

## Attachment D

Regarding Two Revisions to the State Implementation Plan (SIP):  
Periodic Emissions Inventory for Inventory Year 2014;  
and  
Periodic Emissions Inventory for Inventory Year 2017

Prepared by  
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On December 18, 2023, the Commissioner of the Department of Energy and Environmental Protection (DEEP) published a notice of intent for two revisions to the State Implementation Plan (SIP). Each revision to the SIP is a Periodic Emissions Inventory (PEI), one for year 2014 and one for 2017, to satisfy the 2008 and 2015 requirements for the 2008 and 2015 National Ambient Air Quality Standards (NAAQS) for ozone.

The 2014 inventory is being submitted as a periodic inventory pursuant to CAA section 182(a)(3)(A) and the nonattainment status of the Southwest Connecticut nonattainment area for the 2008 ozone NAAQS. The 2017 inventory fulfills two obligations. First pursuant to section 182(a)(3)(A) of the Clean Air Act (CAA), 40 CFR 51.1115(b), and the presence in the state of a nonattainment area (Southwest Connecticut) for the 2008 ozone NAAQS; Connecticut is obliged to develop and submit a periodic inventory for 2017. Additionally, given the state's nonattainment status area for the 2015 ozone NAAQS, the 2017 inventory satisfies the CAA's section 182(a)(1) and 40 CFR 51.1315(a) requirement for the development and submittal of a base year emissions inventory. Both the base year and periodic inventories for 2014 and 2017 are prepared for the entire state.

The notice indicated that a hearing would be held on Tuesday, January 23, 2024, only if a request for a hearing was received on or before Thursday, January 4, 2024. As no hearing request was received, the public hearing for Tuesday, January 23, 2024 was canceled. The public comment period closed on Friday, January 26, 2024.

#### I. Hearing Report Content

While the two PEIs were posted for public notice, an internal review of the documents was done in tandem. This document describes the comments both from the external and internal examination of the 2014 and 2017 PEIs.

The final SIP revisions will be available on DEEP's webpage.

## II. Summary of Periodic Emissions Inventories

EPA requires each state to inventory point, nonpoint, mobile and biogenic emissions sources and report this information to EPA for the pollutants set out in the Air Emissions Reporting Rule (40 Code of Federal Regulations (CFR) 51, Subpart A) including sulfur dioxide (SO<sub>2</sub>), volatile organic compounds (VOCs), nitrogen oxides (NO<sub>x</sub>), lead and lead compounds, primary particulate matter (PM<sub>2.5</sub>, PM<sub>10</sub>), and ammonia (NH<sub>4</sub>). Various data sources were used to develop these inventories including point source emissions data reported by the owners and operators of emitting facilities within Connecticut through their annual emissions statements, EPA inventory estimates, and modeled mobile source emissions.

The authority to adopt these SIP revisions is granted by sections 22a-6 and 22a-174 of the Connecticut General Statutes (CGS).

## III. Opposition to the Inventories

No submitted comments oppose adoption of the proposed SIP revisions.

## IV. Summary of Comments

Written comments were received from a single person:

Eric Wortman, Acting Manager

Air Quality Branch

United States Environmental Protection Agency (EPA) -- Region 1

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**Written Comment 1:** Please indicate that the 2017 inventory fulfills two obligations. First pursuant to section 182(a)(3)(A) of the Clean Air Act (CAA), 40 CFR 51.1115(b), and the area's status as a nonattainment area for the 2008 ozone NAAQS, Connecticut is obliged to develop and submit a periodic inventory for 2017. Second, given the state's status as nonattainment area for the 2015 ozone NAAQS, the 2017 inventory satisfies the CAA's section 182(a)(1) and 40 CFR 51.1315(a) requirement for the development and submittal of a base year emissions inventory.

Additionally, your SIP submittal should note that the 2014 inventory is also being submitted as a periodic inventory pursuant to CAA section 182 (a)(3)(A) and the area's 2008 ozone NAAQS nonattainment status.

**Response to Written Comment 1:** The introductory text was updated to ensure relevant regulations are attributed and cited within the final document for both the 2014 and 2017 PEIs.

V. Comments from Hearing Officers (Internal Review)

**Internal review comments for the 2014 Periodic Emissions Inventory**

The observations made about the 2021 working draft of the 2014 PEI were addressed and incorporated into the 2014 PEI that was posted for public comment in December of 2023.

No material changes were made to the 2014 PEI after public notice.

**Internal review comments for the 2017 Periodic Emissions Inventory**

*Section 1 Comments*

**Internal Review Comment 1:** The internal reviewer found two errors in “Table 1 13: 2017 Annual Emissions of All Sources in the Greater Connecticut PM<sub>2.5</sub> Attainment Area”. The original values for Area Sources PM<sub>2.5</sub> Primary (6,221 TPY) and the total value for PM<sub>2.5</sub> Primary (5,221 TPY) were flagged as errors.

**Response to Internal Review Comment 1:** The reviewer’s suggested values for Area Sources PM<sub>2.5</sub> Primary (5,383 TPY) and the total value for PM<sub>2.5</sub> Primary (6,220 TPY) were accepted and corrected in the final document.

*Section 3 Comments*

**Internal Review Comment 2:** The internal reviewer found an error in “Table 3 2: 2017 Annual Non-Road Emissions in Connecticut by County”. The original value for Connecticut’s VOC was 3,084 TPY.

**Response to Internal Review Comment 2:** The reviewer’s suggested value of 8,748 TPY was accepted and corrected in the final document.

**Internal Review Comment 3:** The internal reviewer had a general question about replicating the modeling runs using the MOter Vehicles Emissions Simulator (MOVES) model.

**Response to Internal Review Comment 3:** Section 3.0.1 Mobile Source Models had the following original text,

MOVES2014 has been updated twice; the most recent version, MOVES2014b, was released in August 2018 and contains improvements in modeling non-road sources.

Updated text in the final draft contains additional details about the model that was run for the 2017 PEI. Modeling runs without these same conditions may yield slightly different results.

MOVES2014b was updated after the original August 2018 release. The most recent version of MOVES2014b (default database movesdb20181022 - application master code version MOVES2014b-20181203) was used. This release contains improvements in modeling non-road sources.

**Internal Review Comment 4:** The internal reviewer found an error in Section 3.0.2.3 Ozone Summer Day Design Temperature.

**Response to Internal Review Comment 4:** The original paragraph read,

For each of the ten highest ozone days in Figure 3-A, the maximum and minimum temperatures that occurred each day were obtained from the [National Oceanic and Atmospheric Administration \(NOAA\) Local Climatological Data Publication Website](#) for Bradley International Airport in Windsor Locks for the greater Hartford ozone non-attainment area and Igor I. Sikorsky Memorial Airport in Bridgeport for the Connecticut portion of the NY-NJ-CT ozone non-attainment area.

The suggested statement was accepted and added to the final document, where, the word “Hartford” was Replaced with “Connecticut”.

For each of the ten highest ozone days in Figure 3-A, the maximum and minimum temperatures that occurred each day were obtained from the [National Oceanic and Atmospheric Administration \(NOAA\) Local Climatological Data Publication Website](#) for Bradley International Airport in Windsor Locks for the Greater Hartford [Connecticut] ozone non-attainment area and Igor I. Sikorsky Memorial Airport in Bridgeport for the Connecticut portion of the NY-NJ-CT ozone non-attainment area.

**Internal Review Comment 5:** In Section 3.1.1.12 Hotelling Inputs, the internal reviewer indicated that the word “zero” was missing from the following text,

For instance, hotelling is known to occur in Fairfield County; yet MOVES2014 default estimates would result in [zero] hotelling hours within Fairfield County because there are no rural restricted roads in the county.

**Response to Internal Review Comment 5:** This change was accepted and the word “zero” was added to the final document draft.

### *Appendix C Comments*

**Internal Review Comment 6:** The internal reviewer noted that in “Table C-5: Detail Listing of 2017 Connecticut Point Source Inventory”, there was a missing entry for New Haven Terminal, East Hartford.

**Response to Internal Review Comment 6:** This error was rectified by regenerating the results of this report and fixing the error on the back end of the database system. The site was added to the final document on page C-233.

It should also be noted that in the document version sent for internal review and public notice, The label for “Table C-5” was incorrectly generated as showing “Table C-4”. This was also rectified for the final document.

**Internal Review Comment 7:** The internal reviewer flagged that in “Table C-5: Detail Listing of 2017 Connecticut Point Source Inventory” there were general text wrapping and readability issues and recommended a more user-friendly format be implemented.

**Response to Internal Review Comment 7:** The report that is run to populate Table C-5 was modified as well as manual formatting adjustments to make the output more user-friendly and clearer.

### *Appendix E Comments*

**Internal Review Comment 8:** The internal reviewer flagged that in “Table E-11: MOVES2014b Source Type Population in Connecticut” that the totals row (All Source Types) that the values were not adding up.

**Response to Internal Review Comment 8:** The totals were recalculated and correctly updated in the final draft.

### *Appendix F Comments*

**Internal Review Comment 9:** The internal reviewer flagged that in “Table F-17: 2017 Annual Onroad Emissions by Fuel Type” that the values were not adding up.

**Response Internal Review Comment 9:** The totals were recalculated and correctly updated in the final draft.

## *Appendix G Comments*

**Internal Review Comment 10:** The internal reviewer flagged that in “Table G-19: Annual Emissions of Aircraft”. that the values were not adding up.

**Response to Internal Review Comment 10:** The totals were recalculated and correctly updated in the final draft.

## *Appendix I Comments*

**Internal Review Comment 11:** The internal reviewer noted that four SCCs were missing from “Table I-1: Annual Emissions of Area Sources by SCC” (2801500171, 2501080100, 2103005000, 2202000062).

**Response to Internal Review Comment 11:** The document was investigated for typos and the SCCs were double checked in database driver and rectified. The missing SCCs are added to the final document: 2801500171 can be found on page I-69), 2501080100 can be found on page I-23, 2103005000 can be found on page I-5, and 2202000062 can be found on page I-26.

**Internal Review Comment 12:** The internal reviewer noted the text wrapping for “Table I-2: Summer Day Emissions of Area Sources by SCC” was not presenting the data in an effective way for the end user.

**Response to Internal Review Comment 12:** Table I-2 was reinserted into the document to make the data more readable.

## VI. Conclusion

Based upon the comments addressed in this Comment Response, we recommend the proposed SIP revision be revised as recommended herein and that the resulting final PEIs for the years 2014 and 2017 submitted to EPA for approval.

/s/ Rebecca McLean \_  
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Air Pollution Control Engineer  
Air Quality Modeling and Emissions Inventory Group

4/25/2024  
Date