
50410110	VOC	50.080	GGGGG	Site Remediation
50410111	VOC	50.080	GGGGG	Site Remediation
50410112	VOC	50.080	GGGGG	Site Remediation
50410120	VOC	50.080	GGGGG	Site Remediation
50410121	VOC	50.080	GGGGG	Site Remediation
50410122	VOC	50.080	GGGGG	Site Remediation
50410123	VOC	50.080	GGGGG	Site Remediation
50410124	VOC	50.080	GGGGG	Site Remediation
50410210	VOC	50.080	GGGGG	Site Remediation
50410211	VOC	50.080	GGGGG	Site Remediation
50410212	VOC	50.080	GGGGG	Site Remediation
50410213	VOC	50.080	GGGGG	Site Remediation
50410214	VOC	50.080	GGGGG	Site Remediation
50410215	VOC	50.080	GGGGG	Site Remediation
50410216	VOC	50.080	GGGGG	Site Remediation
50410310	VOC	50.080	GGGGG	Site Remediation
50410311	VOC	50.080	GGGGG	Site Remediation
50410312	VOC	50.080	GGGGG	Site Remediation
50410313	VOC	50.080	GGGGG	Site Remediation
50410314	VOC	50.080	GGGGG	Site Remediation
50410321	VOC	50.080	GGGGG	Site Remediation

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
50410322	VOC	50.080	GGGGG	Site Remediation
50410405	VOC	50.080	GGGGG	Site Remediation
50410406	VOC	50.080	GGGGG	Site Remediation
50410407	VOC	50.080	GGGGG	Site Remediation
50410408	VOC	50.080	GGGGG	Site Remediation
50410409	VOC	50.080	GGGGG	Site Remediation
50410420	VOC	50.080	GGGGG	Site Remediation
50410510	VOC	50.080	GGGGG	Site Remediation
50410511	VOC	50.080	GGGGG	Site Remediation
50410512	VOC	50.080	GGGGG	Site Remediation
50410513	VOC	50.080	GGGGG	Site Remediation
50410514	VOC	50.080	GGGGG	Site Remediation
50410520	VOC	50.080	GGGGG	Site Remediation
50410521	VOC	50.080	GGGGG	Site Remediation
50410522	VOC	50.080	GGGGG	Site Remediation
50410523	VOC	50.080	GGGGG	Site Remediation
50410524	VOC	50.080	GGGGG	Site Remediation
50410525	VOC	50.080	GGGGG	Site Remediation
50410530	VOC	50.080	GGGGG	Site Remediation
50410531	VOC	50.080	GGGGG	Site Remediation
50410532	VOC	50.080	GGGGG	Site Remediation
50410533	VOC	50.080	GGGGG	Site Remediation
50410534	VOC	50.080	GGGGG	Site Remediation
50410535	VOC	50.080	GGGGG	Site Remediation
50410536	VOC	50.080	GGGGG	Site Remediation
50410537	VOC	50.080	GGGGG	Site Remediation
50410538	VOC	50.080	GGGGG	Site Remediation
50410539	VOC	50.080	GGGGG	Site Remediation
50410540	VOC	50.080	GGGGG	Site Remediation
50410541	VOC	50.080	GGGGG	Site Remediation
50410542	VOC	50.080	GGGGG	Site Remediation
50410543	VOC	50.080	GGGGG	Site Remediation
50410560	VOC	50.080	GGGGG	Site Remediation
50410561	VOC	50.080	GGGGG	Site Remediation
50410562	VOC	50.080	GGGGG	Site Remediation
50410563	VOC	50.080	GGGGG	Site Remediation
50410564	VOC	50.080	GGGGG	Site Remediation
50410565	VOC	50.080	GGGGG	Site Remediation
50410610	VOC	50.080	GGGGG	Site Remediation
50410620	VOC	50.080	GGGGG	Site Remediation
50410621	VOC	50.080	GGGGG	Site Remediation
50410622	VOC	50.080	GGGGG	Site Remediation
50410623	VOC	50.080	GGGGG	Site Remediation
50410640	VOC	50.080	GGGGG	Site Remediation
50410641	VOC	50.080	GGGGG	Site Remediation
50410642	VOC	50.080	GGGGG	Site Remediation
50410643	VOC	50.080	GGGGG	Site Remediation
50410644	VOC	50.080	GGGGG	Site Remediation
50410645	VOC	50.080	GGGGG	Site Remediation
50410710	VOC	50.080	GGGGG	Site Remediation
50410711	VOC	50.080	GGGGG	Site Remediation
50410712	VOC	50.080	GGGGG	Site Remediation

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
50410720	VOC	50.080	GGGGG	Site Remediation
50410721	VOC	50.080	GGGGG	Site Remediation
50410722	VOC	50.080	GGGGG	Site Remediation
50410723	VOC	50.080	GGGGG	Site Remediation
50410724	VOC	50.080	GGGGG	Site Remediation
50410725	VOC	50.080	GGGGG	Site Remediation
50410726	VOC	50.080	GGGGG	Site Remediation
50410740	VOC	50.080	GGGGG	Site Remediation
50410760	VOC	50.080	GGGGG	Site Remediation
50410761	VOC	50.080	GGGGG	Site Remediation
50410762	VOC	50.080	GGGGG	Site Remediation
50410763	VOC	50.080	GGGGG	Site Remediation
50410764	VOC	50.080	GGGGG	Site Remediation
50410765	VOC	50.080	GGGGG	Site Remediation
50410766	VOC	50.080	GGGGG	Site Remediation
50410780	VOC	50.080	GGGGG	Site Remediation
50480001	VOC	50.080	GGGGG	Site Remediation
50482001	VOC	50.080	GGGGG	Site Remediation
50482002	VOC	50.080	GGGGG	Site Remediation
50482599	VOC	50.080	GGGGG	Site Remediation
50490004	VOC	50.080	GGGGG	Site Remediation
62540001	VOC	62.900	UUUU	Cellulose Products
62540010	VOC	62.900	UUUU	Cellulose Products
62540020	VOC	62.900	UUUU	Cellulose Products
62540021	VOC	62.900	UUUU	Cellulose Products
62540022	VOC	62.900	UUUU	Cellulose Products
62540023	VOC	62.900	UUUU	Cellulose Products
62540024	VOC	62.900	UUUU	Cellulose Products
62540025	VOC	62.900	UUUU	Cellulose Products
62540030	VOC	62.900	UUUU	Cellulose Products
62540040	VOC	62.900	UUUU	Cellulose Products
62540041	VOC	62.900	UUUU	Cellulose Products
62540042	VOC	62.900	UUUU	Cellulose Products
62540050	VOC	62.900	UUUU	Cellulose Products
62580001	VOC	62.900	UUUU	Cellulose Products
62582001	VOC	62.900	UUUU	Cellulose Products
62582002	VOC	62.900	UUUU	Cellulose Products
62582501	VOC	62.900	UUUU	Cellulose Products
62582502	VOC	62.900	UUUU	Cellulose Products
62582503	VOC	62.900	UUUU	Cellulose Products
62582599	VOC	62.900	UUUU	Cellulose Products
64130001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130101	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130110	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130111	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130112	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130125	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130201	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130210	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64130211	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64130225	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64131030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64132030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64133030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64180001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64182001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64182002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64182599	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64420001	VOC	62.900	UUUU	Cellulose Products
64420010	VOC	62.900	UUUU	Cellulose Products
64420011	VOC	62.900	UUUU	Cellulose Products
64420012	VOC	62.900	UUUU	Cellulose Products
64420013	VOC	62.900	UUUU	Cellulose Products
64420014	VOC	62.900	UUUU	Cellulose Products
64420015	VOC	62.900	UUUU	Cellulose Products
64420016	VOC	62.900	UUUU	Cellulose Products
64420020	VOC	62.900	UUUU	Cellulose Products
64420021	VOC	62.900	UUUU	Cellulose Products
64420022	VOC	62.900	UUUU	Cellulose Products
64420030	VOC	62.900	UUUU	Cellulose Products
64420031	VOC	62.900	UUUU	Cellulose Products
64420032	VOC	62.900	UUUU	Cellulose Products
64420033	VOC	62.900	UUUU	Cellulose Products
64420034	VOC	62.900	UUUU	Cellulose Products
64420040	VOC	62.900	UUUU	Cellulose Products
64420041	VOC	62.900	UUUU	Cellulose Products
64420042	VOC	62.900	UUUU	Cellulose Products
64430001	VOC	62.900	UUUU	Cellulose Products
64430010	VOC	62.900	UUUU	Cellulose Products
64430011	VOC	62.900	UUUU	Cellulose Products
64430012	VOC	62.900	UUUU	Cellulose Products
64430013	VOC	62.900	UUUU	Cellulose Products
64430014	VOC	62.900	UUUU	Cellulose Products
64430015	VOC	62.900	UUUU	Cellulose Products
64430016	VOC	62.900	UUUU	Cellulose Products

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64430017	VOC	62.900	UUUU	Cellulose Products
64430030	VOC	62.900	UUUU	Cellulose Products
64431001	VOC	62.900	UUUU	Cellulose Products
64431010	VOC	62.900	UUUU	Cellulose Products
64431011	VOC	62.900	UUUU	Cellulose Products
64431012	VOC	62.900	UUUU	Cellulose Products
64431013	VOC	62.900	UUUU	Cellulose Products
64431014	VOC	62.900	UUUU	Cellulose Products
64431015	VOC	62.900	UUUU	Cellulose Products
64431016	VOC	62.900	UUUU	Cellulose Products
64431017	VOC	62.900	UUUU	Cellulose Products
64431030	VOC	62.900	UUUU	Cellulose Products
64450001	VOC	62.900	UUUU	Cellulose Products
64450010	VOC	62.900	UUUU	Cellulose Products
64450011	VOC	62.900	UUUU	Cellulose Products
64450012	VOC	62.900	UUUU	Cellulose Products
64450013	VOC	62.900	UUUU	Cellulose Products
64450014	VOC	62.900	UUUU	Cellulose Products
64450020	VOC	62.900	UUUU	Cellulose Products
64450021	VOC	62.900	UUUU	Cellulose Products
64450022	VOC	62.900	UUUU	Cellulose Products
64450030	VOC	62.900	UUUU	Cellulose Products
64450031	VOC	62.900	UUUU	Cellulose Products
64450032	VOC	62.900	UUUU	Cellulose Products
64450033	VOC	62.900	UUUU	Cellulose Products
64450034	VOC	62.900	UUUU	Cellulose Products
64450035	VOC	62.900	UUUU	Cellulose Products
64450036	VOC	62.900	UUUU	Cellulose Products
64450040	VOC	62.900	UUUU	Cellulose Products
64450041	VOC	62.900	UUUU	Cellulose Products
64450042	VOC	62.900	UUUU	Cellulose Products
64450050	VOC	62.900	UUUU	Cellulose Products
64450051	VOC	62.900	UUUU	Cellulose Products
64450052	VOC	62.900	UUUU	Cellulose Products
64450053	VOC	62.900	UUUU	Cellulose Products
64450060	VOC	62.900	UUUU	Cellulose Products
64450061	VOC	62.900	UUUU	Cellulose Products
64450062	VOC	62.900	UUUU	Cellulose Products
64520001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520023	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520031	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520032	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64520041	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64521011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521023	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64521041	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610031	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610032	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610041	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610050	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610101	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610110	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610111	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610112	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610120	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610121	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610122	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610130	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610131	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610132	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610140	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610141	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610142	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610143	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610150	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610201	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610210	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610211	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610212	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610220	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610221	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610222	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610230	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610231	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610232	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610240	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610241	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610242	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610250	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610301	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610310	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610311	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64610312	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610320	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610321	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610322	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610330	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610331	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610332	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610340	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64610350	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615023	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64615030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620013	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620016	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620017	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620018	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620021	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620026	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620027	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620031	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620032	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620033	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620034	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620035	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620036	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620037	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64620038	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630016	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630026	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630035	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64630041	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630042	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630050	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630051	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630052	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630053	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630080	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630081	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630082	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64630083	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631012	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631016	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631025	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631026	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631050	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631051	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631052	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631053	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631080	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631081	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631082	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64631083	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632015	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632016	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632040	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632041	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632042	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632050	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632051	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632052	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632053	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632080	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632081	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632082	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64632083	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64680001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64682001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64682002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64682501	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64682502	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64682599	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64820010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64821001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64821010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64822001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64822010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64823001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64823010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64824001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64824010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64880001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64882001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64882002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64882599	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
64920001	VOC	62.900	UUUU	Cellulose Products
64920010	VOC	62.900	UUUU	Cellulose Products
64920011	VOC	62.900	UUUU	Cellulose Products
64920012	VOC	62.900	UUUU	Cellulose Products
64920013	VOC	62.900	UUUU	Cellulose Products
64920020	VOC	62.900	UUUU	Cellulose Products
64920021	VOC	62.900	UUUU	Cellulose Products
64920022	VOC	62.900	UUUU	Cellulose Products
64920030	VOC	62.900	UUUU	Cellulose Products
64920031	VOC	62.900	UUUU	Cellulose Products
64920032	VOC	62.900	UUUU	Cellulose Products
64920033	VOC	62.900	UUUU	Cellulose Products
64920034	VOC	62.900	UUUU	Cellulose Products
64930001	VOC	62.900	UUUU	Cellulose Products
64930010	VOC	62.900	UUUU	Cellulose Products
64930011	VOC	62.900	UUUU	Cellulose Products
64930012	VOC	62.900	UUUU	Cellulose Products
64930020	VOC	62.900	UUUU	Cellulose Products
64930021	VOC	62.900	UUUU	Cellulose Products
64930030	VOC	62.900	UUUU	Cellulose Products
64930031	VOC	62.900	UUUU	Cellulose Products
64930035	VOC	62.900	UUUU	Cellulose Products
64930040	VOC	62.900	UUUU	Cellulose Products
64930041	VOC	62.900	UUUU	Cellulose Products
64930045	VOC	62.900	UUUU	Cellulose Products
64930050	VOC	62.900	UUUU	Cellulose Products
64931001	VOC	62.900	UUUU	Cellulose Products
64931010	VOC	62.900	UUUU	Cellulose Products
64931011	VOC	62.900	UUUU	Cellulose Products
64931012	VOC	62.900	UUUU	Cellulose Products
64931020	VOC	62.900	UUUU	Cellulose Products
64931021	VOC	62.900	UUUU	Cellulose Products
64931022	VOC	62.900	UUUU	Cellulose Products
64931030	VOC	62.900	UUUU	Cellulose Products
64931031	VOC	62.900	UUUU	Cellulose Products
64931032	VOC	62.900	UUUU	Cellulose Products
64931040	VOC	62.900	UUUU	Cellulose Products
64931041	VOC	62.900	UUUU	Cellulose Products
64931050	VOC	62.900	UUUU	Cellulose Products

SCC	PLLTCODE	CE_MACT	SUBPART	MACT CATEGORY DESCRIPTION
64980001	VOC	62.900	UUUU	Cellulose Products
64982001	VOC	62.900	UUUU	Cellulose Products
64982002	VOC	62.900	UUUU	Cellulose Products
64982599	VOC	62.900	UUUU	Cellulose Products
65135001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
65140001	VOC	44.500	YY	Generic MACT (Cyanide)
65140010	VOC	44.500	YY	Generic MACT (Cyanide)
65140011	VOC	44.500	YY	Generic MACT (Cyanide)
65140012	VOC	44.500	YY	Generic MACT (Cyanide)
65140013	VOC	44.500	YY	Generic MACT (Cyanide)
65140014	VOC	44.500	YY	Generic MACT (Cyanide)
65140015	VOC	44.500	YY	Generic MACT (Cyanide)
65140016	VOC	44.500	YY	Generic MACT (Cyanide)
65140017	VOC	44.500	YY	Generic MACT (Cyanide)
65140018	VOC	44.500	YY	Generic MACT (Cyanide)
65140030	VOC	44.500	YY	Generic MACT (Cyanide)
68430001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430030	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430031	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68430032	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445013	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445020	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445022	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445101	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68445201	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68510001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68510010	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68510011	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68580001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68582001	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68582002	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc
68582599	VOC	66.200	FFFF	Misc. Organic Chemical Production and Proc

Table B-5 NonEGU Source Shutdowns

FIPS	SITE ID	FACILTY NAME	EU ID	UNIT DESCRIPTION
10003	1000300021	SUNCO INC R M	001	BOILER #1
10003	1000300021	SUNCO INC R M	002	BOILER #2
10003	1000300021	SUNCO INC R M	003	BOILER #3
10003	1000300016	MOTIVA ENTERPRISES LLC	072	METHANOL PLT HTR 41-H-1
10003	1000300004	WILMINGTON PIECE DYE CO	ALL	ALL
10003	1000300032	GENERAL CHEMICAL CORPORATION	ALL	ALL
10003	1000300074	METACHEM PRODUCTS LLC	ALL	ALL
10003	1000300127	VPI FILM LLC	ALL	ALL
10003	1000300129	LAFARGE NORTH AMERICA INC	ALL	ALL
10003	1000300350	KANEKA DELAWARE CORPORATION	ALL	ALL
25001	1200202	PARTYLITE WORLDWIDE	ALL	ALL
25001	1200614	BOURNE LANDFILL	ALL	ALL
25003	1170002	ADVANCED INFORMATION	ALL	ALL
25003	1170005	CATAMOUNT PELLET FUE	ALL	ALL
25003	1170048	SPRAGUE NORTH ADAMS	ALL	ALL
25003	1170056	BERKSHIRE GAS STOCKB	ALL	ALL
25003	1170078	MACDERMID GRAPHIC AR	ALL	ALL
25003	1170091	LANE CONSTRUCTION CO	ALL	ALL
25005	1200009	TEXAS INSTRUMENTS	ALL	ALL
25005	1200031	CONDEA VISTA CO	ALL	ALL
25005	1200036	ELKAY REVERE CORP	ALL	ALL
25005	1200037	AEROVOX INCORPORATED	ALL	ALL
25005	1200065	ROSEMAR SILVER COMPA	ALL	ALL
25005	1200080	ATTLEBORO REFINING C	ALL	ALL
25005	1200116	STEDRO TEXTILES	ALL	ALL
25005	1200138	CLIFTEX CORPORATION	ALL	ALL
25005	1200169	PAUL DEVER STATE SCH	ALL	ALL
25005	1200209	PHARMACY SERVICE COR	ALL	ALL
25005	1200216	BRISTOL COUNTY JAIL	ALL	ALL
25005	1200235	SEA WATCH INTERNATIO	ALL	ALL
25005	1200393	OLSONS GREENHOUSES	ALL	ALL
25005	1200468	AA WILL MATERIALS-FR	ALL	ALL
25005	1200498	CRAPO HILL LANDFILL	ALL	ALL
25005	1200510	KREW INCORPORATED	ALL	ALL
25005	1200513	AEROVOX INCORPORATED	ALL	ALL
25005	1200542	LALLY COLUMN CORP	ALL	ALL
25005	1200673	HOMELAND BUILDERS	ALL	ALL
25005	1200824	JUSTIN CLOTHING CO	ALL	ALL
25005	1200880	VELVET DRIVE TRANSMI	ALL	ALL

FIPS	SITE ID	FACILTY NAME	EU ID	UNIT DESCRIPTION
25005	1192308	INTERSTATE MAT & RUB	ALL	ALL
25009	1210057	COASTAL METAL FINISH	ALL	ALL
25009	1210058	AMESBURY CHAIR	ALL	ALL
25009	1210075	HAMPSHIRE FABRICS	ALL	ALL
25009	1210099	WASTE MANAGEMENT HUN	ALL	ALL
25009	1210110	CUSTOM INDUSTRIES IN	ALL	ALL
25009	1210114	SAGAMORE INDUSTRIAL	ALL	ALL
25009	1210143	LABELS INC	ALL	ALL
25009	1210154	NEWARK ATLANTIC PAPE	ALL	ALL
25009	1210208	TEK COATING COMPANY	ALL	ALL
25009	1210209	NATIONAL NORTHEAST	ALL	ALL
25009	1210223	STARENSIER INC	ALL	ALL
25009	1210400	SANMINA CORPORATION	ALL	ALL
25009	1210401	COVANTA HAVERHILL IN	ALL	ALL
25009	1210404	TEKE FURNITURE RESTO	ALL	ALL
25009	1190756	PERMAIR LEATHERS INC	ALL	ALL
25009	1190842	SLB SNACKS INC	ALL	ALL
25009	1190983	SALEM OIL & GREASE C	ALL	ALL
25009	1191036	JCR ELECTRONICS	ALL	ALL
25009	1195900	LEPAGES INC	ALL	ALL
25013	0420008	DELUXE FINANCIAL	ALL	ALL
25013	0420010	FRYE COPYSYSTEMS INC	ALL	ALL
25013	0420013	JAHN FOUNDRY CORPORA	ALL	ALL
25013	0420052	APW/WRIGHT LINE	ALL	ALL
25013	0420130	KODAK POLYCHROME GRA	ALL	ALL
25013	0420175	FIBERMARK DSI	ALL	ALL
25013	0420218	SPRINGFIELD PRINTING	ALL	ALL
25013	0420252	KODAK POLYCHROME GRA	ALL	ALL
25013	0420528	NATIONAL METAL INDUS	ALL	ALL
25015	0420060	BERKSHIRE GAS HATFIE	ALL	ALL
25015	0420105	INDUSTRIAL POWER SER	ALL	ALL
25015	0420170	TECHALLOY COMPANY IN	ALL	ALL
25015	0420424	MAGNAT MACHINETECH I	ALL	ALL
25015	0420463	INDUSTRIAL PROP OF E	ALL	ALL
25015	0420540	GENERAL CABLE CORP	ALL	ALL
25015	0420614	REXAM IMAGE PRODUCTS	ALL	ALL
25017	1210013	MERRIMACK MAGNETICS	ALL	ALL
25017	1210050	MAJILITE MFG INC	ALL	ALL
25017	1210064	FINISH UNLIMITED INC	ALL	ALL
25017	1190080	MASS BROKEN STONE CO	ALL	ALL
25017	1210127	USM CORPORATION	ALL	ALL

FIPS	SITE ID	FACILTY NAME	EU ID	UNIT DESCRIPTION
25017	1210147	UMASS LOWELL-RESIDEN	ALL	ALL
25017	1210182	JOAN FABRICS CORP	ALL	ALL
25017	1190203	SC WAKEFIELD 200	ALL	ALL
25017	1190212	OLYMPUS SPECIALTY HO	ALL	ALL
25017	1190258	ROYAL INSTITUTIONAL	ALL	ALL
25017	1210334	T&T INDUSTRIAL	ALL	ALL
25017	1190465	PRINTED CIRCUIT CORP	ALL	ALL
25017	1190611	GEORGE MEADE FOUNDRY	ALL	ALL
25017	1190734	NEW ENGLAND CONFECTI	ALL	ALL
25017	1180794	SCHOTT CML FIBEROPTI	ALL	ALL
25017	1190984	SUNGARD AVAILABILITY	ALL	ALL
25017	1191008	RAYTHEON SYSTEMS CO	ALL	ALL
25017	1191217	BOSTON SCIENTIFIC CO	ALL	ALL
25017	1191267	AGFA DIVISION OF BAY	ALL	ALL
25017	1191351	MIT EDUCATIONAL FACI	ALL	ALL
25017	1191389	LONGVIEW FIBRE COMPA	ALL	ALL
25017	1191534	SWISSTRONICS INCORPO	ALL	ALL
25017	1191653	FOCAL INCORPORATED	ALL	ALL
25017	1191668	LEE PRODUCTS COMPANY	ALL	ALL
25017	1191735	TYCO ELECTRONICS COR	ALL	ALL
25017	1191897	GENZYME CORPORATION	ALL	ALL
25017	1194001	WF WOOD INC	ALL	ALL
25017	1194010	RR DONNELLEY & SONS	ALL	ALL
25017	1214012	PERFORMANCE CORRUGAT	ALL	ALL
25021	1190246	SOUTHWOOD COMMUNITY	ALL	ALL
25021	1190313	INNOVATIVE MEMBRANE	ALL	ALL
25021	1180359	BEVILACQUA PAVING CO	ALL	ALL
25021	1200515	FOXBOROUGH REALTY AS	ALL	ALL
25021	1200616	PLAINVILLE GENERATIN	ALL	ALL
25021	1190670	RAYTHEON ELECTRONIC	ALL	ALL
25021	1190714	TEVA PHARMACEUTICAL	ALL	ALL
25021	1190962	NIDEC AMERICA CORPOR	ALL	ALL
25021	1191562	BARCLAY HOUSE THE	ALL	ALL
25021	1191726	MWRA QUINCY PS	ALL	ALL
25021	1192130	CURRY WOODWORKING IN	ALL	ALL
25021	1199000	MEDFIELD STATE HOSPI	ALL	ALL
25023	1200637	FRANKLIN FIXTURES IN	ALL	ALL
25023	1200698	CRANBERRY GRAPHICS I	ALL	ALL
25023	1192101	GTR FINISHING CORPOR	ALL	ALL
25023	1192109	ALGER CORPORATION TH	ALL	ALL
25023	1192210	IMPERIA CORPORATION	ALL	ALL

FIPS	SITE ID	FACILTY NAME	EU ID	UNIT DESCRIPTION
25023	1199994	TEST-RADIUS-FITZGERA	ALL	ALL
25025	1190035	BOSTON WATER & SEWER	ALL	ALL
25025	1190057	NEPONSET RIVER VALLE	ALL	ALL
25025	1190101	UNIFIRST CORP	ALL	ALL
25025	1190357	DAMRELL EWER PARTNER	ALL	ALL
25025	1190478	WINTHROP COMMUNITY H	ALL	ALL
25025	1190649	ZAPCO READVILLE COGE	ALL	ALL
25025	1190808	PUBLIC HEALTH COMMUN	ALL	ALL
25025	1191551	BEACON CAPITAL PARTN	ALL	ALL
25025	1191566	NEW ENGLAND TRAWLER	ALL	ALL
25025	1191621	FEDERAL MOGUL FRICTI	ALL	ALL
25025	1191662	EQUITY OFFICE	ALL	ALL
25025	1191956	CHANNEL CENTER:PARCE	ALL	ALL
25025	1195596	SYNTHON IND INCORPOR	ALL	ALL
25027	1180010	CANTERBURY TOWERS	ALL	ALL
25027	1180014	ER BUCK CHAIR COMPAN	ALL	ALL
25027	1180029	GENERAL ELECTRIC FIT	ALL	ALL
25027	1180091	ANGLO FABRICS COMPAN	ALL	ALL
25027	1180100	ZAPCO ENERGY TACTICS	ALL	ALL
25027	1180111	CINCINATTI MILACRON	ALL	ALL
25027	1180114	NEW ENGLAND PLATING	ALL	ALL
25027	1180129	GF WRIGHT STEEL & WI	ALL	ALL
25027	1180132	STANDARDFOUNDRY	ALL	ALL
25027	1180174	WORCESTER TOOL & STA	ALL	ALL
25027	1180203	WORCESTER COUNTY HOS	ALL	ALL
25027	1180244	HI TECH METALS & FIN	ALL	ALL
25027	1180340	GHM INDUSTRIES INC	ALL	ALL
25027	1180353	ADVANCED MICROSENSOR	ALL	ALL
25027	1180355	NEWARK AMERICA	ALL	ALL
25027	1180373	ZYGO TERAOPTIX	ALL	ALL
25027	1180389	ETHAN ALLEN-DUDLEY	ALL	ALL
25027	1180439	INLAND PAPERBOARD &	ALL	ALL
25027	1180484	NELMOR COMPANY	ALL	ALL
25027	1180518	JAMESBURY INCORPORAT	ALL	ALL
25027	1180556	M&H TIRE CO INC	ALL	ALL
25027	1180568	CROFT CORPORATION	ALL	ALL
25027	1180796	LINCOLN PLAZA CENTER	ALL	ALL
25027	1180994	COZ PLASTICS INC	ALL	ALL
25027	1181045	WORCESTER TAPER PIN	ALL	ALL
33011	3301100093	BATESVILLE MANUFACTURING	ALL	ALL
33015	3301500058	VENTURE SEABROOK	ALL	ALL

Appendix C – Area Source Growth Factors

Table C-1 Area Source Growth Factors by SCC Code

See Electronic File: MANE-VU_Area_gf_scc.xls

This table contains records with area source growth factors by county and SCC. The format for the tables is as follows:

Column A – County FIPS code

Column B – Source Classification Code (SCC)

Column C – EGAS_02_09 this is the EGAS 5.0 factor for projecting from 2002 to 2009

Column D – AEO5_02_09 this is the DOE AEO 2005 factor for projecting from 2002 to 2009

Column E – ST_02_09 this is the state-supplied factor for projecting from 2002 to 2009

Column F – GF_02_09 this is the final factor actually used for projecting from 2002 to 2009 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column G – EGAS_02_12 this is the EGAS 5.0 factor for projecting from 2002 to 2012

Column H – AEO5_02_12 this is the DOE AEO 2005 factor for projecting from 2002 to 2012

Column I – ST_02_12 this is the state-supplied factor for projecting from 2002 to 2012

Column J – GF_02_09 this is the final factor actually used for projecting from 2002 to 2012 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column K – EGAS_02_18 this is the EGAS 5.0 factor for projecting from 2002 to 2018

Column J – AEO5_02_18 this is the DOE AEO 2005 factor for projecting from 2002 to 2018

Column M– ST_02_18 this is the state-supplied factor for projecting from 2002 to 2018

Column N – GF_02_09 this is the final factor actually used for projecting from 2002 to 2012 (it is the state-supplied factor, if available; if no state-supplied factor, then it is the AEO2005 factor; if no AEO2005 factor, then it is the default EGAS 5.0 factor)

Column O – SCC description

Appendix D – Area Source Control Factors

Table D-1 Area Source Control Factors for 2001 OTC VOC Model Rules

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
AIM Coatings						
09	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
09	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
10	2401002000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings - Solvent-based;Surface Coating
10	2401003000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings - Water-based;Surface Coating
10	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
10	2401102000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings- Solve;Surface Coating
10	2401103000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings- Water;Surface Coating
11	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
11	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
11	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
11	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
23	2401001000	VOC	29.50	29.50	29.50	Total: All Solvent Types;Architectural Coatings;Surface Coating
23	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
23	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
23	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
24	2401002000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings - Solvent-based;Surface Coating
24	2401003000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings - Water-based;Surface Coating
24	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
24	2401008999	VOC	31.00	31.00	31.00	Solvents: NEC;Traffic Markings;Surface Coating
24	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
24	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
25	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
25	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
25	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
25	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
33	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
33	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
33	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
33	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
34	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
34	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
34	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
34	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
36	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
36	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
42	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
42	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
42	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
42	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
44	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
44	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
50	2401001000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Architectural Coatings;Surface Coating
50	2401008000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Traffic Markings;Surface Coating
50	2401100000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Industrial Maintenance Coatings;Surface Coating
50	2401200000	VOC	31.00	31.00	31.00	Total: All Solvent Types;Other Special Purpose Coatings;Surface Coating
Consumer Products						
09	2465000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Products/Processes;Miscellaneous Non-industrial: Consumer
10	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
10	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
10	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc
10	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
10	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc
10	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
10	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
11	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
11	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc
11	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc
11	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
11	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc
11	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
11	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
23	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
23	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc
23	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc
23	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
23	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
23	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
23	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
24	2465000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Products/Processes;Miscellaneous Non-industrial: Consumer
25	2460000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Processes;Miscellaneous Non-industrial: Consumer and Commerc
33	2460000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Processes;Miscellaneous Non-industrial: Consumer and Commerc
34	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
34	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc
34	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc
34	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
34	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc
34	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
34	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
34	2465000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Products/Processes;Miscellaneous Non-industrial: Consumer
36	2460000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Processes;Miscellaneous Non-industrial: Consumer and Commerc
42	2465000000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Products/Processes;Miscellaneous Non-industrial: Consumer
44	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
44	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc
44	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
44	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
44	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc
44	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
44	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
50	2460100000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Personal Care Products;Miscellaneous Non-industrial: Consumer and Commerc
50	2460200000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Household Products;Miscellaneous Non-industrial: Consumer and Commerc
50	2460400000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Automotive Aftermarket Products;Miscellaneous Non-industrial: Consumer and Commerc
50	2460500000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Coatings and Related Products;Miscellaneous Non-industrial: Consumer and Commerc
50	2460600000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All Adhesives and Sealants;Miscellaneous Non-industrial: Consumer and Commerc
50	2460800000	VOC	14.20	14.20	14.20	Total: All Solvent Types;All FIFRA Related Products;Miscellaneous Non-industrial: Consumer and Commerc
50	2460900000	VOC	14.20	14.20	14.20	Total: All Solvent Types;Miscellaneous Products (Not Otherwise Covered);Miscellaneous Non-industrial: Consumer and Commerc
Mobile Equipment Repair and Refinishing						
09	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
10	2401005500	VOC	38.00	38.00	38.00	Surface Preparation Solvents;Auto Refinishing: SIC 7532;Surface Coating
10	2401005600	VOC	38.00	38.00	38.00	Primers;Auto Refinishing: SIC 7532;Surface Coating
10	2401005700	VOC	38.00	38.00	38.00	Top Coats;Auto Refinishing: SIC 7532;Surface Coating
10	2401005800	VOC	38.00	38.00	38.00	Clean-up Solvents;Auto Refinishing: SIC 7532;Surface Coating
11	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
23	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
24	2401005000	VOC	0.00	0.00	0.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
25	2401005000	VOC	0.00	0.00	0.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
33	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
34	2401005000	VOC	19.00	19.00	19.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
36	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
42	2401005000	VOC	0.00	0.00	0.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
44	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
50	2401005000	VOC	38.00	38.00	38.00	Total: All Solvent Types;Auto Refinishing: SIC 7532;Surface Coating
Solvent Cleaning Operations						
09	2415000000	VOC	66.00	66.00	66.00	Total: All Solvent Types;All Processes/All Industries;Degreasing
23	2415000000	VOC	66.00	66.00	66.00	Total: All Solvent Types;All Processes/All Industries;Degreasing
23	2415030000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Electronic and Other Elec. (SIC 36): All Processes;Degreasing
23	2415045000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Miscellaneous Manufacturing (SIC 39): All Processe;Degreasing
23	2415065000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Auto Repair Services (SIC 75): All Processes;Degreasing
23	2415300000	VOC	66.00	66.00	66.00	Total: All Solvent Types;All Industries: Cold Cleaning;Degreasing
25	2415000000	VOC	7.00	7.00	7.00	Total: All Solvent Types;All Industries: Cold Cleaning;Degreasing
33	2415000000	VOC	66.00	66.00	66.00	Total: All Solvent Types;All Industries: Cold Cleaning;Degreasing
34	2415000000	VOC	17.00	17.00	17.00	Total: All Solvent Types;All Processes/All Industries;Degreasing
36	2415020000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Fabricated Metal Products (SIC 34): All Processes;Degreasing
36	2415025000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Industrial Machinery and Equipment (SIC 35): All P;Degreasing
36	2415035000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Transportation Equipment (SIC 37): All Processes;Degreasing
36	2415045000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Miscellaneous Manufacturing (SIC 39): All Processe;Degreasing
36	2415055000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Automotive Dealers (SIC 55): All Processes;Degreasing
36	2415060000	VOC	66.00	66.00	66.00	Total: All Solvent Types;Miscellaneous Repair Services (SIC 76): All Proces;Degreasing
44	2415000000	VOC	66.00	66.00	66.00	Total: All Solvent Types;All Processes/All Industries;Degreasing

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
Portable Fuel Containers						
09	2501060300	VOC	41.3	63.8	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage
10	2501011010	VOC	41.3	63.8	75.0	Vapor Losses;Portable Containers: Residential;Petroleum and Petroleum Product Storage
10	2501011011	VOC	41.3	63.8	75.0	Permeation;Portable Containers: Residential;Petroleum and Petroleum Product Storage
10	2501011012	VOC	41.3	63.8	75.0	Diurnal;Portable Containers: Residential;Petroleum and Petroleum Product Storage
10	2501011015	VOC	41.3	63.8	75.0	Spillage;Portable Containers: Residential;Petroleum and Petroleum Product Storage
10	2501011016	VOC	41.3	63.8	75.0	Transport;Portable Containers: Residential;Petroleum and Petroleum Product Storage
10	2501012010	VOC	41.3	63.8	75.0	Vapor Losses;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
10	2501012011	VOC	41.3	63.8	75.0	Permeation;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
10	2501012012	VOC	41.3	63.8	75.0	Diurnal;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
10	2501012015	VOC	41.3	63.8	75.0	Spillage;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
10	2501012016	VOC	41.3	63.8	75.0	Transport;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
11	2501011011	VOC	41.3	63.8	75.0	Permeation;Portable Containers: Residential;Petroleum and Petroleum Product Storage
11	2501011012	VOC	41.3	63.8	75.0	Diurnal;Portable Containers: Residential;Petroleum and Petroleum Product Storage
11	2501011016	VOC	41.3	63.8	75.0	Transport;Portable Containers: Residential;Petroleum and Petroleum Product Storage
11	2501012011	VOC	41.3	63.8	75.0	Permeation;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
11	2501012012	VOC	41.3	63.8	75.0	Diurnal;Portable Containers: Commercial;Petroleum and Petroleum Product

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
						Storage
11	2501012016	VOC	41.3	63.8	75.0	Transport;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
23	2501060300	VOC	41.3	63.8	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage
24	2501011011	VOC	48.8	71.3	75.0	Permeation;Portable Containers: Residential;Petroleum and Petroleum Product Storage
24	2501011012	VOC	48.8	71.3	75.0	Diurnal;Portable Containers: Residential;Petroleum and Petroleum Product Storage
24	2501011016	VOC	48.8	71.3	75.0	Transport;Portable Containers: Residential;Petroleum and Petroleum Product Storage
24	2501012011	VOC	48.8	71.3	75.0	Permeation;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
24	2501012012	VOC	48.8	71.3	75.0	Diurnal;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
24	2501012016	VOC	48.8	71.3	75.0	Transport;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
25	2501011000	VOC	18.8	41.3	75.0	;;
25	2501012000	VOC	18.8	41.3	75.0	;;
33	2501060300	VOC	26.3	48.8	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage
34	2501000120	VOC	33.8	56.3	75.0	Gasoline;All Storage Types: Breathing Loss;Petroleum and Petroleum Product Storage
36	2501011011	VOC	48.8	71.3	75.0	Permeation;Portable Containers: Residential;Petroleum and Petroleum Product Storage
36	2501011012	VOC	48.8	71.3	75.0	Diurnal;Portable Containers: Residential;Petroleum and Petroleum Product Storage
36	2501011016	VOC	48.8	71.3	75.0	Transport;Portable Containers: Residential;Petroleum and Petroleum Product Storage
36	2501012011	VOC	48.8	71.3	75.0	Permeation;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
36	2501012012	VOC	48.8	71.3	75.0	Diurnal;Portable Containers: Commercial;Petroleum and Petroleum Product Storage

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
36	2501012016	VOC	48.8	71.3	75.0	Transport;Portable Containers: Commercial;Petroleum and Petroleum Product Storage
42	2501060300	VOC	48.8	71.3	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage
44	2501060300	VOC	18.8	41.3	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage
50	2501060300	VOC	18.8	41.3	75.0	Total;Portable Containers: Residential & Com;Petroleum and Petroleum Product Storage

Table D-2 Area Source Control Factors for On-Board Vapor Recovery

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
09001	2501060101	VOC	23.81	28.57	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09001	2501060102	VOC	23.81	28.57	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09003	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09003	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09005	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09005	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09007	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09007	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09009	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09009	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09011	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09011	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09013	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09013	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
09015	2501060101	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
09015	2501060102	VOC	23.81	33.33	38.10	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
10001	2501060100	VOC	40.54	48.65	56.76	Stage 2: Total;Gasoline Service Stations
10003	2501060100	VOC	40.54	48.65	56.76	Stage 2: Total;Gasoline Service Stations
10005	2501060100	VOC	40.54	48.65	56.76	Stage 2: Total;Gasoline Service Stations
11001	2501060100	VOC	40.54	48.65	56.76	Stage 2: Total;Gasoline Service Stations
23001	2501060100	VOC	53.68	67.65	79.41	Stage 2: Total;Gasoline Service Stations
23003	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23005	2501060100	VOC	28.57	33.33	42.86	Stage 2: Total;Gasoline Service Stations
23007	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23009	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23011	2501060100	VOC	53.68	67.65	79.41	Stage 2: Total;Gasoline Service Stations
23013	2501060100	VOC	53.68	67.65	79.41	Stage 2: Total;Gasoline Service Stations
23015	2501060100	VOC	53.68	67.65	79.41	Stage 2: Total;Gasoline Service Stations
23017	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23019	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23021	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23023	2501060100	VOC	28.57	33.33	42.86	Stage 2: Total;Gasoline Service Stations
23025	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23027	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23029	2501060100	VOC	53.80	68.35	79.75	Stage 2: Total;Gasoline Service Stations
23031	2501060100	VOC	28.57	33.33	42.86	Stage 2: Total;Gasoline Service Stations
24001	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
24003	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24005	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24009	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24011	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24013	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24015	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24017	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24019	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24021	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24023	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24025	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24027	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24029	2501060100	VOC	53.53	68.24	80.00	Stage 2: Total;Gasoline Service Stations
24031	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24033	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
24035	2501060100	VOC	53.53	68.24	80.00	Stage 2: Total;Gasoline Service Stations
24037	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24039	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24041	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24043	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24045	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24047	2501060100	VOC	54.24	68.36	80.23	Stage 2: Total;Gasoline Service Stations
24510	2501060100	VOC	26.09	34.78	43.48	Stage 2: Total;Gasoline Service Stations
25001	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25003	2501060102	VOC	38.24	50.00	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25005	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25007	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25009	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25011	2501060102	VOC	38.24	50.00	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25013	2501060102	VOC	38.24	50.00	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25015	2501060102	VOC	38.24	50.00	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25017	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25019	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25021	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25023	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25025	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
25027	2501060102	VOC	38.24	47.06	55.88	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
33001	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations
33003	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations
33005	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations
33007	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
33009	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations
33011	2501060100	VOC	38.24	50.00	55.88	Stage 2: Total;Gasoline Service Stations
33013	2501060100	VOC	38.24	50.00	55.88	Stage 2: Total;Gasoline Service Stations
33015	2501060100	VOC	38.24	50.00	55.88	Stage 2: Total;Gasoline Service Stations
33017	2501060100	VOC	38.24	50.00	55.88	Stage 2: Total;Gasoline Service Stations
33019	2501060100	VOC	53.75	68.13	80.00	Stage 2: Total;Gasoline Service Stations
34001	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34003	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34005	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34007	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34009	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34011	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34013	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34015	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34017	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34019	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34021	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34023	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34025	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34027	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34029	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34031	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34033	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34035	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34037	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34039	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
34041	2501060100	VOC	38.89	47.22	58.33	Stage 2: Total;Gasoline Service Stations
36001	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36003	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36005	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36007	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36009	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36011	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36013	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36015	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36017	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36019	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36021	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36023	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36025	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36027	2501060100	VOC	53.80	67.72	79.75	Stage 2: Total;Gasoline Service Stations
36029	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36031	2501060100	VOC	53.57	67.86	79.76	Stage 2: Total;Gasoline Service Stations
36033	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36035	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36037	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36039	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36041	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36043	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36045	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
36047	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36049	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36051	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36053	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36055	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36057	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36059	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36061	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36063	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36065	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36067	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36069	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36071	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36073	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36075	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36077	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36079	2501060100	VOC	53.80	67.72	79.75	Stage 2: Total;Gasoline Service Stations
36081	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36083	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36085	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36087	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36089	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36091	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36093	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36095	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36097	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36099	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36101	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36103	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36105	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36107	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36109	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36111	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36113	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36115	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36117	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36119	2501060100	VOC	34.48	41.38	51.72	Stage 2: Total;Gasoline Service Stations
36121	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
36123	2501060100	VOC	54.29	68.57	80.00	Stage 2: Total;Gasoline Service Stations
42001	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42003	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42005	2501060102	VOC	26.09	34.78	39.13	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42007	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42009	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42011	2501060101	VOC	26.09	34.78	39.13	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42013	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
						Stations
42015	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42017	2501060102	VOC	30.43	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42019	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42021	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42023	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42025	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42027	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42029	2501060102	VOC	30.43	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42031	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42033	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42035	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42037	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42039	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42041	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42043	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42045	2501060102	VOC	30.43	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42047	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42049	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42051	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42053	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42055	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42057	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42059	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42061	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42063	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42065	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42067	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42069	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42071	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42073	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
						Stations
42075	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42077	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42079	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42081	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42083	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42085	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42087	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42089	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42091	2501060102	VOC	30.43	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42093	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42095	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42097	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42099	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42101	2501060102	VOC	30.43	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42103	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42105	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42107	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42109	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42111	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42113	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42115	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42117	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42119	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42121	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42123	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42125	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42127	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42129	2501060102	VOC	26.09	34.78	43.48	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
42131	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
42133	2501060101	VOC	53.98	68.75	80.11	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
						Stations
44001	2501060000	VOC	38.24	50.00	55.88	Total: All Gasoline/All Processes;Gasoline Service Stations
44003	2501060000	VOC	38.24	50.00	55.88	Total: All Gasoline/All Processes;Gasoline Service Stations
44005	2501060000	VOC	38.24	50.00	55.88	Total: All Gasoline/All Processes;Gasoline Service Stations
44007	2501060000	VOC	38.24	50.00	55.88	Total: All Gasoline/All Processes;Gasoline Service Stations
44009	2501060000	VOC	38.24	50.00	55.88	Total: All Gasoline/All Processes;Gasoline Service Stations
50001	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50001	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50001	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50003	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50003	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50003	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50005	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50005	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50005	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50007	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50007	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50007	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50009	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50009	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50009	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50011	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50011	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50011	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50013	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50013	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50013	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50015	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50015	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50015	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50017	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50017	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50017	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50019	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50019	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50019	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50021	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service

FIPS	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018	SCC Description
						Stations
50021	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50021	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50023	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50023	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50023	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50025	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50025	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50025	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations
50027	2501060101	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Uncontrolled;Gasoline Service Stations
50027	2501060102	VOC	37.14	48.57	57.14	Stage 2: Displacement Loss/Controlled;Gasoline Service Stations
50027	2501060103	VOC	37.14	48.57	57.14	Stage 2: Spillage;Gasoline Service Stations

Table D-3 Area Source Growth/Control Factors for Residential Wood Combustion

SCC	SCC Description	Assumptions	Growth and Control Factor 2002-2009	Growth and Control Factor 2002-2012	Growth and Control Factor 2002-2018
2104008000	Total: Woodstoves and Fireplaces	1 - 0.01056*(Year-2002) (Assumes 19.4% fireplaces 71.6%old woodstoves 9.1%new woodstoves)	0.926	0.894	0.831
2104008001	Fireplaces: General	Increase 1%/yr: 1 + 0.01*(Year-2002)	1.070	1.100	1.160
2104008002	Fireplaces: Insert; non-EPA certified	Decrease 2%/yr: 1 - 0.02*(Year-2002)	0.860	0.800	0.680
2104008003	Fireplaces: Insert; EPA certified; non-catalytic	Increase 2%/yr: 1 + 0.02*(Year-2002)	1.140	1.200	1.320
2104008004	Fireplaces: Insert; EPA certified; catalytic	Increase 2%/yr (same as 2104008003)	1.140	1.200	1.320
2104008010	Woodstoves: General	Decrease 2%/yr (same as 2104008002)	0.860	0.800	0.680
2104008030	Catalytic Woodstoves: General	Increase 2%/yr (same as 2104008003)	1.140	1.200	1.320
2104008050	Non-catalytic Woodstoves: EPA certified	Increase 2%/yr (same as 2104008003)	1.140	1.200	1.320
2104008051	Non-catalytic Woodstoves: Non-EPA certified	Decrease 2%/yr (same as 2104008002)	0.860	0.800	0.680
2104008052	Non-catalytic Woodstoves: Low Emitting	Increase 2%/yr (same as 2104008003)	1.140	1.200	1.320
2104008053	Non-catalytic Woodstoves: Pellet Fired	Increase 2%/yr (same as 2104008003)	1.140	1.200	1.320

Table E-1 NonEGU BOTW Control Factors for Adhesives and Sealants Application, Asphalt Production Plants, Cement Kilns, and Glass/Fiberglass Furnaces

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
Control Measure: Adhesives and Sealants Application								
09003	6484	R0131	01	40200701	VOC	64.40	64.40	64.40
09003	6484	R0132	01	40200701	VOC	64.40	64.40	64.40
09015	0647	P0085	01	40200701	VOC	64.40	64.40	64.40
10001	1000100004	003	2	40200701	VOC	64.40	64.40	64.40
10001	1000100004	005	2	40200701	VOC	64.40	64.40	64.40
10001	1000100004	005	3	40200701	VOC	64.40	64.40	64.40
10001	1000100004	005	4	40200701	VOC	64.40	64.40	64.40
10001	1000100004	005	5	40200701	VOC	64.40	64.40	64.40
10003	1000300365	002	2	40200706	VOC	64.40	64.40	64.40
10003	1000300365	002	1	40200710	VOC	64.40	64.40	64.40
23001	2300100076	003	2	40200701	VOC	64.40	64.40	64.40
24003	003-0250	232	01F232	40200701	VOC	64.40	64.40	64.40
24003	003-0250	232	01S232	40200701	VOC	64.40	64.40	64.40
24005	005-2407	17	01F17	40200701	VOC	64.40	64.40	64.40
24005	005-2407	17	01S17	40200701	VOC	64.40	64.40	64.40
24025	025-0006	45	01F45	40200710	VOC	64.40	64.40	64.40
24025	025-0006	45	01S45	40200710	VOC	64.40	64.40	64.40
24025	025-0423	5	01F5	40200701	VOC	64.40	64.40	64.40
24025	025-0423	5	01S5	40200701	VOC	64.40	64.40	64.40
24025	025-0423	6	01F6	40200701	VOC	64.40	64.40	64.40
24025	025-0423	6	01S6	40200701	VOC	64.40	64.40	64.40
24025	025-0423	7	01F7	40200701	VOC	64.40	64.40	64.40
24025	025-0423	7	01S7	40200701	VOC	64.40	64.40	64.40
24045	045-0082	12	01F12	40200710	VOC	64.40	64.40	64.40
24045	045-0082	12	01S12	40200710	VOC	64.40	64.40	64.40
25005	1200077	12	0108	40200701	VOC	64.40	64.40	64.40
25005	1200100	23	0111	40200701	VOC	64.40	64.40	64.40
25005	1200100	26	0114	40200701	VOC	64.40	64.40	64.40
25005	1200100	28	0116	40200701	VOC	64.40	64.40	64.40
25005	1200101	08	0107	40200701	VOC	64.40	64.40	64.40
25005	1200101	09	0108	40200706	VOC	64.40	64.40	64.40
25005	1200101	10	0109	40200701	VOC	64.40	64.40	64.40
25005	1200101	11	0110	40200701	VOC	64.40	64.40	64.40
25005	1200101	12	0111	40200701	VOC	64.40	64.40	64.40
25005	1200183	07	0203	40200701	VOC	64.40	64.40	64.40
25005	1200388	04	0104	40200701	VOC	64.40	64.40	64.40
25005	1200388	05	0105	40200701	VOC	64.40	64.40	64.40
25005	1200388	05	0205	40200701	VOC	64.40	64.40	64.40
25005	1200509	04	0104	40200701	VOC	64.40	64.40	64.40
25005	1200585	02	0102	40200710	VOC	64.40	64.40	64.40
25005	1200673	07	0107	40200710	VOC	64.40	64.40	64.40

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
25005	1200707	08	0106	40200710	VOC	64.40	64.40	64.40
25005	1200851	11	0110	40200710	VOC	64.40	64.40	64.40
25009	1190683	03	0103	40200706	VOC	64.40	64.40	64.40
25009	1190690	09	0108	40200710	VOC	64.40	64.40	64.40
25009	1210026	15	0115	40200710	VOC	64.40	64.40	64.40
25009	1210046	01	0101	40200706	VOC	64.40	64.40	64.40
25009	1210083	05	0104	40200710	VOC	64.40	64.40	64.40
25009	1210093	09	0209	40200701	VOC	64.40	64.40	64.40
25009	1210110	01	0101	40200701	VOC	64.40	64.40	64.40
25009	1210212	30	0321	40200706	VOC	64.40	64.40	64.40
25009	1210212	30	0721	40200706	VOC	64.40	64.40	64.40
25009	1210212	32	0322	40200706	VOC	64.40	64.40	64.40
25009	1210212	32	0622	40200706	VOC	64.40	64.40	64.40
25009	1210212	32	0922	40200706	VOC	64.40	64.40	64.40
25009	1210276	03	0102	40200701	VOC	64.40	64.40	64.40
25009	1210332	01	0101	40200701	VOC	64.40	64.40	64.40
25009	1210332	02	0102	40200701	VOC	64.40	64.40	64.40
25009	1210332	03	0103	40200701	VOC	64.40	64.40	64.40
25009	1210341	10	0110	40200710	VOC	64.40	64.40	64.40
25009	1211013	07	0105	40200710	VOC	64.40	64.40	64.40
25009	1211013	08	0306	40200710	VOC	64.40	64.40	64.40
25009	1211013	33	0331	40200701	VOC	64.40	64.40	64.40
25009	1211013	72	0259	40200710	VOC	64.40	64.40	64.40
25009	1211013	89	0253	40200710	VOC	64.40	64.40	64.40
25013	0420145	16	0112	40200710	VOC	64.40	64.40	64.40
25013	0420213	01	0201	40200701	VOC	64.40	64.40	64.40
25013	0420260	02	0102	40200710	VOC	64.40	64.40	64.40
25013	0420265	06	0105	40200701	VOC	64.40	64.40	64.40
25013	0420561	01	0101	40200701	VOC	64.40	64.40	64.40
25013	0420798	05	0105	40200710	VOC	64.40	64.40	64.40
25013	0420821	10	0106	40200701	VOC	64.40	64.40	64.40
25015	0420558	01	0101	40200710	VOC	64.40	64.40	64.40
25017	1180795	02	0102	40200706	VOC	64.40	64.40	64.40
25017	1180795	03	0103	40200706	VOC	64.40	64.40	64.40
25017	1180795	04	0104	40200706	VOC	64.40	64.40	64.40
25017	1180795	05	0105	40200706	VOC	64.40	64.40	64.40
25017	1180795	06	0106	40200706	VOC	64.40	64.40	64.40
25017	1180795	07	0107	40200701	VOC	64.40	64.40	64.40
25017	1180795	08	0108	40200701	VOC	64.40	64.40	64.40
25017	1180795	09	0109	40200701	VOC	64.40	64.40	64.40
25017	1190355	05	0101	40200706	VOC	64.40	64.40	64.40
25017	1190424	04	0104	40200701	VOC	64.40	64.40	64.40
25017	1190424	08	0106	40200701	VOC	64.40	64.40	64.40
25017	1190424	11	0107	40200701	VOC	64.40	64.40	64.40
25017	1190424	20	0110	40200701	VOC	64.40	64.40	64.40
25017	1190424	24	0111	40200701	VOC	64.40	64.40	64.40
25017	1190424	28	0112	40200701	VOC	64.40	64.40	64.40

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
25017	1190424	32	0213	40200701	VOC	64.40	64.40	64.40
25017	1190424	37	0117	40200701	VOC	64.40	64.40	64.40
25017	1190429	06	0106	40200710	VOC	64.40	64.40	64.40
25017	1190560	02	0101	40200710	VOC	64.40	64.40	64.40
25017	1190560	23	0106	40200710	VOC	64.40	64.40	64.40
25017	1190585	08	0104	40200706	VOC	64.40	64.40	64.40
25017	1190585	17	0106	40200710	VOC	64.40	64.40	64.40
25017	1190692	09	0107	40200701	VOC	64.40	64.40	64.40
25017	1190692	10	0108	40200701	VOC	64.40	64.40	64.40
25017	1190692	11	0108	40200701	VOC	64.40	64.40	64.40
25017	1190953	04	0104	40200710	VOC	64.40	64.40	64.40
25017	1190999	11	0111	40200710	VOC	64.40	64.40	64.40
25017	1190999	11	0211	40200710	VOC	64.40	64.40	64.40
25017	1190999	13	0313	40200710	VOC	64.40	64.40	64.40
25017	1191104	03	0103	40200710	VOC	64.40	64.40	64.40
25017	1191192	05	0104	40200701	VOC	64.40	64.40	64.40
25017	1191296	26	0116	40200701	VOC	64.40	64.40	64.40
25017	1191296	27	0117	40200701	VOC	64.40	64.40	64.40
25017	1191471	04	0103	40200710	VOC	64.40	64.40	64.40
25017	1191564	08	0108	40200710	VOC	64.40	64.40	64.40
25017	1191844	53	0135	40200710	VOC	64.40	64.40	64.40
25017	1191844	53	0335	40200710	VOC	64.40	64.40	64.40
25017	1192051	12	0107	40200710	VOC	64.40	64.40	64.40
25017	1192051	26	0115	40200710	VOC	64.40	64.40	64.40
25017	1210036	03	0103	40200701	VOC	64.40	64.40	64.40
25017	1210036	05	0104	40200710	VOC	64.40	64.40	64.40
25017	1210036	07	0105	40200701	VOC	64.40	64.40	64.40
25017	1210373	01	0101	40200701	VOC	64.40	64.40	64.40
25017	1210373	02	0102	40200701	VOC	64.40	64.40	64.40
25017	1210373	03	0103	40200701	VOC	64.40	64.40	64.40
25017	1210373	04	0104	40200701	VOC	64.40	64.40	64.40
25017	1210373	04	0204	40200701	VOC	64.40	64.40	64.40
25017	1210373	05	0105	40200701	VOC	64.40	64.40	64.40
25017	1210373	05	0205	40200701	VOC	64.40	64.40	64.40
25017	1210373	06	0106	40200701	VOC	64.40	64.40	64.40
25017	1210373	06	0206	40200701	VOC	64.40	64.40	64.40
25017	1210373	09	0109	40200701	VOC	64.40	64.40	64.40
25017	1210373	10	0110	40200701	VOC	64.40	64.40	64.40
25017	1210912	02	0202	40200710	VOC	64.40	64.40	64.40
25021	1190319	04	0103	40200710	VOC	64.40	64.40	64.40
25021	1190319	11	0111	40200710	VOC	64.40	64.40	64.40
25021	1190569	23	0215	40200710	VOC	64.40	64.40	64.40
25021	1192106	03	0103	40200710	VOC	64.40	64.40	64.40
25021	1192121	07	0107	40200701	VOC	64.40	64.40	64.40
25021	1192131	03	0103	40200710	VOC	64.40	64.40	64.40
25021	1192491	07	0107	40200701	VOC	64.40	64.40	64.40
25021	1192491	08	0108	40200701	VOC	64.40	64.40	64.40

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
25021	1200125	55	0146	40200710	VOC	64.40	64.40	64.40
25021	1200125	56	0147	40200710	VOC	64.40	64.40	64.40
25021	1200127	10	0209	40200710	VOC	64.40	64.40	64.40
25021	1200228	04	0203	40200710	VOC	64.40	64.40	64.40
25021	1200452	04	0102	40200701	VOC	64.40	64.40	64.40
25023	1192198	11	0107	40200710	VOC	64.40	64.40	64.40
25023	1192198	12	0108	40200710	VOC	64.40	64.40	64.40
25023	1192198	19	0109	40200710	VOC	64.40	64.40	64.40
25023	1192198	23	0109	40200710	VOC	64.40	64.40	64.40
25023	1192198	25	0109	40200710	VOC	64.40	64.40	64.40
25023	1192198	26	0109	40200710	VOC	64.40	64.40	64.40
25023	1192203	01	0101	40200710	VOC	64.40	64.40	64.40
25023	1192237	08	0102	40200710	VOC	64.40	64.40	64.40
25023	1192436	09	0105	40200701	VOC	64.40	64.40	64.40
25023	1200177	05	0105	40200701	VOC	64.40	64.40	64.40
25023	1200637	04	0104	40200710	VOC	64.40	64.40	64.40
25023	1200637	07	0105	40200707	VOC	64.40	64.40	64.40
25025	1191397	05	0106	40200701	VOC	64.40	64.40	64.40
25025	1191397	06	0107	40200701	VOC	64.40	64.40	64.40
25027	1180025	01	0301	40200710	VOC	64.40	64.40	64.40
25027	1180115	17	0209	40200701	VOC	64.40	64.40	64.40
25027	1180115	25	0311	40200710	VOC	64.40	64.40	64.40
25027	1180115	36	0117	40200710	VOC	64.40	64.40	64.40
25027	1180115	39	0118	40200701	VOC	64.40	64.40	64.40
25027	1180115	77	0251	40200710	VOC	64.40	64.40	64.40
25027	1180225	04	0104	40200710	VOC	64.40	64.40	64.40
25027	1180265	05	0205	40200701	VOC	64.40	64.40	64.40
25027	1180310	03	0203	40200701	VOC	64.40	64.40	64.40
25027	1180310	03	0303	40200701	VOC	64.40	64.40	64.40
25027	1180505	07	0107	40200701	VOC	64.40	64.40	64.40
25027	1180505	23	0123	40200710	VOC	64.40	64.40	64.40
25027	1180998	27	0111	40200710	VOC	64.40	64.40	64.40
25027	1180998	30	0113	40200701	VOC	64.40	64.40	64.40
25027	1200856	12	0110	40200701	VOC	64.40	64.40	64.40
25027	1200856	13	0111	40200701	VOC	64.40	64.40	64.40
33011	3301100076	004	1	40200701	VOC	64.40	64.40	64.40
33011	3301100076	005	1	40200701	VOC	64.40	64.40	64.40
33011	3301100076	009	1	40200701	VOC	64.40	64.40	64.40
33017	3301700010	001	1	40200701	VOC	64.40	64.40	64.40
33017	3301700010	002	1	40200701	VOC	64.40	64.40	64.40
36063	9290900018	ADHES1	HM1FP	40200701	VOC	64.40	64.40	64.40
36069	8329900028	000005	WABFP	40200701	VOC	64.40	64.40	64.40
36103	1473000001	EI0001	E10EI	40200701	VOC	64.40	64.40	64.40
36103	1473000001	U00002	103FP	40200706	VOC	64.40	64.40	64.40
36115	5533000016	U00011	SL2FP	40200710	VOC	64.40	64.40	64.40
36117	8543600007	1MLDRB	SC3FP	40200701	VOC	64.40	64.40	64.40
36117	8543600007	2KLZRS	SC2FP	40200701	VOC	64.40	64.40	64.40

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
42001	420010009	103	1	40200706	VOC	64.40	64.40	64.40
42013	420130480	101	2	40200701	VOC	64.40	64.40	64.40
42017	420171041	101	1	40200701	VOC	64.40	64.40	64.40
42019	420190029	104	1	40200701	VOC	64.40	64.40	64.40
42019	420190029	105	1	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	1	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	2	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	3	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	4	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	5	40200701	VOC	64.40	64.40	64.40
42019	420190090	102	6	40200701	VOC	64.40	64.40	64.40
42035	420350429	P105	1	40200710	VOC	64.40	64.40	64.40
42035	420350429	P106	1	40200710	VOC	64.40	64.40	64.40
42039	420390013	106	1	40200707	VOC	64.40	64.40	64.40
42039	420390014	102	1	40200701	VOC	64.40	64.40	64.40
42039	420390014	103	1	40200701	VOC	64.40	64.40	64.40
42039	420390014	104	1	40200701	VOC	64.40	64.40	64.40
42039	420390014	105	1	40200701	VOC	64.40	64.40	64.40
42045	420450954	121	1	40200701	VOC	64.40	64.40	64.40
42055	420550022	100	1	40200706	VOC	64.40	64.40	64.40
42055	420550022	101	1	40200706	VOC	64.40	64.40	64.40
42061	420610016	104	1	40200701	VOC	64.40	64.40	64.40
42061	420610016	105	1	40200701	VOC	64.40	64.40	64.40
42061	420610032	101	2	40200701	VOC	64.40	64.40	64.40
42061	420610032	101	4	40200701	VOC	64.40	64.40	64.40
42061	420610032	101	6	40200701	VOC	64.40	64.40	64.40
42061	420610032	102	2	40200701	VOC	64.40	64.40	64.40
42061	420610032	102	4	40200701	VOC	64.40	64.40	64.40
42061	420610032	102	6	40200701	VOC	64.40	64.40	64.40
42061	420610032	103	2	40200701	VOC	64.40	64.40	64.40
42061	420610032	103	4	40200701	VOC	64.40	64.40	64.40
42069	420690023	107	1	40200701	VOC	64.40	64.40	64.40
42069	420690023	108	1	40200701	VOC	64.40	64.40	64.40
42071	420710802	102	1	40200710	VOC	64.40	64.40	64.40
42071	420710804	102	1	40200710	VOC	64.40	64.40	64.40
42077	420770071	101	1	40200710	VOC	64.40	64.40	64.40
42077	420770071	101	2	40200710	VOC	64.40	64.40	64.40
42077	420770071	102	1	40200710	VOC	64.40	64.40	64.40
42077	420770071	102	2	40200710	VOC	64.40	64.40	64.40
42077	420770071	103	1	40200710	VOC	64.40	64.40	64.40
42077	420770071	104	1	40200710	VOC	64.40	64.40	64.40
42077	420770071	105	1	40200710	VOC	64.40	64.40	64.40
42081	420810039	113	1	40200710	VOC	64.40	64.40	64.40
42081	420810559	P104	1	40200710	VOC	64.40	64.40	64.40
42091	420910826	002	1	40200701	VOC	64.40	64.40	64.40
42097	420970001	105	1	40200710	VOC	64.40	64.40	64.40
42097	420970001	201	1	40200710	VOC	64.40	64.40	64.40

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
42097	420970001	202	1	40200710	VOC	64.40	64.40	64.40
42097	420970034	104	1	40200710	VOC	64.40	64.40	64.40
42097	420970034	105A	1	40200710	VOC	64.40	64.40	64.40
42101	4210101591	004	1	40200701	VOC	64.40	64.40	64.40
42101	4210102051	005	10	40200712	VOC	64.40	64.40	64.40
42101	4210102051	005	11	40200712	VOC	64.40	64.40	64.40
42101	4210102051	005	12	40200712	VOC	64.40	64.40	64.40
42101	4210102051	006	5	40200712	VOC	64.40	64.40	64.40
42101	4210102051	007	6	40200712	VOC	64.40	64.40	64.40
42101	4210102051	008	14	40200712	VOC	64.40	64.40	64.40
42101	4210102051	009	7	40200712	VOC	64.40	64.40	64.40
42101	4210103217	010	2	40200710	VOC	64.40	64.40	64.40
42109	421090001	113	1	40200710	VOC	64.40	64.40	64.40
42109	421090001	140	1	40200710	VOC	64.40	64.40	64.40
42119	421190477	P101	1	40200710	VOC	64.40	64.40	64.40
42129	421290071	105	1	40200701	VOC	64.40	64.40	64.40
42129	421290311	101	1	40200701	VOC	64.40	64.40	64.40
42133	421330034	103	1	40200701	VOC	64.40	64.40	64.40
42133	421330055	101	1	40200706	VOC	64.40	64.40	64.40
42133	421330055	101	2	40200706	VOC	64.40	64.40	64.40
44003	AIR1438	8	8	40200710	VOC	64.40	64.40	64.40
44007	AIR1859	2	2	40200701	VOC	64.40	64.40	64.40
44007	AIR3850	1	1	40200701	VOC	64.40	64.40	64.40
44007	AIR537	2	2	40200710	VOC	64.40	64.40	64.40
44009	AIR594	7	7	40200710	VOC	64.40	64.40	64.40
50005	9	4	1	40200701	VOC	64.40	64.40	64.40
Control Measure: Asphalt Production Plants								
34001	70003	U101	OS1	30500207	NOX	0.00	35.00	35.00
34001	70003	U101	OS2	30500207	NOX	0.00	35.00	35.00
34001	70003	U12	OS0	30500207	NOX	0.00	35.00	35.00
34001	70003	U13	OS0	30500207	NOX	0.00	35.00	35.00
34001	70003	U6	OS1	30500207	NOX	0.00	35.00	35.00
34001	70015	U401	OS1601	30500207	NOX	0.00	35.00	35.00
34001	70015	U401	OS2101	30500207	NOX	0.00	35.00	35.00
34001	70015	U401	OS401	30500207	NOX	0.00	35.00	35.00
34007	50373	U11	OS1	30500207	NOX	0.00	35.00	35.00
34007	50373	U6	OS1	30500207	NOX	0.00	35.00	35.00
34009	73014	U9	OS3	30500207	NOX	0.00	35.00	35.00
34009	73014	U9	OS7	30500207	NOX	0.00	35.00	35.00
34013	05005	U2	OS1	30500207	NOX	0.00	35.00	35.00
34015	55261	U4	OS1	30500207	NOX	0.00	35.00	35.00
34017	11171	U2	OS1	30500207	NOX	0.00	35.00	35.00
34021	60031	U6	OS1	30500207	NOX	0.00	35.00	35.00
34023	15129	U7	OS1	30500207	NOX	0.00	35.00	35.00
34025	20022	U1	OS1	30500207	NOX	0.00	35.00	35.00
34025	20023	U2	OS1	30500207	NOX	0.00	35.00	35.00
34025	20025	U26	OS1	30500207	NOX	0.00	35.00	35.00

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34025	20025	U3	OS2	30500207	NOX	0.00	35.00	35.00
34027	25009	U13	OS1	30500207	NOX	0.00	35.00	35.00
34027	25009	U2	OS1	30500207	NOX	0.00	35.00	35.00
34027	25268	U100	OS101	30500207	NOX	0.00	35.00	35.00
34027	25268	U1601	OS1601	30500207	NOX	0.00	35.00	35.00
34027	25268	U1601	OS1602	30500207	NOX	0.00	35.00	35.00
34029	78010	U1500	OS1501	30500207	NOX	0.00	35.00	35.00
34029	78010	U1500	OS1502	30500207	NOX	0.00	35.00	35.00
34029	78010	U1601	OS1601	30500207	NOX	0.00	35.00	35.00
34029	78010	U900	OS1	30500207	NOX	0.00	35.00	35.00
34029	78012	U101	OS1	30500207	NOX	0.00	35.00	35.00
34029	78014	U2	OS1	30500207	NOX	0.00	35.00	35.00
34031	30005	U100	OS113	30500207	NOX	0.00	35.00	35.00
34031	30005	U2300	OS2301	30500207	NOX	0.00	35.00	35.00
34031	30005	U2300	OS2332	30500207	NOX	0.00	35.00	35.00
34031	30085	U100	OS201	30500207	NOX	0.00	35.00	35.00
34031	30085	U100	OS901	30500207	NOX	0.00	35.00	35.00
34031	30085	U100	OS903	30500207	NOX	0.00	35.00	35.00
34035	35014	U100	OS113	30500207	NOX	0.00	35.00	35.00
34035	35014	U100	OS2301	30500207	NOX	0.00	35.00	35.00
34035	36009	U1000	OS1201	30500207	NOX	0.00	35.00	35.00
34035	36009	U1000	OS1202	30500207	NOX	0.00	35.00	35.00
34035	36009	U1000	OS1301	30500207	NOX	0.00	35.00	35.00
34035	36009	U1000	OS1401	30500207	NOX	0.00	35.00	35.00
34037	83008	U4	OS1	30500207	NOX	0.00	35.00	35.00
36081	2630200138	D00001	P01FP	30500251	NOX	35.00	35.00	35.00
36085	2640300031	3ADRYR	302FP	30500251	NOX	35.00	35.00	35.00
36119	3550800247	1MIXER	001FP	30500205	NOX	35.00	35.00	35.00
Control Measure: Cement Kilns								
23013	2301300028	001	1	30500706	NOX	60.00	60.00	60.00
24013	013-0012	39	01S39	30500606	NOX	46.67	46.67	46.67
24021	021-0013	21	01S21	30500706	NOX	46.67	46.67	46.67
24021	021-0013	22	01S22	30500706	NOX	46.67	46.67	46.67
24043	043-0008	24	01S24	30500606	NOX	46.67	46.67	46.67
36001	4012200004	U00002	OX1FP	30501202	NOX	70.00	70.00	70.00
36001	4012200004	U00003	FZ1FP	30501204	NOX	70.00	70.00	70.00
36001	4012200004	U00003	FZ2FP	30501204	NOX	70.00	70.00	70.00
36001	4012200004	U00003	SS1FP	30501206	NOX	70.00	70.00	70.00
36001	4012200004	U00012	OX2FP	30501202	NOX	70.00	70.00	70.00
36001	4012200004	U00013	FC2FP	30501204	NOX	70.00	70.00	70.00
36001	4012400001	041000	K12FP	30500706	NOX	20.00	20.00	20.00
36039	4192600021	U00K18	00CEP	30500706	NOX	20.00	20.00	20.00
36113	5520500013	0UKILN	G02FP	30500606	NOX	20.00	20.00	20.00
42019	420190024	101	4	30500706	NOX	0.00	52.38	52.38
42019	420190024	121	4	30500706	NOX	0.00	52.38	52.38
42073	420730024	226	1	30500606	NOX	0.00	54.29	54.29
42073	420730024	227	1	30500606	NOX	0.00	60.00	60.00

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
42073	420730024	228	1	30500606	NOX	0.00	54.18	54.18
42073	420730026	501	1	30500706	NOX	0.00	56.52	56.52
42073	420730026	502	1	30500706	NOX	0.00	56.52	56.52
42077	420770019	101	2	30500606	NOX	0.00	54.40	54.40
42079	420790013	101	1	30501201	NOX	85.00	85.00	85.00
42079	420790013	102	1	30501201	NOX	85.00	85.00	85.00
42079	420790013	103	1	30501204	NOX	85.00	85.00	85.00
42079	420790013	104	1	30501204	NOX	85.00	85.00	85.00
42079	420790060	104	1	30501301	NOX	85.00	85.00	85.00
42095	420950006	102	1	30500606	NOX	0.00	57.04	57.04
42095	420950006	122	1	30500606	NOX	0.00	57.04	57.04
42095	420950012	101	2	30500706	NOX	0.00	45.21	45.21
42095	420950012	102	2	30500706	NOX	0.00	45.21	45.21
42095	420950045	142	1	30500606	NOX	0.00	32.20	32.20
42095	420950045	143	1	30500606	NOX	0.00	32.20	32.20
42095	420950127	101	1	30500606	NOX	0.00	32.20	32.20
42095	420950127	102	1	30500606	NOX	0.00	32.20	32.20
42095	420950127	103	1	30500606	NOX	0.00	32.20	32.20
42095	420950127	104	1	30500606	NOX	0.00	32.20	32.20
42133	421330060	200	4	39000602	NOX	0.00	45.21	45.21
Control Measure: Glass and Fiberglass Furnaces								
24510	510-0285	10	01S10	30501402	NOX	85.00	85.00	85.00
25027	1200856	04	0304	30501402	NOX	85.00	85.00	85.00
25027	1200856	05	0304	30501402	NOX	85.00	85.00	85.00
34005	45982	U6	OS0	39999991	NOX	0.00	20.00	20.00
34011	75475	U1	OS1	30501401	NOX	0.00	20.00	20.00
34011	75475	U3	OS1	30501401	NOX	0.00	20.00	20.00
34011	75475	U35	OS1	30501401	NOX	0.00	20.00	20.00
34011	75475	U37	OS1	30501401	NOX	0.00	20.00	20.00
34011	75475	U5	OS1	30501401	NOX	0.00	20.00	20.00
34011	75503	U2	OS1001	30501401	NOX	0.00	20.00	20.00
34011	75503	U3	OS1	30501401	NOX	0.00	20.00	20.00
34011	75503	U4	OS1	30501401	NOX	0.00	20.00	20.00
34011	75503	U5	OS1	30501401	NOX	0.00	20.00	20.00
34011	75505	U12	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U143	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U144	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U146	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U150	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U151	OS1	30599999	NOX	0.00	20.00	20.00
34011	75505	U6	OS1	30599999	NOX	0.00	20.00	20.00
34011	75506	U1	OS1	30501401	NOX	0.00	20.00	20.00
34011	75506	U1	OS3	30501401	NOX	0.00	20.00	20.00
34023	18070	U1	OS1	30501401	NOX	0.00	20.00	20.00
34033	65499	U1	OS1	30501401	NOX	0.00	20.00	20.00
34033	65499	U2	OS1	30501401	NOX	0.00	20.00	20.00
34033	65499	U3	OS1	30501401	NOX	0.00	20.00	20.00

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
36001	4010300016	KILNSG	10BEI	39001399	NOX	20.00	20.00	20.00
36001	4010300016	KILNSG	KNFFP	39001399	NOX	20.00	20.00	20.00
36001	4012200004	EI0001	E20EI	39000689	NOX	70.00	70.00	70.00
36011	7055200004	AFURNC	FRNFP	30501402	NOX	70.00	70.00	70.00
36015	8070400036	000001	O1AFP	30501402	NOX	70.00	70.00	70.00
36069	8320500041	UFURNC	FURFP	30501403	NOX	70.00	70.00	70.00
36089	6403000002	U00001	101FP	30501401	NOX	70.00	70.00	70.00
36089	6403000002	U00003	300FP	30501416	NOX	70.00	70.00	70.00
36101	8460300008	PCCTNK	GL2FP	30501416	NOX	70.00	70.00	70.00
42003	4200300164	003	1	30501404	NOX	85.00	85.00	85.00
42003	4200300164	007	1	30501404	NOX	85.00	85.00	85.00
42003	4200300164	008	1	30501404	NOX	85.00	85.00	85.00
42003	4200300165	P01	1	30501402	NOX	85.00	85.00	85.00
42003	4200300165	P02	1	30501402	NOX	85.00	85.00	85.00
42003	4200300165	P04	1	30501402	NOX	85.00	85.00	85.00
42003	4200300227	003	1	30590003	NOX	85.00	85.00	85.00
42003	4200300227	003	2	30590003	NOX	85.00	85.00	85.00
42003	4200300342	002	1	30501403	NOX	85.00	85.00	85.00
42003	4200300342	002	3	30501403	NOX	85.00	85.00	85.00
42007	420070012	103	1	30501402	NOX	85.00	85.00	85.00
42007	420070012	104	1	30501408	NOX	85.00	85.00	85.00
42007	420070012	105	1	30501408	NOX	85.00	85.00	85.00
42007	420070022	102	1	30501799	NOX	85.00	85.00	85.00
42027	420270021	P101	1	30501404	NOX	85.00	85.00	85.00
42027	420270021	P102	1	30501404	NOX	85.00	85.00	85.00
42027	420270021	P102	3	30501404	NOX	85.00	85.00	85.00
42027	420270021	P103	1	30501404	NOX	85.00	85.00	85.00
42031	420310009	102	1	30501402	NOX	85.00	85.00	85.00
42031	420310009	S105A	1	30501402	NOX	85.00	85.00	85.00
42039	420390012	101	1	30501403	NOX	85.00	85.00	85.00
42039	420390012	102	1	30501403	NOX	85.00	85.00	85.00
42041	420410013	101	1	30501403	NOX	85.00	85.00	85.00
42041	420410013	102	1	30501403	NOX	85.00	85.00	85.00
42045	420450041	101	1	30501410	NOX	85.00	85.00	85.00
42051	420510020	101	1	30501402	NOX	85.00	85.00	85.00
42051	420510020	102	1	30501402	NOX	85.00	85.00	85.00
42065	420650003	110	1	30501402	NOX	85.00	85.00	85.00
42065	420650007	103	1	30501402	NOX	85.00	85.00	85.00
42065	420650007	104	1	30501402	NOX	85.00	85.00	85.00
42079	420790008	101	1	30501704	NOX	85.00	85.00	85.00
42079	420790008	102	1	30501704	NOX	85.00	85.00	85.00
42079	420790008	103	1	30501701	NOX	85.00	85.00	85.00
42079	420790018	101	1	30501402	NOX	85.00	85.00	85.00
42079	420790018	101	2	30501402	NOX	85.00	85.00	85.00
42079	420790018	102	1	30501402	NOX	85.00	85.00	85.00
42079	420790018	102	2	30501402	NOX	85.00	85.00	85.00
42079	420790018	103	1	30501402	NOX	85.00	85.00	85.00

FIPS	SITEID	EU ID	PROCESS ID	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
42083	420830002	101	1	30501402	NOX	85.00	85.00	85.00
42083	420830002	201	1	30501402	NOX	85.00	85.00	85.00
42083	420830006	101	1	30501402	NOX	85.00	85.00	85.00
42083	420830006	102	1	30501402	NOX	85.00	85.00	85.00
42083	420830006	103	1	30501402	NOX	85.00	85.00	85.00
42095	420950047	101A	3	30501701	NOX	85.00	85.00	85.00
42095	420950047	103A	3	30501701	NOX	85.00	85.00	85.00
42117	421170020	P109	1	30501402	NOX	85.00	85.00	85.00
42117	421170020	P124	1	30501404	NOX	85.00	85.00	85.00
42117	421170020	P127	1	30501408	NOX	85.00	85.00	85.00
42125	421250001	107	1	30501404	NOX	85.00	85.00	85.00
42125	421250001	107	3	30501404	NOX	85.00	85.00	85.00
42129	421290233	101	2	30501404	NOX	85.00	85.00	85.00
42129	421290233	102	2	30501404	NOX	85.00	85.00	85.00
42129	421290553	101	1	30501402	NOX	85.00	85.00	85.00
42133	421330066	104	3	30501414	NOX	85.00	85.00	85.00

Table E-2 NonEGU BOTW Control Factors for ICI Boilers

	Boiler Size Range (mmBtu/hour)						
	< 25	25 to 50	50 to 100	100 to 250	>250		
SCC	**CF0_25**	**CF25_50**	**CF50_100**	**CF100_250**	**CF250**	**SCC_L4**	**SCC_L3**
10200104	10	50	10	40	0	Traveling Grate (Overfeed) Stoker	Anthracite Coal
10200202	10	50	10	40	0	Pulverized Coal: Dry Bottom	Bituminous/Subbituminous Coal
10200203	10	50	10	40	0	Cyclone Furnace	Bituminous/Subbituminous Coal
10200204	10	50	10	40	0	Spreader Stoker	Bituminous/Subbituminous Coal
10200205	10	50	10	40	0	Overfeed Stoker	Bituminous/Subbituminous Coal
10200206	10	50	10	40	0	Underfeed Stoker	Bituminous/Subbituminous Coal
10200212	10	50	10	40	0	Pulverized Coal: Dry Bottom (Tangential)	Bituminous/Subbituminous Coal
10200222	10	50	10	40	0	Pulverized Coal: Dry Bottom (Subbituminous Coal)	Bituminous/Subbituminous Coal
10200401	10	50	10	40	0	Grade 6 Oil	Residual Oil
10200402	10	50	10	40	0	10-100 Million Btu/hr **	Residual Oil
10200403	10	50	10	40	0	< 10 Million Btu/hr **	Residual Oil
10200404	10	50	10	40	0	Grade 5 Oil	Residual Oil
10200405	10	50	10	40	0	Cogeneration	Residual Oil
10200501	10	50	10	40	0	Grades 1 and 2 Oil	Distillate Oil
10200502	10	50	10	40	0	10-100 Million Btu/hr **	Distillate Oil
10200503	10	50	10	40	0	< 10 Million Btu/hr **	Distillate Oil
10200504	10	50	10	40	0	Grade 4 Oil	Distillate Oil
10200505	10	50	10	40	0	Cogeneration	Distillate Oil
10200601	10	50	10	75	0	> 100 Million Btu/hr	Natural Gas
10200602	10	50	10	75	0	10-100 Million Btu/hr	Natural Gas
10200603	10	50	10	75	0	< 10 Million Btu/hr	Natural Gas
10200604	10	50	10	75	0	Cogeneration	Natural Gas
10200701	10	50	10	75	0	Petroleum Refinery Gas	Process Gas
10200704	10	50	10	75	0	Blast Furnace Gas	Process Gas
10200707	10	50	10	75	0	Coke Oven Gas	Process Gas
10200710	10	50	10	75	0	Cogeneration	Process Gas
10200799	10	50	10	75	0	Other: Specify in Comments	Process Gas
10200802	10	50	10	40	0	All Boiler Sizes	Petroleum Coke
10200901	10	10	10	10	10	Bark-fired Boiler	Wood/Bark Waste
10200902	10	10	10	10	10	Wood/Bark-fired Boiler	Wood/Bark Waste

	Boiler Size Range (mmBtu/hour)						
	< 25	25 to 50	50 to 100	100 to 250	>250		
SCC	**CF0_25**	**CF25_50**	**CF50_100**	**CF100_250**	**CF250**	**SCC_L4**	**SCC_L3**
10200903	10	10	10	10	10	Wood-fired Boiler - Wet Wood (>=20% moisture)	Wood/Bark Waste
10200904	10	10	10	10	10	Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste
10200905	10	10	10	10	10	Wood/Bark-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste
10200906	10	10	10	10	10	Wood-fired Boiler (< 50,000 Lb Steam) **	Wood/Bark Waste
10200907	10	10	10	10	10	Wood Cogeneration	Wood/Bark Waste
10200908	10	10	10	10	10	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste
10201001	10	50	10	75	0	Butane	Liquified Petroleum Gas (LPG)
10201002	10	50	10	75	0	Propane	Liquified Petroleum Gas (LPG)
10201003	10	50	10	75	0	Butane/Propane Mixture: Specify Percent Butane in	Liquified Petroleum Gas (LPG)
10300101	10	50	10	40	0	Pulverized Coal	Anthracite Coal
10300102	10	50	10	40	0	Traveling Grate (Overfeed) Stoker	Anthracite Coal
10300103	10	50	10	40	0	Hand-fired	Anthracite Coal
10300203	10	50	10	40	0	Cyclone Furnace (Bituminous Coal)	Bituminous/Subbituminous Coal
10300206	10	50	10	40	0	Pulverized Coal: Dry Bottom (Bituminous Coal)	Bituminous/Subbituminous Coal
10300207	10	50	10	40	0	Overfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal
10300208	10	50	10	40	0	Underfeed Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal
10300209	10	50	10	40	0	Spreader Stoker (Bituminous Coal)	Bituminous/Subbituminous Coal
10300225	10	50	10	40	0	Traveling Grate (Overfeed) Stoker (Subbituminous C	Bituminous/Subbituminous Coal
10300226	10	50	10	40	0	Pulverized Coal: Dry Bottom Tangential (Subbitumin	Bituminous/Subbituminous Coal
10300401	10	50	10	40	0	Grade 6 Oil	Residual Oil
10300402	10	50	10	40	0	10-100 Million Btu/hr **	Residual Oil
10300403	10	50	10	40	0	< 10 Million Btu/hr **	Residual Oil
10300404	10	50	10	40	0	Grade 5 Oil	Residual Oil
10300501	10	50	10	40	0	Grades 1 and 2 Oil	Distillate Oil
10300502	10	50	10	40	0	10-100 Million Btu/hr **	Distillate Oil
10300503	10	50	10	40	0	< 10 Million Btu/hr **	Distillate Oil
10300504	10	50	10	40	0	Grade 4 Oil	Distillate Oil
10300601	10	50	10	75	0	> 100 Million Btu/hr	Natural Gas
10300602	10	50	10	75	0	10-100 Million Btu/hr	Natural Gas
10300603	10	50	10	75	0	< 10 Million Btu/hr	Natural Gas
10300701	10	50	10	75	0	POTW Digester Gas-fired Boiler	Process Gas
10300799	10	50	10	75	0	Other Not Classified	Process Gas

	Boiler Size Range (mmBtu/hour)						
	< 25	25 to 50	50 to 100	100 to 250	>250		
SCC	**CF0_25**	**CF25_50**	**CF50_100**	**CF100_250**	**CF250**	**SCC_L4**	**SCC_L3**
10300811	10	50	10	75	0	Landfill Gas	Landfill Gas
10300901	10	10	10	10	0	Bark-fired Boiler	Wood/Bark Waste
10300902	10	10	10	10	0	Wood/Bark-fired Boiler	Wood/Bark Waste
10300903	10	10	10	10	0	Wood-fired Boiler - Wet Wood (>=20% moisture)	Wood/Bark Waste
10300908	10	10	10	10	0	Wood-fired Boiler - Dry Wood (<20% moisture)	Wood/Bark Waste
10301002	10	50	10	75	0	Propane	Liquified Petroleum Gas (LPG)
10301003	10	50	10	75	0	Butane/Propane Mixture: Specify Percent Butane in	Liquified Petroleum Gas (LPG)

Table E-3 Area Source BOTW Control Factors for Adhesives and Sealants Application, Asphalt Paving, Consumer Products, and Portable Fuel Containers

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
Control Measure: Adhesives and Sealants					
09	2440020000	VOC	64.40	64.40	64.40
10	2440020000	VOC	64.40	64.40	64.40
11	2440020000	VOC	64.40	64.40	64.40
23	2440020000	VOC	64.40	64.40	64.40
24	2440020000	VOC	64.40	64.40	64.40
25	2440020000	VOC	64.40	64.40	64.40
33	2440020000	VOC	64.40	64.40	64.40
34	2440020000	VOC	64.40	64.40	64.40
36	2440020000	VOC	64.40	64.40	64.40
42	2440020000	VOC	64.40	64.40	64.40
44	2440020000	VOC	64.40	64.40	64.40
Control Measure: Asphalt Paving					
09	2461022000	VOC	20.00	20.00	20.00
24	2461022000	VOC	20.00	20.00	20.00
25	2461022000	VOC	20.00	20.00	20.00
33	2461022000	VOC	20.00	20.00	20.00
34	2461022000	VOC	75.00	75.00	75.00
36	2461022000	VOC	20.00	20.00	20.00
42	2461022000	VOC	0.00	20.00	20.00
Control Measure: Consumer Products					
09	2465000000	VOC	2.00	2.00	2.00
10	2460100000	VOC	2.00	2.00	2.00
10	2460200000	VOC	2.00	2.00	2.00
10	2460400000	VOC	2.00	2.00	2.00
10	2460500000	VOC	2.00	2.00	2.00
10	2460600000	VOC	2.00	2.00	2.00
10	2460800000	VOC	2.00	2.00	2.00
10	2460900000	VOC	2.00	2.00	2.00
11	2460100000	VOC	2.00	2.00	2.00
11	2460200000	VOC	2.00	2.00	2.00
11	2460400000	VOC	2.00	2.00	2.00
11	2460500000	VOC	2.00	2.00	2.00
11	2460600000	VOC	2.00	2.00	2.00
11	2460800000	VOC	2.00	2.00	2.00
11	2460900000	VOC	2.00	2.00	2.00
23	2460100000	VOC	2.00	2.00	2.00
23	2460200000	VOC	2.00	2.00	2.00
23	2460400000	VOC	2.00	2.00	2.00
23	2460500000	VOC	2.00	2.00	2.00
23	2460600000	VOC	2.00	2.00	2.00
23	2460800000	VOC	2.00	2.00	2.00

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
23	2460900000	VOC	2.00	2.00	2.00
24	2465000000	VOC	2.00	2.00	2.00
25	2460000000	VOC	2.00	2.00	2.00
33	2460000000	VOC	2.00	2.00	2.00
34	2465000000	VOC	2.00	2.00	2.00
36	2460000000	VOC	2.00	2.00	2.00
42	2465000000	VOC	2.00	2.00	2.00
44	2460100000	VOC	2.00	2.00	2.00
44	2460200000	VOC	2.00	2.00	2.00
44	2460400000	VOC	2.00	2.00	2.00
44	2460500000	VOC	2.00	2.00	2.00
44	2460600000	VOC	2.00	2.00	2.00
44	2460800000	VOC	2.00	2.00	2.00
44	2460900000	VOC	2.00	2.00	2.00
Control Measure: Portable Fuel Containers					
09	2501060300	VOC	5.80	23.20	58.00
10	2501011010	VOC	5.80	23.20	58.00
10	2501011011	VOC	5.80	23.20	58.00
10	2501011012	VOC	5.80	23.20	58.00
10	2501011015	VOC	5.80	23.20	58.00
10	2501011016	VOC	5.80	23.20	58.00
10	2501012010	VOC	5.80	23.20	58.00
10	2501012011	VOC	5.80	23.20	58.00
10	2501012012	VOC	5.80	23.20	58.00
10	2501012015	VOC	5.80	23.20	58.00
10	2501012016	VOC	5.80	23.20	58.00
11	2501011011	VOC	5.80	23.20	58.00
11	2501011012	VOC	5.80	23.20	58.00
11	2501011016	VOC	5.80	23.20	58.00
11	2501012011	VOC	5.80	23.20	58.00
11	2501012012	VOC	5.80	23.20	58.00
11	2501012016	VOC	5.80	23.20	58.00
23	2501060300	VOC	5.80	23.20	58.00
24	2501011011	VOC	5.80	23.20	58.00
24	2501011012	VOC	5.80	23.20	58.00
24	2501011016	VOC	5.80	23.20	58.00
24	2501012011	VOC	5.80	23.20	58.00
24	2501012012	VOC	5.80	23.20	58.00
24	2501012016	VOC	5.80	23.20	58.00
25	2501011000	VOC	0.00	23.20	58.00
25	2501012000	VOC	0.00	23.20	58.00
33	2501060300	VOC	5.80	23.20	58.00
34	2501000120	VOC	5.80	23.20	58.00
36	2501011011	VOC	5.80	23.20	58.00
36	2501011012	VOC	5.80	23.20	58.00
36	2501011016	VOC	5.80	23.20	58.00
36	2501012011	VOC	5.80	23.20	58.00

FIPSST	SCC	PLLTCODE	CE_2009	CE_2012	CE_2018
36	2501012012	VOC	5.80	23.20	58.00
36	2501012016	VOC	5.80	23.20	58.00
42	2501060300	VOC	5.80	23.20	58.00
44	2501060300	VOC	5.80	23.20	58.00

Table E-4 Area Source BOTW Control Factors for ICI Boilers

SCC	Control Factor	SCC_L4	SCC_L3	SCC_L2
2102001000	18.9	Total: All Boiler Types	Anthracite Coal	Industrial
2102002000	18.9	Total: All Boiler Types	Bituminous/Subbituminous Coal	Industrial
2102004000	18.9	Total: Boilers and IC Engines	Distillate Oil	Industrial
2102005000	18.9	Total: All Boiler Types	Residual Oil	Industrial
2102006000	18.9	Total: Boilers and IC Engines	Natural Gas	Industrial
2102007000	18.9	Total: All Boiler Types	Liquified Petroleum Gas (LPG)	Industrial
2102008000	10.0	Total: All Boiler Types	Wood	Industrial
2102011000	10.0	Total: All Boiler Types	Kerosene	Industrial
2103001000	19.5	Total: All Boiler Types	Anthracite Coal	Commercial/Institutional
2103002000	19.5	Total: All Boiler Types	Bituminous/Subbituminous Coal	Commercial/Institutional
2103004000	19.5	Total: Boilers and IC Engines	Distillate Oil	Commercial/Institutional
2103004001	19.5		Distillate Oil	Commercial/Institutional
2103004002	19.5		Distillate Oil	Commercial/Institutional
2103005000	19.5	Total: All Boiler Types	Residual Oil	Commercial/Institutional
2103006000	19.5	Total: Boilers and IC Engines	Natural Gas	Commercial/Institutional
2103007000	19.5	Total: All Combustor Types	Liquified Petroleum Gas (LPG)	Commercial/Institutional
2103008000	10.0	Total: All Boiler Types	Wood	Commercial/Institutional
2103011000	10.0	Total: All Combustor Types	Kerosene	Commercial/Institutional

Appendix 8J

Emission Processing for the Revised 2002 OTC Regional and Urban 12 km Base Case Simulations

Emission Processing for the Revised 2002 OTC Regional and Urban 12 km Base Case Simulations

Bureau of Air Quality Analysis and Research
Division of Air Resources
New York State Department of Environmental Conservation

September 19, 2006

1. Overview

All emissions processing for the revised 2002 OTC regional and urban 12 km base case simulations was performed with SMOKE2.1 compiled on a Red Hat 9.0 Linux operating system with the Portland group fortran compiler version 5.1. The emissions processing was performed on a month-by-month and RPO-by-RPO basis, i.e. SMOKE processing was performed for each month for each of the RPOs (MANE-VU, VISTAS, CENRAP, MRPO) individually as well as for Canada. For each month/RPO combination, a separate SMOKE ASSIGNS file was created, and the length of the episode in each of these ASSIGNS files was set to the entire month. Also, as discussed in Section 3, there was no difference between "episode-average" temperatures and "monthly-average" temperatures for the Mobile6 simulations that used the option of temperature averaging.

This document is structured as follows: A listing of all emission inventories is given in Section 2, organized by RPO and source category. Section 3 discusses the Mobile6 processing approach employed for the different RPOs, while Section 4 describes the processing of biogenic emissions with BEIS3.12. Finally, Sections 5 through7 describe the temporal allocation, speciation, and spatial allocation of the emissions inventories, respectively.

2. Emission Inventories

2.1 MANE-VU

Version 3 of the MANE_VU inventory was utilized to generate CMAQ-ready emissions. This emissions inventory data were obtained from the MANEVU archive in April 2006.

2.1.1 Area Sources

- Files: MANEVU_AREA_SMOKE_INPUT_ANNUAL_SUMMERDAY_040606.txt and MANEVU_AREA_SMOKE_INPUT_ANNUAL_WINTERDAY_040606.txt prepared by PECHAN, downloaded from **ftp.marama.org** (username mane-vu, password exchange)
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing

2.1.2 Nonroad Sources

- File: MANEVU_NRD2002_SMOKE_030306 prepared by PECHAN; downloaded from **ftp.marama.org** (username mane-vu, password exchange)

2.1.3 Mobile Sources

- VMT/Speed: MANEVU_2002_mbinv_02022006_addCT.txt prepared by PECHAN and NESCAUM; downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

2.1.4 Point Sources

- Files: MANEVU_Point_SMOKE_INPUT_ANNUAL_SUMMERDAY_041006.txt and MANEVU_Point_SMOKE_INPUT_ANNUAL_WINTERDAY_041006.txt prepared by PECHAN were downloaded from **ftp.marama.org** (username mane-vu, password exchange)
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing
- Corrected the omission of 2,100 tons/year VOC emissions from several point sources in NJ. NJDEP provided updated IDA files on June 30 that were used for modeling.

2.2 CENRAP

The inventory data were obtained from the CENRAP ftp site in March 2006 and reflect version BaseB of the CENRAP inventory.

2.2.1 Area Sources

- Files:
  - CENRAP_AREA_SMOKE_INPUT_ANN_STATES_081705.txt
  - CENRAP_AREA_MISC_SMOKE_INPUT_ANN_STATE_071905.txt
  - CENRAP_AREA_BURNING_SMOKE_INPUT_ANN_TX_ NELI_071905.txt
  - CENRAP_AREA_MISC_SMOKE_INPUT_NH3_MONTH_{MMM} _072805.txt where {MMM} is JAN, FEB, … DEC
  - CENRAP_AREA_SMOKE_INPUT_NH3_MONTH_{MMM} _071905.txt where {MMM} is JAN, FEB, … DEC
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing
- Note about area and nonroad source SMOKE processing for the CENRAP region: All area source inventories (both annual and month-specific) were processed in

one step through SMOKE. SMK_AVEDAY_YN was set to N, so seasonal profiles were used to apportion the annual inventories numbers by month. This setting was also used for the nonroad processing performed in a separate step. This was necessary since the month-specific files had zero in their 'average-day' column and the annual total column reflects the "monthly emissions as annual totals" as per header line. Therefore, seasonal profiles are used to apportion both the annual and month-specific files. As described below, we utilized the temporal profiles and cross-reference files generated by CENRAP. However, we did not verify that this approach indeed leads to the intended monthly allocation of ammonia and nonroad emissions.

2.2.2 Nonroad Sources

- Files:
  - CENRAP_NONROAD_SMOKE_INPUT_ANN_071305.txt
  - CENRAP_NONROAD_SMOKE_INPUT_MONTH_{MMM}_071305.txt where {MMM} is JAN, FEB, … DEC

2.2.3 Mobile Sources

- VMT/Speed files:
  - mbinv02_vmt_cenrap_ce.ida
  - mbinv02_vmt_cenrap_no.ida
  - mbinv02_vmt_cenrap_so.ida
  - mbinv02_vmt_cenrap_we.ida

2.2.4 Point Sources

- File: CENRAP_POINT_SMOKE_INPUT_ANNUAL_DAILY_072505.txt
- Fugitive dust correction: This was applied as county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.

2.3 VISTAS

All VISTAS emission files were obtained from the Alpine Geophysics ftp site. They reflect version BaseG of the VISTAS inventory with the exception of fire emissions which reflect BaseF and BaseD. These files were downloaded between February and August, 2006.

2.3.1 Area Sources

- Files:
  - arinv_vistas_2002g_2453922_w_pmfac.txt
  - ida_ar_fire_2002_vistaonly_basef.ida
- Note: the header lines of these files indicate that the fugitive dust correction was already applied, so no further correction was performed.

2.3.2 Nonroad Sources

- Files:
  - nrinv_vistas_2002g_2453908.txt
  - marinv_vistas_2002g_2453972.txt

2.3.3 Mobile Sources

- VMT/Speed file: mbinv_vistas_02g_vmt_12jun06.txt

2.3.4 Point Sources

- Files:
  - Annual:
    - egu_ptinv_vistas_2002typ_baseg_2453909.txt
    - negu_ptinv_vistas_2002typ_baseg_2453909.txt
    - ptinv_fires_{MM}_typ.vistas.ida where {MM} is 01, 02, 03, etc. depending on the month; these annual point fire files were generated as part of the VISTAS BaseD inventory and were obtained in January 2005
  - Hour-specific:
    - pthour_2002typ_baseg_{MMM}_28jun2006.ems where {MMM} is jan, feb, mar, etc.
    - pthour_fires_{MM}_typ.vistas.ida where {MM} is 01, 02, 03, etc. depending on the month; these hourly point fire files were generated as part of the VISTAS BaseD inventory and were obtained in January 2005
- Note: No fugitive dust correction was performed for these files.

2.4 MRPO

MRPO emissions for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA to convert the MRPO BaseK inventory from NIF to IDA format. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) between April and June 2006.

2.4.1 Area Sources

- Files:
  - Annual:
    - arinv_mar_mrpok_2002_27apr2006.txt
    - arinv_other_mrpok_2002_20jun2006.txt
  - Month-specific:
    - arinv_nh3_2002_mrpok_{mmm}_3may2006.txt where {mmm} is jan, feb, etc.
    - dustinv_2002_mrpok_{mmm}_23may2006.txt where {mmm} is jan, feb, etc.
- Fugitive dust correction: This correction was performed only to the arinv_other_mrpok_2002_20jun2006.txt file using county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.
- Note about area source SMOKE processing: SMOKE processing was performed separately for the annual and month-specific files. For the annual inventory processing, SMK_AVEDAY_YN was set to N, so seasonal profiles were used to apportion the annual inventories numbers by month. For the month-specific inventory processing, this variable was set to Y so that no seasonal profiles would be applied and the inventory numbers in the 'average day' column would be used. To save a SMOKE processing step, the annual "marine" inventory "arinv_mar_mrpok_2002_27apr2006.txt" was processed together with the annual "other area source" inventory "arinv_other_mrpok_2002_20jun2006.txt" even though it technically is part of the nonroad inventory.

2.4.2 Nonroad Sources

- Files: nrinv_2002_mrpok_{mmm}_3may2006.txt where {mmm} is jan, feb, etc.

2.4.3 Mobile Sources

- VMT/Speed file: mbinv_mrpo_02f_vmt_02may06.txt

2.4.4 Point Sources

- Files: ptinv_egu_negu_2002_mrpok_1may2006.txt
- Fugitive dust correction: This correction was performed only to the arinv_other_mrpok_2002_20jun2006.txt file using county-specific correction factors for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; the correction factor file gcntl.xportfrac.txt was obtained from EPA's CAIR NODA ftp site http://www.airmodelingftp.com (password protected).; this adjustment was

performed using the SMOKE programs cntlmat and grwinven to generate an adjusted IDA inventory file used for subsequent SMOKE processing.

2.5 Canada

2.5.1 Area Sources

- File: AS2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory
- Fugitive dust correction: We applied "divide-by-four" correction for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; this adjustment was performed outside SMOKE with in-house Fortran programs. No county/province-specific correction factors were available for Canada

2.5.2 Nonroad Sources

- File: NONROAD2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory

2.5.3 Mobile Sources

- File: MOBILE2000_SMOKEready.txt obtained from ftp://ftp.epa.gov/EmisInventory/canada_2000inventory
- Fugitive dust correction: applied "divide-by-four" correction for SCC's listed at http://www.epa.gov/ttn/chief/emch/invent/index.html#dust; this adjustment was performed outside of SMOKE with in-house Fortran programs. No county/province-specific correction factors were available for Canada.

2.5.4 Point Sources

There has long been difficulty in obtaining an up-to-date Canadian criteria emissions inventory for point sources. This is due largely to confidentiality rights afforded to Canadian facilities. Thus far, the most recent inventory of Canadian point sources is rooted in the 1985 NAPAP data and is close to two decades old. Because there are a number of high emitting industrial facilities in southern Canada it is of particular importance to have a reasonably accurate inventory of these sources especially when modeling air quality over the Northeast and Midwest United States. Toward this end, an effort was made to obtain more recent Canadian point source data and incorporate it into an inventory database, which could then be used for the 2002 OTC air quality modeling.

Perhaps the most accurate and publicly accessible source of Canadian pollutant data is now available from the National Pollutant Release Inventory (NPRI) database. This database contains 268 substances. Facilities that manufacture, process or otherwise use one of these substances and that meet reporting thresholds are required to report these emissions to Environment Canada on an annual basis. The NPRI data are available at Environment Canada's website and can be found at the link http://www.ec.gc.ca/pdb/npri/npri_home_e.cfm. The page hosts an on-line search engine where one can locate emissions by pollutant or location. In addition, the entire database is available for download as an MS Access or Excel file. The NPRI database contains numerous pages with a rather comprehensive list of information. Detailed information is available about each facility, including location, activity and annual emissions. In addition, facilities having stacks with a height of 50 meters or more are required to report stack parameters.

Unfortunately, one of the limitations of the NPRI database for modeling purposes is that the data are only available at the facility level. Emissions models require process level information, so in order to use this data, a few generalizations had to be made. Each facility has a Standard Industrial Classification (SIC) code associated with it; however, emissions models require Source Classification Codes (SCC's). SCC's are of critical importance as the emissions models use these codes for assignment of temporal and speciation profiles. SIC codes describe the general activity of a facility while SCC codes describe specific processes taking place at each facility. While no direct relationship exists between these two codes, a general albeit subjective association can be made.

For the purposes of creating a model-ready inventory file it was necessary to obtain the whole NPRI database. After merging all the necessary components from the NPRI database required in the SMOKE inventory file, the SIC code from each facility was examined and assigned an SCC code. In most cases, only a SCC3 level code was assigned with confidence. While this is admittedly a less than desirable process, it does allow for the use of the most recent emissions from the NPRI database to be used in modeling. Furthermore, having some level of SCC associated with these emissions will ensure that they will be assigned a temporal and speciation profile by the model, other than the default. Once the model-ready inventory file was developed, it was processed through SMOKE.

3. Mobile6 Processing

3.1 MANE-VU

3.1.1 Mobile6 input files

- Month-specific input files were prepared by PECHAN and NESCAUM and were downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar
- Added the line "REBUILD EFFECTS   :0.10" to each file before the SCENARIO record to override the Mobile6 default setting of 0.9 (90%) for the "chip reflash" effectiveness

3.1.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files were prepared by PECHAN and NESCAUM and were downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

3.1.3 Temperature averaging

- Following the setting in the MANEVU_2002_mvref.txt files, the following procedures were used by SMOKE for temporal and spatial temperature averaging in the calculation of emission factors:
    - Spatial averaging: temperatures were averaged over all counties that share a common reference county (i.e. Mobile6 input file)
    - Temporal averaging for May – September emissions processing: no temporal averaging was used, i.e. day-specific temperatures were used to calculate emission factors for each day.
    - Temporal averaging for non-summer-months emissions processing: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

3.2 CENRAP

3.2.1 Mobile6 input files

- Mobile6 input files for the CENRAP region for January and July were contained in the files central_M6_{MMM}.zip, north_M6_{MMM}.zip, south_M6_{MMM}.zip, west_M6_{MMM}.zip where {MMM} is either jan or jul. July input files were used for April – September processing, while January input files were used for the remaining months
- All files were downloaded from the CENRAP ftp site in March 2006.

3.2.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files were contained in the files central_M6_RD.zip, north_M6_RD.zip, south_M6_RD.zip, and west_M6_RD.zip. The SMOKE MCREF, MVREF, and MCODES files were contained in the file MOBILESMOKE_Inputs.zip. The MCREF and MVREF files were combined for the different regions (“central”, “east”, “west”, “north”)
- All files were downloaded from the CENRAP ftp site in March 2006.

3.2.3 Temperature averaging

- The following procedures were used by SMOKE for temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvref files:

  - Spatial averaging: no spatial averaging of temperatures, i.e. the temperatures for the reference county is used to calculate emission factors for all counties that share this reference county (i.e. Mobile6 input file)
  - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

3.3 VISTAS

3.3.1 Mobile6 input files

- Month-specific Mobile6 input files were obtained from the Alpine Geophysics ftp site in July 2006. They reflect version BaseG of the VISTAS inventory.

3.3.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files utilized were obtained from the Alpine Geophysics ftp site in July 2006. They reflect version BaseG of the VISTAS inventory.

3.3.3 Temperature averaging

- The following procedures were used by SMOKE for the temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvref_baseg.36k.ag.txt file:
  - Spatial averaging: temperatures averaged over all counties that share a common reference county (i.e. Mobile6 input file)
  - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

3.4 MRPO

3.4.1 Mobile6 input files

- Month-specific Mobile6 input files for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA. They are based on version BaseK of the MRPO inventory. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) in May 2006.

3.4.2 SMOKE/Mobile6 auxiliary files

- SMOKE/Mobile6 auxiliary files for SMOKE modeling were generated by Alpine Geophysics through a contract from MARAMA. They are based on version BaseK of the MRPO inventory. The files were downloaded from the MARAMA ftp site **ftp.marama.org** (username mane-vu, password exchange) in May 2006.

3.4.3 Temperature averaging

- The following procedures were used by SMOKE for the temporal and spatial temperature averaging in the calculation of emission factors according to the setting in the mvreg_mrpo_basek.txt file:
  - Spatial averaging: temperatures averaged over all counties that share a common reference county (i.e. Mobile6 input file)
  - Temporal averaging: Temporal averaging over the duration of the episode (i.e. the entire month, see introduction) was used, i.e. monthly average temperatures were used to calculate the emission factors.

4. Biogenic Emission Processing

Hourly gridded biogenic emissions for the 12 km and 36 km modeling domains were calculated by BEIS3.12 through SMOKE, using MCIP-processed MM5 fields for temperature (“TA”, layer-1 temperature), solar radiation (“RGRND”), surface pressure (“PRES”), and precipitation (“RN” and “RC”). A ‘seasonal switch’ file was generated by the SMOKE utility metscan to determine whether winter or summer emission factors should be used for any given grid cell on any given day. Winter emission factors are used from January 1st through the date of the last frost and again from the data of the first frost in fall through December 31st. Summer emission factors are used for the time period in between. This calculation is performed separately for each grid cell.

5. Temporal Allocation

5.1 MANE-VU

5.1.1 Area and nonroad sources

- Generated as part of the MANE-VU version 1 inventory
- amptpro.m3.us+can.manevu.030205.txt
- amptref.m3.manevu.012405.txt
- downloaded from **ftp.marama.org** (username mane-vu, password exchange) in January 2005

5.1.2 Mobile sources

- MANEVU_2002_mtpro_02022006_addCT.txt
- MANEVU_2002_mtref_02022006_addCT.txt
- prepared by PECHAN and NESCAUM and downloaded from http://bronze.nescaum.org/Private/junghun/MANE-VU/onroad_ver3_update/MANEVU_V3_update.tar

5.1.3 Point Sources

- Based on the same files as for the MANE-VU area and nonroad temporal files listed above, but added the CEM-based 2002 state-specific temporal profiles and

cross-references for EGU sources for the MANE-VU states that were generated by VISTAS for their BaseD modeling and obtained in February 2005.
- No CEM-based hour-specific EGU emissions were utilized

5.2 CENRAP

The following temporal profiles and cross-reference files were used:
- Area and nonroad sources:
  - amptpro.m3.us+can.cenrap.010605_incl_nrd.txt
  - amptref.m3.cenrap.010605_add_nh3_and_nrd.txt
- Mobile sources:
  - mtpro.cenrap.v3.txt
  - mtref.cenrap.v3.txt
- Point sources:
  - ptpro.{QQ}.cenrap_egus_cem.00-03avg.121205.txt where {QQ} is Q1 for January/February/March, Q2 for April/May/June, etc.
  - ptref.{QQ}.cenrap_egus_cem.00-03avg.121205.txt where {QQ} is Q1 for January/February/March, Q2 for April/May/June, etc.
- All files were downloaded from the CENRAP ftp site in March 2006.

5.3 VISTAS

The following month-specific temporal profiles and cross-reference files were used:
- Area and nonroad sources:
  - atpro_vistas_basef_15jul05.txt
  - atref_vistas_basef_15jul05.txt
- Mobile sources:
  - mtpro_vistas_basef_04jul05.txt
  - mtref_us_can_vistas_basef_04jul05.txt
- Point sources:
  - ptpro_typ_{MMM}_vistasg_28jun2006.txt where {MMM} is jan, feb, mar, etc.
  - ptref_typ_vistas_baseg_28jun2006.txt
- These files were obtained from the Alpine Geophysics ftp site. They reflect version BaseG of the VISTAS inventory for the point source allocation files and version BaseF for the area, nonroad, and mobile source allocation files. These files were downloaded between February and July, 2006.

5.4 MRPO

The following month-specific temporal profiles and cross-reference files were used for all source categories:
- amptpro_typ_us_can_{MMM}_vistas_27nov04.txt where {MMM} is jan, feb, mar, etc.
- amptref_2002_us_can_vistas_17dec04.txt

- These files were obtained from VISTAS in January 2005 and reflect their BaseD modeling. No updated temporal profiles or cross-reference files were developed for use with the MRPO BaseK inventory.

5.5 Canada

For Canada, the SMOKE2.1 default temporal profiles and cross-reference files (amptpro.m3.us+can.txt and amptref.m3.us+can.txt) were utilized.

6. Speciation

The same speciation profiles (gspro.cmaq.cb4p25.txt) and cross-references (gsref.cmaq.cb4p25.txt) were utilized for all regions and all source categories. Different versions of these files were obtained (SMOKE2.1 default, EPA-CAIR modeling, VISTAS, CENRAP and MANE-VU) and compared. After comparing the creation dates and header lines of these files, it was determined that the EPA-CAIR and MANE-VU files had the most recent updates, and consequently the final speciation profile and cross-reference files used for all regions and source categories was based on the EPA-CAIR files with the addition of MANE-VU specific updates.

7. Spatial Allocation

7.1 U.S.

The spatial surrogates for the 12 km domain were extracted from the national grid 12 km U.S. gridding surrogates posted at EPA's website at
http://www.epa.gov/ttn/chief/emch/spatial/newsurrogate.html
The gridding cross-references were also obtained from this website, but for the processing of MANE-VU area source emissions, MANE-VU specific cross-reference entries posted on the MARAMA ftp site were added.

7.2 Canada

The spatial surrogates for Canadian emissions for the 12 km domain were extracted from the national grid 12 km Canadian gridding surrogates posted at EPA's website at
http://www.epa.gov/ttn/chief/emch/spatial/newsurrogate.html
The gridding cross-references were also obtained from this website.

Appendix 8K

Emission Processing for OTC 2009 OTW/OTB 12km CMAQ Simulations

Emission Processing for OTC 2009 OTW/OTB 12km CMAQ Simulations

Office of Air Data Analysis
Air Division
Virginia Department of Environmental Quality

February, 2007

Overview

The OTC 2009 OTW/OTB emission modeling was conducted at the Virginia Department of Environmental Quality (DEQ). The modeling followed and retained the framework of the previous (original) OTC 2002/2009 emission modeling done by the New York State Department of Environmental Conservation (NYSDEC). Several changes and corrections had been made throughout the entire modeling period. Virginia DEQ was in close contact with NYSDEC which provided many premerged netCDF files for inclusion in the merging process to obtain final SMOKE outputs for CMAQ simulations.

Emissions for all source categories were processed by SMOKE2.1. The SMOKE programs downloaded from Community Modeling and Analysis System (CMAS) website have been compiled for LINUX system and ready for usage. If existing compiled codes returned errors, such as in the case of large MCIP files, compiled versions provided by NYSDEC and available at Ozone Research Center's (ORC) ftp sites were used instead.

Data Sources

The majority of raw input data files were provided to DEQ by Greg Stella of AlpineGeophysics through its ftp site at alpinegeophysics.com. Different versions of 2009 SMOKE emission modeling have been conducted over the years by AlpineGeophysics. The version of input data files used for OTC 2009 OTW/OTB emission modeling was labeled as BaseG of the AlpineGeophysics.

In some source categories, primarily in MANEVU and Canada regions, several changes and corrections in emissions were made at various stage of SMOKE modeling, causing the outputs using AlpineGeophysics files to be discarded. SMOKE modeling of those categories (described below) was performed by NYSDEC which made netCDF outputs available at Ozone Research Center's ftp site at ozoneresearch.org. In such cases, DEQ used the premerged netCDF files directly for final merging.

SMOKE Processing

The OTC 12km regional and urban scale modeling domain encompasses four RPOs: VISTAS, MANEVU, CENRAP, and MRPO. Part of Canada also falls in the modeling domain.

The OTC 2009 OTW/OTB emissions were processed roughly on a month-by-month and RPO-by-RPO basis. SMOKE modeling was conducted for each month for each of the four individual RPOs as well as for Canada (completed by NYSDEC), except for mobile source category, which was done by two sub-RPOs: one for MANEVU and the other for the combination of VISTAS, CENRAP, and MRPO. A separate SMOKE ASSIGNS file was created for each RPO and/or source category. The episode length in the ASSIGNS files varies from one month to the entire year.

Five major emission source categories (listed below) were included in the OTC 2009 OTW/OTB SMOKE modeling. Sub-categories were lumped into the major categories here for presentation purpose but were treated as separate categories in processing. For example, low-level wildfire was treated as area source, whereas high-level wildfire was modeled as point source. In addition, point source category was further divided into EGU and non-EGU. Minor sources such as non-fossil fuels and marine vassel were processed as well. Table 1 summarizes input files and other relevant information for each of the RPOs and Canada.

(1). Area (including low-level wildfire and NH_3);
(2). Nonroad (including marine vassel);
(3). Point (including EGU, Non-EGU, non-fossil fuels and wildfires);
(4). Mobile;
(5). Biogenic.

For VISTAS region (only), AlpineGeophysics has developed annual, daily, or hourly emissions data for EGU and high-level wildfire source categories. SMOKE run script parameters of DAY_SPECIFIC_YN and/or HOUR_SPECIFIC_YN were turned on (to Y) and month-specific temporal profiles of BaseG were applied to make sure those more detailed inventory files were used to override annual emissions.

Mobile source emissions were divided into two groups for processing. The original input file (mbinv_vistas_09g_vmt_12jun06.txt) provided by AlpineGeophysics contains VMT data for all four RPOs. The MANEVU portion was first removed from the original file and the revised file (otherRPOs.mb.vmt.emis) which contains VMT data for the remaining three RPOs (VISTAS, CENRAP, MRPO) was then used as the input inventory for processing. The MANEVU portion removed from the original file was processed separately on its own as another group.

MOBILE6 Processing

As described above, mobile source emissions for three RPOs — VISTAS, CENRAP, and MRPO — were grouped and processed together. To estimate vehicle emission factors in MOBILE6, temperature averaging of space and time were specified in input file of mvref_vistas_2009g_26aug06.txt as follows:

(1). Spatial averaging: temperatures were averaged over all counties that share a common reference county;

(2). Temporal averaging: temperatures were averaged over the duration of the episode, which in present case is one month.

The averaging described above is consistent with the original OTC 2002/2009 emission processing done by NYSDEC. DEQ also processed MANEVU portion of mobile source. However, due to the inconsistency of temporal profile and cross-reference file used between DEQ's run and the original 2002/2009 run by NYSDEC, those outputs were discarded. NYSDEC re-processed the MANEVU portion and provided netCDF files to DEQ for final merging. The re-processed MANEVU run by NYSDEC reflects updated mobile source information in New Jersey and Connecticut.

Speciations, Temporal and Spatial Allocations

For consistency, the OTC 2009 OTW/OTB input profiles for speciations, temporal, and spatial allocations remained the same as the original OTC 2002/2009 emission modeling done by NYSDEC, even though more up-to-date profiles (such as those marked with BaseG or later) were available at the AlpineGeophysics. No attempt was made to examine the effects of different versions of profiles on daily emissions.

Fugitive Dust Corrections

Fugitive dust emissions were corrected in SMOKE by two-step process. First, SMKINVEN and CNTLMAT were executed with two separate input files: (1) the original inventory file, and (2) a controlled matrix file of 2009 dust projection factors. A new inventory file containing adjusted emissions was created in SMKINVEN/CNTLMAT run. The new file was then used as the inventory input for regular SMOKE processing of SMKINVEN, SPCMAT, GRDMAT, TEMPORAL, LAYPOINT (for point source), and SMKMERGE. The source categories which went through this two-step process included non-EGU for VISTAS, MANEVU, CENRAP, and MRPO, and area sources for MANEVU and CENRAP.

Canadian and Biogenic Emissions

Canadian emissions of all four source categories (area, nonroad, point, mobile) and domain-wide biogenic emissions were processed by NYSDEC. Details on how emission modeling of these categories was conducted have been documented in "Emission Processing for the Revised 2002 OTC Regional and Urban 12 km Base Case Simulations" by NYSDEC. DEQ obtained premerged netCDF files for these source categories from ORC ftp site and used them directly for final merging.

Premerged netCDF Files

In December 2006, NYSDEC made further adjustments to ammonia and dust emissions of MRPO region and ran through SMOKE with the adjusted emissions. Three of MRPO's source categories were affected: area, nonroad, and NH_3. As a result, outputs generated by DEQ for the three affected MRPO's categories were discarded. Canadian emissions of all four source categories (area, nonroad, point and mobile) were also re-processed by NYSDEC with updated information. Seven newer versions, three for MRPO and four for Canada, of premerged netCDF files reflecting the adjustments were made available at ORC ftp site. The updated premerged netCDF files were used to replace earlier versions in the final merging process..

SMOKE Merging

A total of twenty-seven netCDF files were merged together to produce daily total emissions for use as inputs to CMAQ:

(1). Six for VISTAS (excluding mobile);
(2). Five for MANEVU (excluding mobile);
(3). Four for CENRAP (excluding mobile);
(4). Five for MRPO (excluding mobile);
(5). Two for mobile source emissions;
(6). Four for Canadian emissions;
(7). One for domain-wide biogenic emissions.

Table 1 lists the categories (indicated by sequential numbers) which were combined in the merging process.

BOTW Emissions

The differences between 2009 BOTW and 2009 OTW/OTB emissions lie in the area and non-EGU sources of MANEVU region where more controlled emissions are in effect for BOTW than for OTW/OTB. NYSDEC generated premerged netCDF files for BOTW run. To obtain 2009 OTC BOTW emissions, the two affected MANEVU source categories for OTW/OTB run were substituted and replaced by the new BOTW premerged files in the final merging process.

Table 1. 2009 OTW/OTB Emissions Processing Summary

	Category	Files	Files Source	Notes
		VISTAS		
(1)	**Area**	arinv_vistas_2009g_2453922_w_pmfac.txt	AlpineGeophysics	
(2)	**Nonroad**	nrinv_vistas_2009g_2453908.txt	AlpineGeophysics	
		marinv_vistas_2009g_2453972.txt	AlpineGeophysics	marine vessel emissions
(3)	**Non-EGU**	negu_ptinv_vistas_2009_baseg_2453957.txt	AlpineGeophysics	
(4)	**EGU**	egu_ptinv_vistas_2009_baseg_2453990.txt	AlpineGeophysics	annual emissions
		pthour_2009_baseg_mon_2453990.ems	AlpineGeophysics	hourly emissions, mon=may,jun,...
(5)	**Low Fire**	area_level_fires_vistas2002_baseg.ida	AlpineGeophysics	treated as area sources
(6)	**High Fire**	ptinv.plume.vistasbaseg09.num.ida	AlpineGeophysics	treated as point sources; annual data
		ptday.plume.vistasbaseg09.num.ida	AlpineGeophysics	daily data; num=1,2,...
		pthour.plume.vistasbaseg09.num.ida	AlpineGeophysics	hourly data; num=1,2,...
(7)	**Mobile**	otherRPOs.mb.vmt.emis	revised from AlpineG	contains VISTAS/CENRAP/MRPO
		MANEVU		
(8)	**Area**	MANEVU2009OTBAreaV3_1_woodburn.incl.IDA.txt	AlpineGeophysics	if BOTW, premerged netCDF for merging
(9)	**Nonroad**	2009MANEVUNRNIFV3_0_NonRoad_IDA.NJfix.txt	AlpineGeophysics	
(10)	**Non-EGU**	manevu2009noneguv3_0_point_ida.txt	AlpineGeophysics	if BOTW, premerged netCDF for merging
(11)	**EGU**	ptinv_egu_2009_manevu_10aug2006.txt	AlpineGeophysics	annual emissions
(12)	**Non-Fossile**	manevu_nonfossil_2009_19sept2006.txt	AlpineGeophysics	non-fossil fuel emissions
(13)	**Mobile**	netCDF file	NYSDEC	netCDF used for merging

Table 1. 2009 OTW/OTB Emissions Processing Summary (cont.)

	Category	Files	Files Source	Notes
		CENRAP		
(14)	**Area**	cenrap_area_burning_smoke_2009_input_ann_tx_neli_071905_2453959.txt	AlpineGeophysics	
		cenrap_area_misc_2009_smoke_input_ann_state_071905_2453959.txt	AlpineGeophysics	
		cenrap_area_misc_2009_smoke_output_nh3_annual_072805_rev_2453959.txt	AlpineGeophysics	
		arinv.cenrap_2009_09_xfact.ida.txt	AlpineGeophysics	
		cenrap_area_smoke_2009_output_nh3_annual_071905_rev_2453959.txt	AlpineGeophysics	
(15)	**Nonroad**	cenrap_nonroad_smoke_2009_output_annual_071305_rev.txt	AlpineGeophysics	
(16)	**Non-EGU**	ptinv_negu_cenrap2009_25aug2006.ida	AlpineGeophysics	
(17)	**EGU**	ptinv_egu_2009_cenrap_10aug2006.txt	AlpineGeophysics	annual emissions
	Mobile	otherRPOs.mb.vmt.emis	revised from AlpineG	VISTAS/CENRAP/MRPO
		MRPO		
(18)	**Area**	arinv_other_mrpok_2009_10aug2006.txt	AlpineGeophysics	dust correction; premerged netCDF
		dustinv_mrpo_basef4_2009_10nov05.ida	AlpineGeophysics	
(19)	**NH3**	nh3inv_2009_mrpok_ann_10aug2006.txt	AlpineGeophysics	dust correction; premerged netCDF
(20)	**Nonroad**	nrinv_mrpo_g_09_2453958_adj.txt	AlpineGeophysics	dust correction; premerged netCDF
		arinv_mar_mrpok_2009_7aug2006.txt	AlpineGeophysics	
(21)	**Non-EGU**	ptinv_negu_2009_mrpok_10aug2006.txt	AlpineGeophysics	
(22)	**EGU**	ptinv_egu_2009_mrpok_10aug2006.txt	AlpineGeophysics	annual emissions
	Mobile	otherRPOs.mb.vmt.emis	revised from AlpineG	VISTAS/CENRAP/MRPO

Table 1. 2009 OTW/OTB Emissions Processing Summary (cont.)

	Category	Files	Files Source	Notes
			CANADA	
(23)	**Area**	netCDF file	NYSDEC; downloaded from OTC ftp site	premerged netCDF for merging
(24)	**Nonroad**	netCDF file	NYSDEC; downloaded from OTC ftp site	premerged netCDF for merging
(25)	**Point**	netCDF file	NYSDEC; downloaded from OTC ftp site	premerged netCDF for merging
(26)	**Mobile**	netCDF file	NYSDEC; downloaded from OTC ftp site	premerged netCDF for merging
			BIOGENIC	
(27)	**biogenic**	netCDF file	NYSDEC; downloaded from OTC ftp site	domain-wide emissions; premerged netCDF for merging

Appendix 8L

CMAQ Air Quality Model Configuration

OTC CMAQ Air Quality Model Configuration

Science Options	Configuration	Details/Comments
Model	CMAQ Version 4.5	
Horizontal Grid Mesh	36km/12km	
36-km grid	145x102 cells	
12-km grid	172x172 cells	
Vertical Grid Mesh	22 Layers	
Grid Interaction	One-way nesting	
Boundary Conditions	GEOS-CHEM	
Emissions		
Baseline Emissions Processing	SMOKE (Version 2.1) model configuration	MM5 meteorology input to SMOKE & CMAQ
Sub-grid-scale Plumes	No Plume –in-Grid (PinG)	
Chemistry		
Gas Phase Chemistry	CBM-IV	
Aerosol Chemistry	AE3/ISORROPIA	
Secondary Organic Aerosols	Secondary Organic Aerosol Model (SORGAM)	
Aerosol Mass Conservation Patch	Yes	Schell et. al., (2001)
Cloud Chemistry	RADM-type aqueous chemistry	Includes sub-grid cloud processes
N_2O_5 Reaction Probability	0.01-0.001	
Meteorological Processor	MCIP Version 3.0	
Horizontal Transport		
Eddy Diffusivity Scheme	K-theory with Kh grid size dependence	Multi-scale Smagorinsky (1963) approach
Vertical Transport		
Eddy Diffusivity Scheme	K-theory	
Diffusivity Lower Limit	Kzmin = 1.0	
Planetary Boundary Layer	No Patch	
Deposition Scheme	M3dry	Directly linked to Pleim-Xiu Land Surface Model parameters
Numerics		
Gas Phase Chemistry	Euler Backward Iterative	Hertel et. Al. (1993) EBI solver ~2x

Science Options	Configuration	Details/Comments
Solver	(EBI) solver	faster than MEBI
Horizontal Advection Scheme	Piecewise Parabolic Method (PPM) scheme	
Simulation Periods	2002	
Platform	Linux Cluster	

Appendix 8M

CMAQ Model Performance and Assessment,

8-Hr OTC Ozone Modeling

TSD-1e

CMAQ Model Performance and Assessment

8-Hr OTC Ozone Modeling

Bureau of Air Quality Analysis and Research

Division of Air Resources

New York State Department of Environmental Conservation

Albany, NY 12233

February 23, 2006

Air quality model evaluation and assessment

One of the tasks that is required as part of demonstrating attainment for the 8-hr ozone NAAQS is the evaluation and assessment of the air quality modeling system that has been utilized to predict future air quality over the region of interest. As part of the attainment demonstration, the SMOKE/CMAQ modeling system was applied to simulate the pollutant concentration fields for the base year 2002 emissions with the corresponding meteorological information. The modeling databases for meteorology using MM5 (TSD-1a), the emissions using SMOKE (TSD-1b and TSD-1c), and application of CMAQ (TSD-1d) provides simulated pollutant fields that are compared to measurements, in order to establish the credibility of the simulation. In the following sections a comparison between the measured and predicted concentrations is performed and results are presented, demonstrating on an overall basis the utility of the modeling system in this application.

The results presented here should serve as an illustration of some of the evaluation and assessment performed on the base 2002 CMAQ simulation. Additional information can be made available by request from the New York State Department of Environmental Conservation.

Summary of measured data

The ambient air quality data, both gaseous and aerosol species, for the simulation period of May through September 2002 were obtained from the following sources:

- EPA Air Quality System (AQS)
- EPA fine particulate Speciation Trends Network (STN)
- EPA Clean Air Status & Trends Network (CASTNet)
- Interagency Monitoring of PROtected Visual Environments (IMPROVE)
- Pinnacle State Park, NY operated by Atmospheric Science Research Center, University at Albany, Albany, NY
- Harvard Forest, Petersham, MA operated by Harvard University, Boston, MA
- Atmospheric Investigation, Regional Modeling, Analysis and Prediction (AIRMAP) operated by University of New Hampshire, Durham, NH
- NorthEast Ozone & Fine Particle Study (NE-OPS), led by Penn State University and other research groups in Philadelphia, PA
- Aircraft data obtained by the University of Maryland, College Park MD
- Wet deposition data from the National Atmospheric Deposition Program/National Trends Network (NADP/NTN), Atmospheric Integrated Research Monitoring Network (AIRMoN), and the New York State Department of Environmental Conservation (NYSDEC)

Measured data from sites within the Ozone Transport Region (OTR) plus the rest of Virginia were included here. The model-based data were obtained at the grid-cell corresponding to the monitor location; no interpolation was performed.

Ozone (O_3)

Hourly O_3 is measured at a large number of State, Local, and National Air Monitoring Stations (SLAMS/NAMS) across the US on a routine basis, and the data from 208 sites were extracted from the AQS database (http://www.epa.gov/ttn/airs/airsaqs/aqsweb/aqswebhome.html). Hourly O_3 concentrations from the Harvard Forest Environmental Management Site in Petersham, MA (http://www.as.harvard.edu/data/nigec-data.html); Pinnacle State Park in Addison, NY (http://www.asrc.cestm.albany.edu); and the four University of New Hampshire AIRMAP sites (http://airmap.unh.edu) were also included in this database. The EPA CASTNet program collects hourly O_3 at generally rural locations across the US (http://www.epa.gov/castnet); data from 22 sites, including two from West Virginia, were used in the model evaluation.

Fine particulate matter ($PM_{2.5}$)

The 24-hour average Federal Reference Method (FRM) $PM_{2.5}$ mass data collected routinely at SLAMS/NAMS sites across the US were extracted from AQS (257 sites). Hourly $PM_{2.5}$ mass was also included in this database, primarily extracted from AQS (54 sites). Hourly $PM_{2.5}$ mass were also taken from the Thompson Farm, NH AIRMAP site, Pinnacle State Park, and the NE-OPS site in Philadelphia, PA (http://lidar1.ee.psu.edu).

Fine particulate speciation

The 24-hour average $PM_{2.5}$ and fine particulate speciation (sulfate (SO_4), nitrate (NO_3), elemental carbon (EC), organic carbon/organic mass (OC/OM), and soil/crustal matter) from Class I areas across the US, collected every 3rd day, were obtained from the IMPROVE web site (http://vista.cira.colostate.edu/IMPROVE/Default.htm). In addition to these parameters, the EPA STN (http://www.epa.gov/ttn/amtic/speciepg.html) also reports ammonium (NH_4) to AQS; data from this network are collected every 3rd or 6th day. Data from 49 STN sites, generally in urban areas and often collocated with FRM monitors, and 21 IMPROVE sites (including Dolly Sods, WV) were used in this analysis. Organic mass is assumed to equal 1.8×OC, and soil/crustal matter is assumed to consist of oxides of Al, Ca, Fe, Si, and Ti. The STN OC data are blank-corrected by removing a monitor-specific, constant blank, and these values are available from http://www.epa.gov/airtrends/aqtrnd03/pdfs/2_chemspec0fpm25.pdf; the IMPROVE OC blanks are assumed to equal zero.

Criteria gaseous pollutants

Hourly carbon monoxide (CO; 97 sites), nitric oxide (NO; 75 sites), nitrogen dioxide (NO_2; 97 sites) and sulfur dioxide (SO_2; 134 sites) are also included in this model evaluation database. A large majority of these sites are SLAMS/NAMS monitors located primarily in urban in suburban areas, but data from the Harvard Forest, Pinnacle State Park, and AIRMAP sites are also included here.

Non-methane hydrocarbons

While there are several dozen hydrocarbon species measured routinely, for this model evaluation database the focus was on Carbon Bond IV species groups that consist of a single primary species. For this reason only ethene (C_2H_4), isoprene (C_5H_8), and formaldehyde (HCHO) concentrations were extracted from AQS. Hourly C_2H_4 and C_5H_8 data from 19 Photochemical Assessment Monitoring Stations (PAMS) sites and 24-hour average HCHO from 18 air toxics sites are included in this database.

University of Maryland aircraft data

The University of Maryland performed 144 aircraft spirals at 41 regional airport locations over 26 days from May-August 2002 (http://www.atmos.umd.edu/~RAMMPP). Spirals are approximately 20-45 minutes in duration, over which time the atmosphere from about 0-3 km is sampled. The concentrations of O_3, CO, and SO_2 from these spirals were included in this database, and help provide a semi-quantitative evaluation of CMAQ performance above the ground surface. Minute average aircraft data were compared to the nearest instantaneous 3-dimensional CMAQ output.

Wet deposition

The NADP (http://nadp.sws.uiuc.edu) collects wet deposition samples across the US, through the NTN and the AIRMoN. Weekly wet deposition samples are collected by the NTN, while daily or event-based samples were collected by the AIRMoN. The NYSDEC (http://www.dec.state.ny.us) also collects weekly wet deposition samples independently from the NADP. The wet deposition of SO_4^{2-}, NO_3^-, and NH_4^+ from 43 NADP/NTN sites, 7 NADP/AIRMoN sites, and 19 NYSDEC sites are included in this model evaluation database.

Evaluation of CMAQ predictions

The following sections provide model evaluation information for the above referenced pollutants over the OTR portion of the 12-km modeling domain. The statistical formulations that have been computed for each species are as follows: P_i and O_i are the individual (daily maximum 8-hour O_3 or daily average for the other species) predicted and observed concentrations, respectively; $\overline{P}$ and $\overline{O}$ are the average concentrations, respectively, and N is the sample size.

Observed average, in ppb:

$$\overline{O} = \frac{1}{N}\sum O_i$$

Predicted average, in ppb (only use P_i when O_i is valid):

$$\overline{P} = \frac{1}{N}\sum P_i$$

Correlation coefficient, R^2:

$$R^2 = \frac{\left[\sum (P_i - \overline{P})(O_i - \overline{O})\right]^2}{\sum (P_i - \overline{P})^2 \sum (O_i - \overline{O})^2}$$

Normalized mean error (NME), in %:

$$NME = \frac{\sum |P_i - O_i|}{\sum O_i} \times 100\%$$

Root mean square error (RMSE), in ppb:

$$RMSE = \left[\frac{1}{N} \sum (P_i - O_i)^2\right]^{1/2}$$

Fractional error (FE), in %:

$$FE = \frac{2}{N} \sum \left|\frac{P_i - O_i}{P_i + O_i}\right| \times 100\%$$

Mean absolute gross error (MAGE), in ppb:

$$MAGE = \frac{1}{N} \sum \left|P_i - O_i\right|$$

Mean normalized gross error (MNGE), in %:

$$MNGE = \frac{1}{N} \sum \frac{\left|P_i - O_i\right|}{O_i} \times 100\%$$

Mean bias (MB), in ppb:

$$MB = \frac{1}{N} \sum (P_i - O_i)$$

Mean normalized bias (MNB), in %:

$$MNB = \frac{1}{N} \sum \frac{(P_i - O_i)}{O_i} \times 100\%$$

Mean fractionalized bias (MFB), in %:

$$MFB = \frac{2}{N} \sum \left[\frac{P_i - O_i}{P_i + O_i}\right] \times 100\%$$

Normalized mean bias (NMB), in %:

$$NMB = \frac{\sum (P_i - O_i)}{\sum O_i} \times 100\%$$

Daily maximum 8-hour O_3 concentrations

Model evaluation statistics, based on daily maximum 8-hour average O_3 levels on those days having (1) at least 18 valid observations, or (2) fewer than 18 valid observations but the observed daily maximum O_3 concentration was at least 85 ppb, are presented here for all sites across the OTR and all of VA. The data cover the period May 15 through September 29, excluding July 6-9, when many sites across the eastern US were affected by large forest fires in Quebec. There are 208 SLAMS/NAMS sites and 28 special sites.

These model evaluation statistics were computed using two different threshold values for observed daily maximum 8-hour O_3. First, the statistics were computed using only those days when the observed daily maximum 8-hour O_3 concentration exceeded 40 ppb. Second, the statistics were computed using only those days when the observed daily maximum 8-hour O_3 exceeded 60 ppb. This latter method focuses on the highest O_3 days.

Figures 1-4 display time series of observed and predicted daily maximum 8-hour O_3 concentrations averaged over all sites across the OTR, at SLAMS/NAMS and special sites and for the daily maximum two thresholds. These averages were computed for each day considering all sites that met the corresponding threshold criteria. In general the observed and predicted composite average O_3 concentrations track each other rather well, although there was fairly substantial underprediction during the mid-August period. Also, the model performance tends to be better when the lower cutoff (40 ppb) was considered.

Figures 5-8 display spatial maps of fractional error and mean fractionalized bias for the two threshold levels. At each site the statistics were computed over the entire modeling season. Both the SLAMS/NAMS and special monitors are displayed here. In general, the model performance was better in the vicinity of urban areas and along the northeastern corridor, compared to the performance in rural areas where the model tended to underpredict daily maximum concentrations. The other statistical metrics yielded similar results to FE and MFB.

Table 1 lists the median and range in fractional error, and the mean fractionalized bias of daily maximum 8-hour O_3 calculated at each site over the season, for both observed thresholds (40 and 60 ppb), as well as all sites versus just the SLAMS/NAMS sites. Considering just SLAMS/NAMS sites, FE was always less than 32% for the 40 ppb threshold, and less than 40% for the 60 ppb threshold. Similarly, the MFB at SLAMS/NAMS sites ranged from -29 to +23% for the 40 ppb threshold, and ranged from -40 to +22% for the 60 ppb threshold. Adding the special sites did not affect the statistics substantially.

Diurnal variations of gases

Figures 9-17 display the composite diurnal variations of the species reported hourly – O_3 (SLAMS/NAMS and other/special sites, displayed separately), continuous $PM_{2.5}$, CO, NO, NO_2, SO_2, ethene, and isoprene. The average diurnal variations are for the period of May 15-September 30 – again excluding July 6-9 – considering all sites in the OTR. Note that the O_3 diurnal variations were computed from running 8-hour averages, with hours denoting the start of the 8-hour block. The number of monitors used to compute each composite diurnal variation is shown in each figure.

For O_3, the composite diurnal pattern predicted by CMAQ is fairly similar to that observed, especially at the more urban SLAMS/NAMS monitors. However, on average CMAQ predicts the daily maximum about an hour earlier than observed. For most of the other species presented here, CMAQ tends to predict two daily peaks, one morning and one late afternoon. For some species, such as $PM_{2.5}$ mass the observed concentration on a composite basis has very little diurnal variation. On the other hand, primary pollutants like CO, NO, and ethane, CMAQ exhibits qualitative agreement with the observations.

Daily average concentrations of co-pollutant trace gases

Composite daily average predicted and observed concentrations of CO, NO, NO_2, SO_2, C_2H_4, HCHO, and C_5H_8 across the OTR are displayed in Figures 18-24. Daily average concentrations of the criteria gases, C_2H_4 and C_5H_8 were computed from hourly averages, and only those days having at least 12 hours of valid observed data were considered here. The HCHO data shown here are based on 24-hour average values every 6^{th} day. The criteria gas data cover the period May 15 – September 30, whereas the NMHC data only cover the June 1 – August 31 period, since these data are predominantly PAMS data; however, excluded from this analysis is the July 6-9 period when many sites across the eastern US were affected by large forest fires in Quebec.

Table 2 lists the median and range in mean fractionalized bias calculated at each site over the season used in this analysis. The values listed in Table 2 were computed at each site over the entire season. While the range in MFB is rather large for each species across all sites, the median MFB was below 50% for all species except C_2H_4, which is substantially overpredicted by CMAQ. It should be noted that these species can vary substantially from day to day, and days with very low modeled or observed values can contribute to high MFB.

$PM_{2.5}$ mass and speciation

Composite daily average predicted and observed concentrations of $PM_{2.5}$ mass (both daily average FRM data and continuous data), as well as major speciation –SO_4, NO_3, NH_4, EC, OM (defined here operationally as 1.8×blank-corrected organic carbon), and crustal mass (sum of oxides of Al, Ca, Fe, Si, and Ti) – across the OTR were compared in this analysis. The data cover the period May 15 – September 30, and again the July 6-9 period was excluded, when numerous sites in the eastern US were affected by large forest fires in Quebec. The continuous and FRM $PM_{2.5}$ data are shown every day, since there are ample daily FRM sites across the OTR. The speciation data included here are daily averages every third day, and consist of the largely urban EPA STN and the largely rural IMPROVE network. The two speciation networks collect $PM_{2.5}$, SO_4, NO_3, EC, OM, and crustal mass, while only the STN reports NH_4 at a sufficient number of locations.

Table 3 lists the median and range in mean fractionalized bias calculated at each site over the season used in this analysis. The values listed in Table 3 were computed at each site over the entire season. Figures 25-39 display time series of composite average observed and predicted daily concentrations; in these figures, for each day the statistics were computed using all monitors with valid data. The best qualitative agreement between observed and modeled concentrations is exhibited for $PM_{2.5}$ and SO_4. Note that in the case of crustal mass, the data from July 4 are also not included since this day is greatly affected by fireworks. On July 4, the composite average observed and predicted crustal concentrations were 4.59 μg m^{-3} and 1.74 μg m^{-3}, respectively at the STN monitors, and 4.46 μg m^{-3} and 0.99 μg m^{-3}, respectively at the IMPROVE monitors.

As with the gaseous co-pollutant data, there is a substantial spread in MFB across the sites. However, the median MFB for $PM_{2.5}$ mass and SO_4 was generally small (<12%) for both urban and rural sites. CMAQ tends to overpredict NO_3, more so at the IMPROVE sites. CMAQ also tends to underpredict OM at both urban and rural sites, although some of this discrepancy may be attributed to the fact that OM is operationally defined and is highly dependent on the blank correction and multiplier to account for other components of OM not directly measured. CMAQ tends to overpredict both EC and crustal mass, especially at urban sites; similar to OM, the crustal mass overprediction is related to the fact that this parameter is operationally defined.

Wet deposition of sulfate, nitrate, and ammonium

Observed and predicted wet deposition of SO_4, NO_3, and NH_4 were compared over the period May 14 – September 30. For this analysis, weekly or event-based wet deposition amounts from the NADP/NTN (43 sites), NADP/AIRMoN (7 sites), and New York State DEC (19 sites) covering the entire OTR plus all of VA and WV were integrated over the four-and-a-half months. Because the observed weekly wet deposition samples did include July 6-9, the corresponding CMAQ predictions also include this period. Table 4 lists the model evaluation statistics for integrated wet deposition of SO_4, NO_3, and NH_4 at each site over the season, while Figures 40-42 compare the observed and predicted weekly values relative to the 1:1 line.

Overall CMAQ tended to overpredict wet deposition of these ions. On a percentage basis, the overprediction was least for SO_4 and highest for NO_3. The NME, MNGE, MNB, and NMB were less than 50% for the three ions. Given that precipitation is very difficult to predict, especially during the summer months when rainfall can vary tremendously over a 12 km by 12 km area represented by this model grid, CMAQ did a rather good job reproducing seasonal wet deposition over the OTR.

Upper-air O_3, CO, and SO_2 data

The University of Maryland operated an instrumented light aircraft during the summer of 2002. On 26 days from May-August meteorological, trace gas, and particle scattering/absorption data were collected during ascent or descent spirals over 41 regional airports. In all, 144 spirals were performed from near the surface to about 3 km above ground level. For this analysis, composite average profiles of O_3, CO, and SO_2 were created over three time periods: "morning" (08-11 EST), "afternoon" (12-16 EST), and "evening" (17-19 EST). The minute average observed concentrations were aggregated into layer averages, which correspond to the lowest 15 model layers. Model layers are increasingly thick away from the surface; the surface layer is about 20 m thick while the 15th layer is about 500 m thick (and centered about 2.8 km above the ground). Figures 43-51 display the observed and predicted composite vertical profiles of O_3, CO, and SO_2 for the three time periods. In terms of profile shape, CMAQ was in good qualitative agreement for all three species above the surface during the afternoon hours. For CO, the model tends to greatly underpredict observed levels near the surface, whereas the predicted O_3 and SO_2 concentrations are closer to the respective observed values.

Summary

Various model evaluation statistics are presented here for a variety of gaseous and aerosol species in addition to O_3. In general, the CMAQ results were best for daily maximum O_3 and daily average $PM_{2.5}$ and SO_4 mass. Many other species vary tremendously over the course of a day, or from day to day, and small model over- or underprediction at low concentrations can lead to large biases on a composite basis. It is important to demonstrate that the model performs reasonably over the diurnal cycle, not just in terms of daily maximum or average values. Also, it is important to demonstrate that the model can reproduce concentrations above the ground level.

Table 1. Median and range in fractional error (FE, %) and mean fractionalized bias (MFB, %) for daily maximum 8-hour O_3 using the 40 ppb and 60 ppb observed thresholds. The values using only SLAMS/NAMS sites are boldfaced, the values using all sites are in regular font.

Metric, threshold	Range (%)	Median (%)
FE, 40 ppb	+10 to +34% **+10 to +32%**	+15% **+15%**
MFB, 40 ppb	-34 to +23% **-29 to +23%**	-6% **-6%**
FE, 60 ppb	+9 to +40% **+9 to +40%**	+15% **+15%**
MFB, 60 ppb	-40 to +22% **-40 to +22%**	-12% **-11%**

Table 2. Median and range in mean fractionalized bias (%) for daily average CO, NO, NO_2, SO_2, C_2H_4, HCHO, and C_5H8.

Pollutant	Range in MFB (%)	Median MFB (%)
CO (97 sites)	-128 to +144%	-10%
NO (75 sites)	-182 to +116%	-46%
NO_2 (97 sites)	-125 to +107%	+13%
SO_2 (134 sites)	-139 to 140%	+3%
C_2H_4 (19 sites)	+28 to +168%	+86%
HCHO (18 sites)	-66 to +96%	-13%
C_5H_8 (19 sites)	-54 to +165%	+43%

Table 3. Median and range in mean fractionalized bias (%) for daily average $PM_{2.5}$, SO_4, NO_3, NH_4, EC, and OM.

Pollutant	**Range in MFB (%)**	**Median MFB (%)**
$PM_{2.5}$ (FRM; 257 sites)	-59 to +119%	-4%
$PM_{2.5}$ (continuous; 57 sites)	-39 to +85%	+5%
STN $PM_{2.5}$ (49 sites)	-45 to +102%	-9%
IMPROVE $PM_{2.5}$ (21 sites)	-36 to +19%	-10%
STN SO_4 (49 sites)	-21 to +60%	+12%
IMPROVE SO_4 (21 sites)	-26 to +16%	-7%
STN NO_3 (49 sites)	-73 to +406%	+25%
IMPROVE NO_3 (21 sites)	-57 to +358%	+64%
STN NH_4 (49 sites)	-36 to +112%	+16%
STN EC (49 sites)	-42 to +269%	+34%
IMPROVE EC (21 sites)	-60 to +146%	-27%
STN OM (49 sites)	-82 to -25%	-58%
IMPROVE OM (21 sites)	-60 to +7%	-40%
STN crustal (49 sites)	+2 to +546%	+182%
IMPROVE crustal (21 sites)	-18 to +163%	+38%

Table 4. Model evaluation statistics for integrated wet deposition of SO_4, NO_3, and NH_4
.

Parameter	**SO_4**	**NO_3**	**NH_4**
Observed average, mg m^{-2}	1063	704	185
Predicted average, mg m^{-2}	946	367	117
Correlation coefficient, R^2	0.17	0.22	0.12
NME, %	34	49	48
RMSE, mg m^{-2}	490	417	109
FE, %	36	62	57
MAGE, mg m^{-2}	365	344	89
MNGE, %	36	45	46
MB, mg m^{-2}	-118	-337	-68
MNB, %	-3	-44	-28
MFB, %	-13	-61	-44
NMB, %	-11	-48	-37

Figure 1.

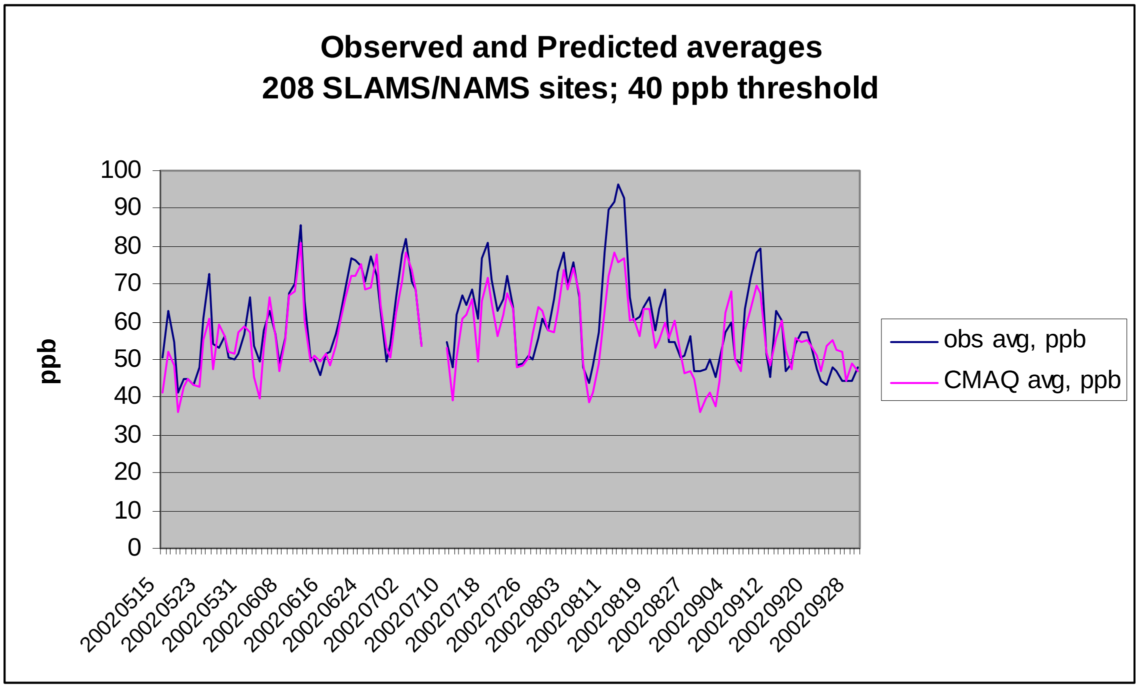


Figure 2.

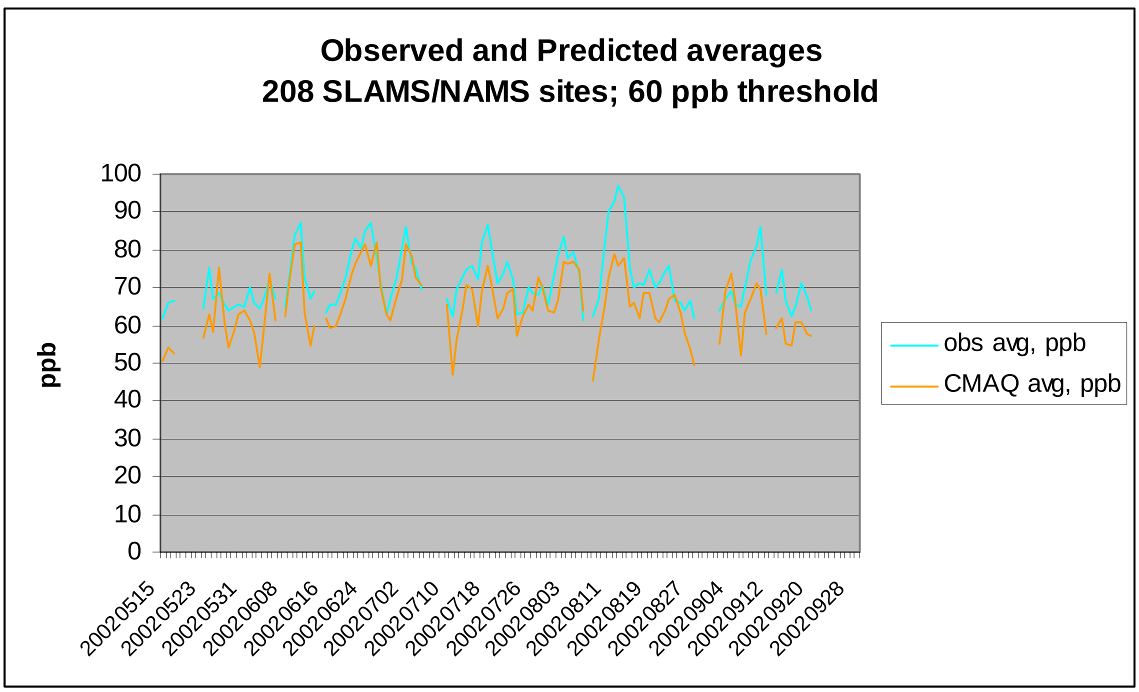


Figure 3.

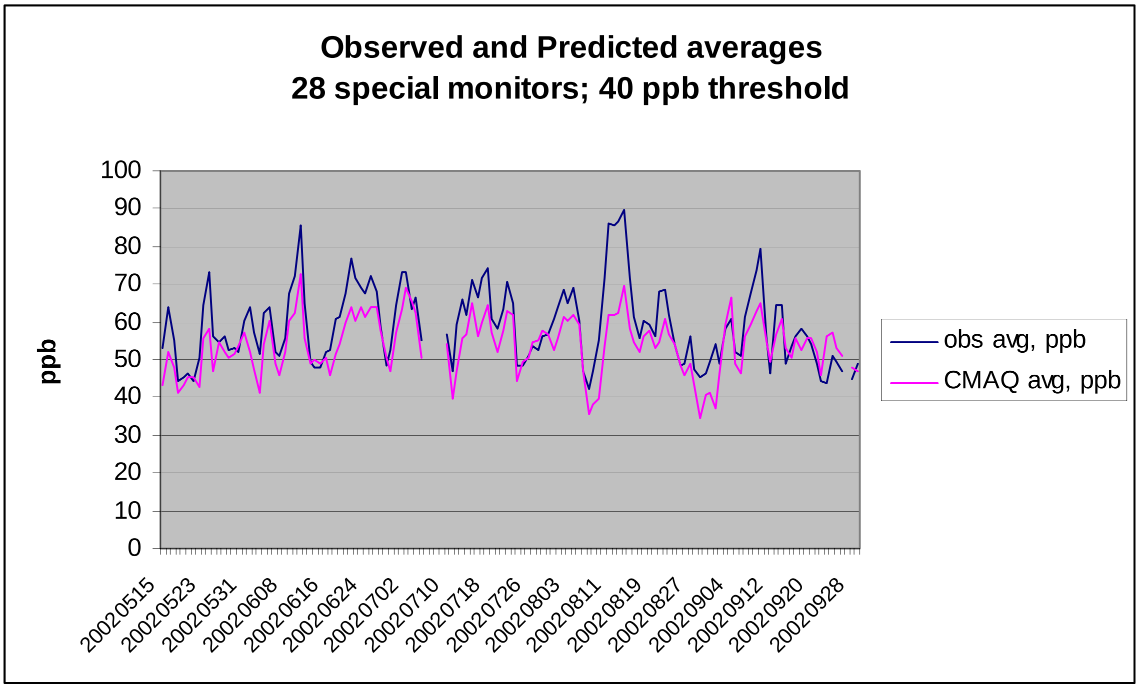
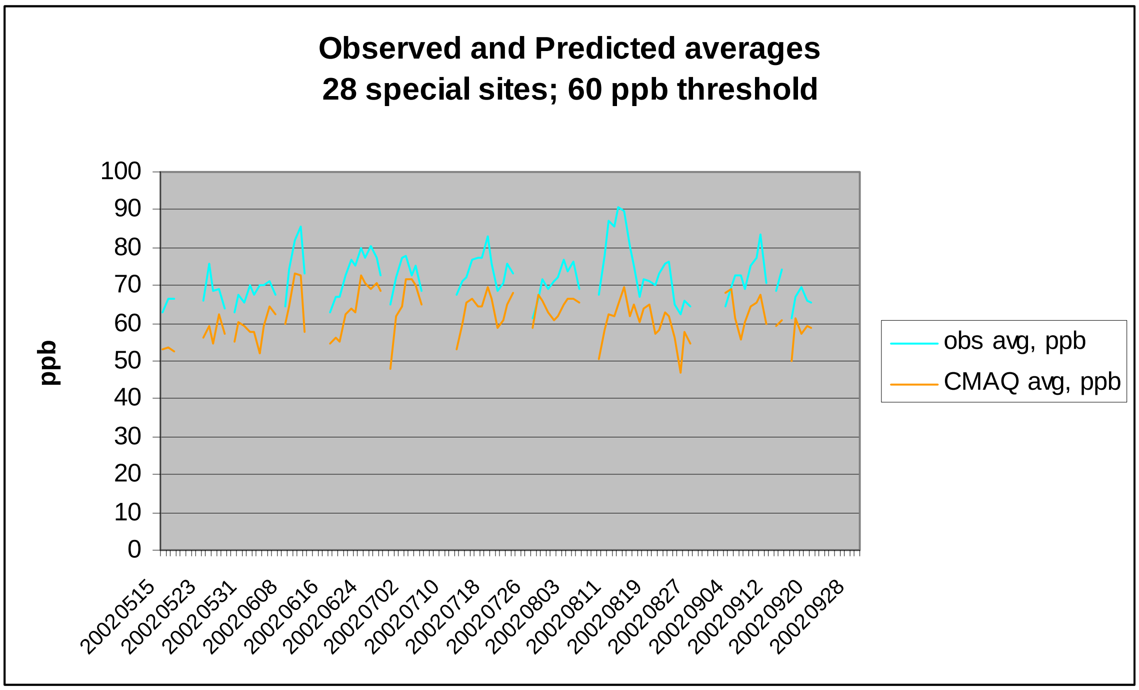


Figure 4.



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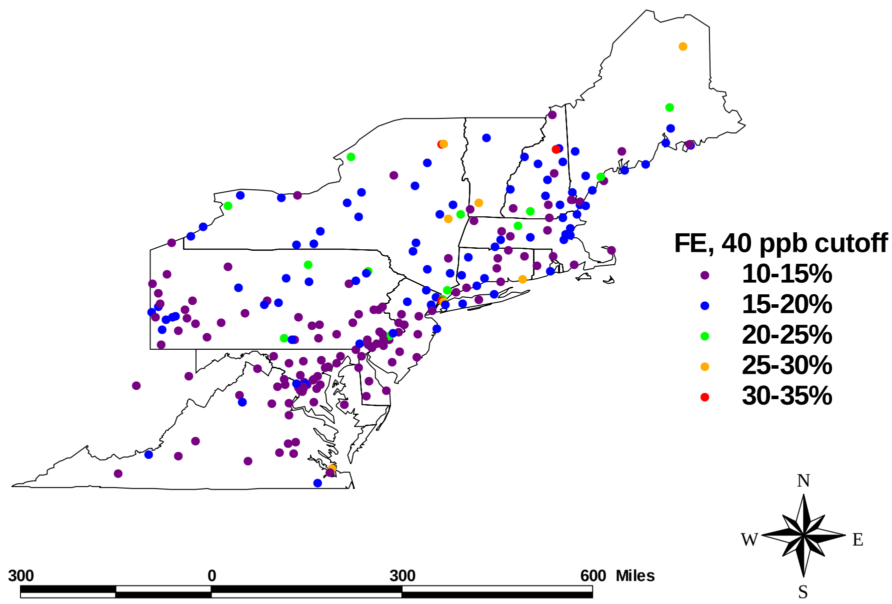

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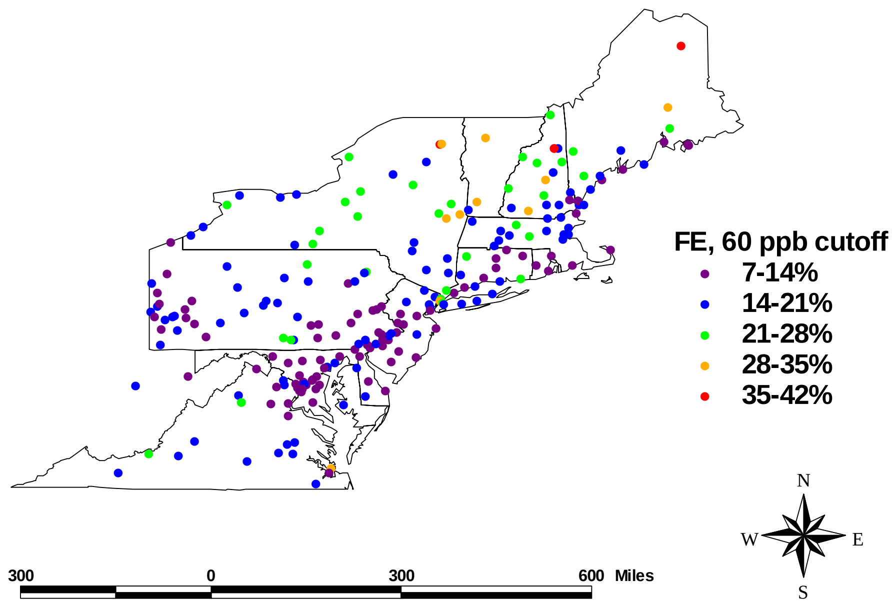

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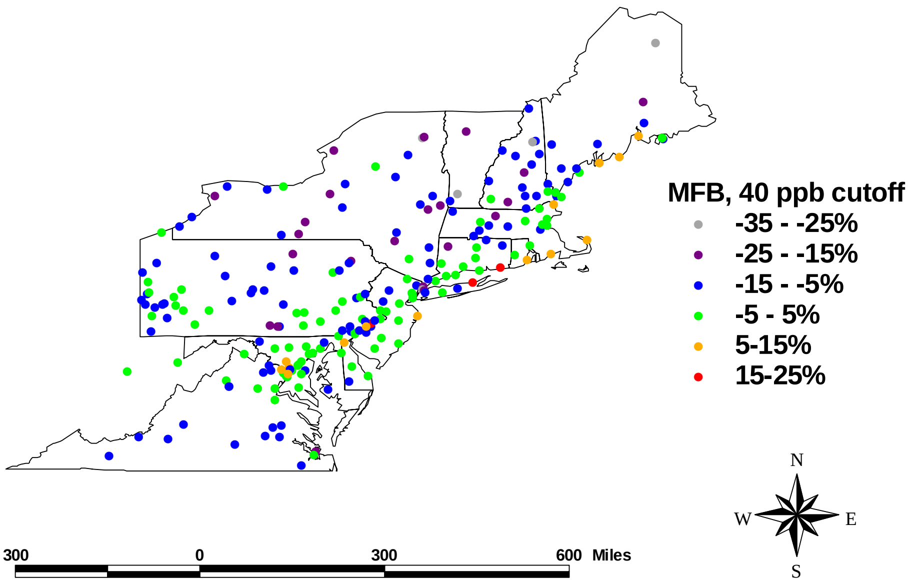
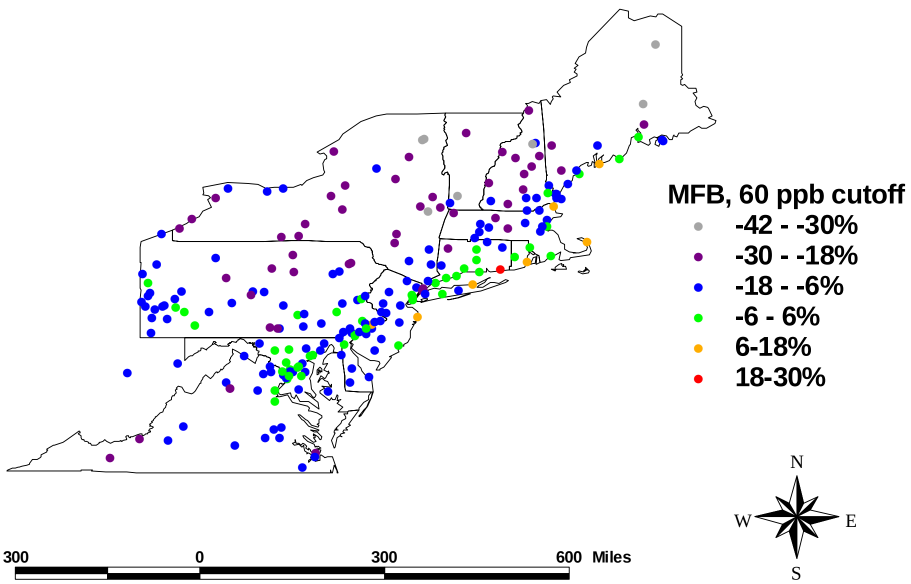


Figure 8.



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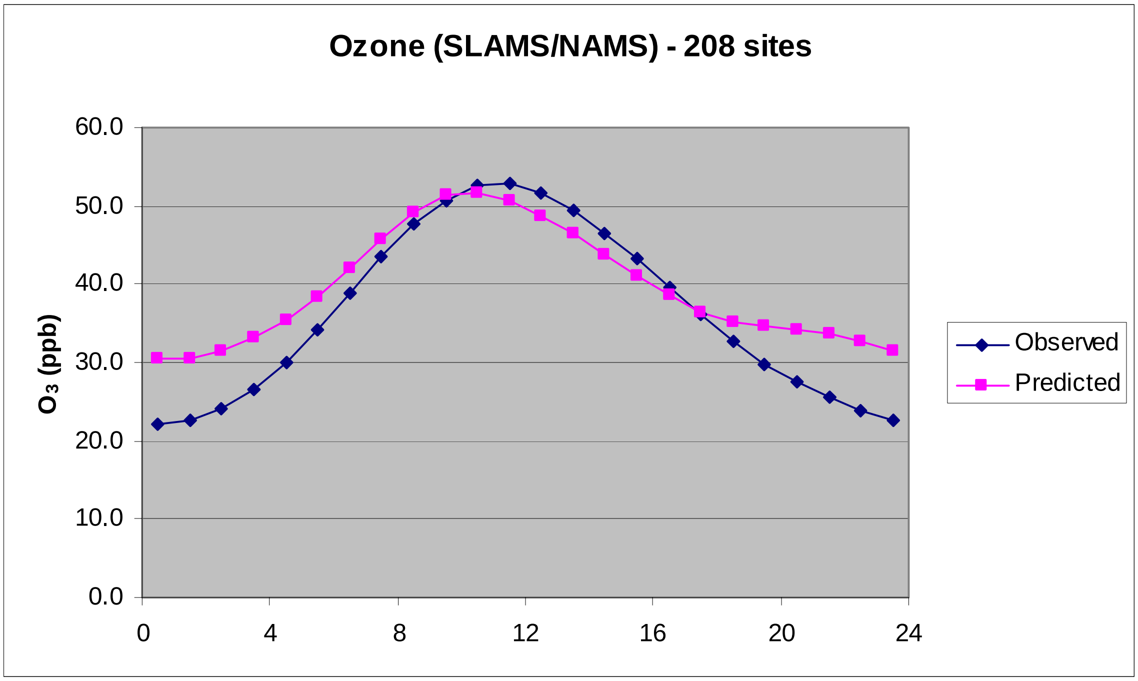

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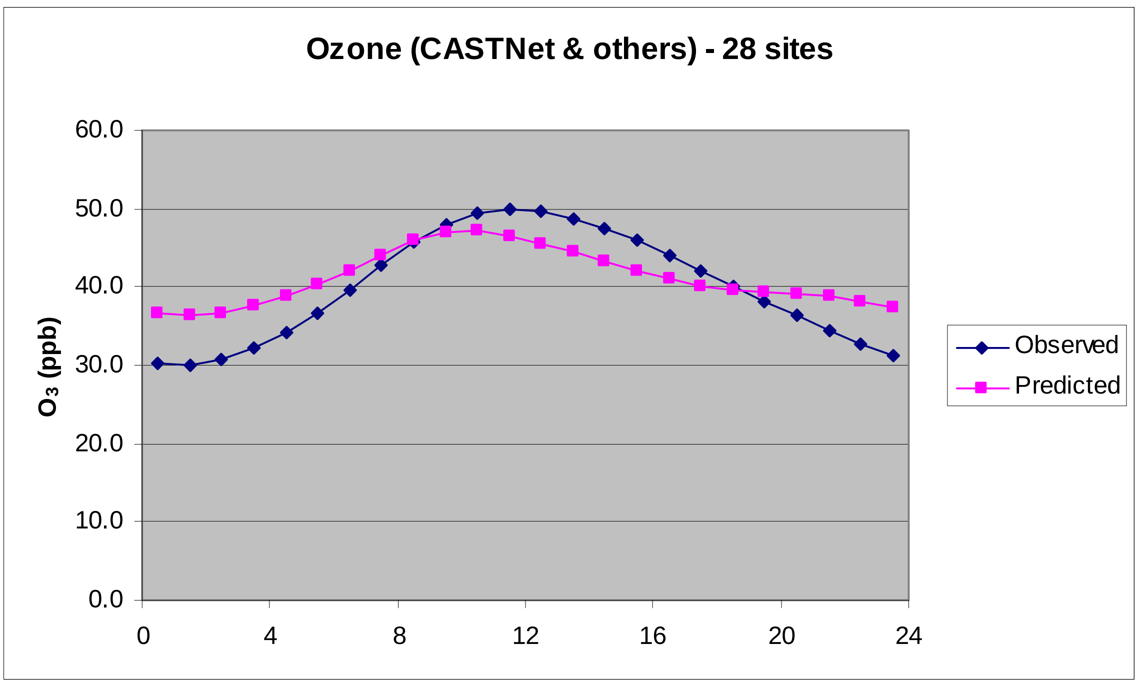

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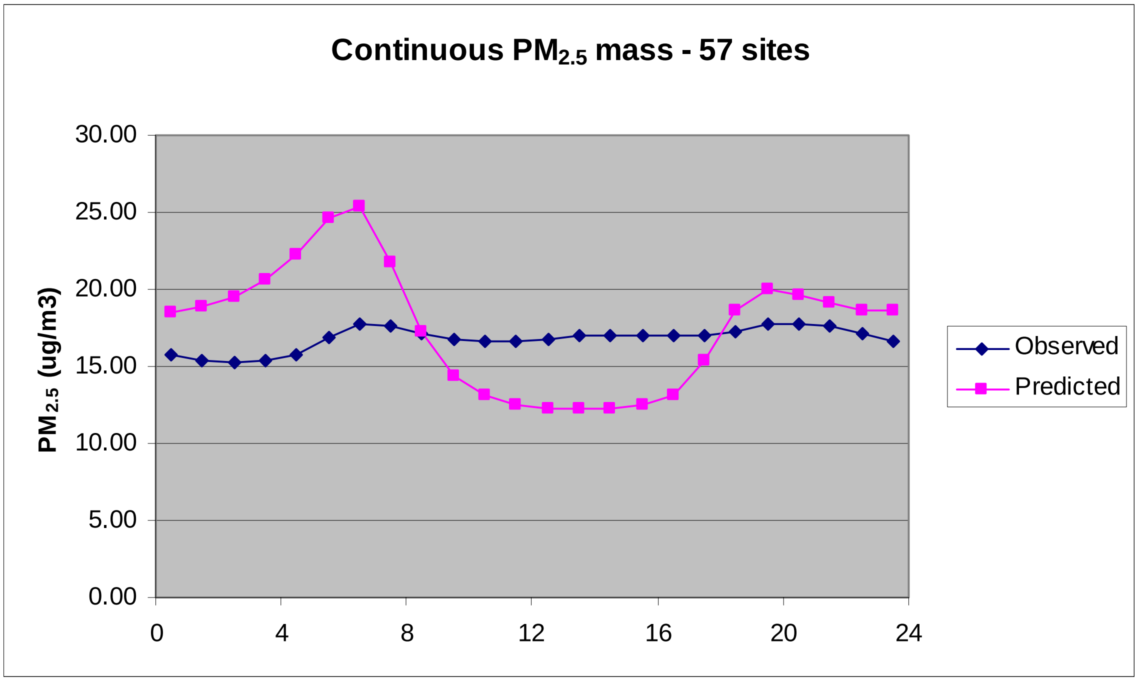

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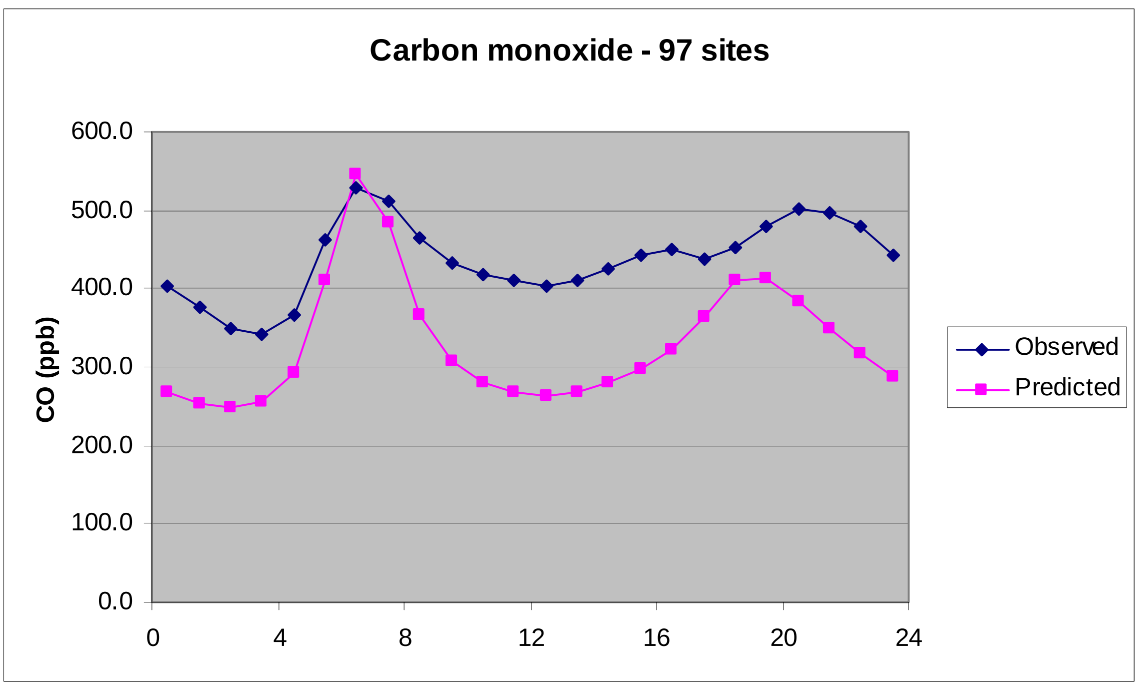
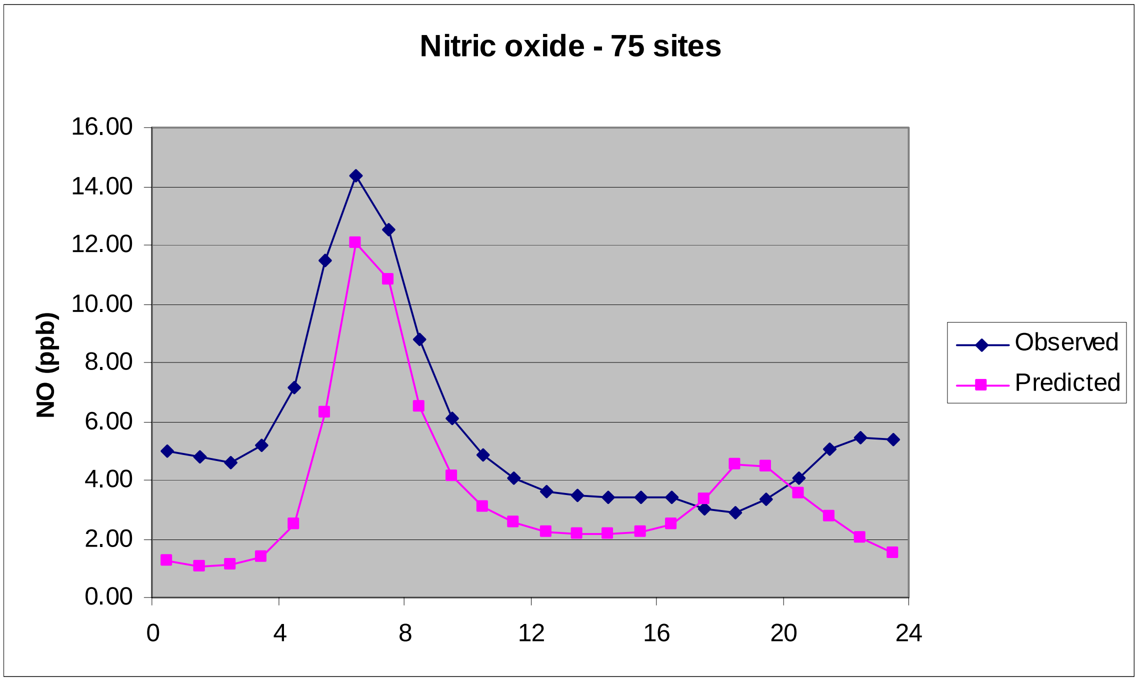


Figure 13.



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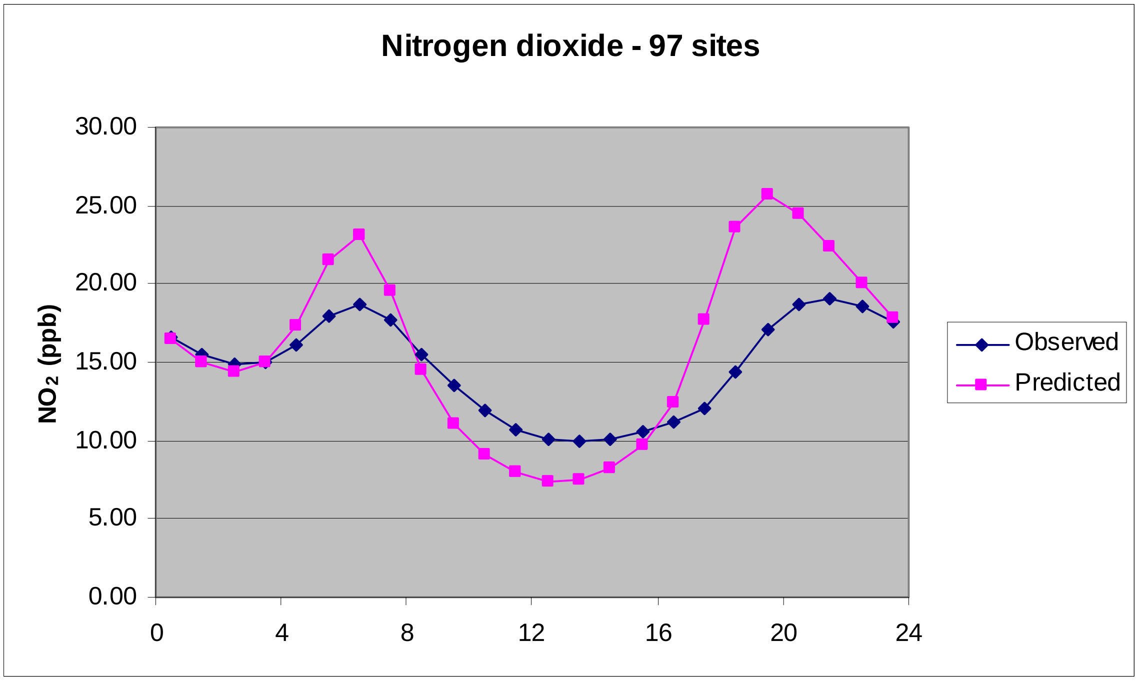

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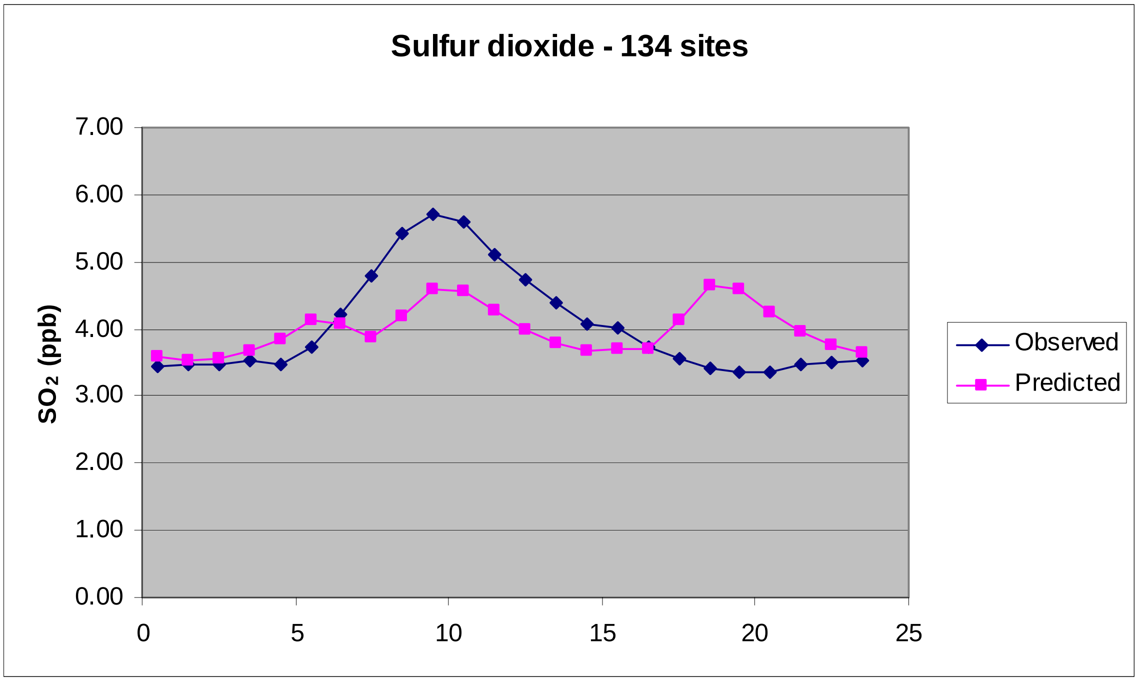

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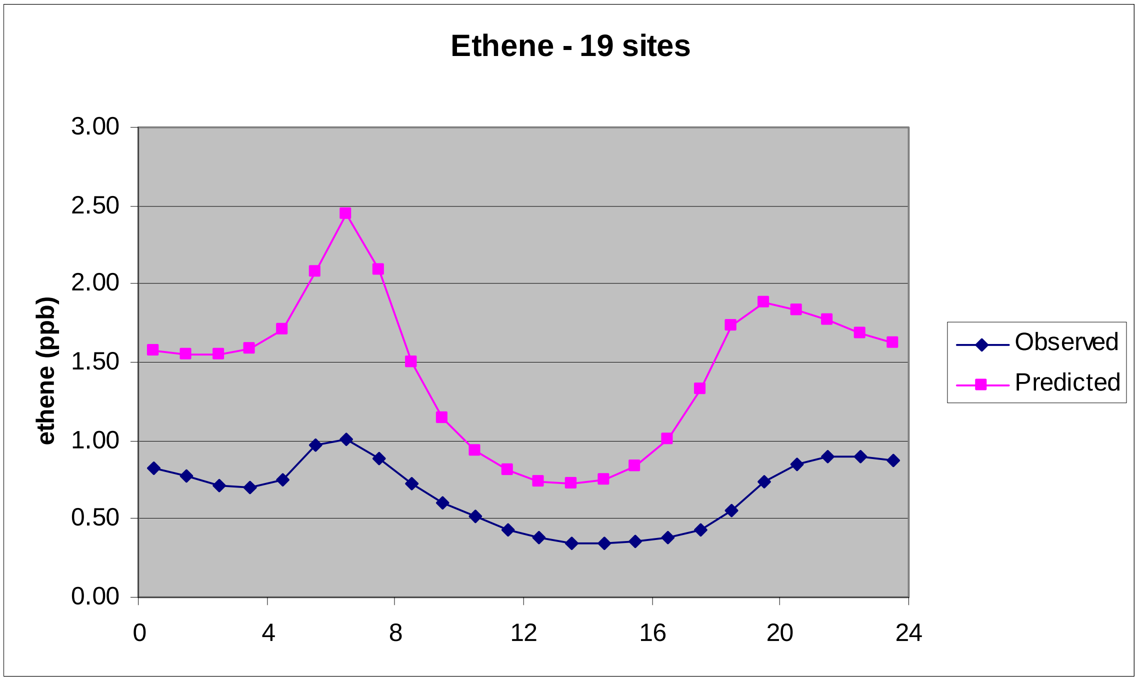

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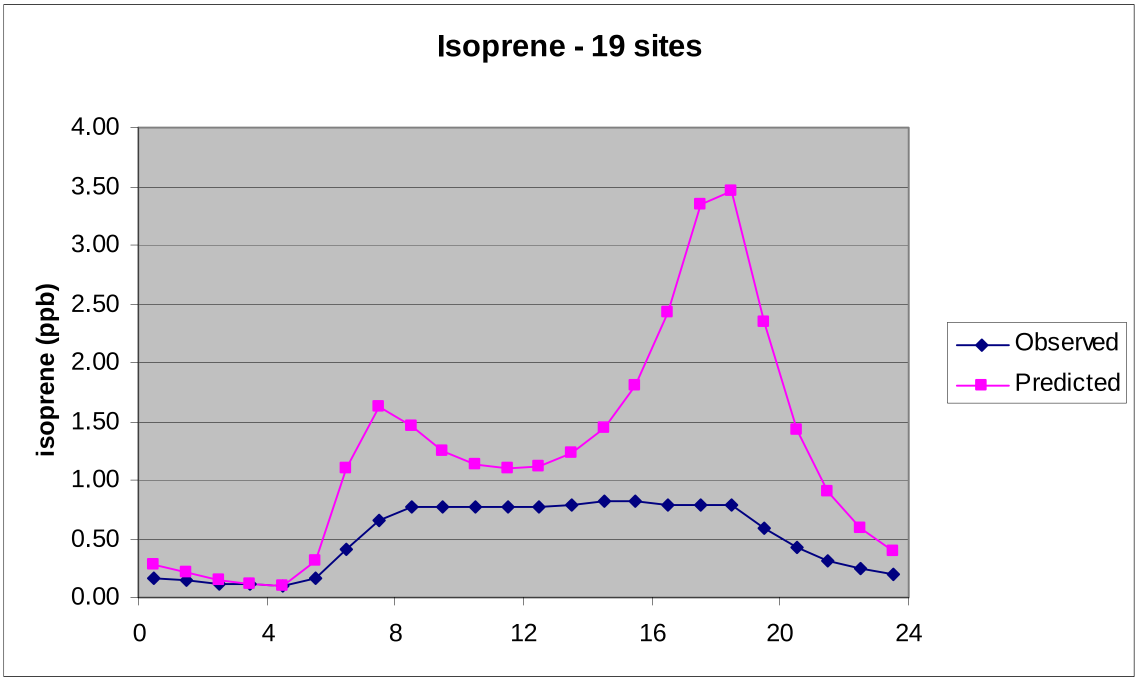

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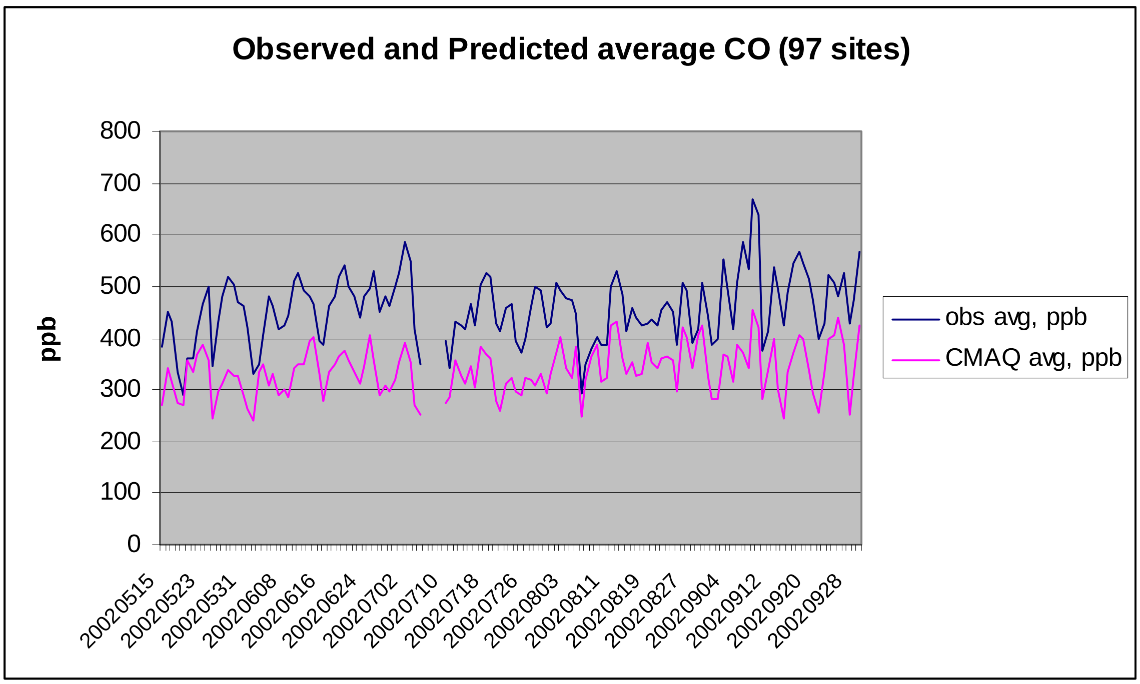

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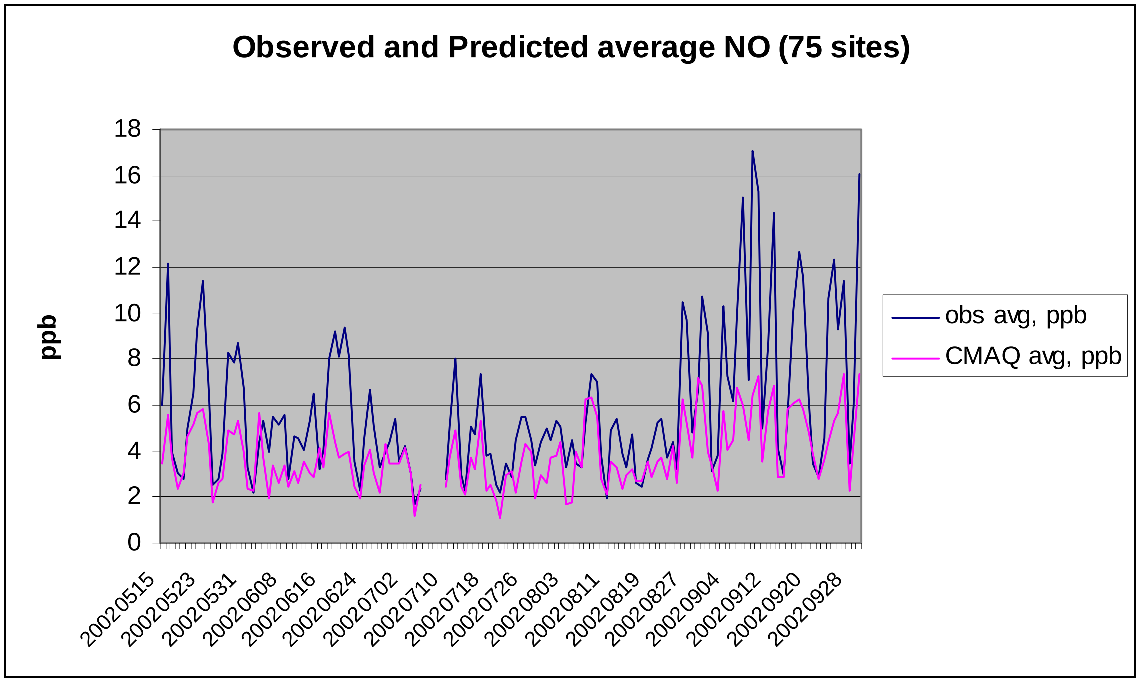

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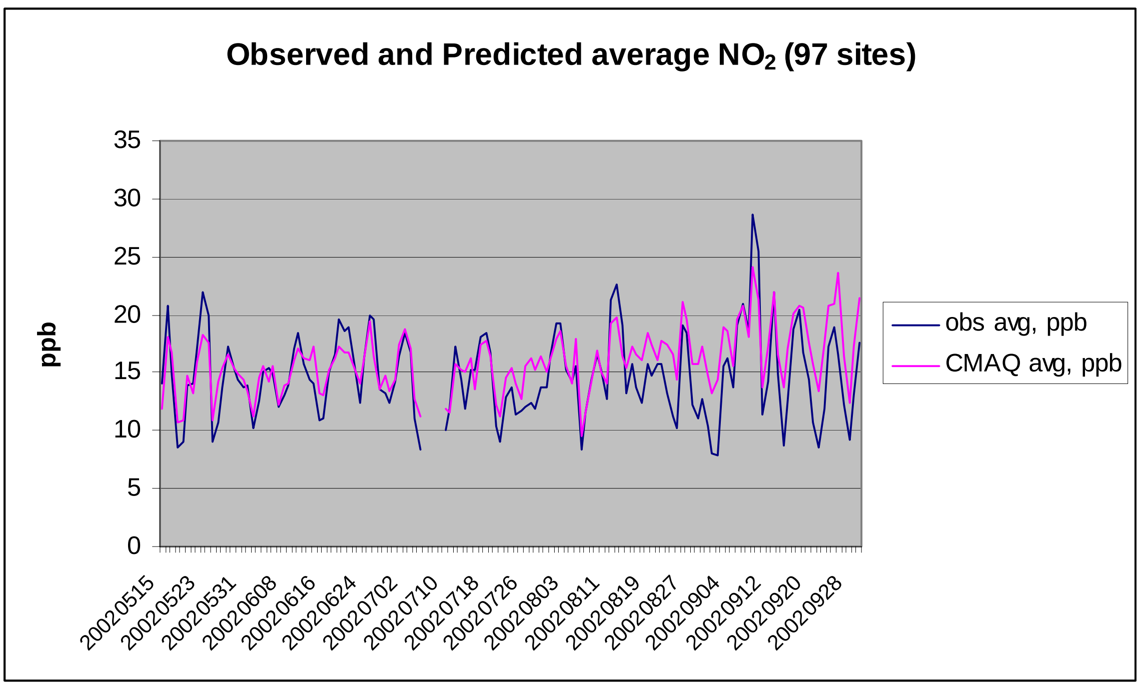

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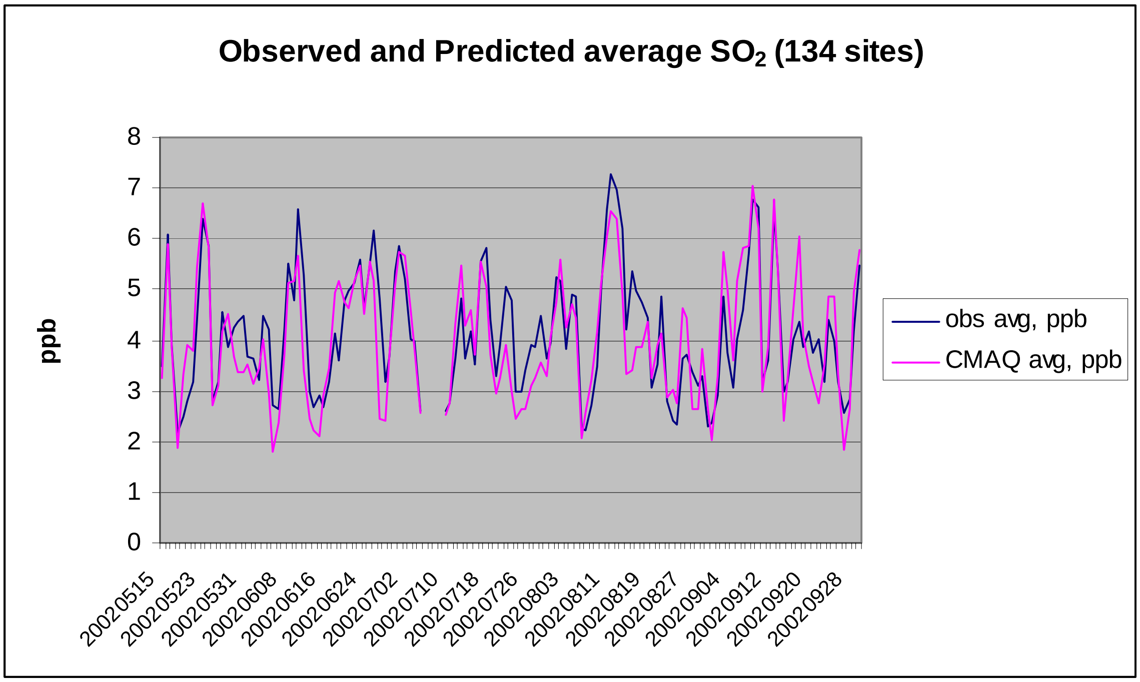


Figure 22.

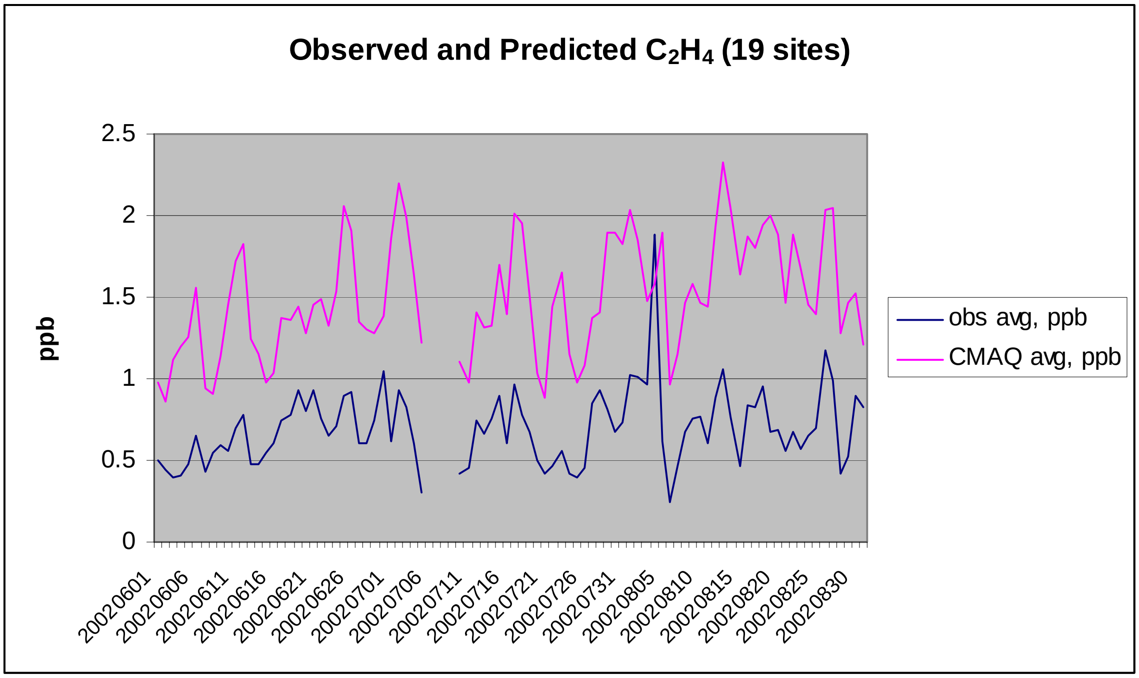
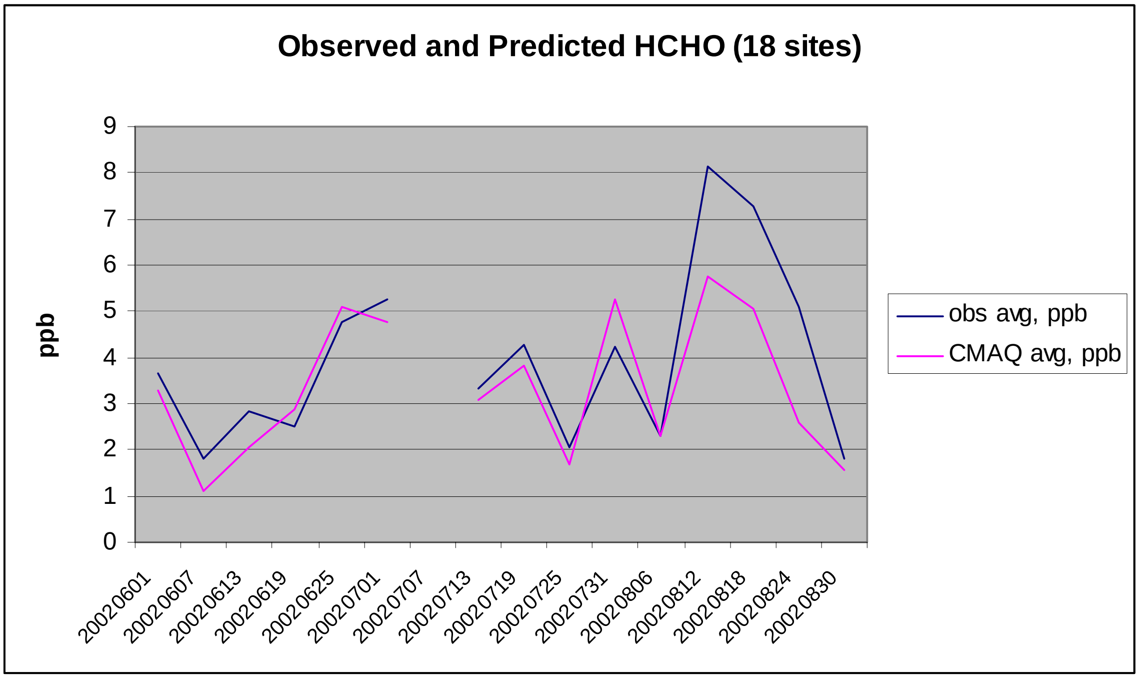


Figure 23.



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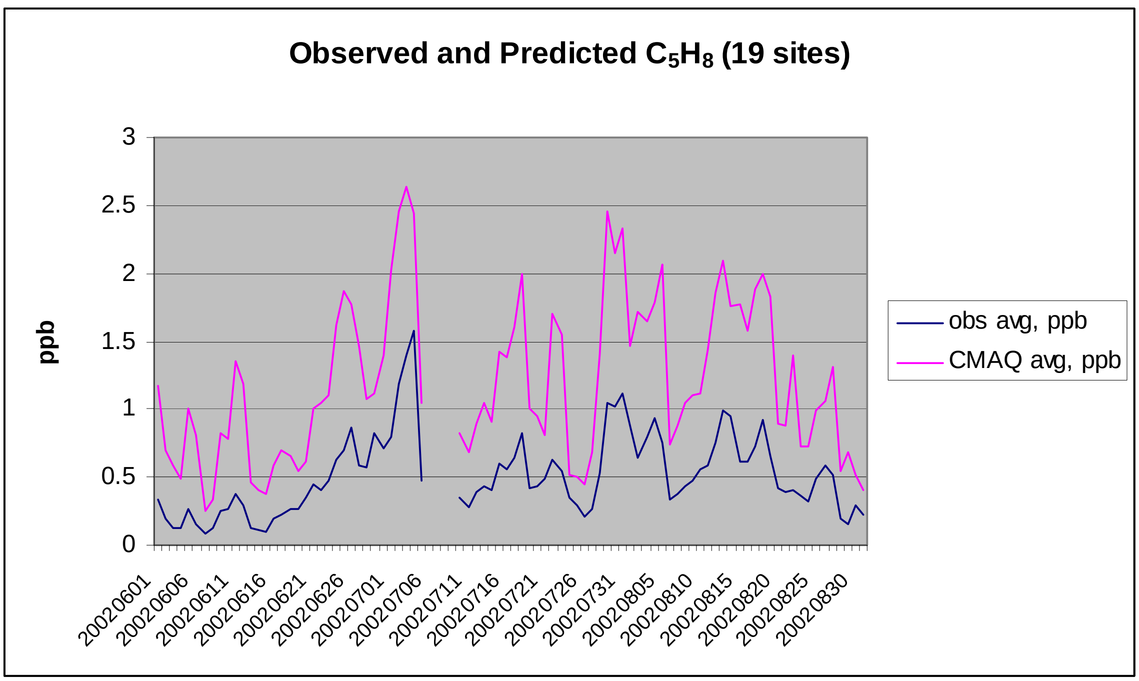

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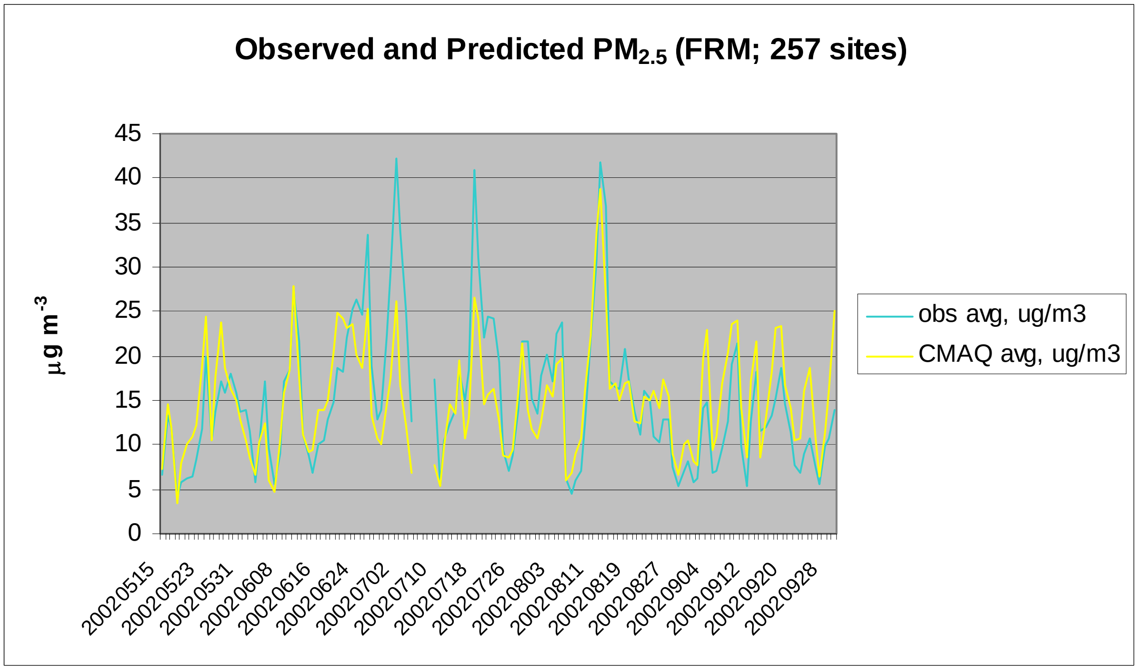

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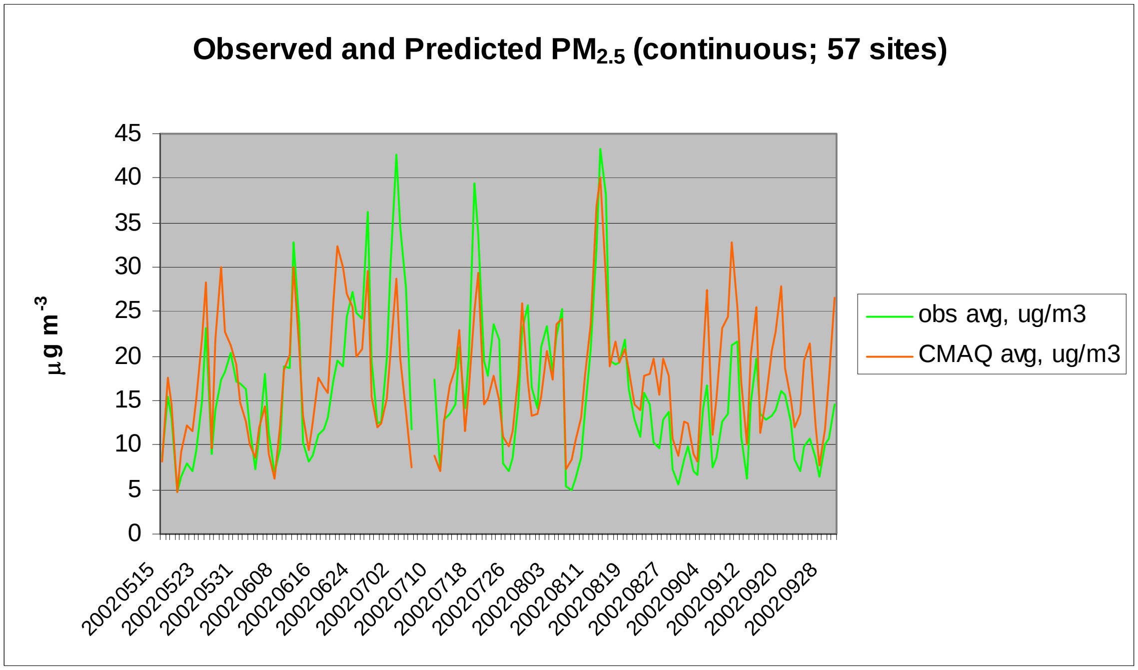

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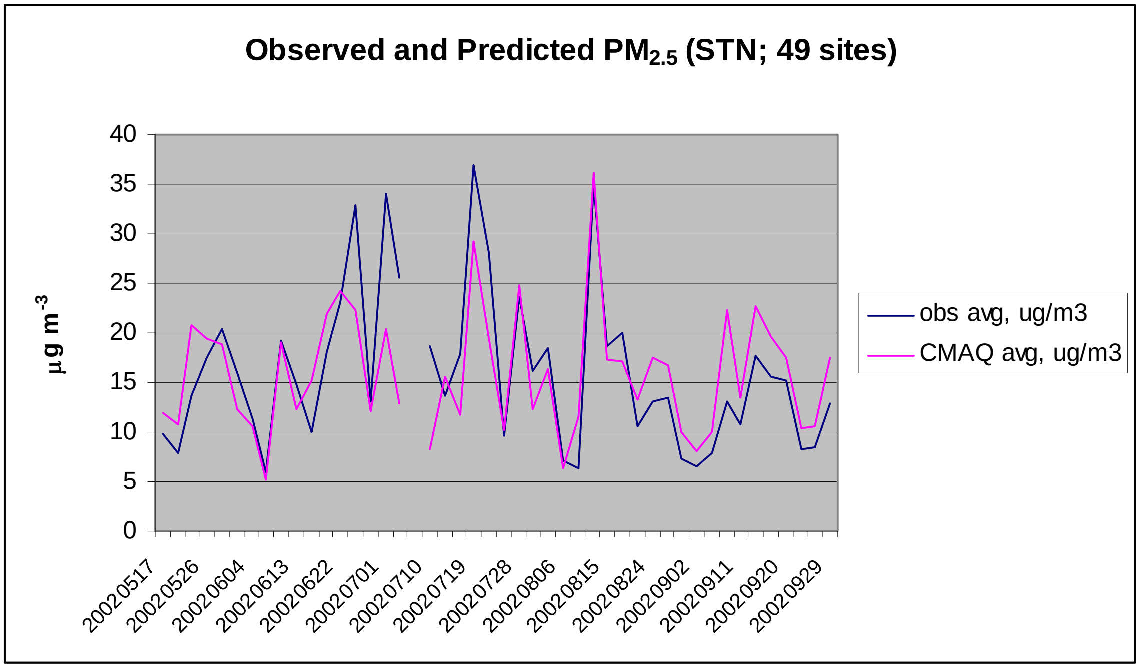

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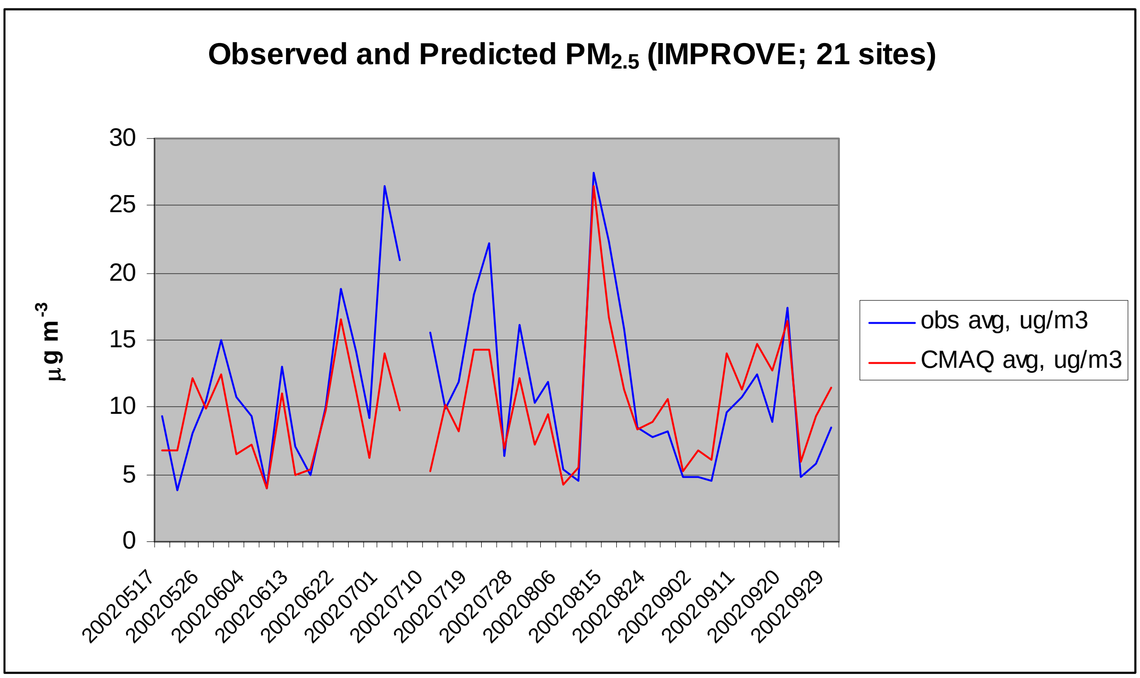

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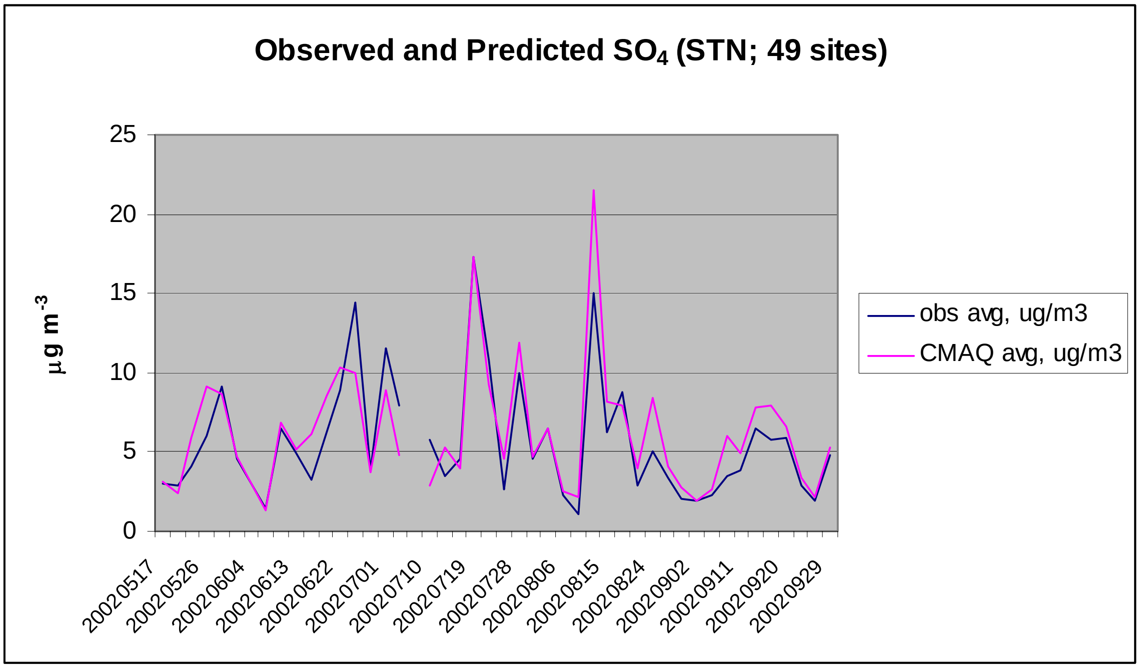

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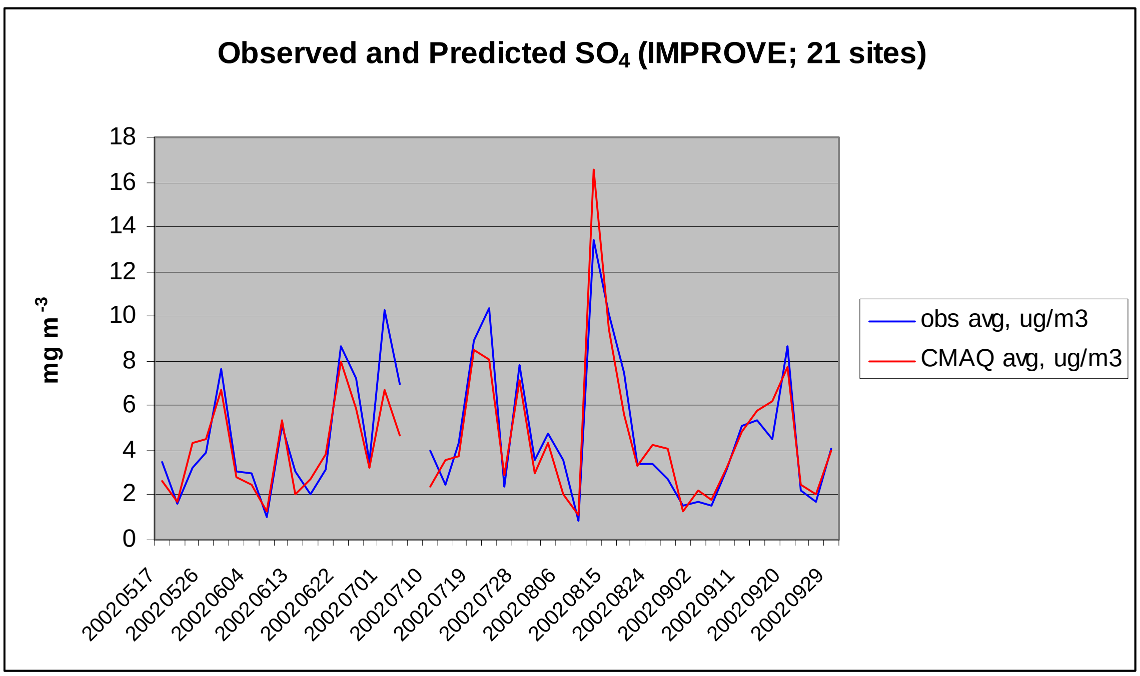

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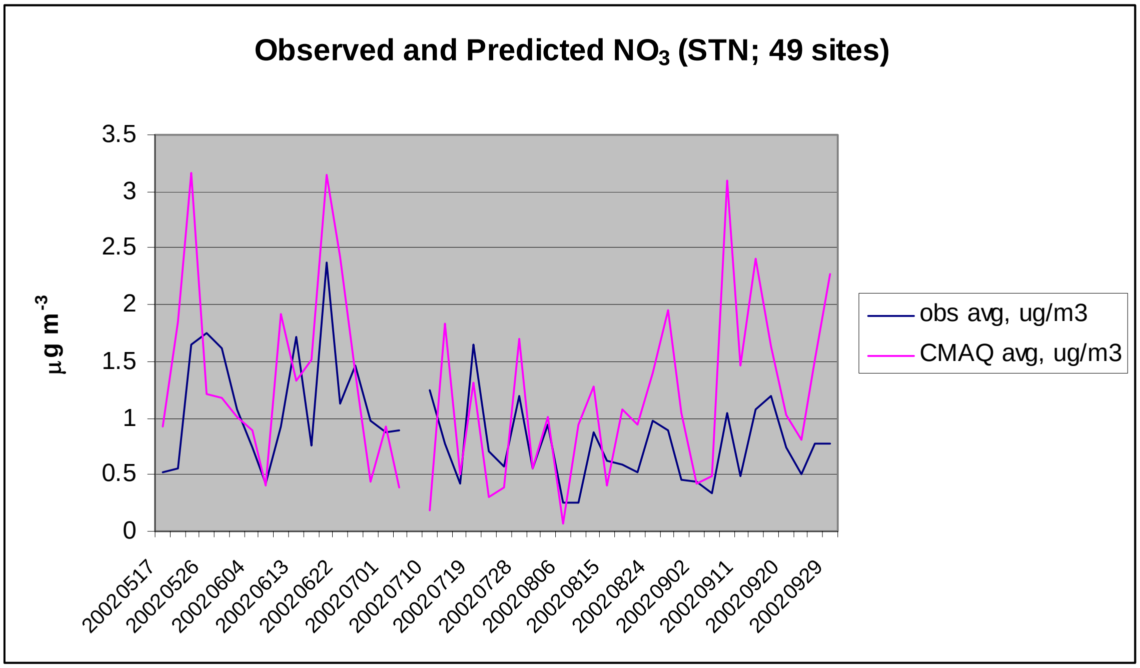

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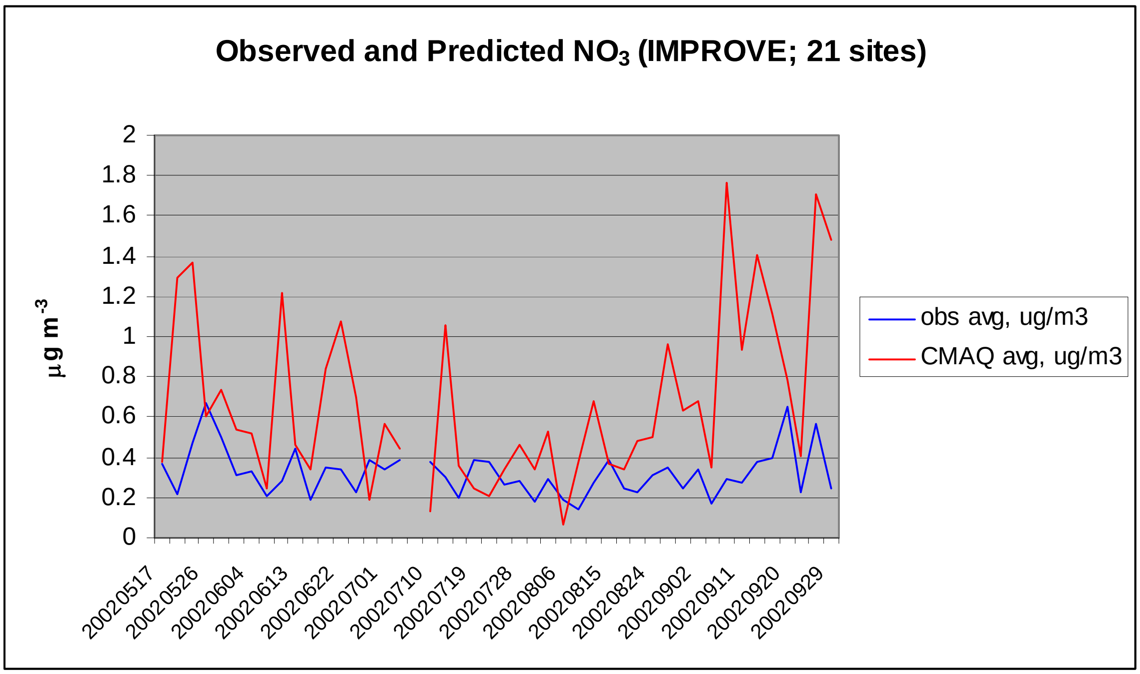

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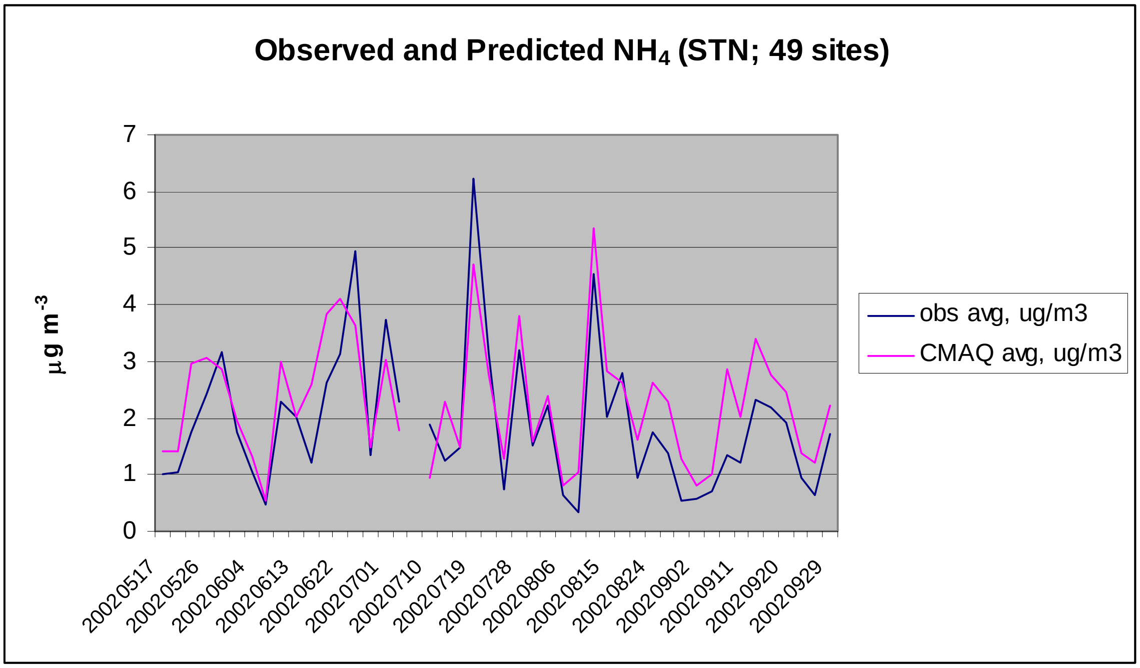

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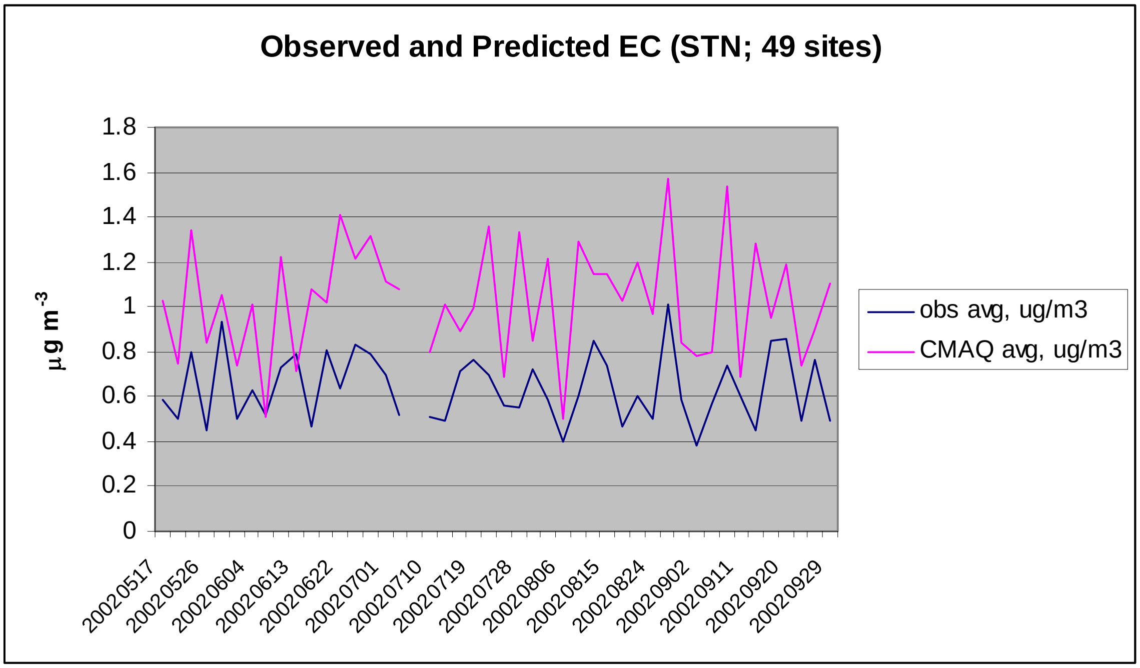

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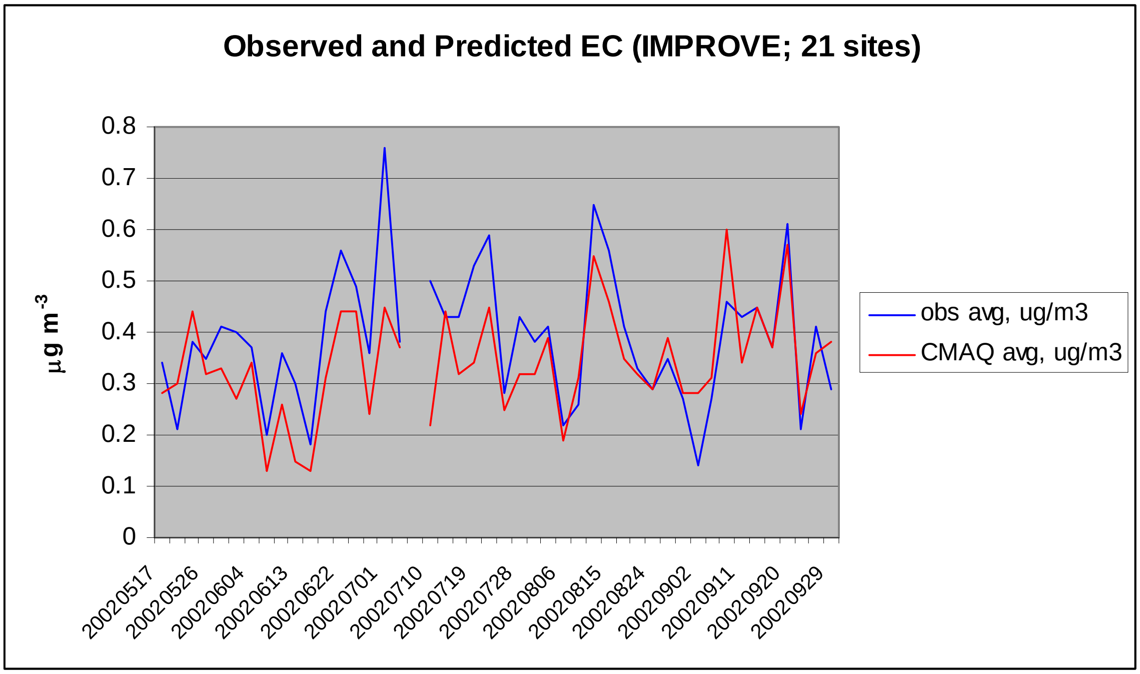

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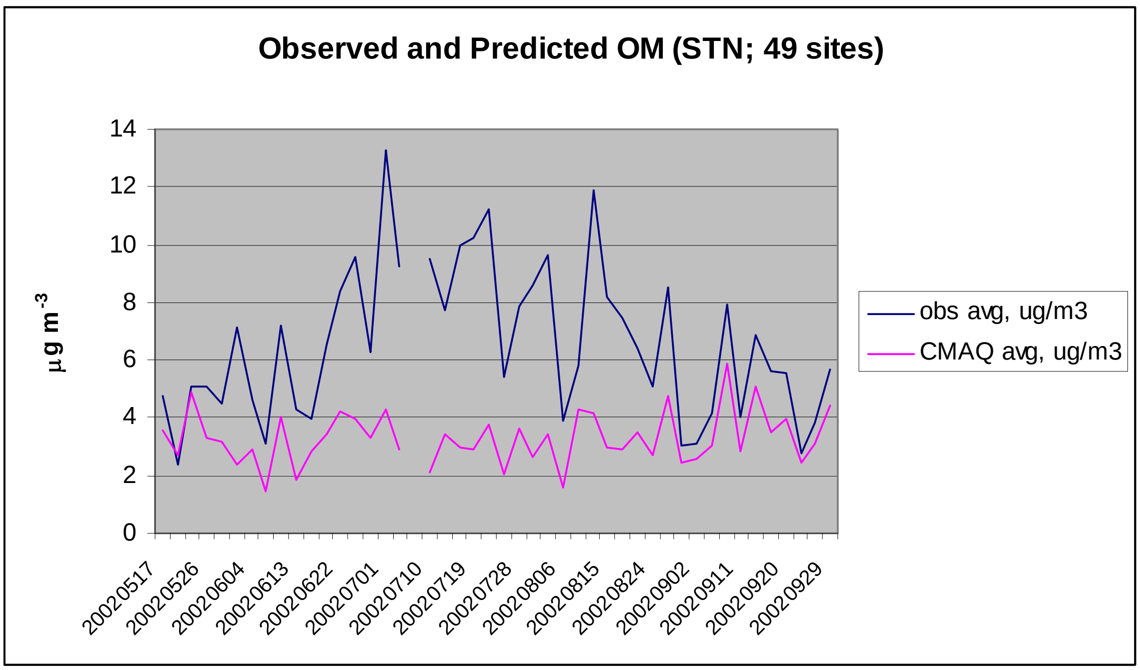

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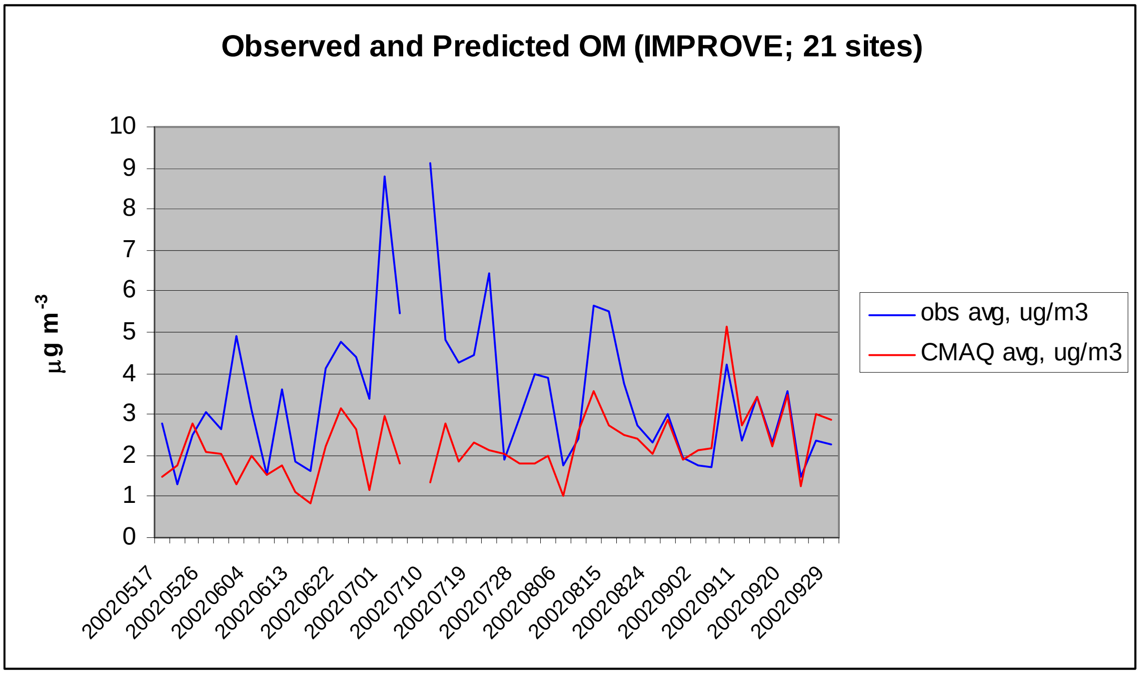

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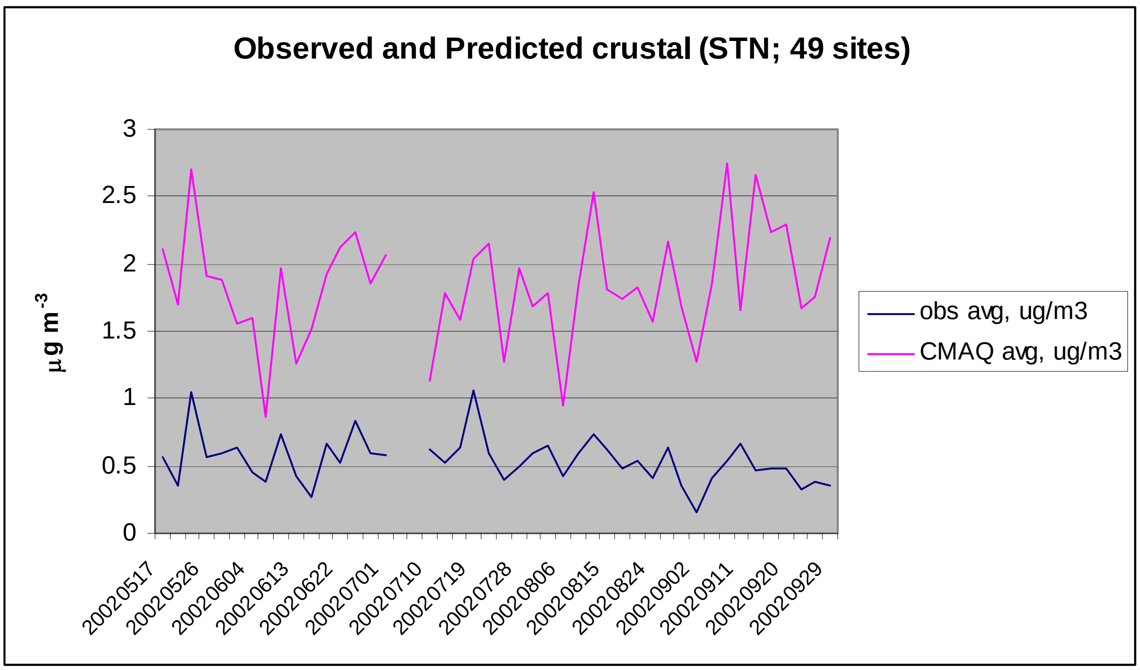

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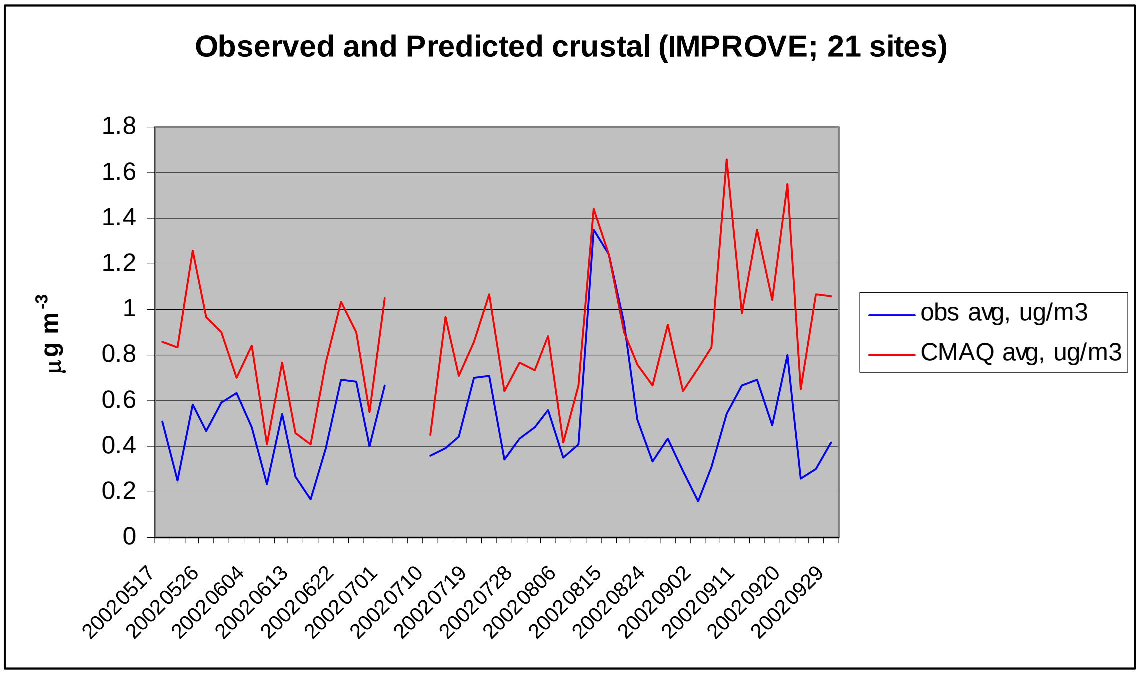

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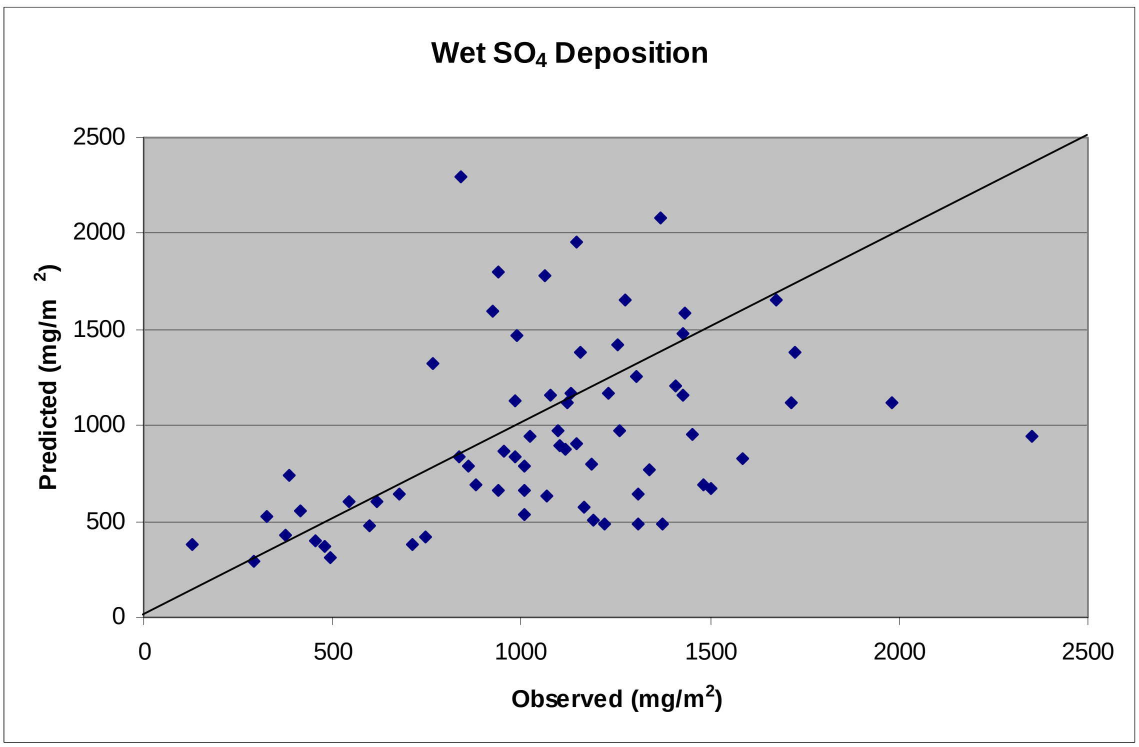

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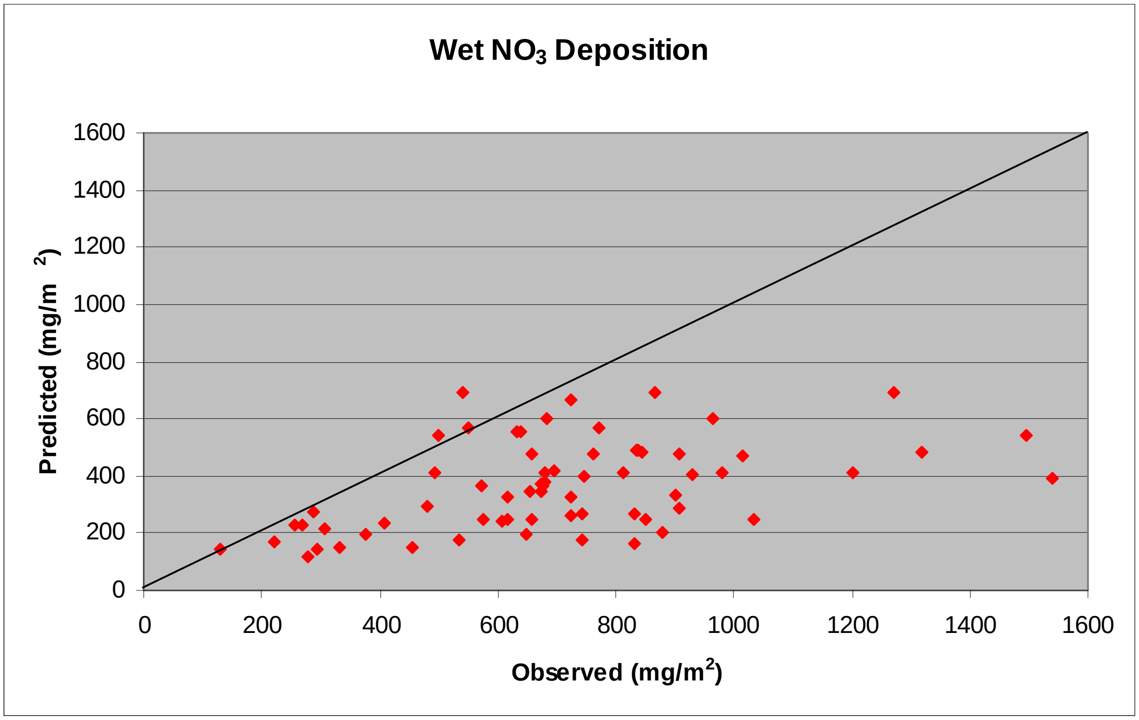

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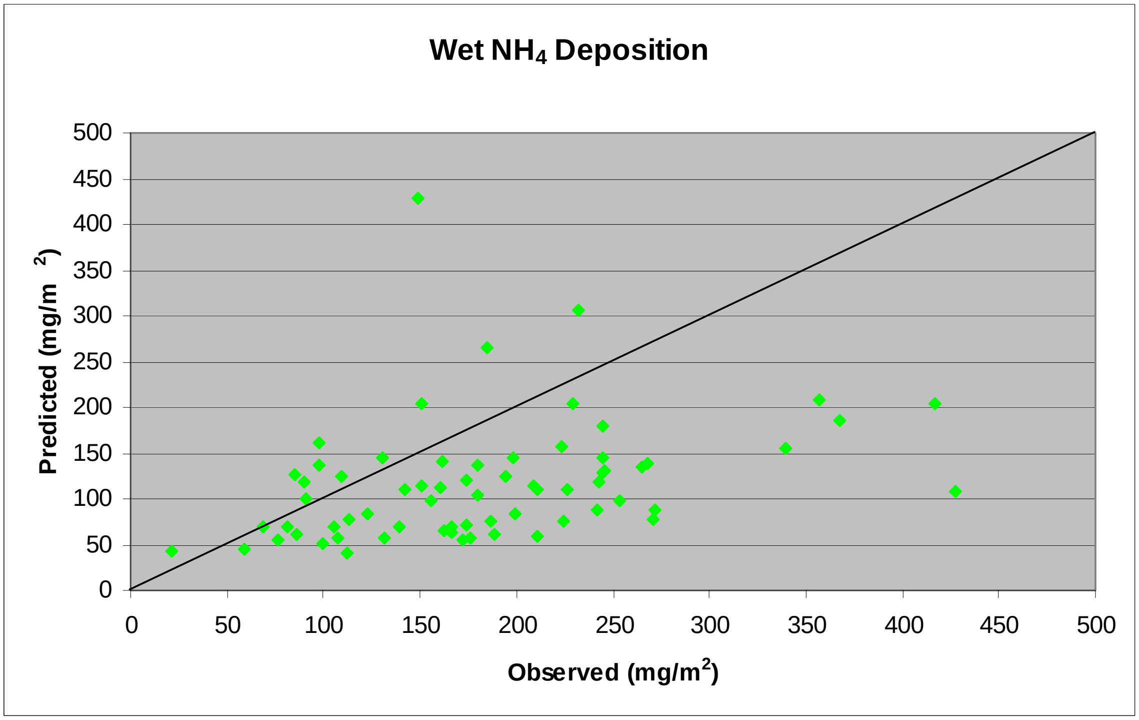

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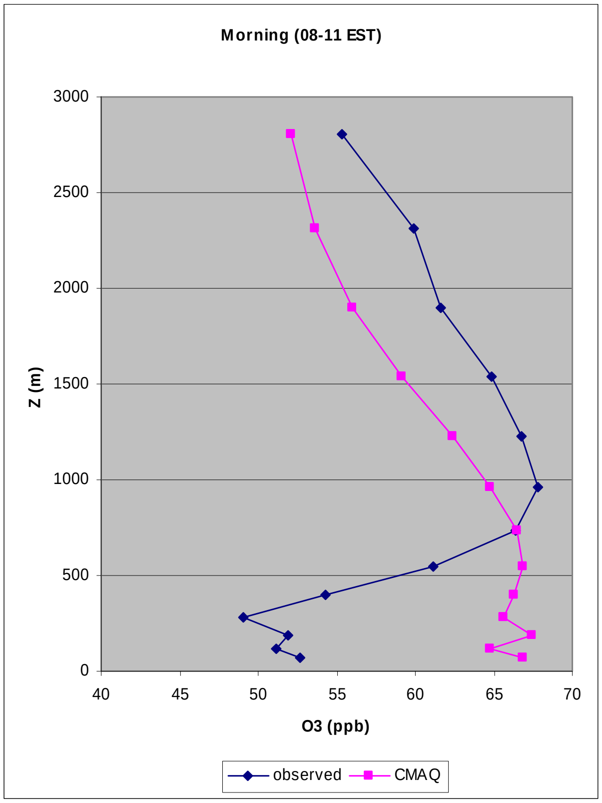

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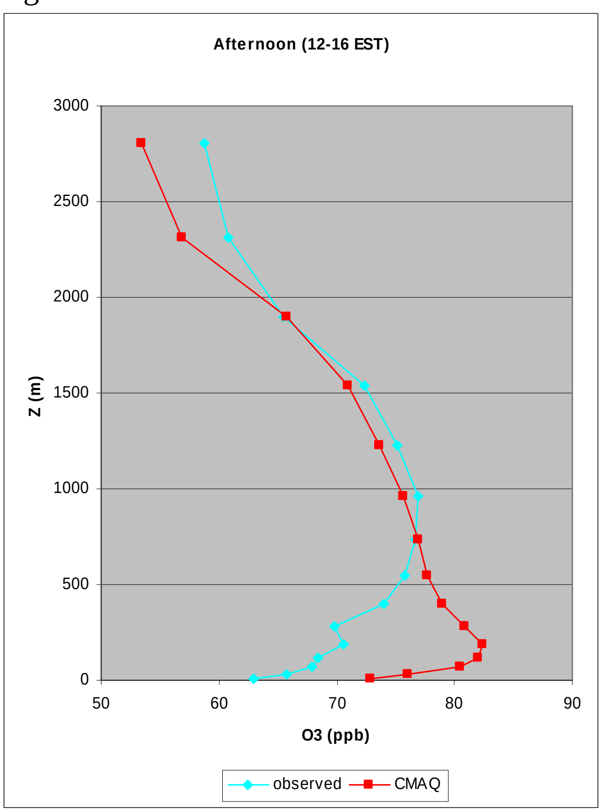

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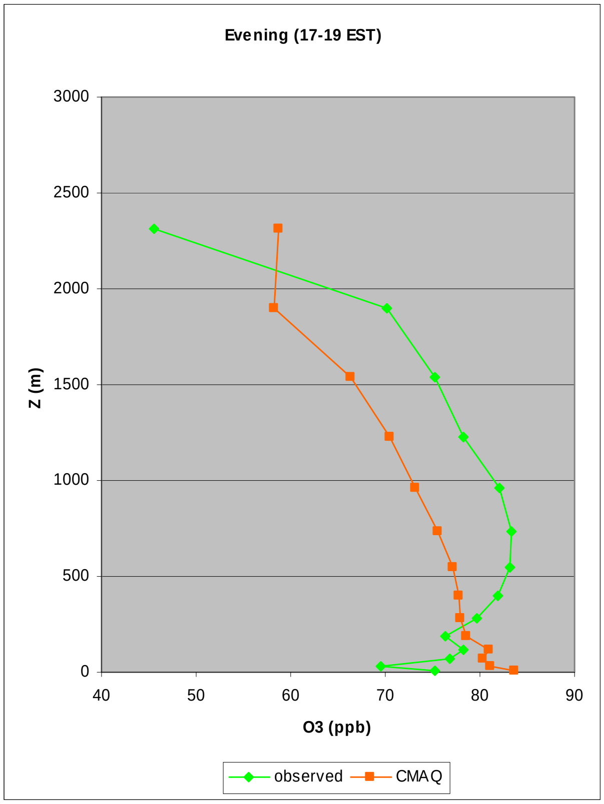

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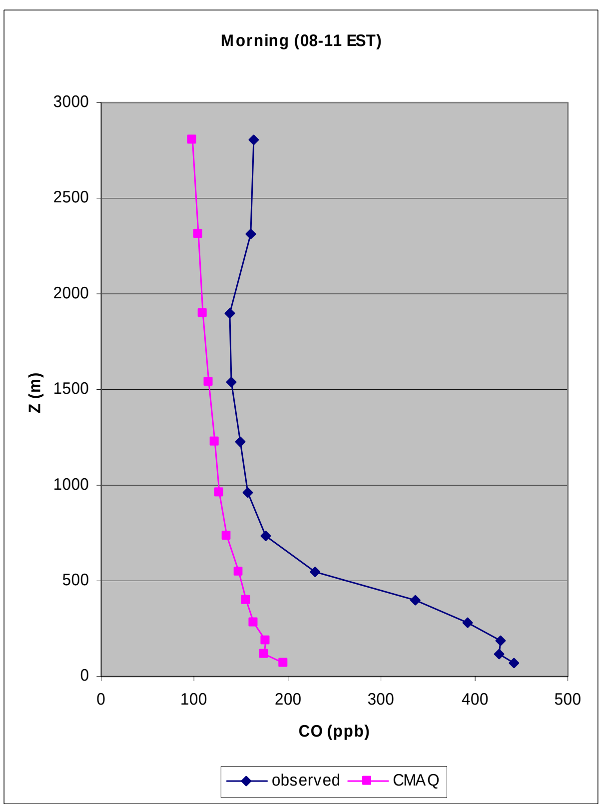

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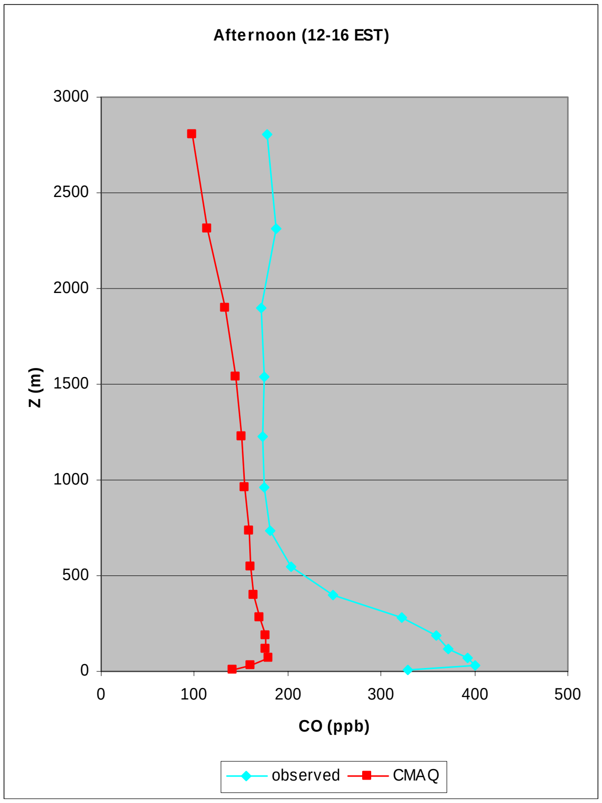

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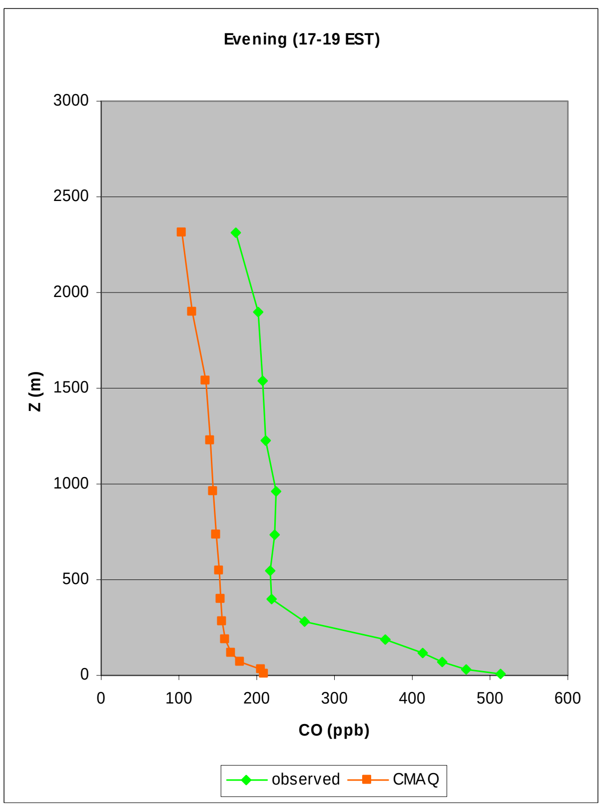

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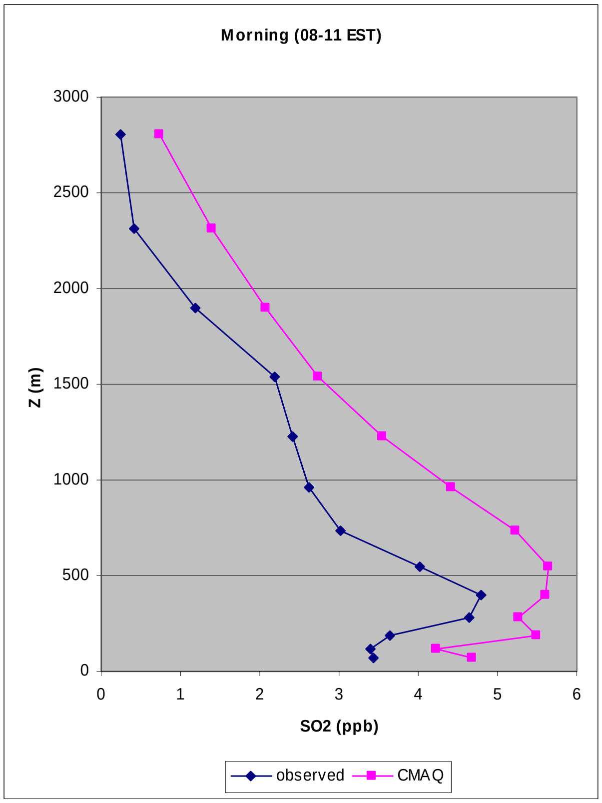

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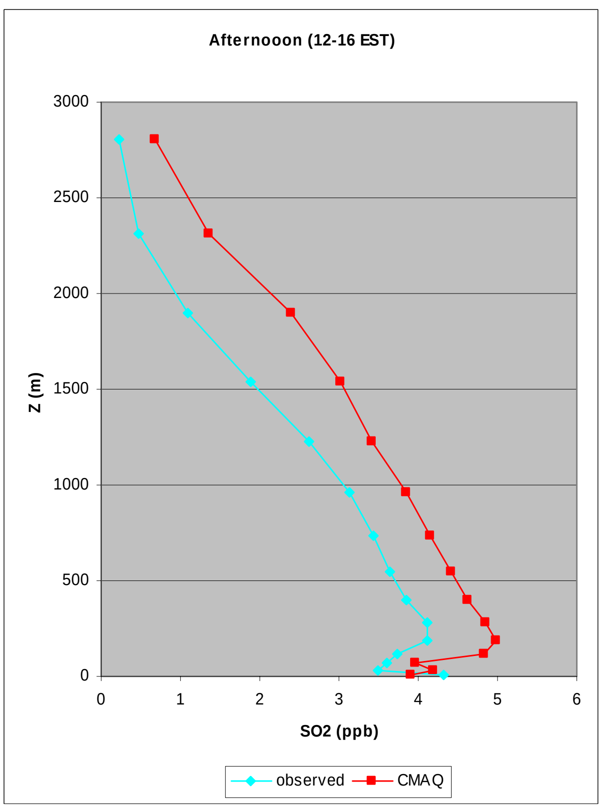

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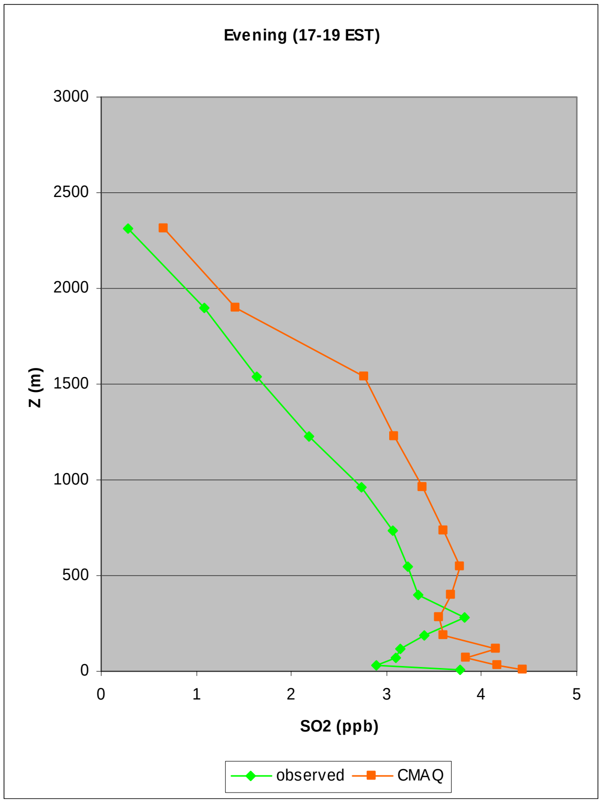
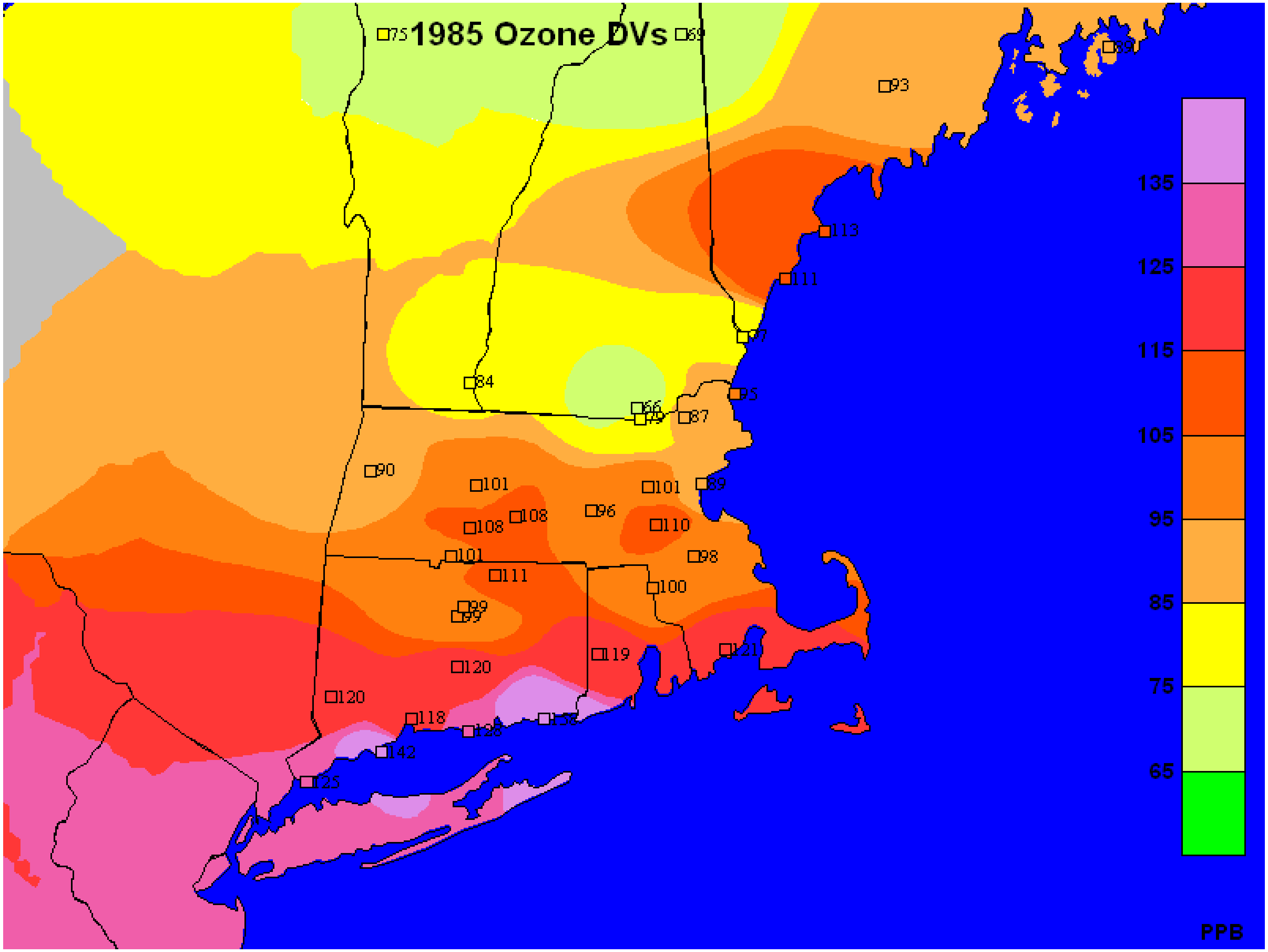
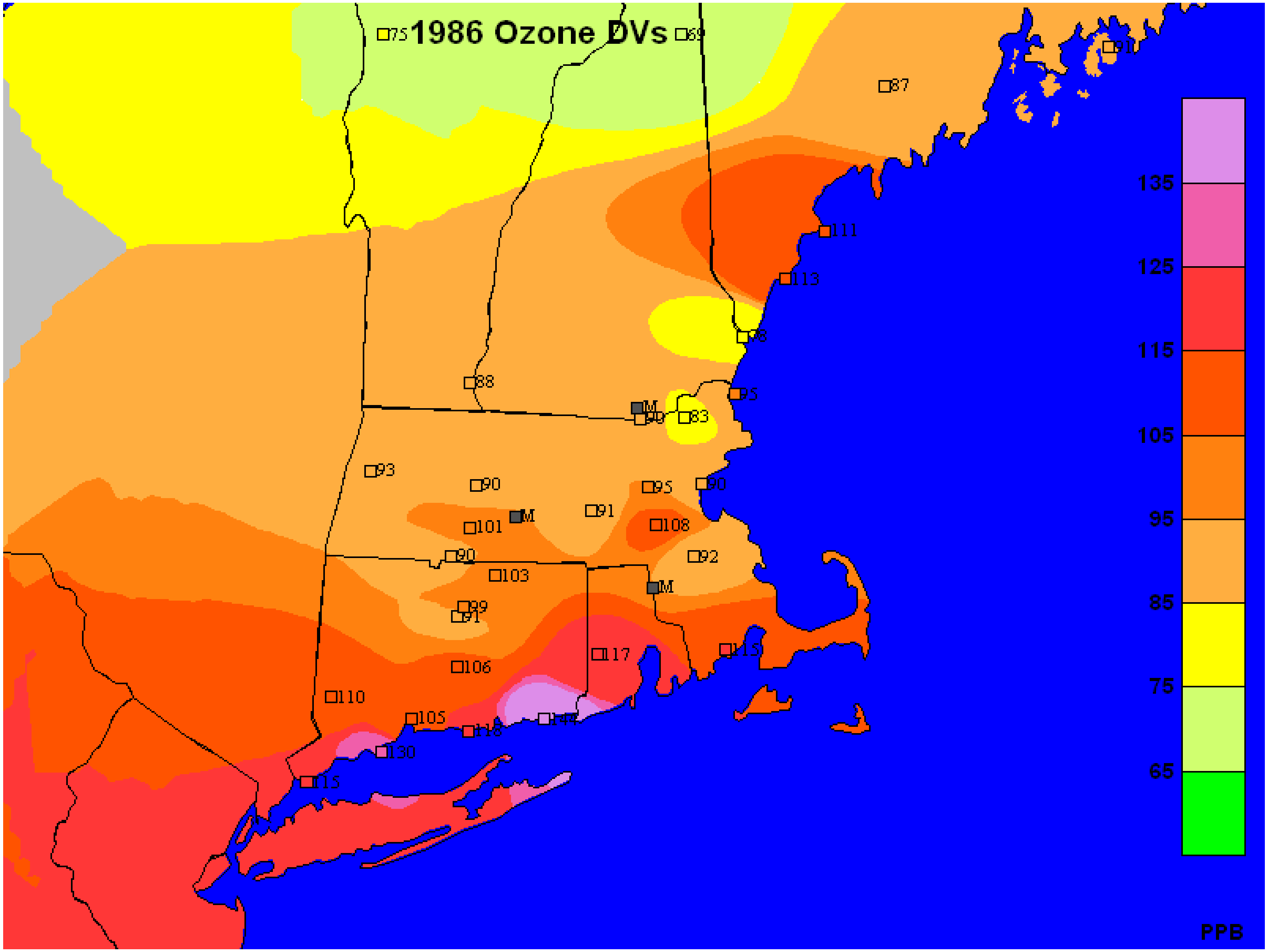

Evening (17-19 EST)
Z (m)
3000
2500
2000
1500
1000
500
0
0
1
2
3
4
5
SO2 (ppb)
observed
CMAQ

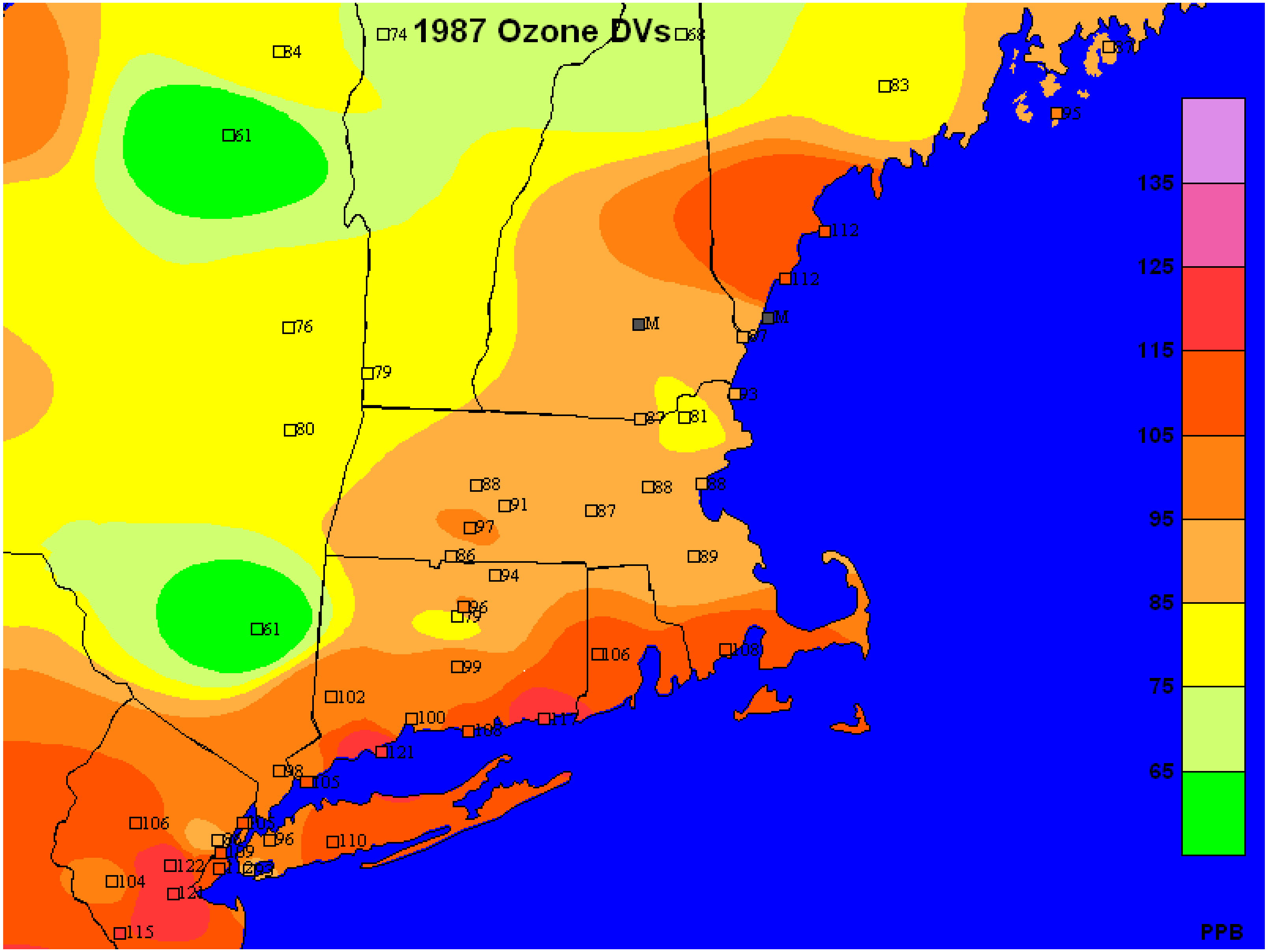
Appendix 8N

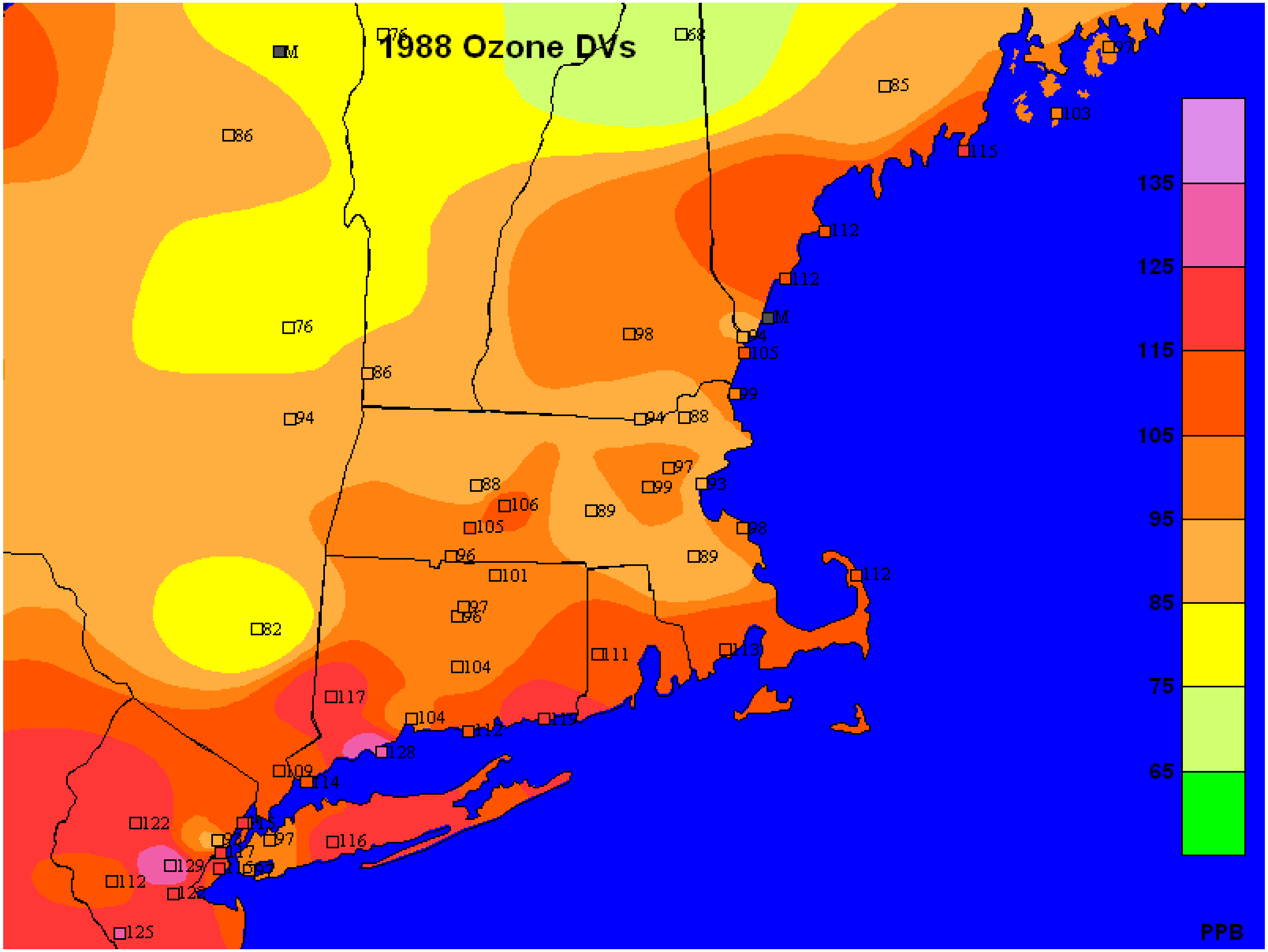
Isopleth Maps Displaying
Ozone Design Value Improvements
In the Northeast
1985 - 2006

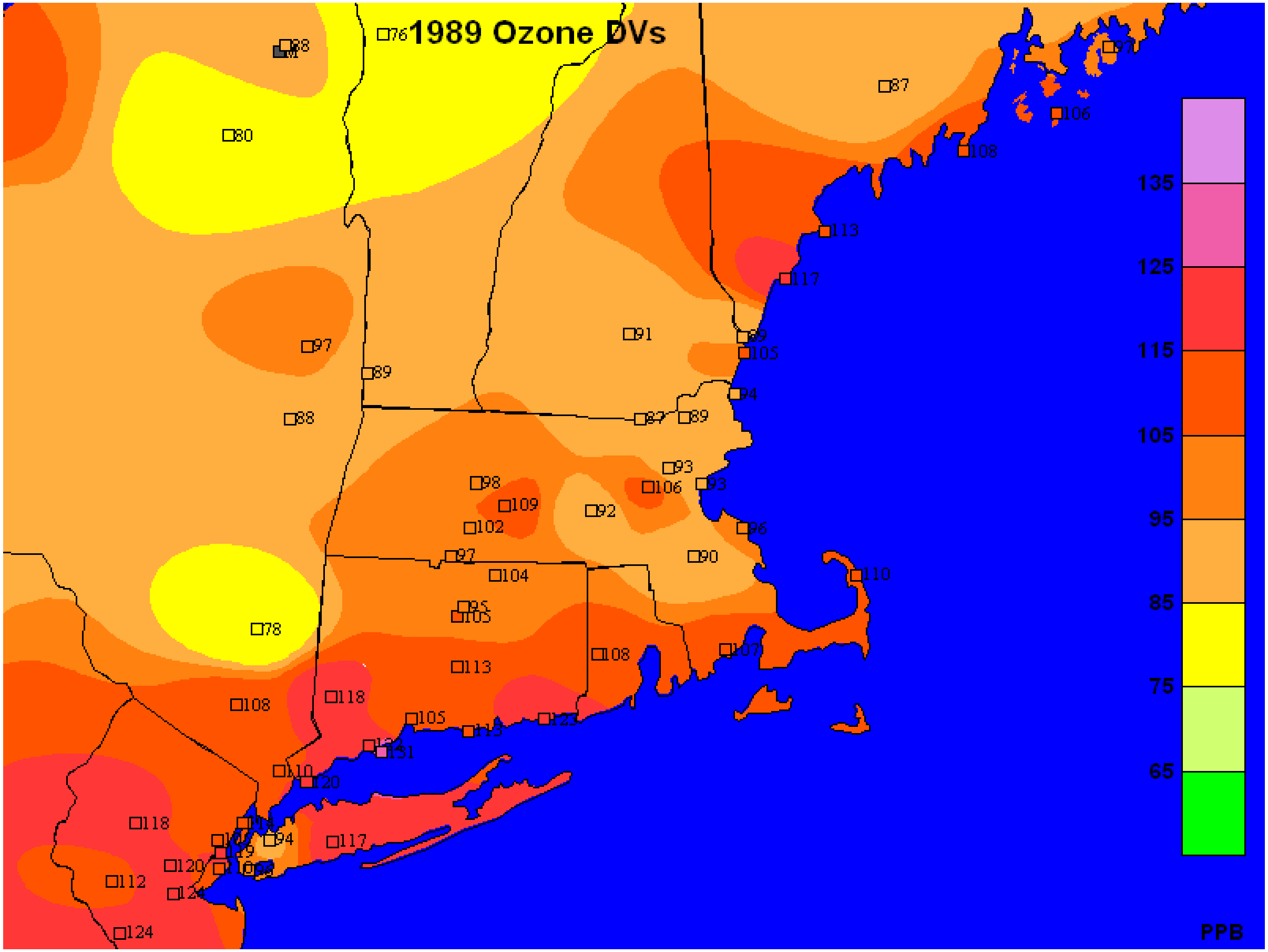

1985 Ozone DVs
135
125
115
105
95
85
75
65
PPB



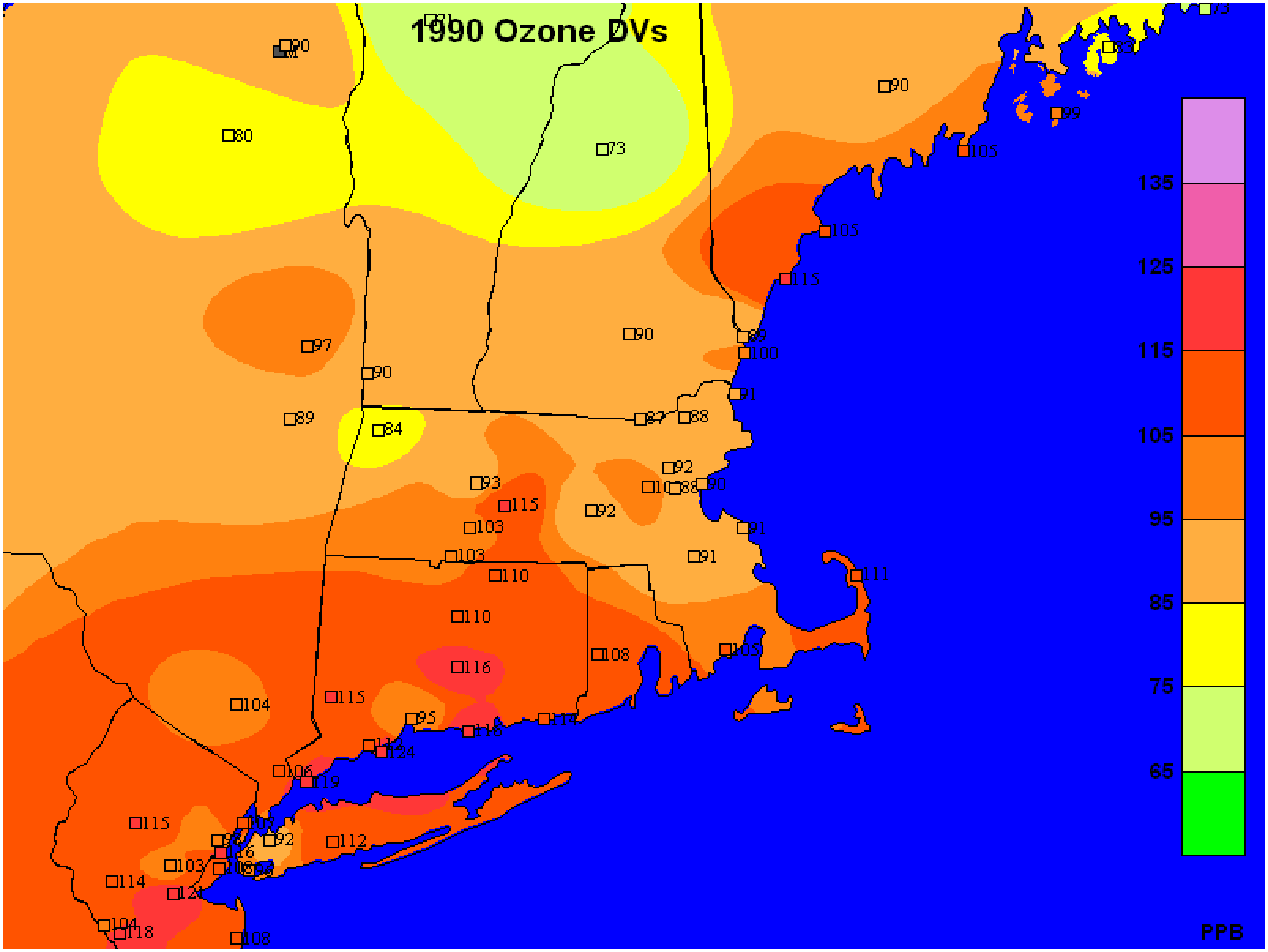
1986 Ozone DVs
75
69
81
87
111
113
98
95
88
M
90
83
93
90
95
90
M
91
101
108
90
92
103
M
99
91
117
115
106
110
105
118
147
130
115
135
125
115
105
95
85
75
65
PPB

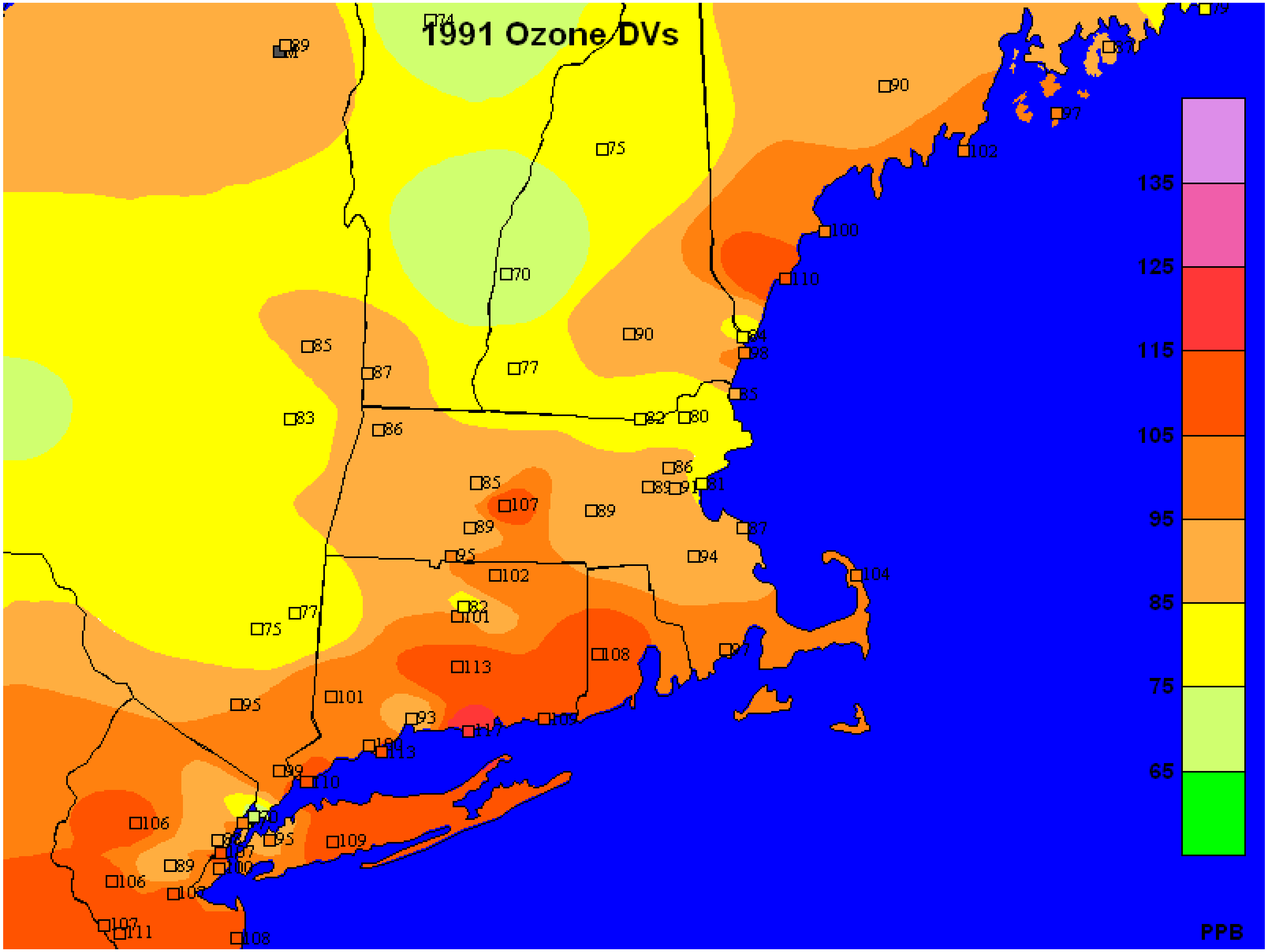

1987 Ozone DVs
74
68
84
87
83
61
95
112
112
M
M
87
76
79
93
87
81
80
88
88
88
91
87
97
86
89
94
96
79
61
106
108
99
102
100
108
117
121
98
105
106
105
96
110
122
104
121
115
135
125
115
105
95
85
75
65
PPB


1988 Ozone DVs
135
125
115
105
95
85
75
65
PPB
76
68
86
85
103
115
112
112
76
98
94
105
86
99
94
88
97
99
93
88
106
89
105
98
96
89
101
112
97
96
82
111
113
104
117
104
112
113
128
109
114
122
97
116
129
112
125

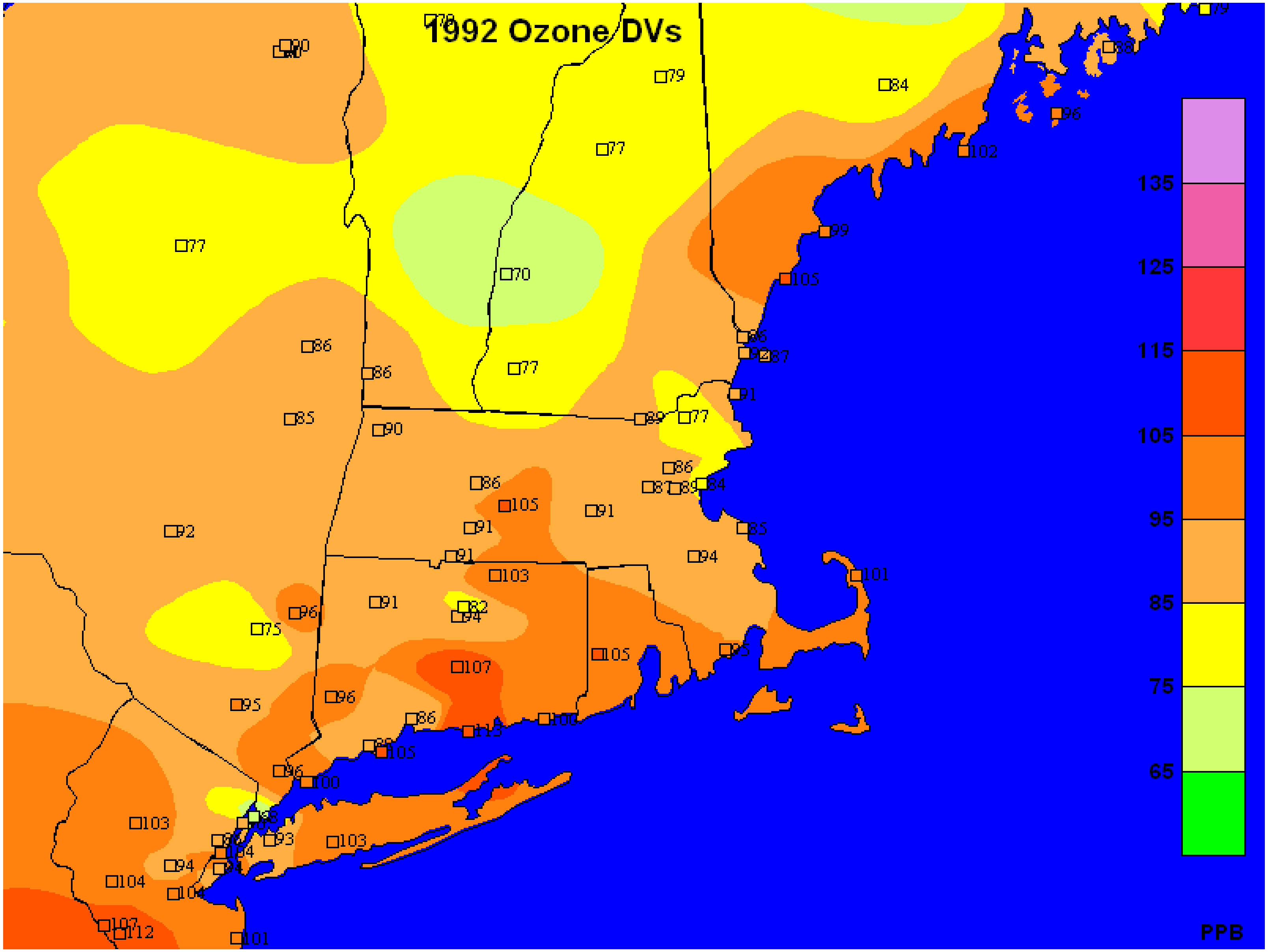


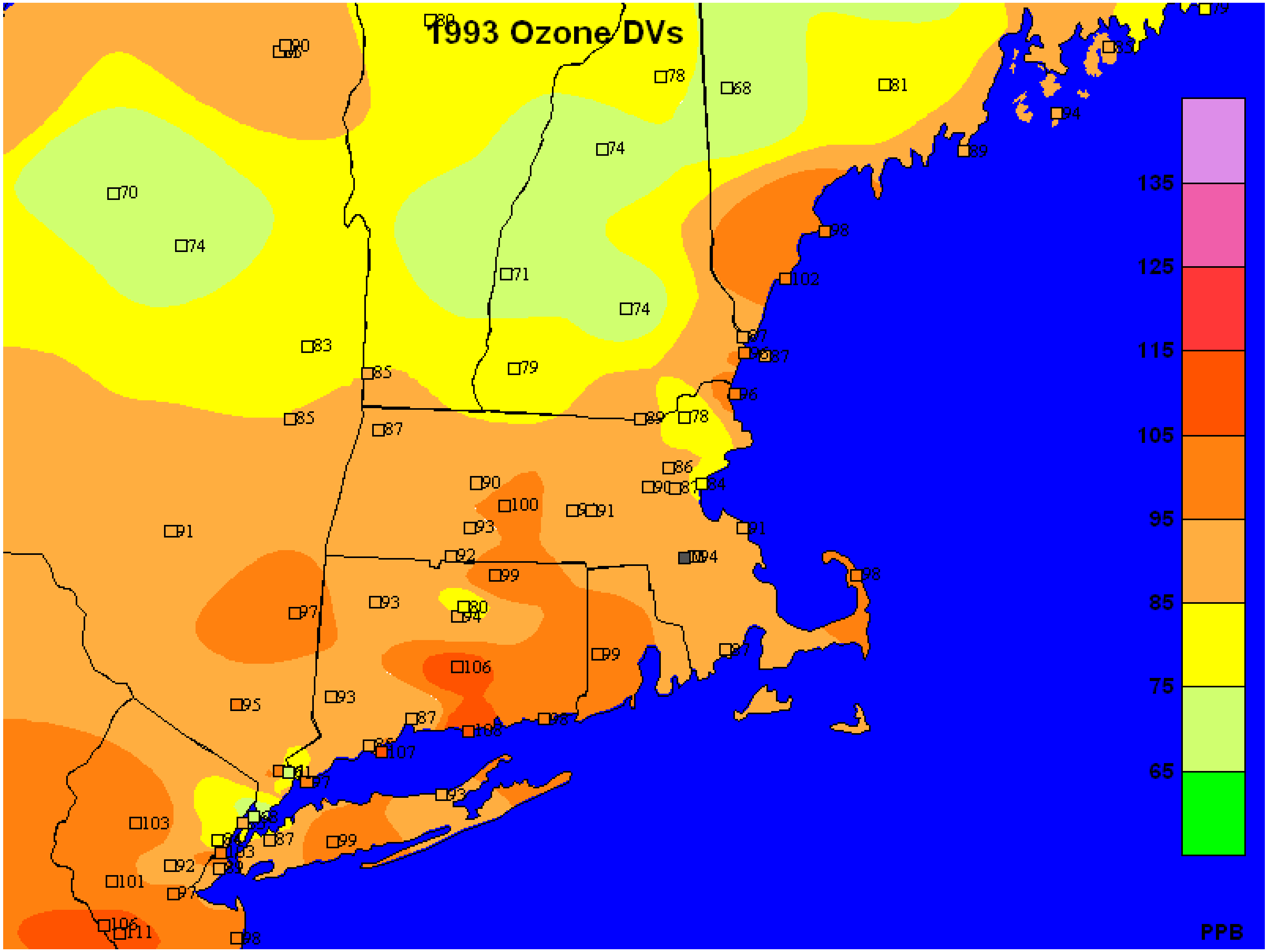
1989 Ozone DVs
135
125
115
105
95
85
75
65
PPB
76
88
80
87
106
108
113
117
97
89
91
105
94
88
98
109
102
92
96
104
90
110
78
107
118
123
131
120
117
112
124

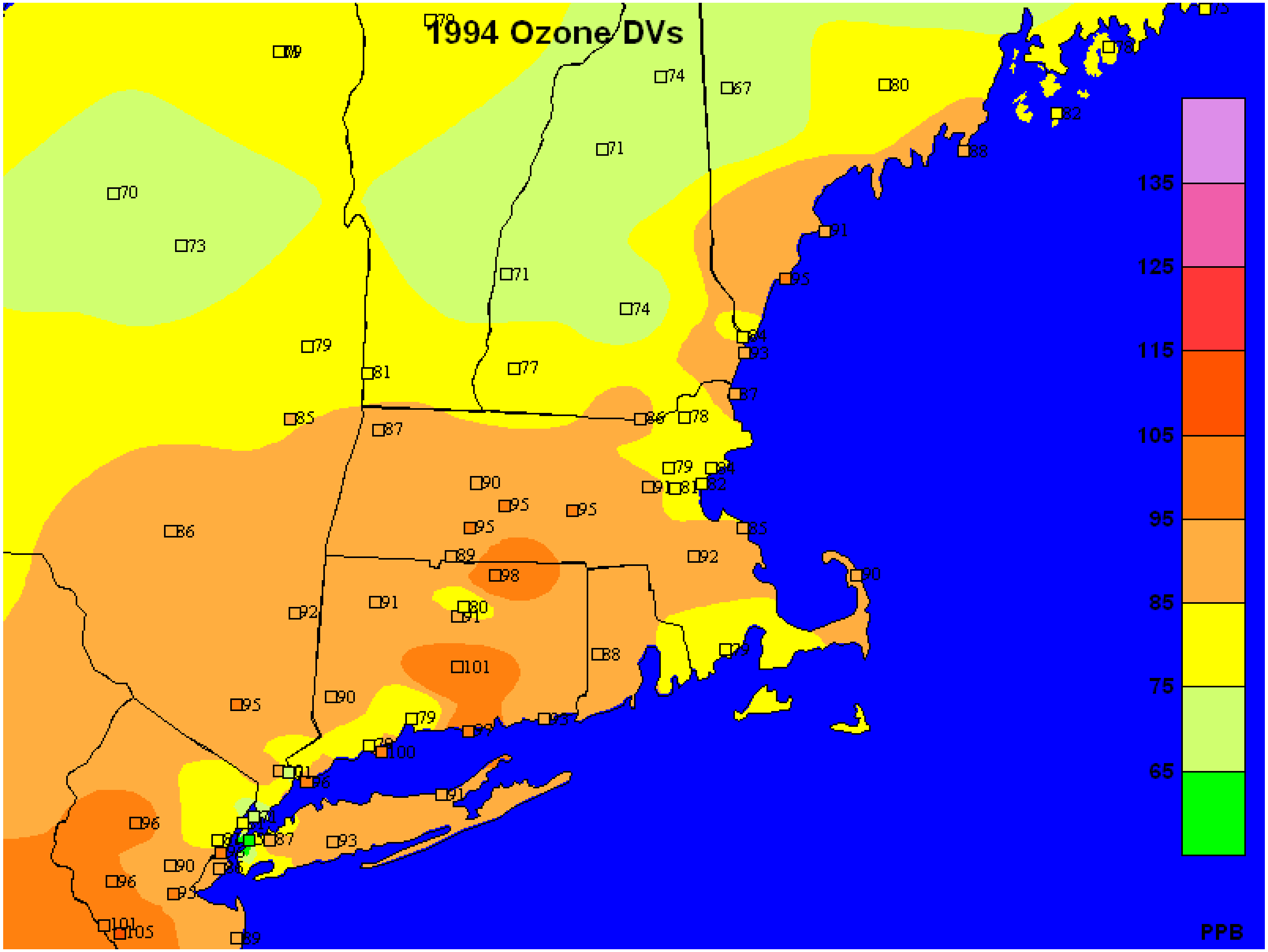

1990 Ozone DVs
135
125
115
105
95
85
75
65
PPB



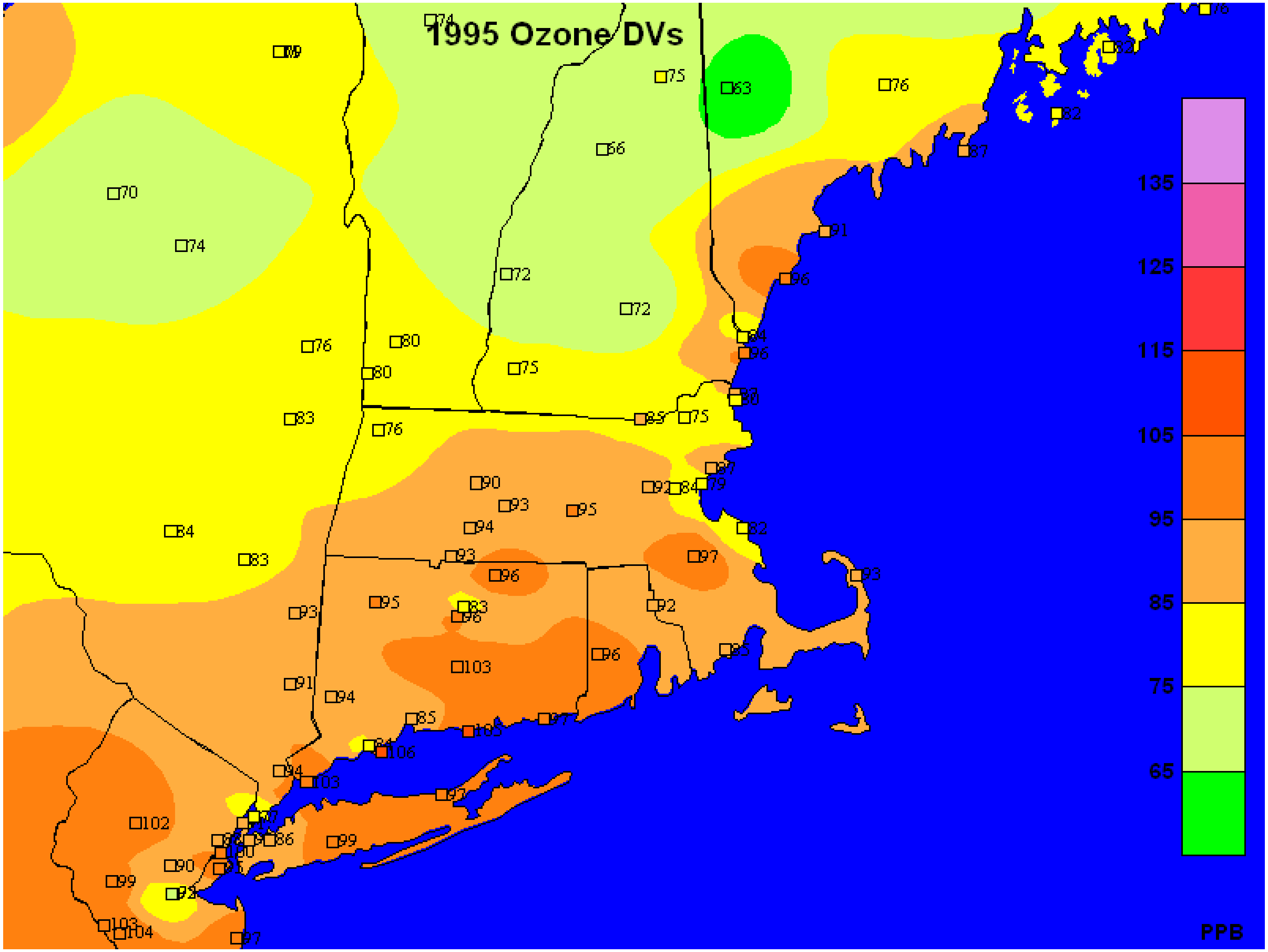
1991 Ozone DVs
135
125
115
105
95
85
75
65
PPB

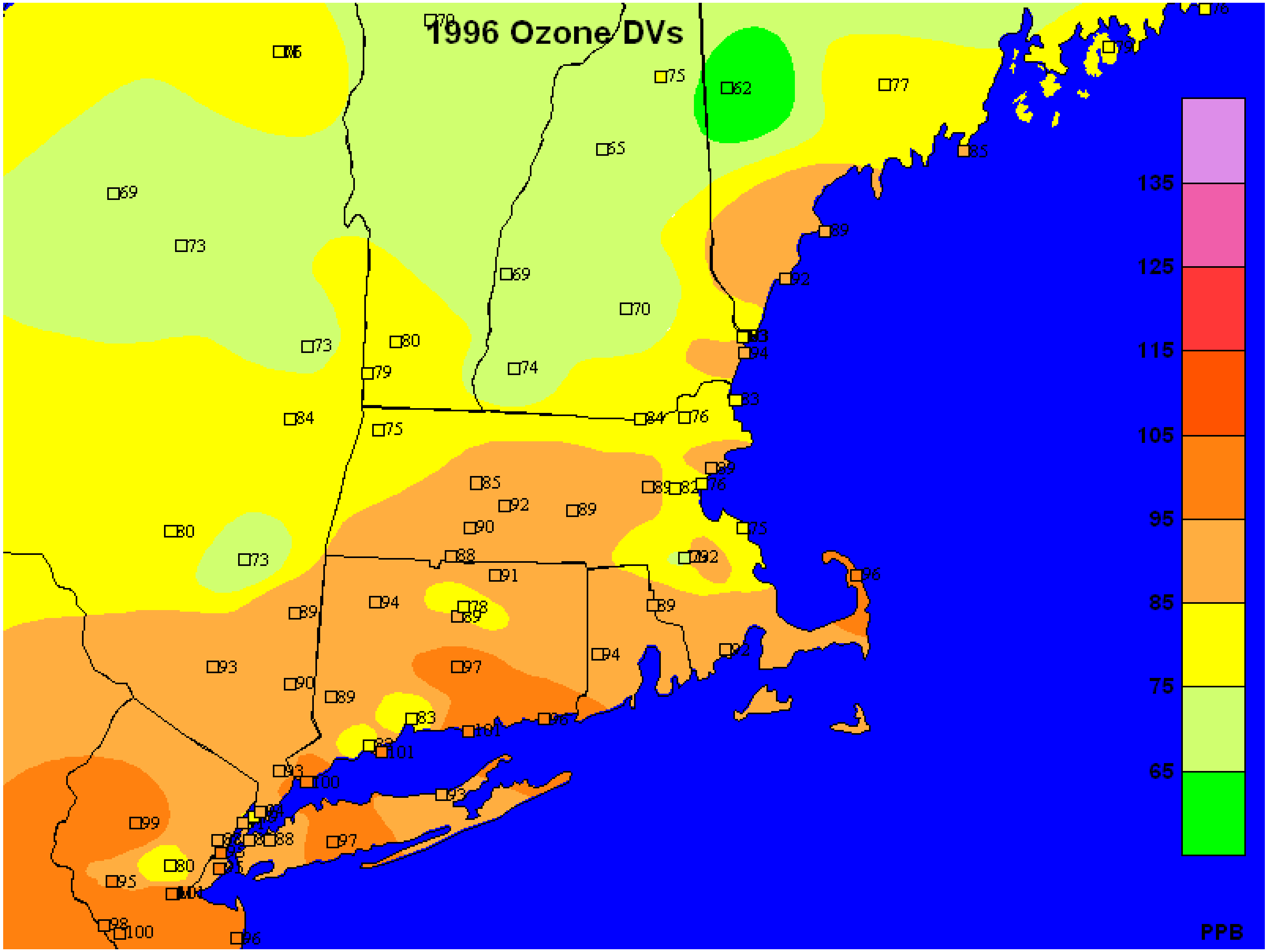

1992 Ozone DVs
135
125
115
105
95
85
75
65
PPB


1993 Ozone DVs
135
125
115
105
95
85
75
65
PPB

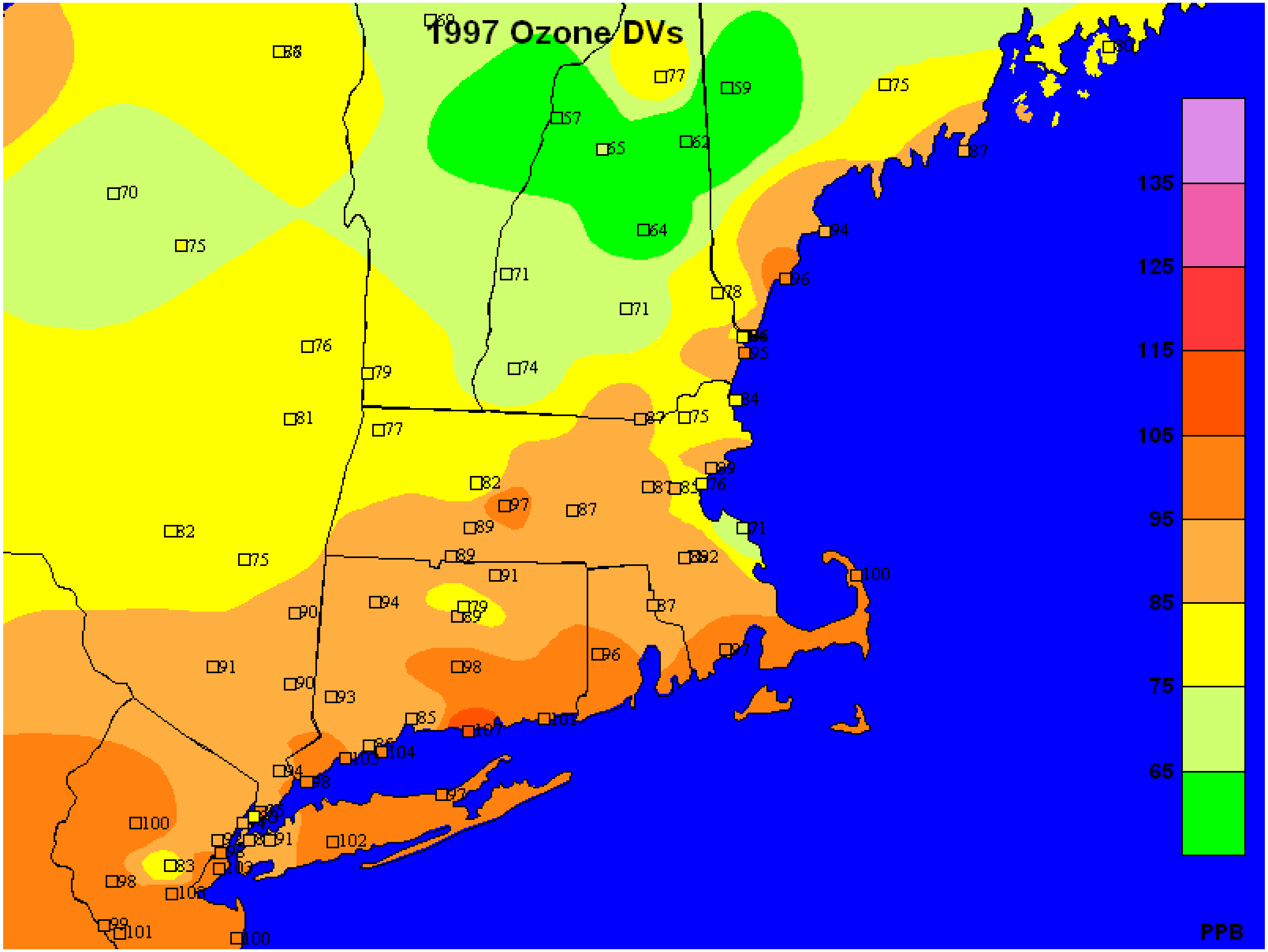


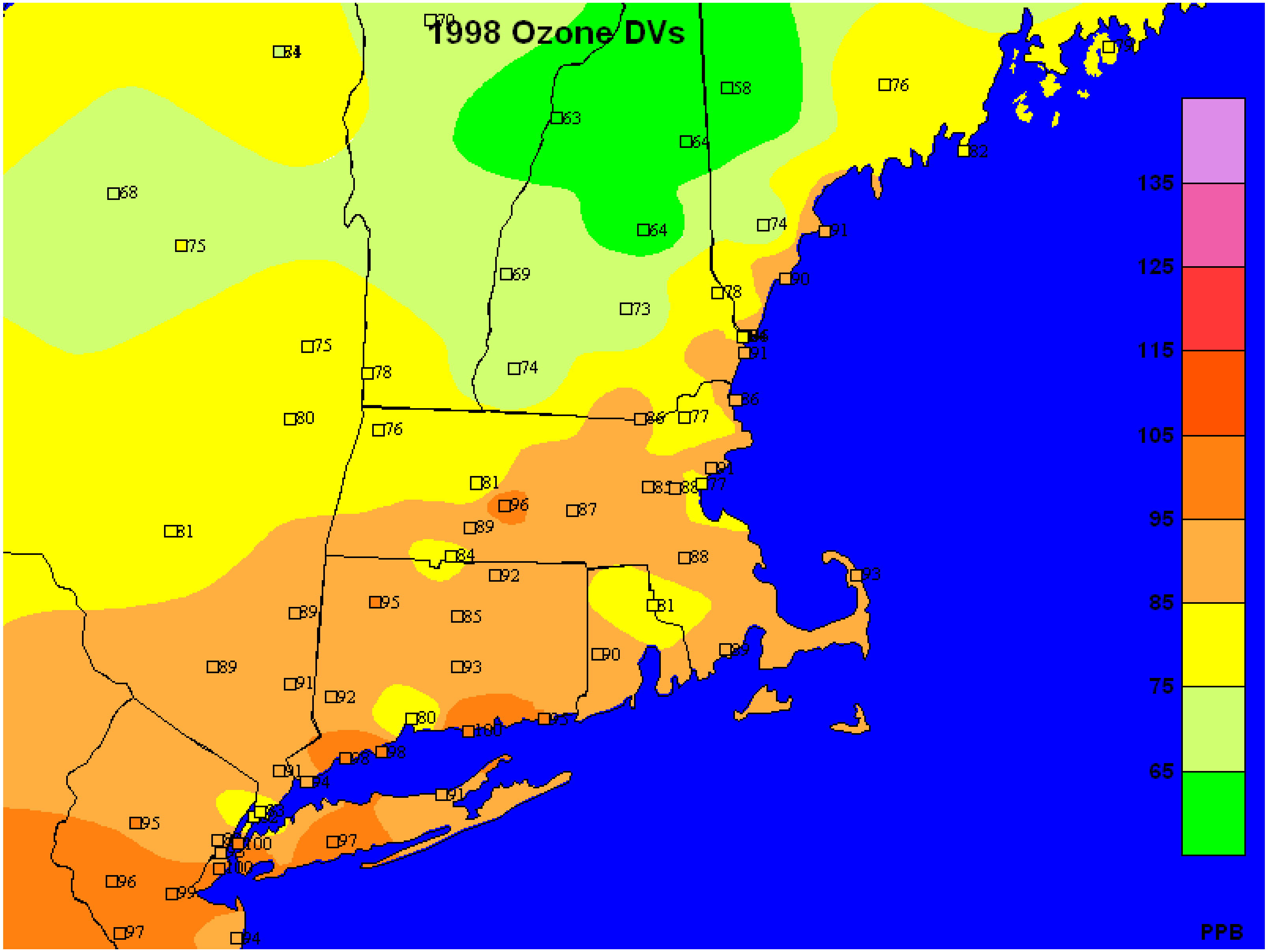
1994 Ozone DVs
135
125
115
105
95
85
75
65
PPB

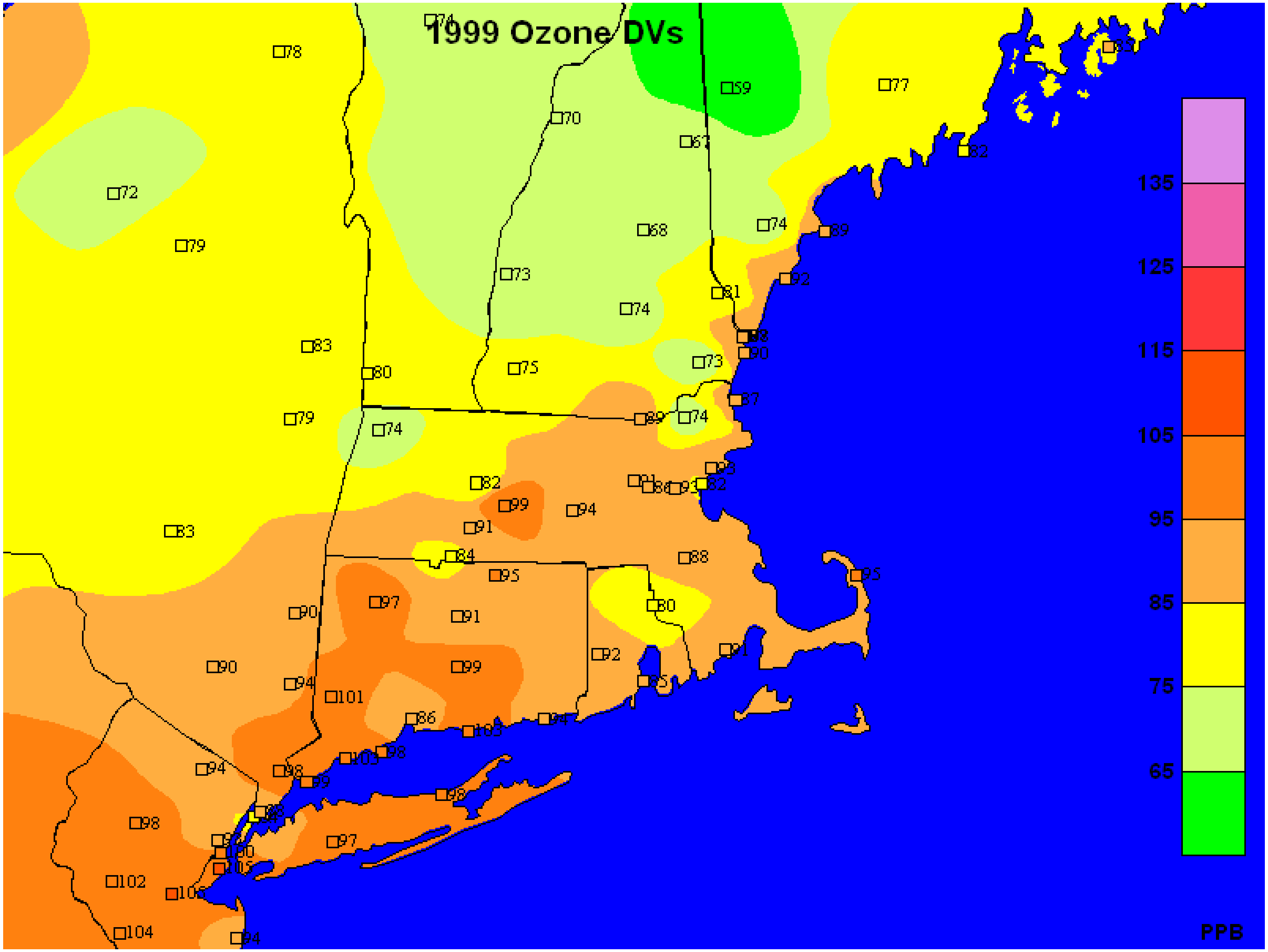

1995 Ozone DVs
135
125
115
105
95
85
75
65
PPB



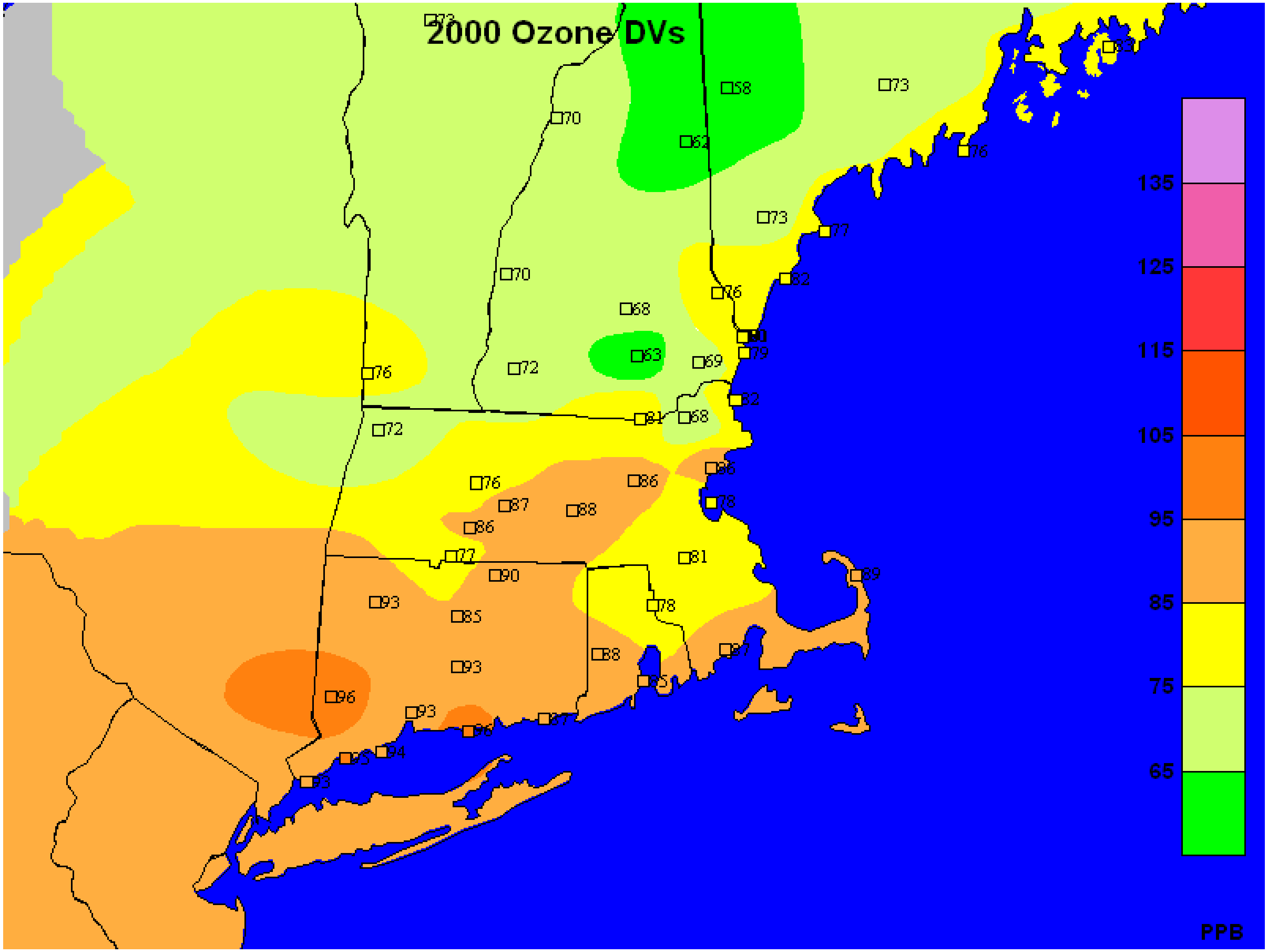
1996 Ozone DVs
135
125
115
105
95
85
75
65
PPB

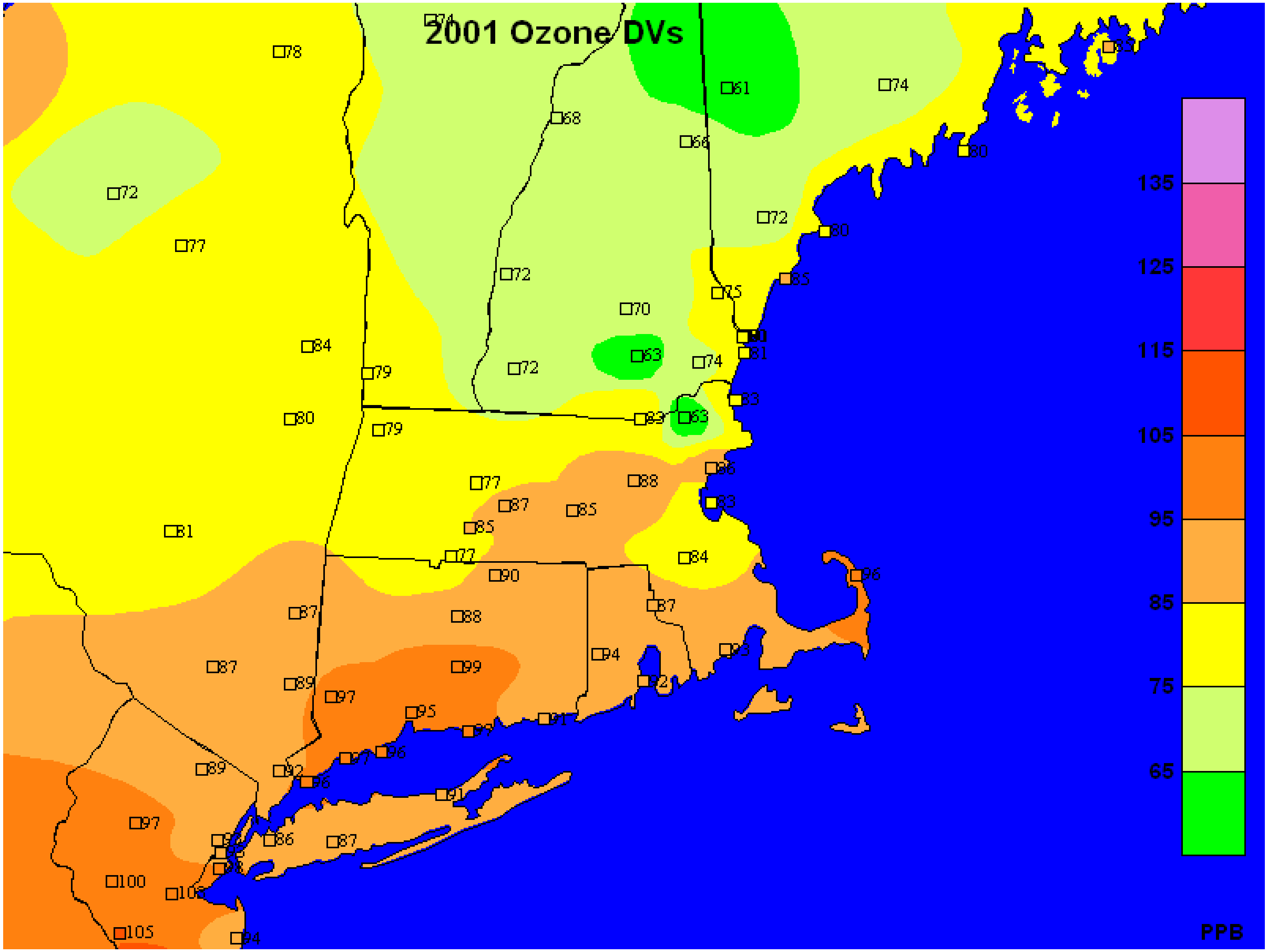

1997 Ozone DVs
135
125
115
105
95
85
75
65
PPB

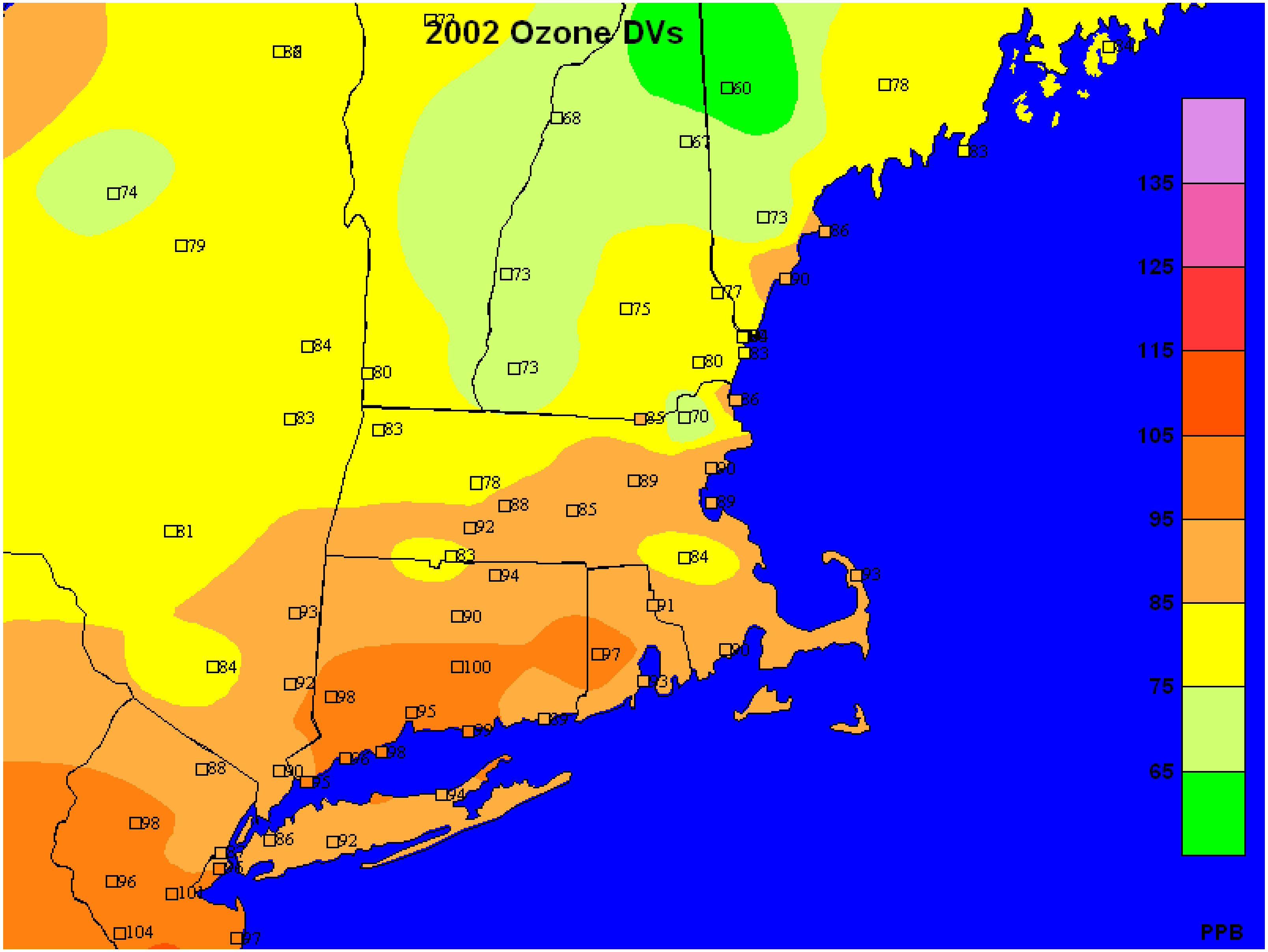

1998 Ozone DVs
135
125
115
105
95
85
75
65
PPB

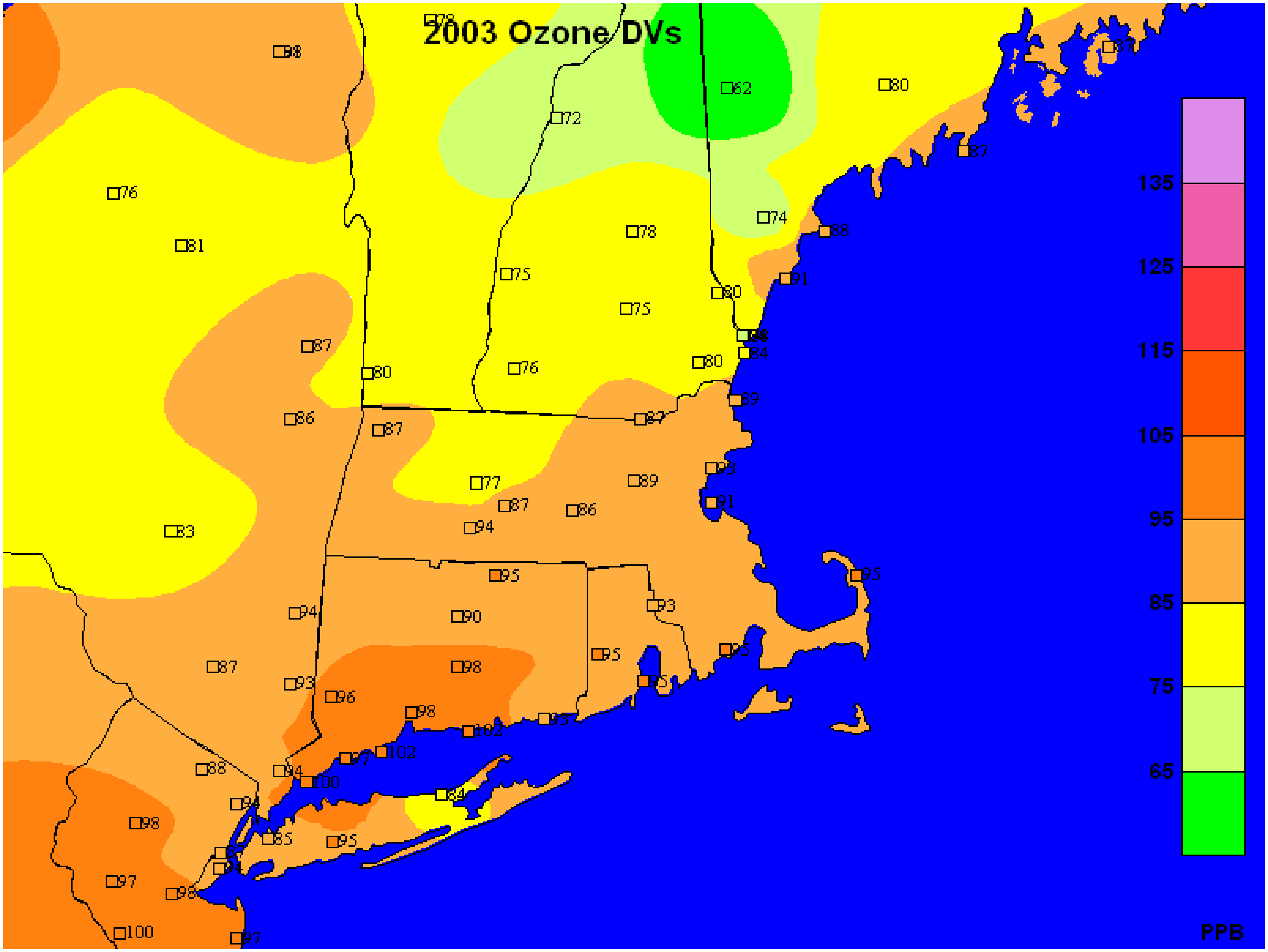


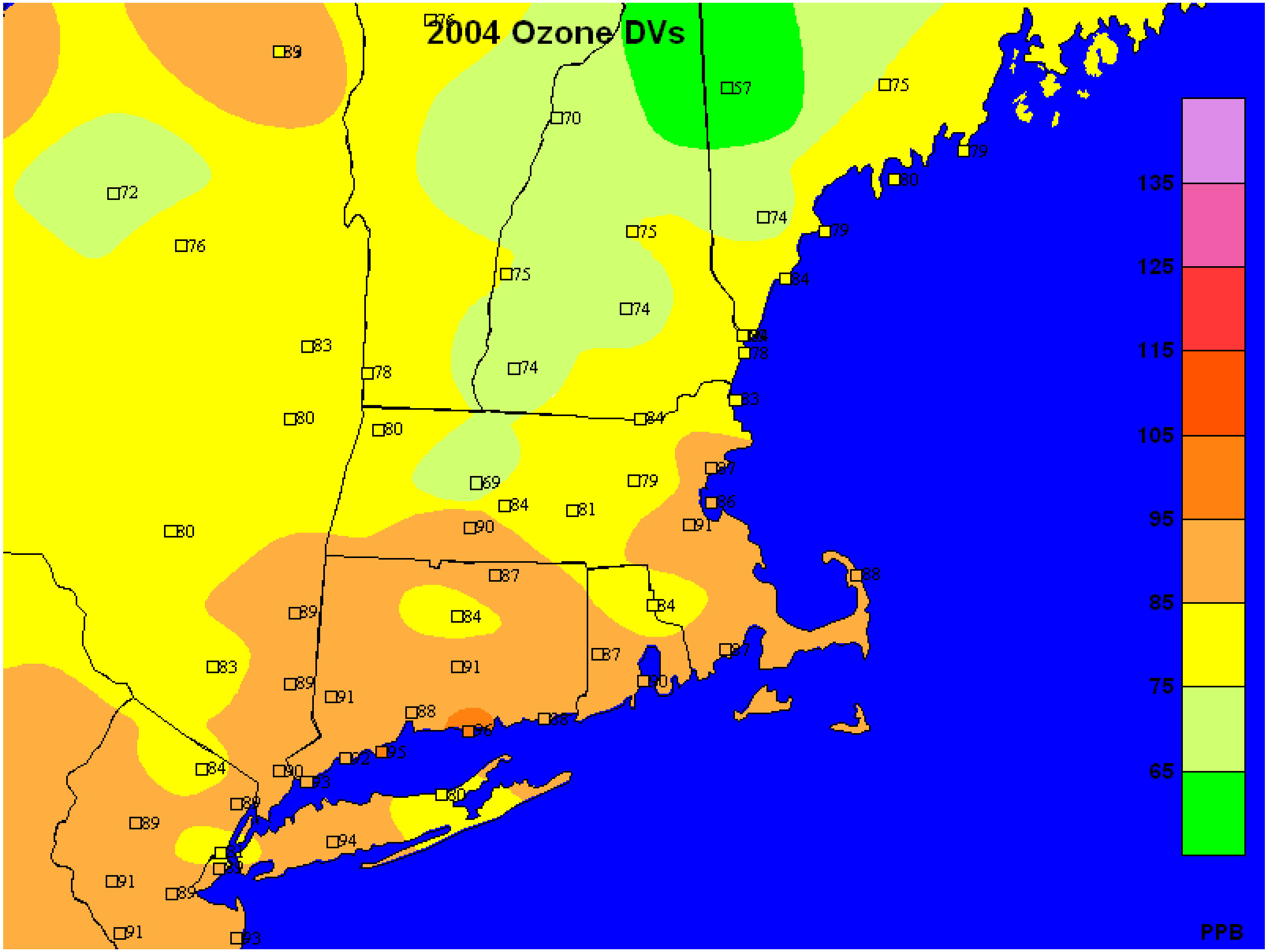
1999 Ozone DVs
135
125
115
105
95
85
75
65
PPB
78
72
79
83
79
83
80
74
70
73
75
82
99
91
84
95
97
91
99
101
90
90
94
94
98
102
104
86
103
98
97
59
77
82
68
74
89
92
81
74
73
90
87
74
88
95
80
92
94

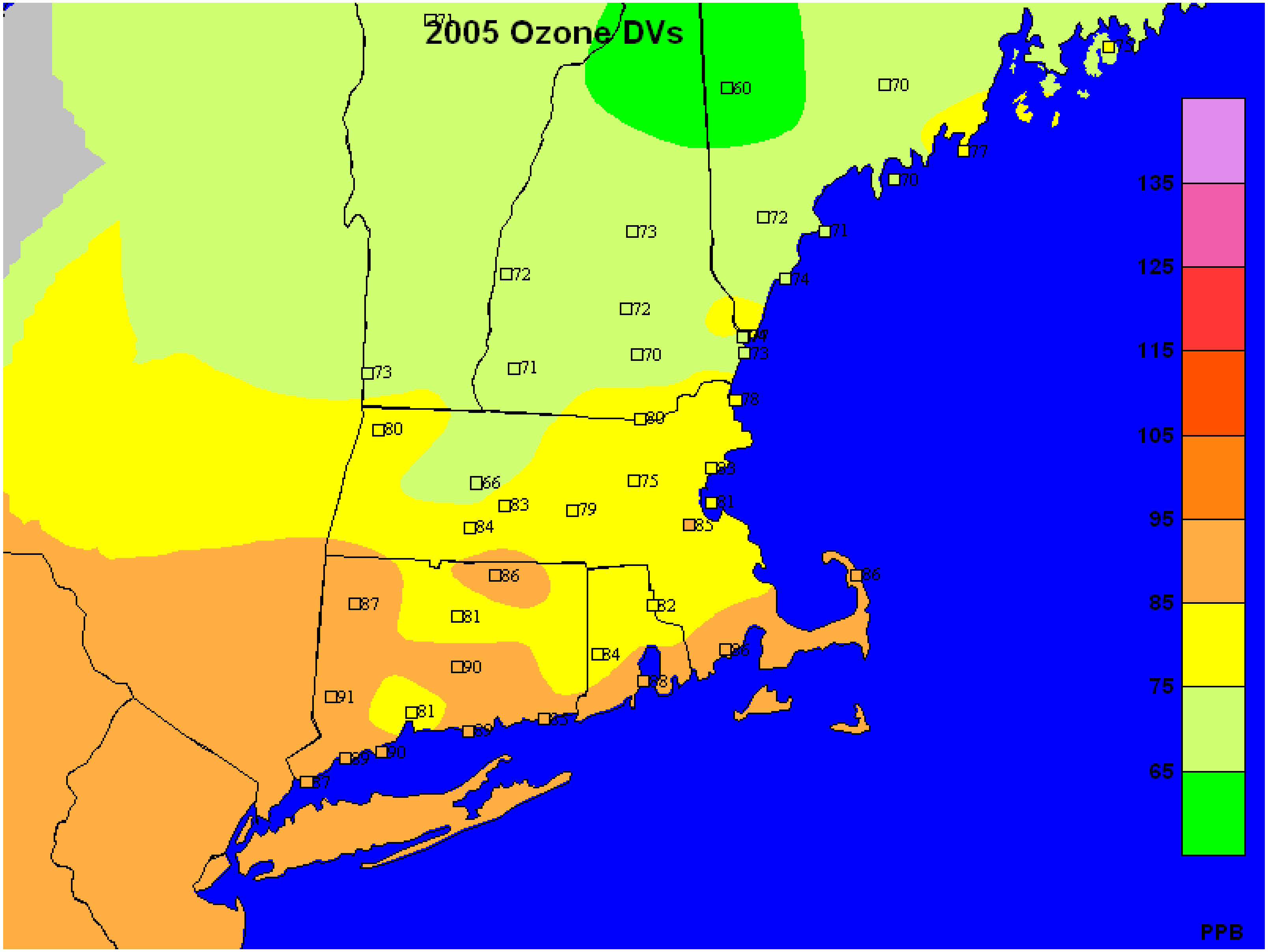

2000 Ozone DVs
135
125
115
105
95
85
75
65
PPB


2001 Ozone DVs
135
125
115
105
95
85
75
65
PPB

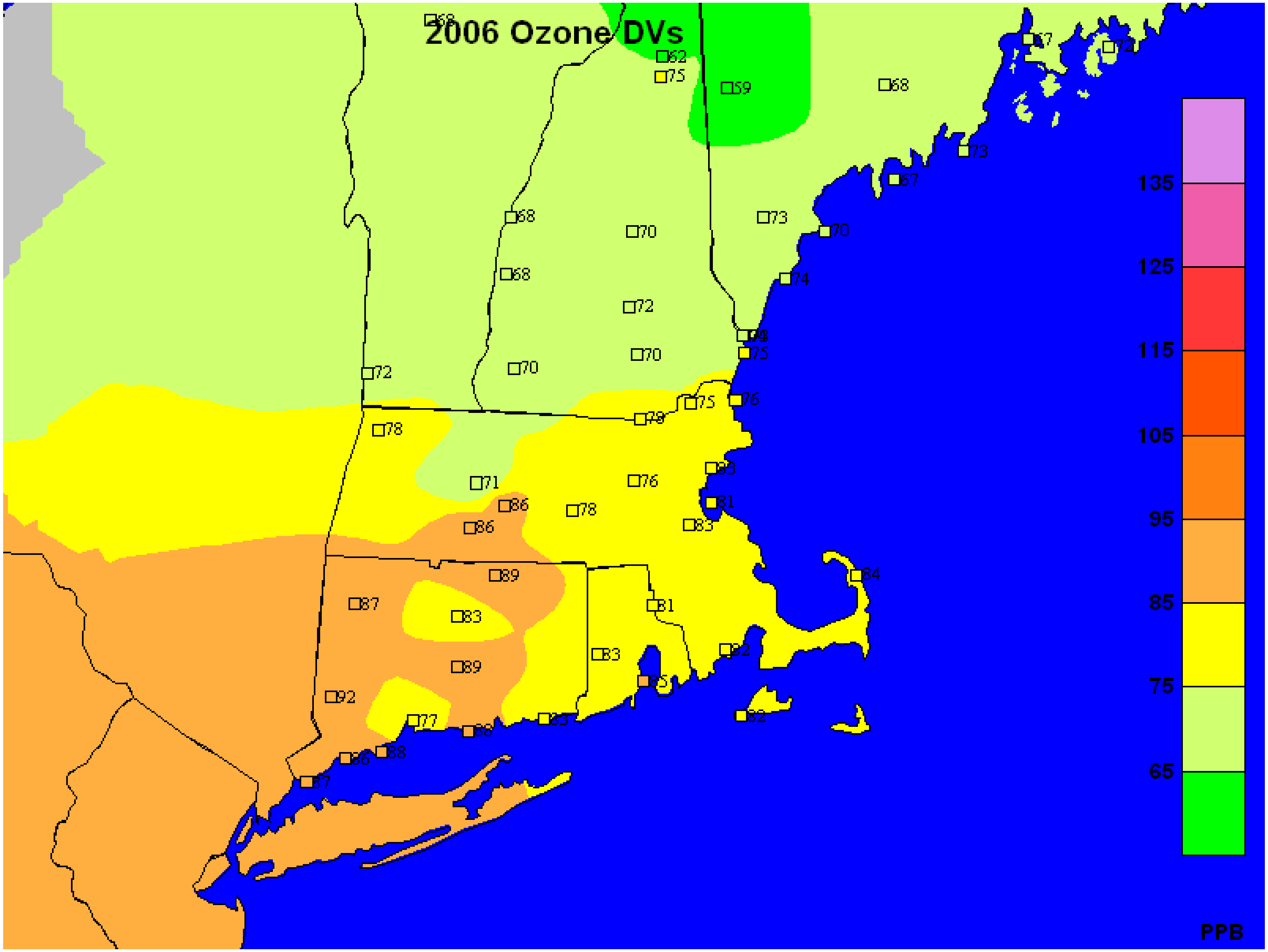

2002 Ozone DVs
135
125
115
105
95
85
75
65
PPB


2003 Ozone DVs
135
125
115
105
95
85
75
65
PPB


2004 Ozone DVs
135
125
115
105
95
85
75
65
PPB



2005 Ozone DVs
135
125
115
105
95
85
75
65
PPB


2006 Ozone DVs
135
125
115
105
95
85
75
65
PPB

Appendix 8O

Memorandum of Understanding Among the States of the Ozone Transport Commission Concerning the Incorporation of High Electrical Demand Day Emission Reduction Strategies Into Ozone Attainment State Implementation Planning

March 2, 2007

Memorandum of Understanding Among the States of the Ozone Transport Commission Concerning the Incorporation of High Electrical Demand Day Emission Reduction Strategies into Ozone Attainment State Implementation Planning

OZONE TRANSPORT COMMISSION

Connecticut

Delaware

District of Columbia

Maine

Maryland

Massachusetts

New Hampshire

New Jersey

New York

Pennsylvania

Rhode Island

Vermont

Virginia

Christopher Recchia
Executive Director

444 N. Capitol St. NW
Suite 638
Washington, DC 20001
(202) 508-3840
FAX (202) 508-3841
e-mail: ozone@otcair.org

Whereas the Ozone Transport Commission (OTC) was established under Sections 176A and 184 of the federal Clean Air Act (CAA) to ensure the development and implementation of regional strategies to reduce ground-level ozone to healthful levels; and

Whereas the adverse health effects of ground-level ozone are well documented, and in spite of significant reductions of ozone precursor emissions achieved to date as a result of our NOx MOU of 1994, the US Environmental Protection Agency (EPA) NOx SIP call effective in 2003, and expected reductions to be further achieved by federal and state programs over the next decade, a significant portion of the ozone problem continues to be caused by nitrogen oxides (NO_X) transported into and generated within our region by electrical generating units (EGUs); and

Whereas, high electrical demand day (HEDD) operation of EGUs generally have not been addressed under existing air quality control requirements, and these units are called into services on the very hot days of summer when air pollution levels are highest, and

Whereas, HEDD unit operations are a significant contributor to NOx emissions on high ozone days; and

Whereas, the NOx cap and trade program, although effective generally has, by its very nature, had limited success in reducing emissions from HEDD units on HEDDs; and

Whereas, OTC staff, state environmental and utility regulators, EPA staff, EGU owners and operators and the independent regional systems operators have been meeting to assess emissions associated with HEDD during the ozone season and to address excess NOx emissions on HEDDs, and

Whereas, OTC is guided by its precepts to seek reductions in the most comprehensive, cost effective manner possible in order to maximize public health, environmental and economic benefits while ensuring an adequate electrical capacity and reliability for the region; and

Whereas, our investigations have found that NOx emissions are much higher on a high electrical demand day than on a typical summer day and there is the potential to reduce HEDD emissions by approximately 25% in the short term through the application of known control technologies to HEDD combustion turbine, coal and residual oil burning units; and

Whereas, installing typically used NOx control technologies may not be available to, or be the most cost effective method of, controlling HEDD NOx emissions from specific units; and

Whereas, energy efficiency is the most cost effective method to reduce HEDD NOx emissions, but cannot alone, nor in the short term, achieve sufficient emission reductions to achieve attainment of the ozone standard in many areas; and

Whereas, demand response programs can be a very cost effective mechanism to reduce emissions if they result in clean behind the meter generation and are supported by appropriate market devices, including but not limited to dynamic pricing; and

Whereas, any strategy to address HEDD emissions must recognize and address the issue of high emitting behind the meter units; and

Whereas, EPA and State workgroups estimate that using a cap and trade mechanism alone to provide sufficient financial incentives to cause the clean up of HEDD units would need an 18:1 retirement ratio and such a strategy would consume 74% of all available CAIR allowances for 12 HEDD days;

Therefore, be it **RESOLVED** that

The OTC States identified in the following table commit to pursue the following reductions in NOx emissions associated with HEDD units on high electrical demand days during the ozone season; such reductions to be achieved beginning with the 2009 ozone season or as soon as feasible thereafter, but no later than 2012:

State	NOx (tons per day)	Percent Reduction from HEDD Units
CT	11.7	25%
DE	7.3	20%
MD	23.5	32%
NJ	19.8	28%
NY	50.8	27%
PA	21.8	32%
Total	134.9	

Furthermore, that such reduction commitment will be included in each of the several states' 8-hour ozone attainment State Implementation Plan submissions to EPA due in June 2007; and

Furthermore, that each state shall select the strategy or combination of strategies that provides both maximum certainty and appropriate flexibility for that state and its electric generators. Such mechanisms for achieving the reductions may include but are not limited to:

- regulatory caps for emissions from HEDD units on HEDDs;
- performance standards;
- State/generator HEDD partnership agreements;
- energy efficiency programs;
- demand response programs, provided that such programs reduce and/or preclude the installation or use of distributed generation with unacceptably high emissions;
- regulatory standards or controls for behind-the-meter generators;
- effective adjustment of the NOx retirement ratio to provide reductions on HEDDs; and

Furthermore, the undersigned states for whom no state-specific target emission reduction is specified above sign this MOU in support and appreciation of the listed states making this commitment, will continue to evaluate the HEDD issue in their state and, as necessary and appropriate, may choose to pursue additional emission reductions from the HEDD sector in their state.

Be it **FURTHER RESOLVED** that the OTC states will continue their work to establish long-term standards and programs to address emissions on HEDDs, such programs and standards to include:

- continued work with state energy and utility regulators as well as the regional transmission operators regarding energy efficiency, dynamic pricing and other market oriented incentives toward significant demand reduction and clean new or repowered supply

- development of long-term performance standards that will ensure reliable, clean future generation.
- development of emissions portfolio standards applicable to load serving entities, distribution companies, "aggregators" and generators, according to the structure of the energy supply market

Executed by the undersigned States this 2nd day of March, 2007:

Connecticut	Delaware
District of Columbia	Maine
Maryland	Massachusetts
New Hampshire	New Jersey
New York	Pennsylvania
Rhode Island	Vermont
Virginia	

Appendix 8P

Avoided Nitrogen Oxide Emissions from Energy Efficiency on High Electric Demand Days in Connecticut
A Preliminary Analysis

Resource Systems Group, Inc.

Draft March 2007

Avoided Nitrogen Oxide Emissions from Energy Efficiency on High Electric Demand Days in Connecticut: A Preliminary Analysis

Colin J. High and Kevin M. Hathaway

Resource Systems Group, Inc.
White River Junction, VT

Supported by Funding from the U.S. Department of Energy

Clean Energy/Air Quality Integration Initiative

Draft Final March 27, 2007

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PREFACE

This report and analysis were prepared by Colin High and Kevin Hathaway of Resource Systems Group under contract to DJ Consulting LLC. The work was conducted with the financial support of the Clean Energy/Air Quality Integration Initiative of the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy.

Resource Systems Group (RSG) wishes to thank staff from the Connecticut Department of the Environment (DEP) who provided extensive input to the avoided emissions analysis included in this report. The analysis of the energy savings from energy efficiency measures was provided Alden Hathaway and John Kunz of Environmental Resources Trust (ERT). The results of that work have been provided to DEP in a separate memorandum titled "Energy Efficiency Analysis for the Connecticut Department of Environmental Protection to Estimate Energy Savings from End-Use Energy Efficiency Measures by Connecticut Electric Utilities." In addition, we appreciate the review and comments on earlier work for this report provided by Debra Jacobson of DJ Consulting LLC, and Alden Hathaway of ERT. We also thank the staff of the Connecticut Light and Power Company and United Illuminating Company who provided publicly available reports and data used in the analysis.

LIST OF ACRONYMS

CEM	Continuous Emission Monitors
DEP	Connecticut Department of Environmental Protection
DOE	U.S. Department of Energy
EE	Energy Efficiency
EGU	Electric Generating Units
EPA	U.S. Environmental Protection Agency
HEDD	High Electric Demand Day
kWh	Kilowatt-Hour
ISO	Independent System Operator
MWh	Megawatt-Hour
NAAQS	National Ambient Air Quality Standards
NO_x	Nitrogen Oxides
RSG	Resource Systems Group, Inc
SIP	State Implementation Plan

1. INTRODUCTION AND PURPOSE OF THE REPORT

The purpose of this report is to provide an estimate of the avoided nitrogen oxide (NO_x) emissions that result from savings in electric power generation from electric energy efficiency (EE) on High Electric Demand Days (HEDD) in Connecticut. This report is designed to help the Connecticut Department of the Environment (DEP) quantify the avoided NO_x emissions resulting from electric EE savings. Specifically, this work is intended to support the development of the State Implementation Plan to implement requirements under the Clean Air Act to attain the 8-hour ozone standard.

The report provides a retrospective evaluation of the avoided emissions from four electric EE and load reduction measure types in 2005 and 2006 undertaken under programs administered by Connecticut Light and Power Company and the United Illuminating Company in Connecticut. These four measures types are part of an array of EE programs that have been evaluated by Environmental Resources Trust and are described in their report to the DEP.[1] The measure types included in the ERT report and our related avoided emissions analysis are as follow: commercial and industrial lighting, commercial and industrial cooling, residential lighting and residential cooling. All of these measures will impact electric generation within Connecticut.

2. THE CONNECTICUT POWER MARKET

Connecticut is part of the ISO New England Power Market Area (ISO NE). However, on HEDDs, the marginal power units and the demand response programs (DRP) that are affected by the operation of EE measures are principally in Connecticut, and particularly within the Southwest Connecticut load pocket (SW CT) – an area that is somewhat isolated from the rest of the ISO. The analysis is focused on the response to EE within SW CT area. In this analysis, the import and export of power is not considered.

3. ANALYTICAL METHODOLOGY

The analysis objective was to determine the average hourly avoided NOx emissions that result from a specific amount of EE saving in SW CT. The four EE measures analyzed are as follows:

(1) Commercial and Industrial Lighting – mainly fluorescent and high intensity lights

(2) Commercial and Industrial Cooling – mainly air conditioning

(3) Residential Lighting – mainly compact fluorescent lights

4) Residential Cooling – mainly air conditioning.

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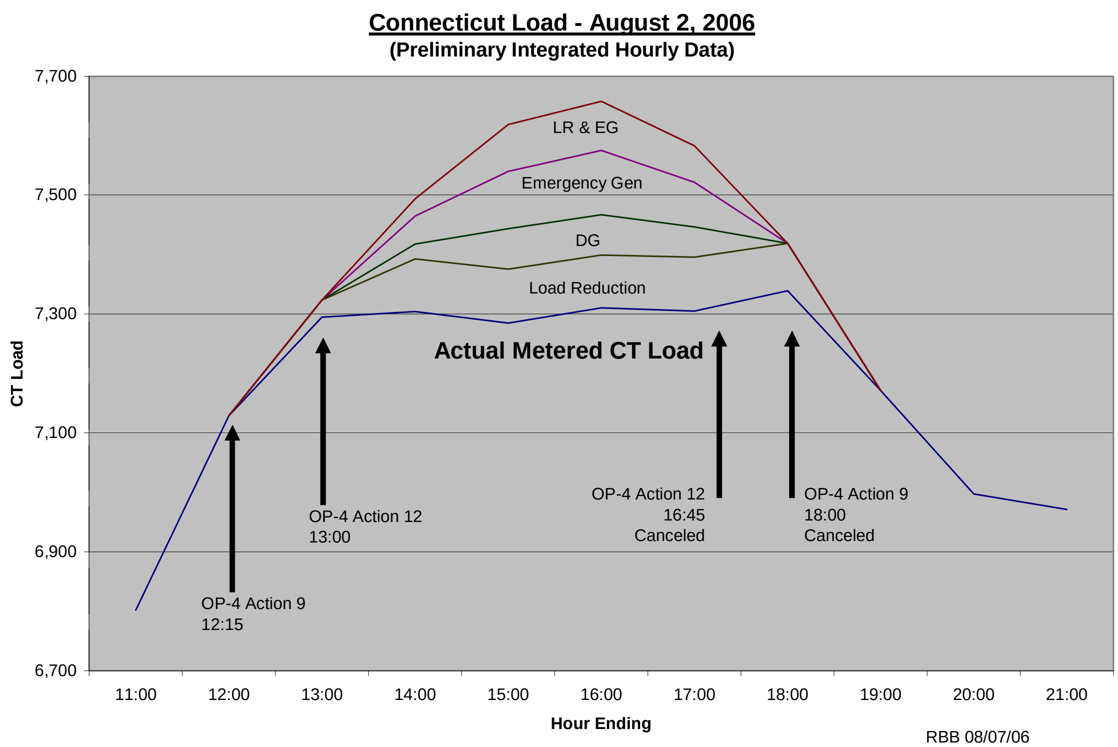
[1] Environmental Resources Trust, "Energy Efficiency Analysis for the Connecticut Department of Environmental Protection to Estimate Energy Savings from End-Use Energy Efficiency Measures by Connecticut Electric Utilities." Memorandum prepared for the Connecticut DEP with the support of the US DOE Clean Air /Air Quality Integration Initiative. March 2007.

For each of these measures, ERT provided hourly profiles of electric EE savings for typical summer days. These hourly profiles enabled us to match the EE savings for each measure against the hourly marginal fossil fueled generation that was serving the area for a sample of three days. The original intention of the project was to analyze a larger number of HEDDs. However, problems in obtaining the hourly data on both grid generation and DRP program generation for specific days limited the scope of the study. The three days analyzed were August 2, 2006 and July 26, 2005, which were both the highest HEDD in each year and June 4, 2005, which was a typical summer day (but not a HEDD).

A HEDD electric demand profile is shown in Figure 1.

Figure 1: Load Components on a Typical HEDD with DRP



The methodology used in this report has two parts.

Part 1 Grid Connected Units: The first part analyzes the emissions from the grid connected units which are the on the margin on the HEDD. The method used is the time-matched and generation-weighted average of the emissions of plants that are dispatched to meet changing demand. For a description of this method refer to the report prepared for the Metropolitan Washington Air Quality

Committee[2]. This methodology is a refinement of the generation-weighted average approach which was used in the New Jersey avoided emissions study. The first step determines the grid connected generation displaced by EE for each HEDD. In this case, the displacement occurs primarily at peaking units. The NRG Devon units were identified as typical displaced units.

Unit-level generation is estimated using the hourly carbon dioxide (CO_2) emissions from the continuous emissions monitors (CEMs) required by EPA for each fossil-fueled electric generating unit (EGU). Hourly NO_x emissions for each fossil-fueled EGU are also derived from CEM data or for typical units of this type as CEM NOx data was not complete for the NRG Devon units on the days analyzed. Estimated avoided emissions for each hour are based on a generation-weighted average of the units operating at that time

The hourly, average avoided emissions rates for NO_x (lbs/MWh) for grid connected units are shown in Figure 2. .

Figure 2: Hourly Avoided NOx Emissions for the NRG Devon Units 26 July 2005 and 4, June 2005

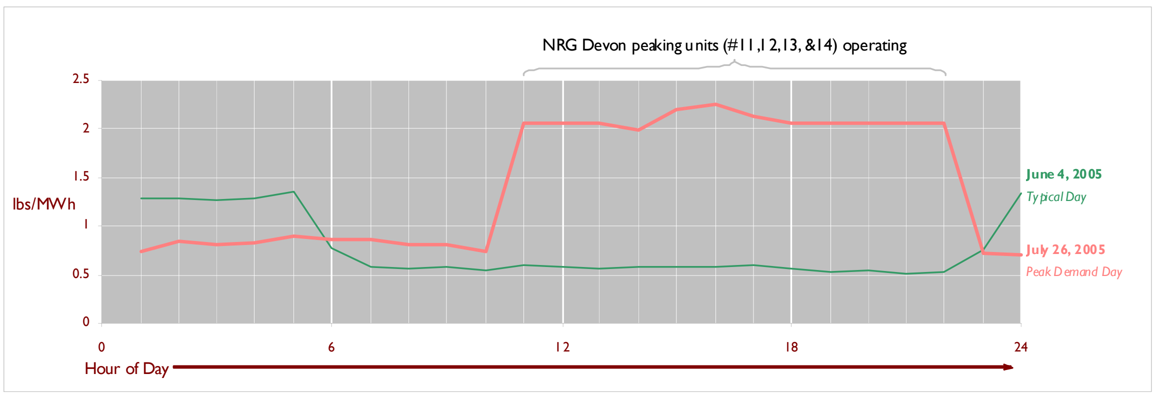


Figure 2 reveals that on July 26, which is a HEDD, the NRG Devon units were operating with high NOx emission rates during the peak period. However, on June 4 -- which is not a HEDD -- the peaking NRG Devon units are not operating and daytime NOx rates are much lower.

Part 2 Demand Response Program Emissions: The composition of the DRP load shown in Figure 1 based on data provided by ISO NE. The DRP is composed of a combination of actual load reduction (LR) by customers and additional emergency generation (EG) by customers by "behind the meter" generators. There is relatively little specific data available to us on either the type of generators or the amount of power generated as a percentage of the total LR and EG. Estimates

[2] RSG Inc, Avoided Emissions from Energy Efficiency and Renewable Electric Power Generation in the PJM Interconnection Power Market Area for the Metropolitan Washington Council of Governments, Air Quality Committee, with the support of the US DOE Clean Air /Air Quality Integration Initiative. March 2007.

received from the load-serving entities in CT and from the DEP range from 50% to 80% generation from DRP on HEDDs. In order to be conservative, we used the 50% figure where it was applicable. The emission rates for units in the DRP are based on typical emission rates for the types of units known to be in the DRP. These typical emission rates were provided by DEP and are included in the Excel Workbook which has been submitted to DEP as a supplement to this report.

4. RESULTS OF THE ANALYSIS

The results presented here for the two HEDDs are based on information from the DRP load profile in Figure 1 and a detailed analysis of the grid connected units based on data shown in Figure 2. The results are shown in Table 1. The analysis for 4 June 2005 is based on grid connected units because the DRP program was not operating. Based on an analysis of these three days, we estimated the summer NOx reductions from 610 MWh of EE savings over a 24-hour period. the EE programs analyzed represent about 66% of the total energy efficiency programs administered by the two utility companies. These estimates include reductions at grid connected units (mainly oil fired) and the emergency demand response program on the highest peak demand day. The emergency demand response program includes reductions at "behind the meter" generators. Price response programs are not included. The results for 8/2/2006 and 7/26/2005 in Table1 and Table 2 are the same because data from the two dates were merged in the analysis.

Table 1: SW CT HEDD NOx Reductions Estimates from EE Savings Programs

Day	EE Energy Savings (MWh)	Grid Unit NOx Reductions (lb/24 hours)	DRP Generation NOx Reductions (lb/24 hours)	Total NOx Reductions (lb/24 hours)
8/2/2006	610	2,952	3,350	6,302
7/26/2005	610	2,952	3,350	6,302
6/4/2005	610	397	0	397

In addition to the analysis described above, we also have also applied the same analytical approach to an EE energy savings estimate that was based on the IPM-TRUM model which was provided by Art Diem of EPA. This model has been used by EPA to make estimates of the possible avoided emissions from EE programs in States in the Ozone Transport Region. RSG did not make an independent evaluation of the EE savings from the IPM-TRUM model. We relied on the estimates of daily EE savings from the model and assumed they had the same hourly profile used in the EE savings analysis provided in the ERT report for the four EE measures.

The results of this analysis of the IPM-TRUM derived EE savings are shown in Table 2 below.

Table 2: SW CT HEDD NOx Reductions Estimates from EE Estimates Using the IPM-TRUM Model

Day	EE Energy Savings (MWh)	Grid Unit NOx Reductions (lb/24 hours)	DRP Generation NOx Reductions (lb/24 hours)	Total NOx Reductions (lb/24 hours)
8/2/2006	1,497	7,240	8,214	15,453
7/26/2005	1,497	7,240	8,214	15,453
6/4/2005	1,497	4,591	0	4,591

The IPM-TRUM model estimates EE electric savings at 1.5% of Connecticut electric demand. This results in daily estimated savings of 1,497 MWh per day compared to 610 MWh per day using the savings estimates from the utility programs in the ERT report. As a result the avoided NOx emissions are correspondingly higher.

Overall we believe that the estimates in Table 1 based on the four EE measures may be too low as there are other EE programs that could increase the estimate electric EE savings by up to about 33%. The addition of the price response program to the analysis may also produce a small increase in reductions on some days. However, data from these days were not analyzed.

5. LESSONS LEARNED FROM THE STUDY

The results of the avoided emissions analysis should be used with caution. The electric savings from the four EE measures are based upon well established methods and reliable data so that they can be used with some confidence. However, data on the grid connected units, their generation and their emission rates have required considerable interpretation and estimation. Many of the smaller grid units used on HEDDs do not have CEM NOx records. Hourly generation records are also not available.

Data on the DRP overall load reduction and generation programs from the ISO NE is adequate but data on individual units was not available. Some of the necessary data on generation is kept by the ISO, as shown from the one day of records which were provided in Figure 1. The data on both generation and the type of units is known to the utilities and/or their customers.

If the data problems can be overcome considerable benefits can be obtained as it appears from this preliminary analysis that EE measures have the potential to make significant reductions in HEDD NOx emissions. Other information indicates that these EE savings also result in cost savings to customers. Further co-operation on data availability between the DEP, ISO New England, the utilities and their customers should make it possible to demonstrate and credit these avoided emissions. This would be very beneficial to all parties and the public interest in clean air.

Appendix 8Q

Report of the Energy Conservation Management Board
Year 2006 Programs and Operations

March 1, 2007

Energy Efficiency

INVESTING IN CONNECTICUT'S FUTURE

REPORT OF THE
ENERGY CONSERVATION
MANAGEMENT BOARD
YEAR 2006 PROGRAMS
AND OPERATIONS

MARCH 1, 2007

Determine
Your Own
Energy Future

PREPARED FOR THE CONNECTICUT LEGISLATURE
ENERGY & TECHNOLOGY COMMITTEE
ENVIRONMENT COMMITTEE

CONNECTICUT ENERGY EFFICIENCY FUND PROGRAMS ARE FUNDED
BY THE CONSERVATION CHARGE ON CUSTOMER BILLS

Connecticut Energy Efficiency Fund Activities Help Protect the Environment

THE LIFETIME SAVINGS RESULTING FROM THE 2006 PROGRAMS IS 4.6 BILLION KWH. THIS IS EQUIVALENT TO:

2.3 MILLION TONS OF COAL SAVED

OR

304 MILLION GALLONS OF OIL SAVED

OR

2.5 MILLION TONS OF CARBON DIOXIDE AVOIDED

OR

596 THOUSAND HOMES POWERED BY ELECTRICITY FOR ONE YEAR

OR

$843 MILLION SAVED IN ELECTRIC ENERGY COSTS

Based on 2006 data

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From the Chair and Vice-Chair

JEFFREY GAUDIOSI

RICHARD W. STEEVES

As the Energy Conservation Management Board (ECMB) delivers its annual report on the Connecticut Energy Efficiency Fund's (CEEF) 2006 operations, the Connecticut State Legislature is determining our state's energy future. In 1998, legislators created the ECMB to guide the state's electric distribution companies in the development and implementation of cost-effective energy-efficiency programs and market transformation initiatives. Conn. Gen. Stat. §16-245m. This same legislation also created the CEEF, formerly known as the Connecticut Conservation and Load Management Fund.

In 2005, pursuant to Sections 5, 17, and 22 of Public Act 05-1, *An Act Concerning Energy Independence,* the ECMB's role was expanded to include energy-efficiency programs for the state's three natural gas distribution companies and for the Connecticut Municipal Electrical Energy Cooperative. With the addition of these utilities in 2006, the ECMB is now able to assist and advise all of Connecticut's electric and natural gas utilities in helping more of Connecticut's energy consumers receive the benefits of energy-efficiency programs.

As this annual report details, the CEEF provides valuable benefits for Connecticut's economy, environment and people. Since 2000, CEEF programs will result in lifetime electric savings for Connecticut businesses and residents of 27 billion kilowatt-hours (kWh). Connecticut electric customers receive $4 in benefits for every $1 spent on CEEF programs. These savings are realized by energy-efficiency programs designed and implemented by the state's electric distribution companies, The Connecticut Light and Power Company (CL&P) and The United Illuminating Company (UI), collectively the "electric companies." The Department of Public Utility Control is responsible for final approval of the electric companies' operational plans for CEEF programs.

In 2006, the electric companies' customers contributed approximately $71 million to the CEEF through a conservation surcharge on their electric bills. The ECMB respectfully requests that legislators consider resolution of Connecticut's energy issues by restoring full funding to cost-effective CEEF programs in 2007. Since 2003, due to a legislative mandate redirecting CEEF funds to the state's General Fund in order to reduce the state's budget deficit, approximately one-third of CEEF funds have not been made available to the state's electric customers. These reductions also impede the realization of the Climate Change Action Plan targets and the Connecticut Energy Advisory Board's overarching goals. Despite reduced funding, the ECMB and CEEF continue to deliver high quality programs enabling Connecticut's energy consumers—both residential and business—to reduce energy consumption, lower their energy bills and help reduce air pollutants released during energy generation.

CEEF programs have been a solid success story, making Connecticut a national leader in energy-efficiency and load management programs. The ECMB's leadership and members, most of whom serve on a voluntary basis, are always available to any legislator to answer questions regarding energy-efficient technologies, load management programs and potential program development should CEEF funds be fully restored. For the past six years, we have been proud to oversee and manage the CEEF. During 2007, we look forward to another year of delivering innovative and successful CEEF programs.

Jeffrey Gaudiosi
ECMB Chairperson

Richard W. Steeves
ECMB Vice-Chairperson

SECTION 1: Executive Summary

What is the Energy Conservation Management Board?

In 1998, the Energy Conservation Management Board (ECMB) was created by the Connecticut State Legislature to advise and assist the state's electric distribution companies, The Connecticut Light and Power Company (CL&P) and The United Illuminating Company (UI), in the development and implementation of energy-efficiency and load management programs. In 2005, pursuant to Sections 5, 17 and 22 of Public Act 05-01, *An Act Concerning Energy Independence* (EIA), the ECMB's role was expanded to advise and assist the state's three natural gas distribution companies and the Connecticut Municipal Electrical Energy Cooperative in developing energy-efficiency programs for Connecticut's natural gas distribution and municipal utility customers.

The ECMB's expansion, coupled with the increased funds from the natural gas distribution companies and municipalities, now allows all of Connecticut's energy consumers to receive the benefits of quality energy-efficiency and load management programs. As a result of the passage of the EIA, the ECMB is also charged with implementing programs that reduce Federally Mandated Congestion Charges (FMCCs). The Department of Public Utility Control (DPUC) is responsible for final approval of Connecticut Energy Efficiency Fund programs and EIA initiatives.

The ECMB is an appointed group of 14 members representing a wide variety of public and private entities representing all customer classes (business, low-income and residential) who receive utility services. The ECMB has retained national energy-efficiency experts to assist in developing quality and award-winning programs. The ECMB has also hired independent evaluation/market research organizations to evaluate the effectiveness of Connecticut's energy-efficiency and load management programs and to guide future improvements and activities.

What is the Connecticut Energy Efficiency Fund?

The same 1998 legislation that created the ECMB, also created the Connecticut Conservation and Load Management Fund, now known as the Connecticut Energy Efficiency Fund (CEEF). The Connecticut State Legislature created the CEEF to provide funding for the utilities to develop and administer cost-effective energy-efficiency and load management programs to the state's residential and business customers. These types of programs help Connecticut's electric customers save money, save energy and ultimately protect the environment by reducing demand for electrical generation.

The CEEF's primary objectives include: (1) advancing the efficient use of energy, (2) reducing air pollution and negative environmental impacts, and (3) promoting economic development and providing energy security/affordability. This annual report highlights how CEEF programs have addressed these primary objectives in 2006.

Connecticut Energy Efficiency Fund programs are funded by the conservation surcharge on customer electric bills.

The ECMB works with the utilities to develop annual operational plans that include the most effective mix of energy-efficiency and load management programs.

The ECMB retains national energy-efficiency experts to assist in developing quality and award-winning programs.

In 2006, CEEF programs provided annual energy savings of approximately 328 million kWh.

Since 2000, CEEF programs have saved Connecticut businesses and residents 27 billion kWh in lifetime electric savings.

There were more than 346,000 instances of statewide participation in 2006 CEEF programs.

Primary Objective—Advancing the Efficient Use of Energy

CEEF programs are designed to reduce overall energy consumption, as well as energy consumption and electric load during periods of critical peak demand.

In 2006, CEEF programs provided annual energy savings of approximately 328 million kWh. If an average price of $0.183/kWh is used, this equates to annual savings of approximately $60 million. For 2006, the energy-efficiency measures installed in Connecticut residences and businesses will result in lifetime projected energy savings of $843 million. Connecticut businesses and residents will realize 27 billion kWh in lifetime electric savings due to 2000-2006 CEEF programs.

As a result of 2006 CEEF programs and EIA initiatives, estimated peak demand reduction in Connecticut was 311,189 kilowatts (kW). This peak demand reduction helps reduce the stress on Connecticut's transmission lines and facilities and helps to alleviate potential risk of electricity shortages during high-use energy demand periods, especially in the congested area of southwestern Connecticut (SWCT).

Primary Objective—Reducing Air Pollution and Negative Environmental Impacts

CEEF programs are designed and intended to significantly reduce air pollutants released during electrical generation. These pollutants include: sulfur oxides (SO_x), nitrogen oxides (NO_x) and carbon monoxide. In 2006, CEEF programs helped reduce pollutant emissions (NO_x and SO_x) by 422 tons per year.

CEEF programs also greatly reduce production from electrical generation of carbon dioxide (CO_2), a greenhouse gas closely linked with global warming. Increased public awareness of the effect of greenhouse gases on the global climate has moved energy efficiency to the forefront as a strategy to control greenhouse gas emissions. 2006 CEEF programs helped to reduce CO_2 emissions by nearly 181,000 tons.

Primary Objective—Promoting Economic Development and Providing Energy Security/Affordability

There were more than 346,000 instances of statewide participation in 2006 CEEF programs. However, all of Connecticut's electric customers, including those who do not directly participate, benefit from CEEF programs through economic development.

The implementation of energy-efficiency programs in the state continues to support approximately 1,000 non-utility jobs in the energy-efficiency industry. Many of these energy-efficiency and load management service companies are small businesses, benefiting from the success and continued funding of CEEF programs. CEEF programs also promote economic development by assisting businesses, large or small, save energy by installing energy-efficiency measures in their facilities. These measures, from energy-efficient lighting to replacement of old, inefficient motors with high-efficiency units, can significantly lower a business' operating costs and improve productivity. CEEF programs allow Connecticut's businesses to redirect operational efforts from controlling rising energy costs to their business' primary objectives—being successful and remaining competitive in today's dynamic global marketplace.

CEEF programs help Connecticut's residential energy consumers, including low-income residents. Residential customers benefit from a myriad of CEEF programs, including new construction programs, rebates for ENERGY STAR®-qualified appliances and home energy audits. These programs allow them to reduce energy use and lower energy bills.

Rising energy costs impose a dangerous burden on Connecticut's low-income residents. This issue is addressed by the CEEF's two low-income programs, CL&P's Weatherization Residential Assistance Partnership (WRAP) program and the UI Helps program. Through these programs, approximately 16,516 low-income customers received free weatherization services in 2006 to make their homes more energy efficient and comfortable. The energy-efficient measures installed in their homes should reduce their energy bills, allowing these Connecticut residents to spend their dollars on other household necessities.

Cost-Benefit of CEEF Programs

The DPUC and ECMB advise and assist in CEEF operations and determine if they are effectively administered and implemented to provide Connecticut's consumers with the most cost-effective programs. The ECMB and the electric companies recognize that clear indicators, metrics of performance and cost-benefit analyses are helpful and extremely important in ensuring delivery of quality programs to Connecticut consumers. Each CEEF program is evaluated by performance and incentive metrics developed by the electric companies, with input from the ECMB, the ECMB's consultants, and approved by the DPUC. Programs must meet or exceed expected metrics and have a high benefit to cost ratio, or else they are discontinued in the following program year.

Collaboration for Clean Energy and Energy Efficiency

An additional provision of the EIA was the ECMB's charge to coordinate more of its efforts, where there are synergies, with the Connecticut Clean Energy Fund (Clean Energy Fund). The Clean Energy Fund was created by the same legislation as the CEEF, and is charged with encouraging the development of clean energy technologies and the use of clean energy and renewable sources such as: biomass, fuel cells, landfill gas, run-of-the-river hydropower, solar, wave/tidal/ocean thermal and wind. In 2006, the CEEF worked closely with the Clean Energy Fund on a number of projects, including a joint $2 million investment in a Clean and Efficient Energy Exhibit at the Connecticut Science Center to educate visitors about the importance of sustainable energy, and a high-performance schools initiative to coordinate use of both funds to develop incentives and programs supporting the design and construction of high-efficiency schools in Connecticut.

CEEF efforts assisted 16,516 low-income customers in 2006.

The ECMB and the electric companies use clear indicators, metrics of performance and cost-benefit analyses to ensure the delivery of high-quality programs to Connecticut's consumers.

In 2006, the CEEF continued to work closely with the Clean Energy Fund on a number of projects.

SECTION II: 2006 National and Regional Awards

Regional Collaboration

In 2006, to continue Connecticut's prominence as an energy-efficiency industry leader, the ECMB and the electric companies continued to participate in several regional and national initiatives and organizations, including: the American Council for an Energy-Efficient Economy (ACEEE), the Consortium for Energy Efficiency (CEE), Northeast Energy Efficiency Partnerships (NEEP) and several other utility and public benefit fund organizations. 2006 initiatives with these organizations included: development of efficiency standards; exchange of programmatic ideas and concepts; market baseline research; and assessment of the need for energy-efficiency program incentives.

In 2006, the ECMB and the electric companies continued to actively seek the assistance and involvement of design professionals and trade-allies in implementing CEEF programs. In the residential sector, the electric companies continued their partnerships with the U.S. Environmental Protection Agency (EPA), the U.S. Department of Energy, and other efficiency programs built around the ENERGY STAR® brand. These partnerships have led to more stringent efficiency standards for refrigerators and washing machines.

National and Regional Awards

In 2006, the ECMB and the electric companies continued to develop and implement a variety of award-winning programs that received national recognition for their quality and performance. In 2006, NEEP and its sponsors, including CL&P and UI, were recognized by the EPA with the ENERGY STAR Sustained Excellence 2006 Award for continued leadership in protecting the environment. As ENERGY STAR partners since 1996, NEEP and its sponsors were honored for their long-term commitment to promoting energy efficiency in the Northeast. In fact, NEEP's and its sponsors' regionally coordinated programs were cited as the catalyst for the Northeast's increased use of energy-efficient products, services and practices.

In 2006, the EPA honored CEEF's ENERGY STAR Homes (listed as "Residential New Construction") program with an ENERGY STAR for Homes Award for the program's operations and successes. In 2006, 1,504 homes in CL&P's and UI's service territories were certified as ENERGY STAR homes.

In 2006, three CEEF programs administered by CL&P received Silver Connecticut Innovation Awards from the Connecticut Quality Improvement Award Partnership, Inc. (CQIA), including the Energy Opportunities, Museum Partnership and Independent System Operator-New England Load Response Support programs. CQIA's Connecticut Innovations Award is an annual award recognizing Connecticut organizations that excel in managing quality improvement for business success and growth.

Federally Mandated Congestion Charges

In the 1990s, as a part of the regional electric industry's restructuring, the Independent System Operator of New England (ISO-NE) was created to operate the transmission grid and wholesale energy markets in New England. These restructuring changes in New England's energy marketplace have led to changes in the categorization of energy costs and how these costs are passed on to energy consumers.

Since 2002 and continuing in 2006, the ECMB and the electric companies have shifted the focus of CEEF programs from solely providing energy savings to program features providing savings in both energy and capacity. This shift is designed to help address transmission reliability problems in SWCT by providing capacity resources. With other measures, this should result in the mitigation of congestion costs currently borne by Connecticut consumers.

An Act Concerning Energy Independence

In 2005, the Connecticut State Legislature passed the EIA to help address the rising energy costs that face Connecticut's electric consumers by directing the DPUC to implement a variety of energy-efficiency and load response initiatives aimed at reducing Federally Mandated Congestion Charge (FMCC) costs. These initiatives include: customer and grid-side distributed generation; energy-efficiency and demand response investments; low-cost financing; a gas cooling pilot program; a new Class III renewable portfolio requirement for energy efficiency and combined heat and power; and time-of-use rates. The EIA provides a variety of incentives to Connecticut customers, including: waiving electric back-up rates; low-interest financing; monetary grants of between $200 and $500 per kW for new customer-side distributed generation capacity; and natural gas distribution charge rebates.

In 2006, the ECMB and electric companies promoted measures addressing EIA initiatives, as well as the CEEF's goals. For example, by aligning the incentives available through the CEEF with the EIA requirement for time-of-use rates, the Bridgeport Board of Education was able to invest in a cool thermal energy storage system that avoided 201 kW of summer demand. Efforts were continued to implement measures and programs that significantly reduced summer peak demand, especially in SWCT, thereby reducing congestion costs. In 2007, the ECMB and electric companies plan to continue actively promoting customer enrollment in the ISO-NE Load Response programs, as well as customer participation in core energy-efficiency programs. Special emphasis will be placed on Residential and Commercial and Industrial (C&I) cooling measures, C&I lighting measures, and industrial process measures. The ECMB and the electric companies will continue to work with the DPUC to maximize the benefits available to Connecticut's consumers through EIA initiatives.

In 2006, CEEF programs continued to provide capacity resources that helped address Connecticut's transmission reliability issues, and as a result, should help mitigate congestion costs.

The Connecticut State Legislature passed the EIA to help address Connecticut's rising energy costs. In 2006, the ECMB and the electric companies worked to maximize the benefits available to Connecticut's consumers through EIA initiatives.

In late 2006 and early 2007, the ECMB and the electric companies filed two scenario plans with the DPUC to show the peak demand savings for Connecticut consumers if: (1) full CEEF funding was restored and (2) if Connecticut achieved zero peak demand growth.

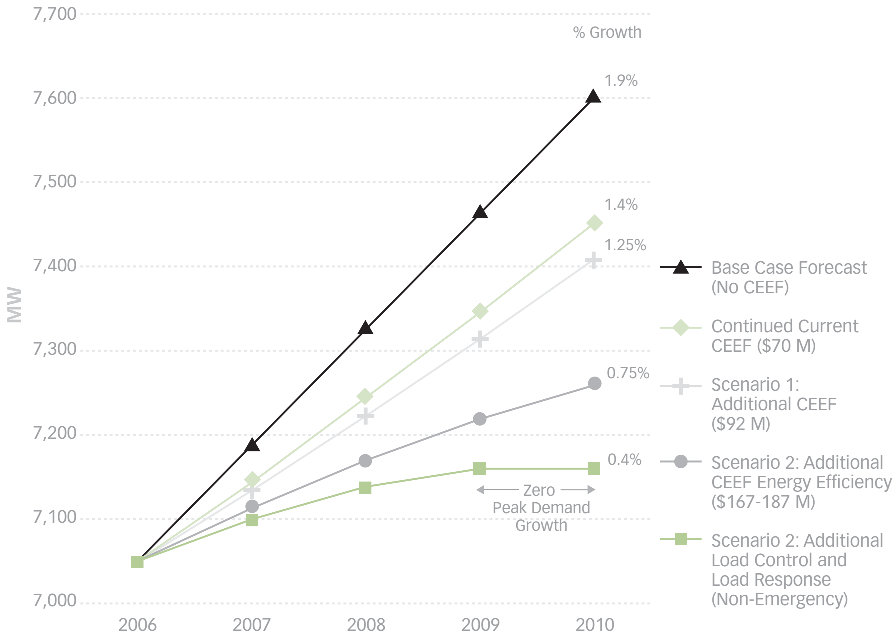
Potential for CEEF Programs Through Increased Funding

In late 2006 and early 2007, the ECMB and the electric companies filed two scenario plans with the DPUC that supplemented their 2007 Plan filed in October 2006. The first scenario plan was based on 2007 programs and goals that could be achieved through full restoration of CEEF funds, if the State Legislature assumed the repayment of the bonds currently being repaid through diversions of CEEF funding, plus the Forward Capacity Market (FCM) Transition Period payments in 2007. This plan was submitted on December 22, 2006.

This second scenario, covering 2007-2010, provides a high-level multi-year plan for achieving zero peak demand growth in Connecticut by 2010, equivalent to a 140 MW reduction in peak demand in 2010. The graph below depicts the peak demand savings from all three filed plans with the DPUC.

GRAPH A:

Connecticut Peak Demand Savings Forecast: Base Case, Continued Current CEEF, Additional CEEF in Scenarios 1 and 2 (In MW)



This graph reflects only CL&P's and UI's portion of the Connecticut peak demand.

Forward Capacity Market

2006 was a year of change for the energy markets and energy stakeholders that serve Connecticut. The original proposal for new wholesale capacity markets, Locational Installed Capacity (LICAP), was replaced through a settlement process resulting in ISO-NE's creation of an alternate capacity market. The resulting settlement agreement created the new FCM.

The new FCM features a three-year Transition Period (December 2006-May 2010) where all eligible capacity will receive a predetermined capacity payment. The full FCM takes effect in June 2010 and features a declining clock auction for capacity. To allow new capacity adequate time to come on line, the bidding process for that capacity will take place three years prior to the year in which the capacity is delivered. The settlement agreement establishing the FCM included a provision that demand resources be considered eligible capacity and be fully integrated in the FCM.

The inclusion of demand resources in the capacity markets requires market rules to implement that concept. ISO-NE convened a stakeholder process to develop rules for the Transition Period and FCM rules for what were labeled, to avoid confusion with the Real Time Demand Response Programs, as Other Demand Resources (ODRs) for the Transition Period. ODRs include demand response, distributed generation, energy efficiency and load management.

The FCM has become another potential source of funding for CEEF programs. The electric companies will be able to enroll current energy-efficiency savings approved by the DPUC into the Transition Period and receive transition capacity payments. It may also be possible to get payments for energy-efficiency savings from the FCM in future years (2010 and later). The process of registering the savings in the capacity markets is not a simple one and the new revenue may be somewhat offset by increased participation costs.

Two to three years before the year in which the CEEF and electric companies will actually deliver ODR capacity resources, they must provide financial assurance to ISO-NE that they will deliver the ODR capacity specified in their bid. In order for the CEEF and electric companies to participate in the FCM and not lose all or part of their financial assurance, stable funding for the CEEF in future years will be necessary.

Once the Forward Capacity Market is fully implemented, demand-side resources could become a potential source of additional revenues for CEEF programs providing peak demand reductions.

The new FCM features a three-year Transition Period (December 2006-May 2010) where all eligible capacity will receive a predetermined capacity amount. The full FCM takes effect in June 2010 and features a declining clock auction for capacity.

SECTION IV: Southwestern Connecticut Focus

CEEF programs target 54 SWCT towns in the electric companies service territories, and provide focused efforts in the 16 priority towns in the Norwalk-Stamford sub-area designated by ISO-NE.

Why Focus CEEF Programs in Southwestern Connecticut?

As directed by the DPUC, since 2002, the electric companies and the ECMB have developed and implemented CEEF programs specifically targeting SWCT. This region has been identified as a "load pocket" by ISO-NE, the Regional Transmission Organization (RTO) responsible for the day-to-day reliable operation of New England's bulk generation and transmission systems. A load pocket is defined as an area of the bulk power system characterized by high levels of electricity demand, limited local generation capacity, and limitations on what can be imported from other areas of the system. As a load pocket, SWCT poses a potential threat to electric service reliability in the entire six-state New England region.

In 2002, as a result of this threat, the DPUC directed the electric companies to focus energy-efficiency and load management efforts in SWCT to reduce transmission constraints and alleviate potential electricity shortages. During peak demand periods, such as hot summer afternoons when the demand for air conditioning is high, the electrical system's ability to deliver power is constrained.

The CEEF programs target 54 SWCT towns in the electric companies' service territories, and provide focused efforts in the 16 priority towns in the Norwalk-Stamford sub-area designated by ISO-NE. CEEF programs help reduce the demand for electricity during peak times. The CEEF's ongoing SWCT focus has substantially increased the energy efficiency of SWCT businesses, large commercial operations, municipal buildings and residential dwellings in that region since 2002.

Successful 2006 SWCT Energy-Efficiency Programs

- In 2006, the CEEF's Museum Partnership program, administered by CL&P, was honored with the Silver Connecticut Innovation Awards from the CQIA for its innovative approach in partnering with educational institutions and museums to reach Connecticut's schoolchildren with an energy-efficiency message. CL&P partnered with W.F. Kaynor High School (Waterbury, Conn.) to install an interactive compact fluorescent light display in the school's lobby to allow students and visitors to compare the energy-efficiency benefits of compact fluorescent lighting vs. inefficient, incandescent lighting. The exhibit allows the students or visitors to observe, first-hand, the quality of light provided by the energy-efficient alternative and see how energy-saving technology positively affects their lives and livelihoods.
- In 2006, the CEEF's SmartLiving Center, administered by UI, continued to serve the SWCT region with educational tours and Family Science Days to promote energy-efficiency messages to Connecticut's schoolchildren. A variety of special events were held to educate business and residential consumers about energy-efficiency programs and technologies.
- In 2006, the Community Based Program was successful in establishing and reestablishing relationships in all of the SWCT Critical 10 municipalities served by CL&P (Darien, Greenwich, New Canaan, Norwalk, Redding, Ridgefield, Stamford, Weston, Westport and Wilton). This program focuses on a community's specific energy needs and educates the community's residents and businesses regarding the importance and benefits of participating in CEEF programs.
- The CEEF's Small Business Energy Advantage program, administered by CL&P and UI, continued targeting energy-saving programs to SWCT small businesses in 2006.
- In 2006, the Retrocommissioning (RCx) pilot continued working with five SWCT Class A commercial buildings as part of the CEEF's existing Operations and Maintenance program administered by CL&P and UI. In 2006, three buildings completed implementing energy-efficiency measures identified through the RCx program.

DPUC "Summer Saver" Awards for SWCT Customers

In 2006, the SWCT Clean Demand Response Pilot team, a partnership between Connecticut's Office of Policy and Management, DPUC and Department of Environmental Protection, honored 12 electricity customers in SWCT who substantially reduced electric usage in 2005 through CEEF programs. Identified as "Summer Energy Savers," the combined energy savings of the awardees was over 1.3 million kilowatt hours (kWh) of electricity.

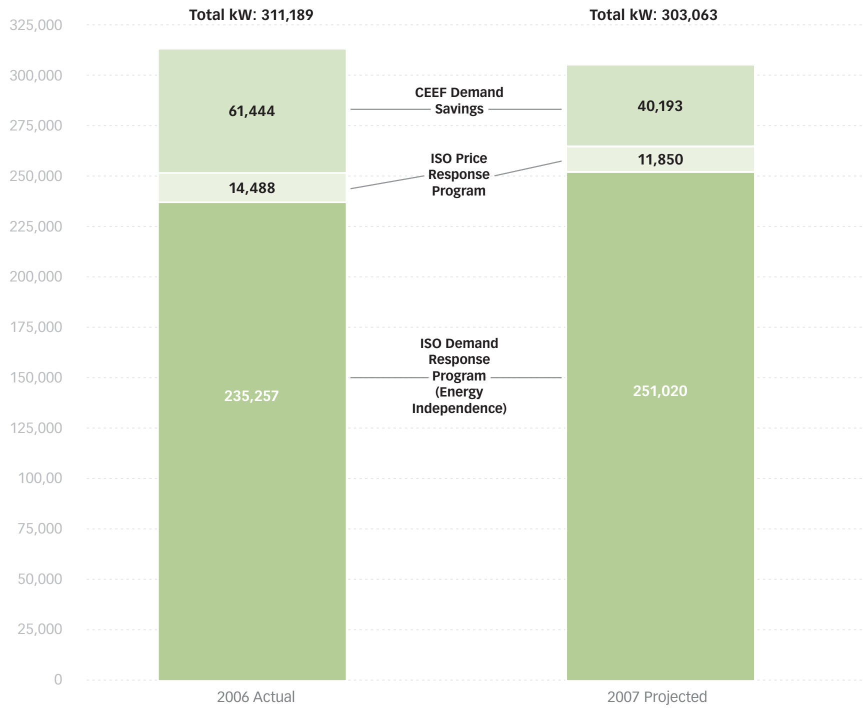
In 2006, the Museum Partnership program was honored with the Silver Connecticut Innovation Awards from the CQIA for its innovative approach in partnering with educational institutions and museums to reach Connecticut's schoolchildren with an energy-efficiency message.

Among the 12 "Summer Energy Savers" were the A.J. Oyster Company (Watertown), who received a Gold Award for installing lighting and occupancy sensors in its warehouse; the Eastern Bag Company (Milford), who received a Silver Award for participating in a warehouse lighting retrofit project; the H.B. Ives Company (New Haven), who received Platinum and Silver Awards for replacing high-intensity discharge lighting with energy-efficient lighting; and the Meriden Foodmart, Inc., who received a Silver Award for retrofitting their store's lighting system and installing refrigeration energy-efficiency measures.

Advancing the Efficient Use of Energy

GRAPH B:

Peak Demand Savings Available from CEEF and EIA Programs (In kW)



Note: 2006 Actuals include 218 MW from EIA initiatives.

Lower Costs: CEEF programs help alleviate stress placed on Connecticut's transmission lines by reducing energy use during peak demand periods. Decreased energy consumption during peak demand periods should help to lower Connecticut consumers' electric bills through a reduction in FMCCs.

Enhanced Electric System Reliability: Transmission constraints and peak energy demand diminish the overall reliability of Connecticut's electric systems. CEEF's energy-efficiency and load management programs help reduce load in already transmission-constrained areas, such as SWCT, which provides greater reliability for Connecticut's residences and businesses. Electrical reliability of 99.999999% is required to operate today's digital controls, equipment and manufacturing processes.

Improved Air Quality: CEEF programs help mitigate adverse environmental effects by reducing energy demand in Connecticut. Reduced energy demand allows power plants used to meet peak loads to operate for fewer hours. This results in the emission of less air pollutants, such as sulfur and nitrogen oxides, and greenhouse gases, such as carbon dioxide.

Reducing Air Pollution and Negative Environmental Impacts

Reduce Air Pollution

A primary goal of CEEF is to reduce air pollution and improve air quality in Connecticut and the Northeast region. Energy-efficiency programs reduce air pollution by decreasing the growth rate of electric and gas demand, thereby decreasing the amount of pollutants emitted through additional generation. CEEF programs play a significant role in reducing harmful air pollutants and greenhouse gas emissions that have been significantly linked to global warming and climate change.

The efficient use of energy results in the reduction of harmful greenhouse gas emissions, such as carbon dioxide. Carbon dioxide is released during electrical generation produced by fossil fuel combustion plants. In 2006, CEEF programs reduced carbon dioxide emissions by nearly 181,000 tons.

CEEF programs also significantly reduce two other air pollutants released during electrical generation: nitrogen and sulfur oxides. Both of these air pollutants are linked to acid rain and acid deposits in Connecticut's rivers and lakes. Nitrogen oxides are precursors to ozone, a primary component of summer smog. In particulate forms, nitrogen and sulfur oxides reduce visibility and are linked to respiratory problems, especially asthma. In 2006, CEEF's energy-efficiency and load management program activities, over the lifetime of the measures, resulted in the following environmental benefits:

CHART A:

Reflecting Reduction in Criteria Pollutants and CO_2

(In Tons)

	2006 Annual Actual	2006 Lifetime Actual	2007 Annual Projected	2007 Lifetime Projected
SO_X	333	4,673	232	2,733
NO_X	89	1,243	62	727
CO_2	180,789	2,536,814	125,841	1,483,452

In 2006, the ECMB and electric companies continued working with the Governor's Steering Committee on Climate Change. That committee recently released its 2006 Progress Report to the Governor showing that in 2001 approximately 90 percent of Connecticut's annual state greenhouse gas emissions (GHG) emissions were the result of fossil fuel combustion for energy production. Forty percent of these GHG emissions are attributed to transportation, 22 percent for electricity generation, 19 percent for residential heating, and 19 percent for commercial and industrial purposes. The Progress Report indicates that these sectors' greenhouse gas emissions can be reduced through increased efficiency standards for appliances, improved building efficiency codes (residential and commercial), and greening Connecticut's colleges and universities—all activities CEEF has worked to achieve.

"Energy Information Administration data indicates that residential, commercial and industrial consumers in Connecticut account for 72% of the state's end-use energy consumption, with transportation accounting for the remainder. Energy efficiency is therefore an important and cost-effective factor in reducing greenhouse gas emissions in Connecticut's Residential, Commercial, and Industrial Sectors."

2006 PROGRESS REPORT, GOVERNOR'S STEERING COMMITTEE ON CLIMATE CHANGE, JANUARY 2007

CEEF programs generated $4 in lifetime savings for every $1 spent in 2006.

In 2006, CEEF programs achieved energy savings of approximately 328 million kWh, resulting in long-term savings of approximately $843 million over the lifetime of energy-efficiency measures.

Promoting Economic Development and Energy Security/Affordability

Promote Energy Savings for all Connecticut Customers

In 2006, CEEF programs generated four dollars in lifetime savings for each dollar spent and saved enough energy to serve approximately 39,000 homes in Connecticut for an entire year. In 2006 alone, CEEF programs helped residents and businesses achieve energy savings of approximately 328 million kWh, resulting in long-term savings of approximately $843 million over the lifetime of installed energy-efficiency measures.

Benefits Distributed Over All Customer Classes

The ECMB and the electric companies ensure that all classes of customers benefit from the CEEF's energy-saving programs. Therefore, the CEEF's budget is distributed across all customer classes. In 2006, there were more than 346,000 instances of participation in CEEF programs. Groups that benefited from 2006 programs include: educational institutions; non-profits; residential customers; small businesses; municipal and state governments; and large commercial and industrial customers.

CHART B:

Summary of Energy Savings by Customer Class

(In Millions of kWh)

	Annual Savings		Lifetime Savings	
Customer Sector	2006 Savings	2007 Projected	2006 Savings	2007 Projected
Low-Income	14	15	144	123
Residential (Non Low-Income)	93	67	760	545
Commercial & Industrial	221	147	3,702	2,024
Totals	**328**	**228**	**4,606**	**2,692**

Promoting Economic Development and Energy Security/Affordability

One of the primary goals of CEEF is to promote economic development for Connecticut's businesses—large and small. More than one-third of the energy consumed in the United States is by industry. With rising costs for energy, industry looks to energy-efficiency programs and high-performance equipment to assist businesses in reducing operating and maintenance costs. By participating in CEEF programs, Connecticut industrial manufacturers can cut their energy costs and improve their productivity, enabling them to maintain or improve their competitive niches in the global marketplace.

CHART C:

Energy-Efficiency Activities Save Energy and Money for All Customers

(Compares 2006 Actual and 2007 Projected Annual and Lifetime Savings)

Energy Savings from Energy-Efficiency Programs
(In Millions of kWh)

Type of Savings	2006 Actual	2007 Projected
Annual kWh	328	228
Lifetime kWh	4,606	2,692

In 2006, CEEF programs continued assisting Connecticut industries in installing energy-efficiency measures to improve their productivity, product quality, safety and pollution prevention. In 2006, CEEF programs:

- Generated $4 dollars in future lifetime savings for each $1 spent.
- Paid or committed over $7.5 million in incentives to approximately 1,256 Connecticut small businesses.
- Paid or committed over $23 million in incentives to approximately 1,587 Connecticut commercial and industrial customers.
- Supported approximately 1,000 non-utility jobs in the energy-efficiency industry.
- Reduced operating costs and improved productivity in Connecticut's commercial and manufacturing industries.
- Partnered with Connecticut retailers—small grocery stores and national home store chains—to promote ENERGY STAR appliances and lighting.

"With the rising costs of energy, Bovano Industries had to look toward programs and equipment that could help to reduce our total energy costs. Through our participation in Connecticut Energy Efficiency Fund programs, we were able to replace all of our lighting with energy-efficient ballasts and high-intensity lights. The installation was done quickly and efficiently with little interruption. The most important part, however, is that the entire project has only a 2-year payback. This project, combined with our electric commodity buying, has helped us take control of spiraling energy costs."

JIM FLOOD,
PRESIDENT,
BOVANO INDUSTRIES

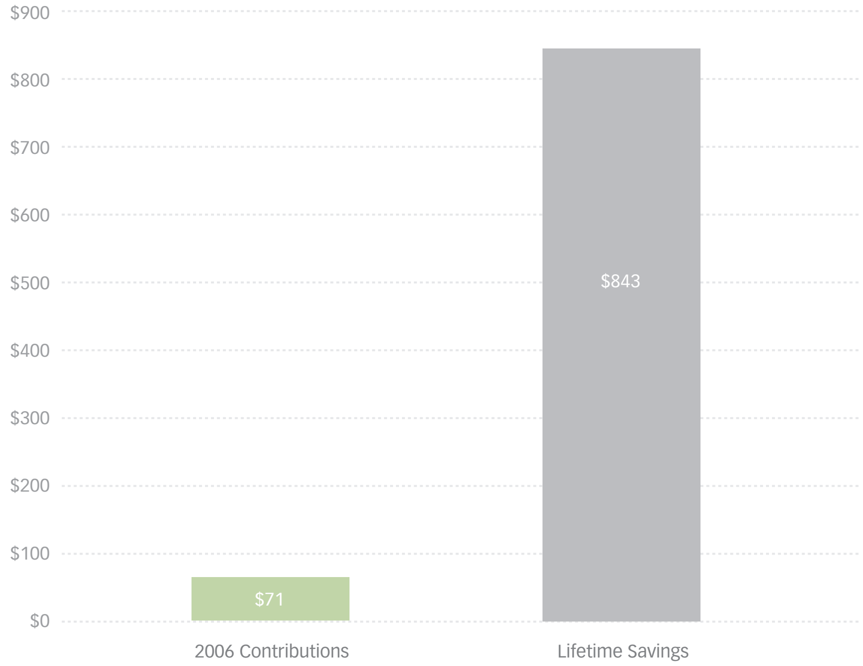
Promoting Economic Development and Energy Security/Affordability

(continued)

GRAPH C:

Contributions and Dollars Saved

(In Millions of Dollars)



Assistance for Low-Income Customers

CEEF programs provide weatherization and education services to low-income customers to help reduce their energy bills. To assist with outreach to low-income customers, the natural gas and electric companies maintain strong partnerships with local Community Action Agencies, third-party vendors and other Connecticut social service providers. These parties work closely together to educate low-income customers about federal and state energy assistance, arrearage forgiveness programs, and other billing programs that are available to them. This type of education and partnership is important for low-income customers, as energy bills typically comprise a disproportionate percentage of their household income.

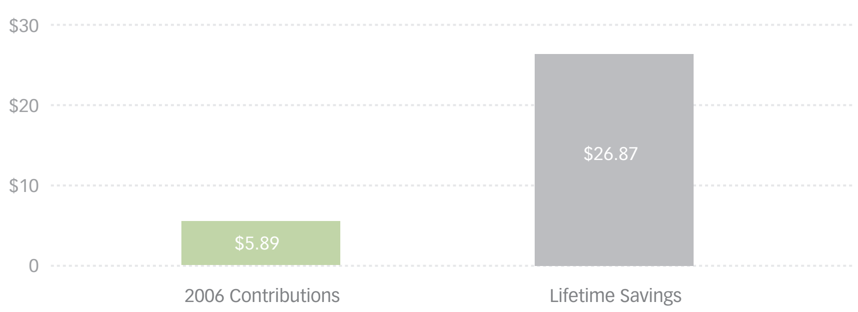
In September 2006, the firm of Fisher, Sheehan & Colton prepared the *Home Energy Affordability Gap: Connecticut* (2006) report for Operation Fuel, a Connecticut private, not-for-profit organization that provides emergency energy assistance to state residents. This study reported that rising energy prices have placed a substantial burden on Connecticut's low-income households and that the average annual shortfall between actual and affordable home energy bills for households at or below 185 percent of the Federal Poverty Level was $1,100 per household. In 2006, the aggregate Home Energy Affordability Gap in Connecticut was approximately $255 million statewide.

In 2006, CEEF programs continued to provide services to Connecticut's most vulnerable households assisting approximately 16,516 low-income customers through its two low-income programs, Weatherization Residential Assistance Partnership (WRAP-administered by CL&P) and UI Helps. These programs continued their success in 2006 by helping low-income customers save 144 million lifetime kWh, which equates to lifetime energy savings of $26.87 million. An independent consultant evaluation of CEEF's low-income programs was prepared in 2006 and will be used to guide future improvements.

GRAPH D:

2006 Low-Income Customer Contributions vs. Lifetime Dollars Saved

(In Millions of Dollars)



A study from the firm of Fisher, Sheehan & Colton reports that rising energy prices place a substantial burden on Connecticut's low-income households.

In 2006, CEEF programs assisted 16,516 low-income customers, helping them save 144 million lifetime kWh.

Assistance to Customers in Connecticut Towns*

Andover	$	112,000
Ansonia	$	305,000
Ashford	$	29,000
Avon	$	113,000
Barkhamsted	$	34,000
Beacon Falls	$	17,000
Berlin	$	501,000
Bethany	$	85,000
Bethel	$	101,000
Bethlehem	$	16,000
Bloomfield	$	516,000
Bolton	$	21,000
Bozrah	$	14,000
Branford	$	284,000
Bridgeport	$	2,626,000
Bridgewater	$	4,000
Bristol	$	965,000
Brookfield	$	439,000
Brooklyn	$	27,000
Burlington	$	58,000
Canaan	$	18,000
Canterbury	$	33,000
Canton	$	73,000
Chaplin	$	12,000
Cheshire	$	442,000
Chester	$	74,000
Clinton	$	98,000
Colchester	$	170,000
Colebrook	$	3,000
Columbia	$	24,000
Cornwall	$	2,000
Coventry	$	94,000
Cromwell	$	294,000
Danbury	$	952,000
Darien	$	86,000
Deep River	$	45,000
Derby	$	134,000
Durham	$	61,000
East Granby	$	185,000
East Haddam	$	41,000
East Hampton	$	100,000
East Hartford	$	1,319,000
East Haven	$	251,000

East Lyme	$	127,000
East Windsor	$	102,000
Eastford	$	20,000
Easton	$	36,000
Ellington	$	159,000
Enfield	$	760,000
Essex	$	141,000
Fairfield	$	522,000
Farmington	$	426,000
Franklin	$	15,000
Glastonbury	$	408,000
Goshen	$	11,000
Granby	$	58,000
Greenwich	$	253,000
Griswold	$	113,000
Groton	$	304,000
Guilford	$	111,000
Haddam	$	86,000
Hamden	$	812,000
Hampton	$	16,000
Hartford	$	3,269,000
Hartland	$	3,000
Harwinton	$	24,000
Hebron	$	77,000
Jewett City	$	11,000
Kent	$	5,000
Killingly	$	297,000
Killingworth	$	20,000
Lebanon	$	61,000
Ledyard	$	76,000
Lisbon	$	128,000
Litchfield	$	88,000
Lyme	$	7,000
Madison	$	167,000
Manchester	$	904,000
Mansfield	$	272,000
Marlborough	$	45,000
Meriden	$	809,000
Middlebury	$	44,000
Middlefield	$	18,000
Middletown	$	1,097,000
Milford	$	1,263,000
Monroe	$	181,000

Montville	$	348,000	Simsbury	$	465,000
Morris	$	5,000	Somers	$	50,000
Naugatuck	$	321,000	South Windsor	$	795,000
New Britain	$	403,000	Southbury	$	133,000
New Canaan	$	55,000	Southington	$	469,000
New Fairfield	$	37,000	Sprague	$	15,000
New Hartford	$	197,000	Stafford	$	444,000
New Haven	$	2,140,000	Stamford	$	1,468,000
New London	$	250,000	Sterling	$	12,000
New Milford	$	210,000	Stonington	$	136,000
Newington	$	484,000	Stratford	$	1,117,000
Newtown	$	225,000	Suffield	$	354,000
Norfolk	$	2,000	Thomaston	$	136,000
North Branford	$	123,000	Thompson	$	104,000
North Canaan	$	34,000	Tolland	$	190,000
North Haven	$	497,000	Torrington	$	391,000
North Stonington	$	89,000	Trumbull	$	516,000
Norwalk	$	1,119,000	Union	$	3,000
Norwich	$	44,000	Vernon	$	310,000
Old Lyme	$	131,000	Voluntown	$	11,000
Old Saybrook	$	326,000	Wallingford	$	308,000
Orange	$	290,000	Warren	$	3,000
Oxford	$	336,000	Washington	$	11,000
Plainfield	$	147,000	Waterbury	$	1,487,000
Plainville	$	527,000	Waterford	$	355,000
Plymouth	$	64,000	Watertown	$	323,000
Pomfret	$	14,000	West Hartford	$	861,000
Portland	$	84,000	West Haven	$	745,000
Preston	$	46,000	Westbrook	$	87,000
Prospect	$	51,000	Weston	$	141,000
Putnam	$	279,000	Westport	$	298,000
Redding	$	162,000	Wethersfield	$	232,000
Ridgefield	$	82,000	Willington	$	61,000
Rocky Hill	$	276,000	Wilton	$	94,000
Roxbury	$	8,000	Winchester	$	123,000
Salem	$	6,000	Windham	$	519,000
Salisbury	$	40,000	Windsor	$	1,391,000
Scotland	$	6,000	Windsor Locks	$	514,000
Seymour	$	228,000	Wolcott	$	262,000
Sharon	$	6,000	Woodbridge	$	63,000
Shelton	$	771,000	Woodbury	$	22,000
Sherman	$	9,000	Woodstock	$	77,000

*Based on 2006 data. All figures are approximated and may vary due to rounding.

*This does not include incentives for ISO-NE Load Response program participants.

Sample List of Customers Served

2,843 Commercial, Industrial and Institutional Customers Participated in 2006

Acme Wire Products Company, Inc.
Alimak Hek, Inc.
Amerbelle Textiles, LLC
Amity Regional Junior High School
Ansonia Board of Education
Ansonia Shopping Center, LLC
APEX Machine Tool Company
Aquajet Cutting Technology
Arrow Concrete Products, Inc.
ATP Health & Beauty Care
Avon Old Farms School
Baker Properties, LP
Berlin Steel Construction Company
Boys & Girls Club, Inc.
Braxton Manufacturing Company, Inc.
Bridgeport Board of Education
Bridgeport Holiday Inn
Bridgeport Hospital
Brien McMahon High School
Bristol Public Library
Canton Intermediate School
Champ Direct Mail Printing Company
Cherry Hill Construction and Demolition Co.
Cigna
City of Bridgeport
City of Derby
City of New Haven Board of Education
City of New Haven Police Department
City of Shelton
Colchester Pre K-2 School
Connecticut Children's Medical Center
Connecticut Container, Corp.
Connecticut Transit
Consolidated Industries, Inc.
Corbin Russwin
Country Pure Foods, Inc.
Coventry Public School
Cromwell High School
Danbury Engine Company No. 25
Daniel Hand High School
Desanto Technologies
Domestic Kitchens, Inc.

Donham Craft, Inc.
Dur-A Flex, Inc.
Durham Manufacturing Company
Dyno Noble
East Haddam Free Public Library
Eaton Corp.
Edge of the Woods Market
Enfield Tennis Club
Engineering Specialties, Inc.
Enthone, Inc.
ESPN
Essex Products, Inc.
Farrell Precision Metalcraft Corp.
Flexo Converters USA, Inc
Geissler's Supermarket
Gibbs Wire and Steel Company Inc.
Global Wire, Inc.
Greenwald Industries, Inc.
Greenwich Hospital
Haddam-Killingworth Middle School
Hamden Board of Education
Harco Laboratories, Inc.
Hartford Steam Company
Hopkins School
Ideal Products, LLC
Industrial Pallet, LLC
Johnson Memorial Hospital
KC Cubed Realty Associates, LLC
King Industries, Inc.
Kmart Discount
Knights of Columbus
Lake Compounce Family Theme Park
Lawrence & Memorial Hospital
Laz Parking, LTD.
Lebanon Fire Department
Ledyard Village Market
Leed-Himmel Industries, Inc.
LEGO Systems, Inc.
Lenard Engineering, Inc.
Lenihan Lumber Company
Light Sources, Inc.
LP MacAdams Co.
Lyman Memorial High School

Mazak Corp. Technology Center
Middletown High School
Middletown Nissan
Milford Public Works
Mohegan Elementary School
Mortensen's Restaurant & Ice Cream Shop
Mountain Dairy
MPS Plastics
National Sintered Alloys, Inc.
Naugatuck Savings Bank
New Britain General Hospital
New Haven Copper Company
New Horizons Computer Learning
Newington Business Park, LLC
Newtown Middle School
Numa Tools Company
O&G Industries, Inc.
Old Lyme High School
Oxford Center School
Palmer Paving Corp.
Parsons Chevrolet
Pemco Manufacturing, LLC
Pitney Bowes, Inc.
Plainfield High School
Post University
Precision Plastic Products, Inc.
Prospect Town Hall
Putnam Plastics Corp.
Quest Plastics
Quinebaug Valley Community College
Ramar-Hall, Inc.
R.D. Scinto, Inc.
Redding Elementary School
Regal Inn
Ridgefield Academy
Rockbestos-Surprenant Cable Corp.
Roto-Frank of America, Inc.
Santoros Cleaners
Schick-Wilkinson Sword
Sikorsky Aircraft Corp.
Simpson and Vail, Inc.
Sippin Management Company, LLC

Sleepys, Inc.
Solla Eyelet Products, Inc.
South Windsor High School
Southbury Public Library
Southern New England Telephone Company
Spartan Aerospace, LLC
St. Mary's Hospital
St. Maurice Church
St. Paul Travelers
St. Vincent's Medical Center
Staff Mates, Inc.
Stamford High School
Stamford Hospital
Standard Tile Distributors
Stanwich Congregational Church
Staples High School
Star Distributors, Inc.
Sterling Sintered Technologies Inc.
Stew Leonard's
Stone Academy
Strategic Building Solutions, LLC
Stratford Board of Education
Suffield Hardware
SureSource
Target Corporation
The Amerling Company
The Becton Dickinson Company
The Birken Manufacturing Company
The Darien Ice Rink
The Ethel Walker School
The Hartford Courant
The Hotchkiss School
The KARL Chevrolet Company
The Warner Theatre
Vanguard Plastics Corp.
West Hartford Town Hall
West Haven Public Library
Woodstock Academy
Yale/New Haven Medical Center
YMCA-Fairfield

Case Studies

UI CASE STUDY

Energy Conscious Blueprint Program

The Cesar Battalla/Westside School is a newly constructed elementary school located in Bridgeport for grades K-12. The school was built to accommodate the city's growing population. From the start, the city and Board of Education wanted the school to be as energy efficient as possible, but needed help to pinpoint conservation opportunities.

The school installed lighting occupancy sensors, high-efficiency motors and variable frequency drives (or motor speed controls) on all pumps and motor fans for the chiller system and ENERGY STAR® dry-type transformers throughout the entire school. In addition, an ice storage system was installed to significantly reduce the peak demand of the cooling system. The system produces and stores ice during off-peak hours of the day and cools the building during peak hours.

Cesar Battalla School received a $140,500 incentive from the CEEF for the installation of energy-efficient systems. An estimated 599,007 kWh will be saved annually as well as an additional 334.2 kW during summer peak periods. The ice storage system is responsible for 201 kW, or 60 percent of the 334.2 peak kW; ensuring summer peak demand reduction.

CL&P CASE STUDY

Energy Conscious Blueprint Program

Brien McMahon High School was originally built as a junior-senior high school in 1960. Over the past two years, the school has undergone several major renovations. The newest addition, completed in September 2006, includes a new library, offices, classrooms and a remodeled auditorium and gymnasium.

City of Norwalk and Brien McMahon High School officials worked extensively with CL&P's Conservation & Load Management staff to implement energy-efficiency measures including lighting and lighting controls, high-efficiency motors, a water-cooled chiller and ENERGY STAR transformers. These measures will save the city of Norwalk approximately 1.1 million kWh annually with a lifetime energy savings of over 20 million kWh. The project will also reduce the city's energy demand by 420 kW. The dollar savings are approximately $135,000 per year and about $2.4 million over the expected lifetime of the improvements. The city of Norwalk received a $214,919 incentive check from the CEEF for installing the energy-efficiency measures.

"This recent expansion project gives Norwalk students access to a world-class learning facility that operates efficiently," said Norwalk Mayor Richard A. Moccia at the incentive check presentation. "The teachers and officials can concentrate on illuminating students' minds, instead of the school's classrooms." Brien McMahon High School's energy savings is equivalent to providing 143 homes with electricity each year or saving more than 73,000 gallons of home heating oil.

UI CASE STUDY

Energy Opportunities Program

Schick-Wilkinson Sword of Milford is the company's largest manufacturing facility of Schick razors. Recognizing the challenges of the company's aging production facility, Tony Sanzo, plant supervisor, recruited the expertise of UI and CEEF's Energy Opportunities Program to equip the facility with energy-efficient upgrades.

After evaluating high-energy and demand-use systems and the potential for energy efficiency, UI recommended Schick-Wilkinson Sword replace the facility's old 125-ton air-conditioning unit with a smaller, more economical 100-ton unit.

Schick received a total CEEF incentive of $133,000 to help reduce the cost of the project. The installation of the new air-conditioner will save Schick 142,600 kWh annually with a 37 peak kW reduction, and by replacing additional inefficient equipment, Shick will save 691,000 kWh and 96 peak kW annually.

CL&P CASE STUDY

Small Business Program

The River Street School in Windsor and its satellite River Street Preschool/Early Learning Center in Hartford are part of the Capitol Region Education Council's (CREC) educational school district serving special education communities. These two schools' programs serve more than 200 students aged 3-21 who have a variety of behavioral, communicative, and neurological disorders, such as autism. These schools offer a range of educational experiences for their students, ranging from self-contained programs to supervised work programs in the community.

By working with CL&P's Small Business administrators and a third-party vendor, CREC learned that it could reduce electricity usage at both schools by replacing old inefficient lighting fixtures with high-efficient lighting equipment and installing lighting controls. Through CREC's participation in the Small Business program, the Hartford Preschool/Early Center is expected to save over 69,674 kWh annually and save nearly 1.28 million kWh over the lifetime of the energy-efficiency measures. The dollar savings are approximately $8,100 per year.

The River Street School should save approximately 92,611 kWh annually and save approximately $11,144 per year. CREC received a $53,061 CEEF incentive for installing energy-efficient lighting at both schools.

UI CASE STUDY

Small Business Program

Tile America, with six locations throughout Connecticut and approximately 100 employees, is an importer, distributor and retailer of ceramic tile and natural stone. Tile America discovered its main consumption of electricity was lighting throughout their showrooms and warehouse, located in New Haven. Through the help of UI's SBEA program, Tile America learned that the company could reduce electricity usage and lower the monthly electric bills with just a few changes. Tile America was also very concerned about the quality of lighting to ensure products were showcased in their true colors as well as staying open for business during the retrofits.

Tile America not only discovered that they were wasting electricity with old lighting fixtures and lighting unoccupied areas, but they also had outdated fixtures and lights that were emitting an extreme amount of heat that activated the air conditioning system in the midst of winter. Through UI's SBEA program, Tile America replaced all existing incandescent lighting in the showrooms and warehouse with high efficiency lighting. Additionally, occupancy sensors were installed to reduce the usage of electricity in areas that were unoccupied. In Tile America's Brookfield location alone, more than $3,000 has been saved since 2005.

The company has saved a total of $18,667 and has seen an annual energy savings of 138,072 kWh. Tile America also received another $13,245 in incentives.

CL&P CASE STUDY

Energy Conscious Blueprint Program

Foodshare is a regional food bank and distributes more than 11 tons of food each day to 350 local programs that feed hungry people in Hartford and Tolland counties. Foodshare provides food to community kitchens, shelters, and other social service organizations in every town in Greater Hartford. These programs serve children, families, and seniors and provide over a quarter of a million meals each month.

With the help of CL&P's C&LM department and third-party vendors, in early 2006, Foodshare officials received a $100,130 incentive for installing an efficient lighting and refrigeration system, occupancy sensor lighting controls, energy-efficient HVAC (heating, ventilating and air conditioning) equipment and high-speed freezer doors in the distribution center at their new Bloomfield location.

With the help of CEEF incentives, Foodshare is expected to save over 320,000 kWh over the next year, and nearly 5.8 million kWh over 18 years, which is the expected lifetime of the improvements. The energy cost savings are approximately $38,000 per year and about $685,000 over the expected lifetime of the improvements. Foodshare's annual energy savings is equivalent to providing 41 homes with electricity each year, removing 452 cars from the road or saving more than 21,000 gallons of home heating oil.

SECTION VI: CEEF Program Summary for 2007

Residential Programs		
Programs	*Eligibility*	*Incentive*
ENERGY STAR® Retail Products	All residential customers.	Retail incentives, special events and mail order promotions, to encourage customer buying habits of energy-efficient lighting products and clothes washers.
Residential New Construction	Residential customers in the process of building a new home.	Incentives for high-efficiency HVAC equipment, lighting products and home performance.
Residential Heating and Cooling	Residential customers with central air conditioning or heat pumps.	Prescriptive rebates for installing energy-efficient central air conditioning, heat pumps and geothermal systems. Quality installation verification and commissioning available through participating contractors.
Home Energy Solutions	All residential customers. This program is free to all electric and natural gas heat customers. Co-pay for Connecticut residents who heat with oil.	Full comprehensive residential in-home services including: duct sealing, weatherization, energy-efficient light bulb installation, education, and water heating measures where applicable. Appliance rebates for replacing older, inefficient qualified appliances.
Weatherization Residential Assistance Partnership/WRAP (CL&P), UI Helps (UI)	Low-income residents with incomes at or below 60% of the Connecticut state median income.	Full cost of installed conservation and energy-efficiency measures.
Energy Conservation Loan	Owners of single- and multi-family buildings, having an average annual income below the Connecticut Housing Investment Fund (CHIF) established limits.	Low-interest loans for residential energy conservation work.
Community Based	Government, educational groups, economic development organizations, retailers, trade allies and civic organizations.	Education, CEEF program information and financial incentives are provided via an array of energy-efficiency programs.
***ee*Smarts™**	Boards of Education, school principals, teachers and parents.	Free Professional Development Workshops for Connecticut school teachers and school districts regarding the eeSmarts program and energy topics. Workshops and free curriculum for grades K-8 help students meet Connecticut Mastery Test standards.

CALL **1-877-WISE-USE** FOR ADDITIONAL INFORMATION

Commercial & Industrial (C&I) Programs		
Programs	*Program Features/Eligibility*	*Incentive*
Energy Conscious Blueprint	New non-residential construction, planned remodeling, major renovations and new equipment.	Up to 100% of incremental cost.
Connecticut Cool Choice	Express Services Rebates for non-residential customers replacing rooftop or packaged air conditioning systems or heat pump systems.	Rebates from $70-200 per ton.
Connecticut MotorUp Express Rebate Form	All non-residential customers, replacing three-phase motors.	Rebates based on average incremental cost.
***PRIME**	Industrial manufacturing customers with average peak demand of 1,500 kW or less.	100% reimbursement of cost paid for the first two PRIME events at the customer's location for qualifying projects.
Energy Opportunities	All commercial and industrial customers, including municipalities.	Up to 60% of installed cost (dependent upon energy-efficient measure) and possible two-year payback buy down (See electric Utility for details).
Express Lighting Rebate Form	All non-residential customers replacing inefficient lighting or lighting controls. Rebates exceeding $1,000 require pre-approval.	Prescriptive rebates from $10-$55 per fixture or up to 100% of the incremental cost (varies with technology and application).
Accelerated Chiller Retirement	C&I and institutional customers with water-cooled chiller 25 years or older. Unit must operate during ISO-NE summer peak hours. Any chiller that has an existing utility Conservation Program agreement is not eligible.	Incentives are the lesser amount of: 75% of the total installed cost, 100% of the Measure Cap, or $600/ton installed cost.
Small Business Energy Advantage	All non-residential customers, including municipalities, with up to 200 kW (CL&P) or 150 kW (UI) of average peak demand. Interest-free financing for up to 36 months available to qualified customers.	Prescriptive incentives for: Lighting and lighting controls up to 50% of installed cost; HVAC controls and tune-ups up to 50% of installed cost; and Refrigeration controls up to 50% of installed cost.
Operation & Maintenance (O&M) Services	All non-residential customers. Program provides incentives for the implementation of non-capital intensive items that save electric energy such as the repair of leaking ductwork or compressed air system leaks.	Incentives up to 50% of installed cost (SWCT customers eligible for incentives up to 100% of installed cost).
Retrocommissioning	Large non-residential customers. Customers must have a building energy management system with trending capability.	Incentives toward the analysis costs and up to 100% of installed cost.
ISO-NE Load Response Program Support	Customers with at least 100 kW of curtailable load that can respond within 30 minutes or 2 hours of notification.	Incentives paid for curtailment when requested. Higher payment available for customer capable of responding within 30-minutes.
***Demand Reduction**	Non-residential customers who are capable and willing to control kW demand during peak times through real-time monitoring and control.	Incentives for qualifying projects will be the lesser of $500/kW curtailed or 50% of installed costs. (SWCT Customer—lesser of $1,000/kW curtailed or 50% of installed cost).
***Small Industrial & Commercial Loan**	Qualified commercial customers with average kW demand of 350 kW or less, or industrial customers with less than 100 employees. In business for minimum 3 years required.	Interest-free financing for qualified customers.

*CL&P programs only.

SECTION VII:

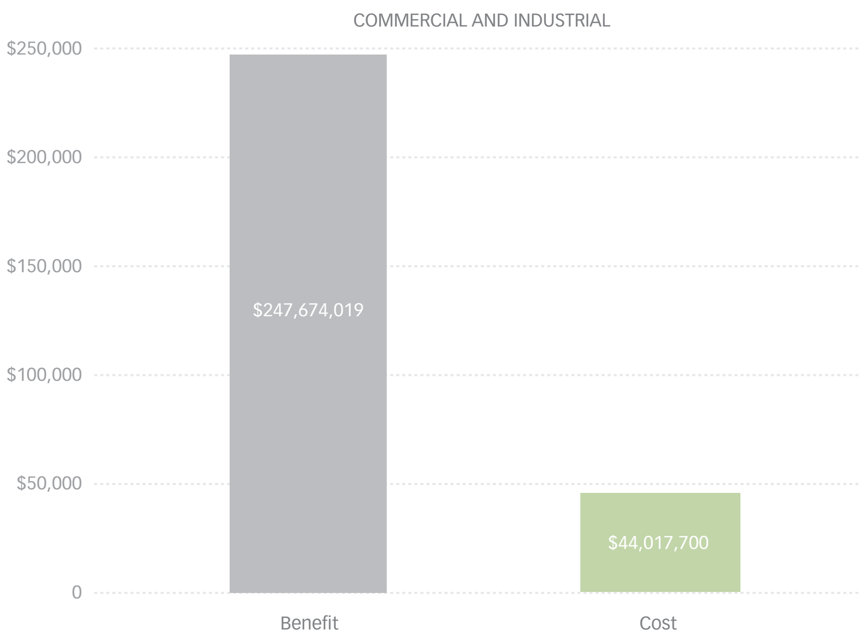
2006-2007 CEEF Budget Summary

Connecticut Energy Efficiency Fund Programs		2006 Actuals		2007 Projected
RESIDENTIAL				
Residential Retail Products	$	7,290,784	$	6,850,000
Appliance Retirement		1,297,944		—
Total — Consumer Products		**8,588,728**		**6,850,000**
Residential New Construction		2,063,543		2,100,000
Residential Heating & Cooling/Home Energy Solutions		4,743,830		6,121,909
Low-Income (Energy Care & WRAP/UI Helps)		6,548,194		7,235,381
Subtotal RESIDENTIAL	**$**	**21,944,295**	**$**	**22,307,290**
COMMERCIAL & INDUSTRIAL				
C&I LOST OPPORTUNITY				
Energy Conscious Blueprint		12,622,289		15,366,126
Total — Lost Opportunity	**$**	**12,622,289**	**$**	**15,366,126**
C&I LARGE RETROFIT				
Energy Opportunities	$	12,058,255	$	11,958,868
O&M (RetroCx, BOC, RFP)		1,507,056		3,409,000
Total — C&I Large Retrofit		**13,565,312**		**15,367,868**
Small Business		9,135,120		5,323,845
Alternative Standard Offer (ATSO)		—		—
Subtotal C&I	**$**	**35,322,720**	**$**	**36,057,839**
OTHER — EDUCATION *				
SmartLiving Center® — Museum Partnerships	$	380,349	$	434,559
eeSmarts (K-12 Education)		469,240		481,183
Residential Audits-Non WRAP		57,778		—
Community Based Program (SWCT)		276,025		225,000
Science Center		207,200		200,000
Subtotal Education	**$**	**1,390,592**	**$**	**1,340,742**
OTHER — PROGRAMS/REQUIREMENTS				
Institute for Sustainable Energy (ECSU)	$	302,000	$	295,822
Energy Conservation Loan Fund		247,174		—
Heat Pump Water Heaters (Hot Shot/WSaver)		100,981		—
C&LM Loan Defaults		85,071		64,652
Subtotal Programs/Requirements	**$**	**735,226**	**$**	**360,474**
OTHER — LOAD MANAGEMENT				
ISO Load Response Program	$	1,252,111	$	424,570
Demand Reduction		12,663		400,000
Power Factor		124,420		150,000
Subtotal Load Management	**$**	**1,389,194**	**$**	**974,570**
OTHER — RD&D				
Research, Development & Demonstration	$	46,794	$	525,000
Subtotal RD&D	**$**	**46,794**	**$**	**525,000**
OTHER — ADMINISTRATIVE & PLANNING				
Administration	$	1,295,149	$	978,759
Planning and Evaluation		1,507,641		1,833,340
Information Technology		2,084,337		1,742,857
ECMB		315,585		460,000
Audit		—		165,000
Performance Management Fee		5,003,897		3,311,044
Admin/Planning Expenditures	**$**	**10,170,609**	**$**	**8,491,000**
PROGRAM SUBTOTALS				
Residential	**$**	**23,510,326**	**$**	**23,576,120**
C&I		**36,969,701**		**37,268,973**
Other*		**10,519,402**		**9,311,822**
TOTAL C&LM BUDGET	**$**	**70,999,429**	**$**	**70,156,915**
Docket 05-07-14 PH01 EIA programs	$	—	$	—
ISO Load Response Programs		18,949,862		20,568,468
Residential HVAC		1,260,482		1,423,893
Electric & Gas Efficiency		121,094		895,000
General Awareness		298,136		300,000
Direct Load Control		—		—
Energy Opportunities	$	2,142,084	$	2,041,625
Subtotal Docket 05-07-14PH01 EIA Programs	**$**	**22,771,658**	**$**	**25,228,986**
Total C&LM and EIA Programs	**$**	**93,771,087**	**$**	**95,385,901**

* OTHER-EDUCATION is primarily allocated to residential programs. Totals vary due to rounding.

GRAPH E:

Benefits of Connecticut's Energy-Efficiency Programs Far Exceed Costs



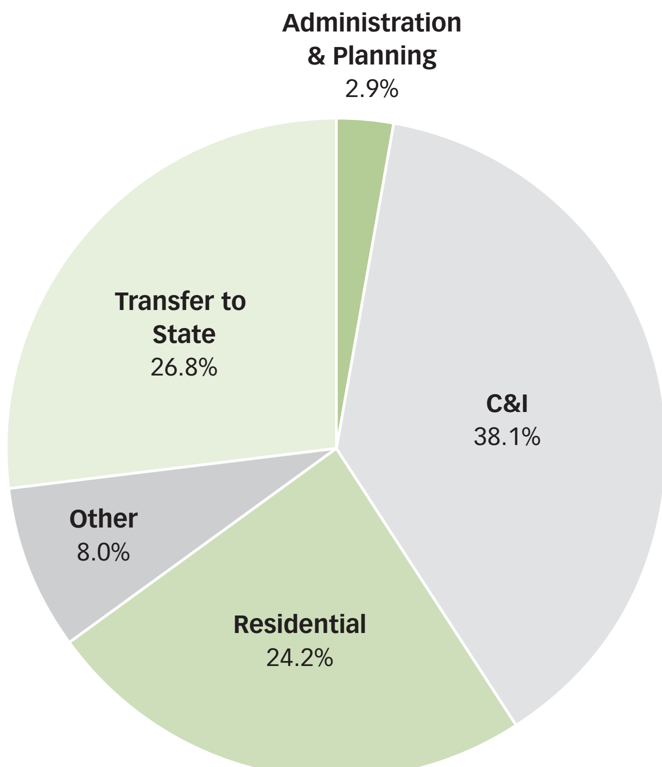
CEEF Budget Allocations

The CEEF's 2006 programs were affected by the General Assembly's 2003 decision to divert funds from the CEEF to the state's General Fund and subsequent decision to allow the DPUC to authorize bonding. In June 2004, the bonds were issued with the net result being an overall one-third reduction in CEEF program funding for the next seven years.

Despite these financial challenges, in 2006, the CEEF's programs provided significant cost savings and reduced energy consumption for Connecticut residents and businesses. The General Assembly's diversion of CEEF funds to the state's General Fund significantly reduces the level of programs and services offered to Connecticut businesses and residents in 2007. Therefore, the capacity and energy savings due to CEEF programs are greatly reduced.

CHART D:

2006 Actuals: CEEF Budget Allocations



2006 "Transfer to State" includes Funds Diverted to the State's General Fund Under PA 03-02 and Funds Used for Rate Reduction Bonds Under PA 03-6 and Authorized by the DPUC in Docket 03-09-08.

Creation of the Natural Gas Energy Efficiency Programs

In 2005, the *Act Concerning Energy Independence* added the natural gas distribution companies to the ECMB's membership and tasked the ECMB with advising and assisting them in the development and implementation of gas energy-efficiency plans to implement cost-effective energy-efficiency programs and market transformation initiatives. The three Connecticut natural gas utilities are the Connecticut Natural Gas Corporation (CNG), Southern Connecticut Gas Company (SCG), and the Yankee Gas Services Company (Yankee Gas), collectively the "natural gas companies".

In 2006, the natural gas companies worked collaboratively with the ECMB and its consultants to revise and develop expanded gas energy-efficiency programs. In 2006, the natural gas companies' energy-efficiency programs served approximately 2,256 residential customers. A primary component of the natural gas companies' energy-saving programs was the new General Weatherization Program (GWP). This program is intended to serve all of Connecticut's residential energy customers. The GWP served 847 residential customers with comprehensive weatherization services, such as duct sealing. These customers will realize annual gas savings of 163,430 ccf and lifetime gas savings of 3.13 million ccf. In 2006, the Low-Income WRAP program delivered weatherization services (electric and gas) to 1,409 low-income customers in Connecticut.

CHART E:

Energy Savings from Natural Gas Utilities' Energy-Efficiency Programs

Energy Savings from 2006 Actual and 2007 Projected Annual and Lifetime Savings		
Program	**2006 Actual**	**2007 Plan**
Low-Income Weatherization		
Annual ccf	123,734	157,712
Lifetime ccf	2,425,500	3,154,234
General Weatherization Program		
Annual ccf	39,696	160,879
Lifetime ccf	707,619	3,788,882
Total Energy Savings		
Annual ccf	163,430	318,591
Lifetime ccf	3,133,119	6,943,116

YANKEE GAS CASE STUDY
WRAP PROGRAM

WINTHROP SQUARE is a 300 unit apartment unit in New London, Conn. The complex served as a pilot project for the joint natural gas company and CEEF program partnership, as it is primarily heated by natural gas.

In mid-2006, a WRAP program administrator and an ACCESS agency representative performed a walk-through energy analysis of the Winthrop Square complex, and determined that there were several locations that had inadequate insulation. In December 2006, over 140,500 square feet of insulation was installed in the complex's units, which should save Winthrop Square residents approximately 20,000 ccf annually. Winthrop Square received a natural gas company incentive of $126,804 for installing the energy-efficient insulation. In 2007, the complex will also receive additional electric energy-saving services that should help them further reduce their energy consumption.

2007 Natural Gas Energy Efficiency Programs

Residential Low-Income Weatherization and Heating System

The Low-Income Weatherization Residential Assistance Partnership with Heating System Replacement program is continued from 2006 and reduces the utility bills of eligible low-income customers and makes their houses more energy-efficient and comfortable by installing weatherization measures, replacing older, inefficient heating and water heating systems and performing energy conservation services at no cost to the participant. The program also provides energy-efficiency education to raise customer awareness of conservation and to encourage them to take behavioral and other steps beyond weatherization to further reduce energy consumption. Residential customers who live in owner-occupied dwellings or renters who pay for their own natural gas accounts and whose household income is less than 60% of the state median income are eligible to receive the program's services.

General Weatherization Program

The General Weatherization Program reduces utility bills so they are more affordable for residential customers who have household incomes higher than the "low income" program guidelines, yet still experience a financial impact because their homes are not energy efficient. This program is continued from 2006 and provides comprehensive weatherization and other energy conservation services to owner-occupied dwellings or renters who pay for their own natural gas accounts.

Commercial and Industrial Process Retrofit Pilot

The Process Retrofit Pilot is a market based request for proposal program designed to promote competitive gas energy-efficiency activities in the market place by encouraging customers and/or third parties to bid to undertake gas efficiency projects on a competitive basis. The Process Retrofit Pilot program is new for 2007 and is aimed at energy-efficiency potential from commercial and industrial (C&I) customers utilizing process applications that consume natural gas resources (e.g., manufacturing, food service, laundry services, etc.). The program is being offered as a "pilot" in order to test and establish market interest and potential. The knowledge and insight gained will help in the establishment of a longer-term strategy, guide development of future program designs, and help more effectively meet customer needs.

CHART F:

Assistance to Customers in Connecticut Towns in 2006

Avon	$	1,787
Beacon Falls	$	591
Berlin	$	5,108
Bloomfield	$	4,052
Branford	$	19,445
Bridgeport	$	23,053
Bristol	$	10,780
Canton	$	70
Cheshire	$	2,752
Cromwell	$	2,560
Danbury	$	2,094
Darien	$	315
East Hartford	$	159,827
East Haven	$	9,317
East Lyme	$	351
East Windsor	$	876
Ellington	$	686
Enfield	$	20,647
Farmington	$	862
Glastonbury	$	6,292
Greenwich	$	4,203
Guilford	$	735
Hamden	$	37,239
Hartford	$	69,517
Killingly	$	3,555
Madison	$	363
Manchester	$	17,290
Meriden	$	16,976
Middlebury	$	3
Middletown	$	2,407
Milford	$	4,153
Monroe	$	578
Montville	$	92
Naugatuck	$	3,147
New Britain	$	76,022
New Haven	$	88,779
New London	$	127,886
New Milford	$	720
Newington	$	3,981
Newtown	$	5,282
North Haven	$	9,569
Norwalk	$	5,616
Old Saybrook	$	719
Plainfield	$	1,492
Plainville	$	2,828
Plymouth	$	302
Putnam	$	6,556
Ridgefield	$	57
Rocky Hill	$	2,699
Seymour	$	127
Simsbury	$	479
South Windsor	$	2,309
Southington	$	11,321
Stamford	$	5,352
Stratford	$	12,372
Suffield	$	599
Thomaston	$	147
Torrington	$	8,077
Trumbull	$	7,442
Vernon	$	8,265
Wallingford	$	64
Waterbury	$	87,006
Waterford	$	18
Watertown	$	1,749
West Hartford	$	14,051
West Haven	$	14,581
Weston	$	1,182
Westport	$	17,255
Wethersfield	$	2,924
Wilton	$	537
Winchester	$	6,842
Windham	$	20,691
Windsor	$	1,703
Windsor Locks	$	1,019
Wolcott	$	90

SECTION IX: Connecticut Municipal Electric Energy Cooperative

What is the Connecticut Municipal Electric Energy Cooperative (CMEEC)?

Formed in 1976, CMEEC is a publicly directed joint action supply agency formed by the state's municipal electric utilities. Its mission is to meet the electric needs of its residents and businesses at the lowest possible cost. CMEEC is owned by the municipal cities of Groton and Norwich, the Borough of Jewett City, and South and East Norwalk. CMEEC also provides all power required by other participating utilities including the Town of Wallingford Department of Public Utilities, the Bozrah Light and Power Company, and the Mohegan Tribal Utility Authority.

In 2005, the EIA required CMEEC to administer energy-efficiency programs for its customers. In 2006, CMEEC began implementation of a portfolio of energy-efficiency initiatives, that included: distribution of 57,000 compact fluorescent lamps; promotion/purchase of over 400 ENERGY STAR appliances; participation in CoolChoice and MotorUp Rebate programs; incentives for major commercial lighting projects; and providing energy-efficiency assessments for commercial and industrial customers.

In its development year, CMEEC's efforts provided over $6.6 million in net total resource benefits and $7.2 million in net electric benefits. It generated 1.3 MW in summer demand reduction and over 7.5 gigawatt hours (GWh) in annual energy savings, at a cost of $0.02 per lifetime kWh. CMEEC's commercial and industrial customers received over $1.3 million in incentives for installing energy-efficiency measures in their facilities. This is equivalent to annual cost savings of over $500,000.

CMEEC generated 1.3 MW in summer demand reduction and over 7.5 GWh in annual energy savings, at a cost of under 2 cents per lifetime kWh in 2006.

In 2006, CMEEC distributed over 57,000 CFLs to residents and assisted in the promotion/purchase of over 400 ENERGY STAR appliances.

2006 CMEEC commercial and industrial programs completed over $1.3 million in projects, with annual cost savings of over $500,000.

CHART G:

Assistance to Customers in CMEEC Towns in 2006

	CMEEC Assistance	CEEF Assistance	Total
Bozrah	$ 14,000	$ 0	$ 14,000
Groton	$ 289,000	$ 15,000	$ 304,000
Jewett City	$ 11,000	$ 0	$ 11,000
Norwalk	$ 42,000	$ 1,077,000	$ 1,119,000
Norwich	$ 44,000	$ 0	$ 44,000
Wallingford	$ 225,000	$ 83,000	$ 308,000

CMEEC Assistance for Norwalk is comprised of $25,000 from the Third Taxing District, and $17,000 from South Norwalk Electric and Water.

Connecticut Municipal Electric Energy Cooperative

CHART H:

2006 CMEEC Costs and Results

Program	Utility Costs ($000)	Annualized Savings	Lifetime Savings (MWh)	Demand Savings (kW)	Cost Per Lifetime kWh Savings
Residential					
Low-Income Program	$ 194	$ 283	$ 2,580	$ 29	$ 0.075
Efficient Products					
Lighting	383	1,812	12,791	143	0.030
Appliances	56	51	722	16	0.078
Air Conditioning	12	5	94	9	0.130
Subtotal—Residential	**$ 645**	**$ 2,151**	**$ 16,187**	**$ 196**	**$ 0.040**
Commercial					
Prescriptive	$ 70	358	5,004	268	$ 0.014
C&I Existing Facility Retrofit	701	4,661	64,299	783	$ 0.011
Subtotal—Commercial	**$ 771**	**$ 5,019**	**$ 69,303**	**$ 1,052**	**$ 0.011**
Total—All Programs	**$ 1,416**	**$ 7,170**	**$ 85,489**	**$ 1,248**	**$ 0.017**

SECTION X: Energy Conservation Management Board Members

Jeffrey Gaudiosi
ECMB Chairperson
Manufacturing Alliance of CT
173 Industry Lane
Waterbury, CT 06705

Mary Healey
Consumer Counsel

Richard Steeves
ECMB Vice-Chairperson
Designee
Office of Consumer Counsel
Ten Franklin Square
New Britain, CT 06051

Ronald J. Araujo
The Connecticut Light and Power Company
P.O. Box 270
Hartford, CT 06141

Shirley Bergert
Connecticut Legal Services, Inc.
P.O. Box 258
Willimantic, CT 06226

Neil W. Beup
Designee
Carrier Corporation
One Carrier Place
Farmington, CT 06032

Richard Blumenthal
Attorney General

Michael Wertheimer
Designee
Office of the Attorney General
Ten Franklin Square
New Britain, CT 06051

Richard E. DesRoches
Connecticut Municipal Electric Energy Cooperative
30 Stott Avenue
Norwich, CT 06360

Louise E. Dicocco-Beauton
Greater New Haven Chamber of Commerce
900 Chapel Street
10th Floor
New Haven, CT 06510

John Dobos
Connecticut Natural Gas/
Southern Connecticut Gas
P.O. Box 1500
350 Church Street
Hartford, CT 06144-1500

Robert Earley
Connecticut Business & Industry Association
350 Church Street
Hartford, CT 06103

John M. Ferrantino
Yankee Gas Services Company
P.O. Box 270
Hartford, CT 06141

Christopher James
Designee
Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

Roger Koontz
Designee
Environment Northeast
101 Whitney Avenue
New Haven, CT 06510

Patrick McDonnell
The United Illuminating Company
157 Church Street
MS 1-6B
New Haven, CT 06510

Connecticut Light & Power
The Northeast Utilities System

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Connecticut's Energy Efficiency Programs are funded by the Conservation Charge on customer electric bills.

Energy Conservation Management Board
c/o Connecticut Department of Public Utility Control
10 Franklin Square
New Britain, CT 06051
www.CTSavesEnergy.org

Connecticut Department of Public Utility Control
10 Franklin Square
New Britain, CT 06051
www.ct-energyinfo.com

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