STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:	:	
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PETITION OF WATERBURY GENERATION LLC FOR A DECLARATORY RULING FOR THE CONSTRUCTION OF AN ELECTRIC GENERATING FACILITY AND ASSOCIATED TRANSMISSION LINE TAP IN WATERBURY CONNECTICUT	:	PETITION NO. 831
	:	JANUARY 28, 2008

RESPONSES OF WATERBURY GENERATION LLC TO
CONNECTICUT SITING COUNCIL
PRE-HEARING INTERROGATORIES – SET TWO

On January 16, 2008, the Connecticut Siting Council ("Council") issued Pre-Hearing Interrogatories – Set Two to Waterbury Generation LLC ("WatGen") relating to the above-captioned petition. Below are WatGen's responses:

Question No. 15

What is the height of the following area structures:

a) brick exhaust stack on the abutting property to the east;
b) southwest corner of Ansonia Copper & Brass Co. building- adjacent to site.
c) Waterbury Train Station tower.
d) Yankee Gas LNG tank. Provide the distance from the tank to the site.
e) Allegheny Ludlum tower south of site. Provide the distance from the tower to the site.

Response

Attachment A contains a table noting the height and elevations of these structures as well as the distance to the LNG and Allegheny Ludlum structures.

Question No. 16

Has a subsurface investigation been conducted in the project area? If so, were contaminants requiring remediation identified? Has a remediation plan been developed? What

is the extent of the remediation?

Response

As part of the lease agreement with WatGen, Ansonia Copper and Brass ("ACB") is required to perform subsurface investigation activities and develop a Remediation Action Plan ("RAP") in conjunction with the building of the plant by WatGen. ACB has performed soil and groundwater investigations in compliance with the Connecticut DEP's Remediation Standard Regulations ("RSRs") to determine the extent of contamination. All investigations were performed under the supervision of a Licensed Environmental Professional ("LEP") as approved by the DEP. Constituents were encountered above the DEP's Industrial/Commercial Standards for the following contaminants: petroleum compounds, polynuclear aromatic hydrocarbons ("PAHs"), and metals (including copper, cadmium, arsenic and lead) in soils on the property. Petroleum hydrocarbons and metals (including cadmium, copper and zinc) were detected in groundwater samples above DEP Groundwater Protection standards.

As part of the plant construction activities, WatGen performed geotechnical borings to determine the structural integrity of the underlying soils for construction of the heavy power plant components. It was determined that approximately 11,000-12,000 cubic yards of the cobbly soils located under the project area would need to be excavated and replaced with clean fill for structural stability.

A RAP is being developed by ACB's environmental consultant and LEP, Steve Daniels of Facility Support Services. The draft RAP incorporates the excavation needs required for the building of the generating facility. Clean fill will be used to backfill the excavated areas (i.e., 11,000-12,000 cubic yards) in accordance with requirements under the RSRs. Soils removed during the excavation activities will be properly characterized for offsite disposal. At this time, it

is anticipated that the materials will be accepted as landfill cover materials at non-hazardous waste landfills in the Massachusetts/Connecticut area.

Question No. 17

Will the facility be manned during operation? If so, what is the required manpower?

Response

The generating facility is a peaking unit and will only operate during times of high electricity demand. WatGen anticipates that two operations and maintenance personnel will be assigned to this facility. When the unit is in operation, a WatGen employee will be sent to the unit to monitor the operation of the unit. In addition, when fuel oil and ammonia deliveries are made to the facility, a WatGen employee will be in attendance to supervise and assist. The WatGen unit will be monitored and operated remotely from FirstLight Power Resources' New Milford, Connecticut dispatch office, which is staffed around the clock every day of the year, as is typical of peaking generating units.

Question No. 18

How often is maintenance performed on the unit? What is the length of the maintenance event(s)?

Response

Maintenance on the unit is performed at intervals based on hours of operation. The maintenance schedule includes routine combustion system inspections, inspection of the Selective Catalytic Reduction ("SCR")/Carbon Monoxide ("CO") removal system as well as inspection and maintenance on pumps and filters in the system. These maintenance events range in length from several hours to several days. The main engine will be removed and shipped to a service center after approximately 20,000 hours of operation for a complete inspection. This

process will take 6 to 8 weeks. WatGen does not expect the engine to accumulate that number of operating hours for at least 25 years.

Question No. 19

What is the service life of the generator and related components?

Response

The electrical generator is a very robust piece of equipment and is designed for a service life of forty (40) years of continuous operation. With the very low number of operational hours expected for the WatGen facility, the generator is expected to last indefinitely. Related components of the generator have the same robust design standards and service life expectancy.

Question No. 20

Provide specifics in regards to the proposed transmission line including number, type and height of towers, route of the line, and cost of line (excluding costs within the substation).

Response

At this stage of design, WatGen plans to have 23 structures along the Metro North right of way ("ROW") and 3 or 4 structures on the City of Waterbury ("City") property at the site of the Waterbury Waste Water Treatment Plant. Most of the towers will range between a low of 77 feet and a high of 82 feet and two towers will be approximately 125 feet in order to provide adequate clearance to The Connecticut Light and Power Company's ("CL&P") distribution circuits on the South Leonard Street overpass. The route of the line is proposed to be North to South along the Metro North ROW and West to East from the City Waste Water Treatment Plant across the Naugatuck River and into the Baldwin Street Substation. This route is shown in Attachment G of WatGen's November 26, 2007 Interrogatory Responses.

The cost of the line will depend on final engineering and final construction estimates, but

at this point in time, with the design about 60% completed, using Valmont hybrid poles, it is estimated that this interconnection will cost be between $3 and $4 million.

Question No. 21

Graphs 3&4 of Application Attachment 12 appear the same- please explain. What point along the ROW do the Attachment 12 graphs represent?

Response

Mistakenly, graphs 3 and 4 of Petition Attachment 12 were the same graphs. WatGen had prepared two graphs illustrating the projected magnetic flux density at the edge of a 50 foot ROW and a 100 foot ROW. Two copies of the 50 foot ROW were provided in the Petition. The surveying that WatGen recently completed confirmed that the Metro North ROW is approximately 50 feet wide and, therefore, the 100 foot ROW chart is no longer relevant and has not been provided. Graphs 3 and 4 of the Petition represent a typical cross section of the magnetic field at horizontal distances from a line with a conductor height of 25 feet.

Question No. 22

Provide a graph/calculations for magnetic field exposure where the ROW crosses Washington Ave, South Leonard Street, and Railroad Hill Avenue. Provide a fourth graph/calculation for exposure along the edge of the railroad ROW (typical).

Response

Attachment B contains three diagrams showing the magnetic field exposure where the line will cross Washington Avenue, South Leonard Street and Municipal Road, just north of the Waterbury Waste Water Treatment Plant. The line will not cross Railroad Hill Street.

Each of these graphs show that even if someone was to stand directly below the conductors at their lowest level (32 feet above ground) the exposure would be approximately 5%

of the 833 milliGauss ("mG") public exposure limit, which is discussed in response to question 23. Since the lowest the conductor will be anywhere on the transmission line route (including along the railroad ROW) is 32 feet high, the diagrams for the Washington Street and Municipal Road crossings depict the typical exposure at the edge of the railroad ROW.

Question No. 23

Page 13 states ICNIRP has developed an exposure guideline of 4167 mG for the general public. What is the source of this figure?

Response

The 4167 mG exposure guideline cited on page 13 of the Petition is incorrect. The 4167 mG value is the occupational exposure limit and not the exposure limit for the general public. The correct general public exposure limit is 833 mG. This limit is based upon ICNIRP's "Guidelines for limiting exposure to time varying electric, magnetic and electromagnetic fields (up to 300 GHz.)," Health Physics 74 (4) 494-522 (April 1998). That report recommends a reference exposure level for occupational exposure to 25,000 μT/60 hz, which equals 416.7 μT or 4,167 mG, where 1 μT (microTesla) equals 10 mG. ICNIRP recommends a reference exposure for the general public that is 20% of the occupational exposure, equating to 5,000 μT/60 hz, which equals 83.3 μT or 833 mG. As shown in the diagrams in response to question 22, the exposure from the Waterbury transmission line will be approximately five percent (5%) of this lower limit directly under the conductors at their lowest level and even lower as one moves further away from the structures.

Question No. 24

Would the applicant construct the line and follow MF measurement protocols in accordance to the Council's EMF Best Management Practices, dated December 14, 2007?

Response

WatGen plans to design the line in accordance with the Council's EMF Best Management Practices.

Question No. 25

Would the modifications to the Baldwin Street Substation be conducted under a separate petition? If not, provide details of the transmission line interconnection.

Response

No. As indicated in the first paragraph of the Petition and discussed in more detail in Section II.D of the Petition, the "Project" for which WatGen is seeking a declaratory ruling includes the improvements at the Baldwin Street Substation to accommodate interconnection of the generating facility and transmission line tap. *See also* Prefiled Testimony of Dorian E. Hill on behalf of The Connecticut Light and Power Company, dated December 19, 2007, at 2-3. The following equipment will be installed at Baldwin Street Substation:

- Line Motor Operated Disconnect (MOD)
- Mobil transformer position MOD
- 115 kV circuit breaker
- Three manual disconnect switches
- Three Potential Transformers (PTs)
- Power and control cable and conduit from equipment to the control house
- One primary relay panel
- One duplex panel
- Associated protection and controls equipment.

Question No. 26

Provide specifics for the ammonia system used on site (composition, use, anticipated deliveries, spill prevention and containment system).

Response

The ammonia used in the SCR system will utilize a 19% solution of aqueous ammonia.

This is a solution of water and ammonia that is commonly used in industrial applications and is approximately two times the concentration of ammonia used in household applications. The United States Environmental Protection Agency ("EPA") does not require the preparation of a Risk Management Plan for solutions of ammonia of less than 20% concentration because the risk associated with vapor plume dispersion and transport in the unlikely event of a spill or tank rupture from such a solution is very low.

The solution is non-flammable, and is not explosive when stored at ambient temperature and pressure conditions, as is the case for the WatGen facility. The solution was specifically selected as the safest way to supply ammonia to the SCR system at this facility. At full load, approximately 22 gallons of the solution will be consumed per hour. At continuous full load, there will be approximately 26 days of usable supply on site. Based on capacity factors assumed for this plant, deliveries of aqueous ammonia will be infrequent, and likely will be once every two to three months during the high demand time of the year.

The aqueous ammonia solution will be unloaded in an area specially designed to contain the entire content of the truck and will prevent the escape of liquid outside of the unloading area in the event of a rupture of an unloading hose of the delivery tanker itself.

The solution will be stored in a horizontal 15,000 gallon steel tank designed to applicable American Society of Mechanical Engineers ("ASME") design codes for this type of tank. The tank structure will be located 27 feet away from the existing building. There will be a concrete dike around the tank that will contain the entire contents of the tank plus an additional margin of ten percent (10%). In the event of a spill or leak, the open surface in the dike area will be covered with small hollow plastic balls that will float on the surface of the liquid and limit the amount of evaporation by up to ninety percent (90%). Due to the low vapor pressure of the

aqueous ammonia solution, very little evaporation will occur.

In addition, all suppliers selected to deliver the aqueous ammonia to WatGen will be required to be equipped with all safety provisions, including the use of Department of Transportation ("DOT") qualified trailers, certified and trained drivers and appropriate hazard protection measures for unloading.

Question No. 27

Will City of Waterbury emergency response/HAZMAT personnel require any special training to deal with on-site emergencies? If so, who will provide such training? What level of coordination is needed between emergency response and WatGen to aggressively manage an emergency at the site?

Response

No. WatGen first met with Chester Bennett, the Waterbury Fire Marshal, in August 2007 to discuss the project. During that meeting, Mr. Bennett did not raise any concerns with the on-site storage of distillate oil or the ammonia storage tank. WatGen again met with Chester Bennett and members of his staff on January 24, 2008 to review the details of the entire project with respect to site hazards and emergency response both during construction and operation. During that meeting, the location of on-site oil and aqueous ammonia storage tanks were reviewed. The layout of equipment within the site and in the existing mill was discussed in detail, along with specific types of equipment contained in each of the modular components of the project. It was agreed, during the meeting, that no special training would be needed by emergency response personnel to respond to on-site emergencies.

Nevertheless, discussions with the Fire Marshall and his staff will continue throughout the construction of the project to ensure that any issues of interest to the Fire Marshall are

addressed to his satisfaction. In addition, WatGen will conduct familiarization tours of the site with the Fire Department and establish emergency response protocols with the Department to be able to aggressively manage any emergency that may occur on site.

Question No. 28

What is the height of the VBV Exhaust Stack?

Response

The height of the variable bleed valve ("VBV") exhaust stack will be 48 feet.

Question No. 29

Does WatGen anticipate any electromagnetic disturbance from plant operations? Please explain.

Response

No significant power frequency electromagnetic disturbances are expected from the facility. All power frequency electric fields created by the generator and auxiliary equipment will be shielded by the enclosures around them. Magnetic fields created by the generator and auxiliary equipment will be significantly mitigated by the installation configuration and their distance from the general public. Electric and magnetic fields created in the switchyard will be significantly mitigated by distance from public access.

Question No. 30

Does this plant have black start capability? If not, what would be the additional cost to install such capability? Is the site large enough to accommodate black start equipment?

Response

The plant as currently configured does not have black start capability as participation in this market was not required by the Department of Public Utility Control ("DPUC"). The

additional cost to install black start capability is approximately $1.5 million. There is ample room on site to accommodate the equipment. In the event that this capability is installed, a new air permit will be needed for the diesel engine needed for this capability. WatGen is currently reviewing whether to add this capability to the Project.

Question No. 31

How are air emissions monitored? Are the results transmitted to the DEP? If so, at what time intervals? What actions are taken by WatGen and the DEP if there are air permit violations?

Response

The air permit issued by DEP will require performance stack testing of the emissions at the initial start of operations and stack emissions testing will be conducted for all permitted pollutants every five years thereafter. A continuous emissions monitor ("CEM") system will be installed on the stack to monitor air emissions at all times during facility operation. These emissions are measured every 10 to 15 seconds and recorded to an electronic data management system. Alarms are set in the control system to notify the operator if air emissions are approaching emission permit limits. If an alarm were to occur, a diagnostics would be performed and if the emissions reached or exceeded the air permit levels, the unit would be shut off. The emissions data is uploaded to the EPA website on a quarterly basis where it is analyzed by both EPA and the DEP. Additionally, on a semi-annual basis, sources with Title V air operating permits are required to certify compliance with all permit requirements. Violations of any air emission limits are required to be reported to DEP immediately.

Question No. 32

Does low sulfur diesel fuel degrade? If so, at what rate? Would use of degraded fuel affect plant operations and emissions? What actions will WatGen take to maintain the quality of diesel fuel stored on-site?

Response

Based on discussions with General Electric Co. ("GE") and Lill-DiFazio and WatGen's operational experience with similar highly refined light distillate oils for combustion turbine use, WatGen does not anticipate any degradation in Ultra Low Sulfur Distillate fuel quality nor does WatGen expect that operations or emissions when burning this fuel will be affected in any way.

The design of the fuel unloading, storage and filtering system at the generating facility will follow General Electric Guidelines for fuel purity. Periodic fuel samples will be taken to ensure that the stored fuel meets applicable fuel standards. The tank will be equipped with water drains and a removal system to ensure no build-up of water in the tank.

Question No. 33

On page 6 of Mr. Campbell's pre-filed testimony, it is stated a noise level of 66 dBA would be attained at the property line. What property line is being referred to? How was this determination made? What would be the noise level at the east property line (130 Washington Street)?

Response

The property line referred to is the 130 Washington Avenue property line adjacent to the site. As the noise analysis continued to be refined, it was found that the property line at this location was modeled incorrectly. With the property line modeled correctly, it was found that a small exceedence of the industrial noise standards may occur in this area. Even though the noise

analysis was conservative and lower noise levels than those provided in the Petition are expected, in order to further mitigate any potential off site noise impacts, WatGen has decided to modify the planned chain link fence design to include a solid eight (8) foot high fence around three sides of the site, including the east side of the property adjacent to 130 Washington Avenue.

The solid fence will reduce noise levels in the vicinity of the generating facility site. Although not needed for noise abatement, WatGen decided to extend the solid fence around the south and west boundaries of the site to improve the aesthetics of the Project. The refined noise analysis with the installation of the eight (8) foot high solid fence is depicted as Attachment C. This attachment is a noise contour map that depicts noise levels due to the power plant operation in all areas immediately adjacent to the Project site. It is noted that noise levels at the 130 Washington Avenue property line would be at 66 to 67 dBA or lower along this property line, and, within the property itself. This noise level is below the City of Waterbury and State of Connecticut noise standards for bordering industrial properties.

The current noise environment at the project site consists of many sources, including existing industrial operations in the area, vehicular traffic and trains. Informal observations made during the site visit of January 8, 2008, suggest that existing background noise levels are on the order of 65 to 70 dBA. A passing train was also noted during the site visit, which generated even higher noise levels. As such, noise levels due to project operation, as would be experienced at the adjacent property, would be in the range of existing noise levels.

Question No. 34

The noise analysis in the application (p. 12) states a potential vendor would provide an exhaust stack silencer that would meet project needs. Was any noise modeling conducted to verify this statement? If so, please provide.

Response

The noise modeling analysis included a silencer for the exhaust stack. The required noise reduction from the exhaust stack was determined by using the noise model as a design tool and adding control as needed in order to achieve compliance with the noise standard. Each source in the model, therefore, has a specific allowable noise emission limit. The noise limit for the exhaust stack, developed from the noise modeling, was provided to the vendor. The vendor responded that it will be able to meet the noise limit for the exhaust stack, and that a silencer would be used to meet this limit.

Question No. 35

Has WatGen performed any subsurface soil analyses in the area of the proposed oil tank to determine if the river bank is stable and could support such installation? What is the distance from the tank to the riverbank?

Response

Geotechnical subsurface analyses in the location of the fuel oil tank have been conducted by professional civil engineers at Clarence Welti Associates, Inc. and Sigma Engineering, both contractors for the WatGen project. The results of the testing confirm that the area is stable, will adequately support the tank and its contents and that foundation piles are not required for this area of the site.

The center line of the fuel oil tank has been moved approximately eight (8) feet further west (i.e., away from the river and the stone wall) from its original location as depicted on Drawings C-102 and MDBY-C-002 behind Tab 9 of the Petition. By relocating the tank in this manner, the soil loads from the proposed fuel oil tank will have no surcharge whatsoever on the existing wall. The tank center will now be approximately 41 feet from the retaining wall. The

edge of the tank containment will be approximately 14 feet from the retaining wall.

Question No. 36

Is there a retaining wall along the river bank? Was any structural analysis of the retaining wall conducted?

Response

The riverbank in the area of the tank is retained with a massive fitted stone wall that appears to be in excellent condition. As indicated in response to Question 35, professional engineers have reviewed the soil conditions in the area. To provide additional conservatism, the location of the oil tank has been moved approximately eight (8) feet west, further away from the retaining wall. By doing so, there will be no loads from the tank imposed on the retaining wall.

Question No. 37

Has WatGen submitted the Application to the Waterbury Inland Wetland/Watercourses Commission for comment?

Response

A copy of the Petition was provided to all Waterbury agencies, including the Wetlands/Watercourses Commission. Additionally, WatGen met with the Waterbury Wetlands Commission liaison Nancy Shea and City Planner Jim Sequin on October 10, 2007 to discuss tank construction plans and stormwater management plans. No concerns were noted during the meeting.

Question No. 38

Have any photosimulations of the oil tank been prepared? If so, please submit.

Response

Photosimulations of the oil tank were not originally performed. WatGen has completed a new viewshed of the tank from Washington Avenue and it is enclosed with this response in Attachment D.

Question No. 39

Please respond to the DEP's comments of January 7, 2008 regarding water use.

Response

As shown on the first page behind Tab 18 of the Petition, WatGen met with Mr. Kenneth Skov of the City of Waterbury ("City") Water Department who indicated that the City had adequate supply for WatGen water demand needs, even on peak water demand days. Additionally, WatGen was provided with the City's projected water use (shown on page 22 of Tab 18 of the Petition), which shows the City has capacity of up to 27 million gallons per day but is only projected to use up to 17.5 million gallons per day through the year 2050. Therefore, there is more than adequate supply for the WatGen project. Moreover, the 442,000 gallons per day, which is equivalent to approximately one percent (1%) of the City's total capacity, is a maximum daily rate of withdrawal for the project assuming 24 hours of operation a day. However, it is very unlikely that the plant will run for more than 6 to 8 hours per day and during only 2 to 6 weeks of the year. Therefore, the actual use of water will be well below this stated maximum.

The water quality required for the water injection nitrogen oxide ("NOx") controls and the intercooler functions of the GE LMS 100 is very strict and, even with the use of potable water, would require further demineralization to ensure the purity of water to be introduced into the sensitive equipment. WatGen studied the use of river water from the Naugatuck River or

from groundwater on the property; however, due to the quality of the river and groundwater as class B water bodies, additional treatment would be required, which would make the project uneconomical. Similarly, the use of treated effluent from the Waterbury Waste Water Treatment Plant would not be feasible because the proposed generating facility would be located approximately 1.8 miles from the Waste Water Treatment Plant and piping of the effluent would not be economical. Although WatGen did consider the use of a dry air cooling system, the project was bid into the DPUC assuming a wet system because the cost of implementing a dry system would otherwise render this project uneconomical.

Since the City has determined that it has adequate water supply and high quality water is required for the NOx control and intercooler functions of the plant, the use of potable water is necessary, will not create any adverse impact to the City and will provide the City with added revenue from water use charges.

Question No. 40

Estimate the cost (excluding costs within the substation) of an underground cable connection to the Freight Street Substation via:

a) Bank & Jackson Streets and across State property;
b) Bank, Meadow & Freight Streets.

Response

a) Bank & Jackson Streets and across State property

WatGen estimates the minimum cost to construct an underground cable connection, which is approximately 1.14 miles from the plant site to Freight Street Substation, along this route to be approximately $9 million. This estimate is based on the following assumptions that, if proved to be incorrect, would significantly increase this cost:

- The Naugatuck River crossing will be made by attaching cables to the underside of an existing, unused railroad bridge;
- Easements can be obtained at no cost from the private parties between the end of the State property and Freight Street;
- Trenching can be accomplished without the need for blasting and rock removal; and
- Environmental compliance costs related to soil excavation are limited to $100/ton.

An interconnection to Freight Street Substation would also require additional interconnection studies by ISO New England and CL&P, which would require another set of analyses that will add months to the approval process and delay the Project beyond the July 2009 contractual commercial operation date. Such a delay will result in the loss of the important ratepayer benefits that the Project would otherwise provide during the peak load season in the Summer of 2009. In addition, underground construction of a transmission line is generally far more intrusive to the environment and can actually result in higher levels of EMF exposures to the general public than the planned overhead transmission line.

b) Bank, Meadow & Freight Streets

This route between the plant site and Freight Street is 1.48 miles, approximately 0.34 miles longer than the Bank Street, Jackson Street and across State and private property route. The estimate for this route is approximately $12 million dollars and is based on the same assumptions as enumerated in the response to subsection (a) above except that easements from private parties would not be needed.

Question No. 41

Have any meteorological or air quality studies been conducted at or near the proposed site? If so, were these incorporated into the air permit analysis?

Response

WatGen is not aware of any relevant air quality or meteorological studies that have been conducted in the area of the Project. Nevertheless, WatGen is aware of an early urban heat island study of New England via satellite data (J.C. Price, "Notes and Correspondence, Assessment of the Urban Heat Island Effect Through the Use of Satellite Data," Monthly Weather Review, Vol. 107, pg 1554-1557) that included Waterbury among several other cities. Price used a single day of satellite imagery and found that the indicated surface temperatures were not likely good indicators of air temperature but that high resolution infrared satellite data may be promising for future heat island studies. As a consequence, the results of Price's work were not used for the air quality assessment.

DEP operates an air quality monitoring station approximately 0.5 miles north of the proposed generating facility site. Following DEP procedures as set forth in the Ambient Impact Analysis Guideline (July 1989) and the Interim PM2.5 New Source Review Modeling Policy and Procedures (August 2007), data from this station have been incorporated to characterize the existing air quality as modeled for the WatGen air permit.

Question No. 42

Is the Bradley Field wind rose the closest meteorological station available? What elevation above ground is the station? Are there any studies available of wind speed and prevailing direction at different heights?

Response

Bradley Field is the closest meteorological station with a full five year period of record, known high quality data and all the variables needed for air quality modeling input. Bradley Field is specified as the appropriate meteorological monitoring site for air quality modeling

studies of the Waterbury area in the DEP Ambient Impact Analysis Guideline, and the station is climatologically representative of Waterbury. The wind rose (Bradley is shown on page 5 behind Tab 10 of the Petition) at both locations (i.e., Bradley and Waterbury) would be expected to be similar because both are located in river valleys that are oriented from north to south. Indeed, the National Climatic Data Center includes Bradley Airport and Waterbury in the same Central Connecticut Climate Division (a region within a state that is reasonably homogeneous with respect to climatic characteristics). The anemometer height at Bradley Field for the modeling period of record is 10 meters above grade. The EPA air quality models contain an algorithm that adjusts the wind speed as a function of height above the ground and the atmospheric turbulence, and that algorithm has been used in the modeling analyses for the proposed project. When used as recommended in the Ambient Impact Analysis Guideline, the models do not vary wind direction with height.

Question No. 43

Is there data from Waterbury from the Western Connecticut State University station in Danbury? Would this date pertain to the air permit?

Response

With respect to air quality data, DEP operates a monitoring station at Western Connecticut State University in Danbury. Following DEP procedures as set forth in the Ambient Impact Analysis Guideline (July 1989) and the Interim PM2.5 New Source Review Modeling Policy and Procedures (August 2007), data from the Danbury station have been incorporated to characterize the existing air quality as modeled for the WatGen air permit.

To be approved for use in regulatory dispersion modeling analyses, meteorological data must meet numerous criteria with respect to the parameters measured, the period of record, the

data capture rate and quality assurance. WatGen has no information to indicate that any meteorological data collected at Western Connecticut State University meet the required criteria. From among the available data sets that meet the required criteria, the most representative set of data for the Project site are used for air permitting purposes; in this case, Bradley Field data.

Appropriate meteorological data are collected at Danbury Municipal Airport in Danbury, but that data is less representative of the project site in Waterbury than the meteorological data collected at Bradley Airport. As stated in response to Question 42 above, the topography is similar (valleys oriented north to south) at Bradley Airport and the Project site in Waterbury. The topography at Danbury Airport is dissimilar (bowl-shaped valley) to that at both Bradley Airport and the project site in Waterbury. Furthermore, as discussed in response to Question 42 above, DEP's Ambient Impact Analysis Guideline recommends the use of the Bradley Airport data for the Waterbury area. A modeling protocol that describes the proposed modeling procedures for the Project, prepared as part of the air permitting process for review and approval by DEP, specified the use of the Bradley Airport data. A follow-up discussion has confirmed DEP's approval of the use of the Bradley Airport data rather than data from Danbury.

CERTIFICATE OF SERVICE

I hereby certify that on the 28th day of January 2008, a copy of the foregoing was mailed, postage prepaid, to:

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