Witness: Dean Gustafson

Question Middlebury-1:

In response to Town of Middlebury Interrogatory 2, the names and address and qualifications of the applicant's witnesses were provided, including Mr. Dean Gustafson. Mr. Gustafson identifies himself as a "Professional Soil Scientist" and "Senior Wetland Scientist." Please provide the Council with any additional qualifications of Mr. Gustafson to support his opinion that there will be no adverse impact to the Important Bird Area at Naugatuck State Forest in response to Question CSC-5 (Interrogatories CSC-2, 1/26/15).

Response:

Mr. Gustafson has been the lead scientist on well over 1,000 development projects in Connecticut. In addition to his 26 years of providing wetland consulting in capacity as a "Professional Soil Scientist" and "Senior Wetland Scientist", his expertise as a wetland biologist includes the identification of flora and fauna and evaluation of wildlife habitat functions in both wetland and terrestrial systems. Over the course of Mr. Gustafson's 26-year career as a field scientist, he has received extensive "hands-on" practical field and office training from a number of wildlife biologists. Mr. Gustafson has applied this knowledge on hundreds of projects performing wildlife habitat evaluations and focused avian, mammalian, invertebrate and herpetofauna surveys using both active and passive methods. Mr. Gustafson has also performed targeted surveys for sensitive, rare and listed species. In addition, Mr. Gustafson has extensive experience in performing herpetological surveys including vernal pool investigations and evaluations.

Mr. Gustafson has been responsible for preparation of exhibits and/or provided expert testimony for over the past 12 years on more than 100 Dockets and Petitions before the Connecticut Siting Council ("Council") on wetland, wildlife, vernal pool, coastal consistency analysis, listed flora and fauna species, and migratory bird issues. In particular, Mr. Gustafson has provided an evaluation of impact to migratory birds, including impact to Important Bird Areas as designated by the Audubon's Important Bird Areas ("IBA") Program and evaluation of tower structures on over 30 Dockets before the Council. Mr. Gustafson has documented during this large body of work before the Connecticut Siting Council that he is a well-qualified to address these issues.

Witness: **Dean Gustafson**
Eric Davison

Question Middlebury-2:

In response to Question CSC-5 (Interrogatories CSC-2, 1/26/15), Mr. Gustafson stated that the Naugatuck State Forest IBA is "known as a particularly important area for bird species that require early successional habitats."

a. Does that conflict with the February 2012 Important Bird Area Conservation Plan for Naugatuck State Forest, which says that "[t]his IBA was selected because its diverse habitats support a variety of breeding birds identified as endangered, threatened or of special concern in CT…" and that it was recognized for "its shrubland and early to mid-successional forest habitats…" and that "In particular, the IBA offers prime breeding habitat for early successional/shrubland and forest species," and that "the size and integrity of the NSF make it especially valuable habitat for area-sensitive forest interior species."

b. What relationship does the discussion of grassland bird habitat have to the potential impact on avifauna in the vicinity of the site or at the Naugatuck State forest IBA?

c. Which of the 22 state-listed bird species reported from the Naugatuck State Forest IBA and considered grassland birds?

d. Was the absence of any state-listed grassland birds from the NDDB response letter the result of any comprehensive on-site surveys?

e. Can utility rights of way and/or abandoned agricultural fields be managed in a way that supports valuable early successional habitats?

f. Do shrublands support grassland birds? Are any of them present at or adjacent to the site?

Response:

a. According to the *Important Bird Area Conservation Plan Naugatuck State Forest* (Devine 2010), the Naugatuck State Forest IBA meets several Audubon IBA program criteria, including the following: presence of state-endangered endangered Golden-winged Warbler along with other state-listed and species of conservation concern

avifauna; providing an important inland stopover area for neotropical migrant birds using the Naugatuck River as an important inland migratory corridor; and, supporting early successional and extensive forestland habitats. This IBA "encompasses 3,436 acres of forestland, early successional grassland and shrubland, and various aquatic habitats."[1] The Naugatuck State Forest IBA contains approximately 20 acres of grassland habitats, classified as an early-successional habitat type, with the largest field consisting of 13 acres.[2]

Since the proposed Project's impact to early successional habitat is isolated to the open ±8-acre field that occupies the southwest corner of the subject property, the discussion on grassland bird species provided in Response to Q-CSC-5, dated 1/26/15 (Set 2) is relevant to the Naugatuck State Forest IBA.

b. As discussed in the response above, early successional habitat is important to the avifauna diversity at the Naugatuck State Forest IBA, particularly since it is a habitat in decline. Since there is a potential relationship between the early successional grassland habitat at the proposed project site and habitat supported by the Naugatuck State Forest IBA, an evaluation of potential impact to grassland dependent avifauna at the project site was provided in the Response to Q-CSC-5, dated 1/26/15 (Set 2). An avifauna evaluation of the forest habitat to be impacted by the proposed project was not provided since it is a small forest block that has been fragmented by surrounding developments and is a common habitat type in the region.

c. The 22 state-listed species identified in the *Important Bird Area Conservation Plan Naugatuck State Forest* (Devine 2010), include the following bird species that depend on grassland habitat: Northern Harrier, American Kestrel, Upland Sandpiper, Long-eared Owl, Horned Lark, Savannah Sparrow, Vesper Sparrow, Bobolink, and Eastern Meadowlark.[3, 4]

d. Biological surveys were not performed in association with the NDDB review request submission that resulted in the June 10, 2014 letter from the Connecticut Department of Energy & Environmental Protection. As noted in the Applicant's response to Q-CSC-6, dated 1/26/15 (Set 2) biological surveys including avian surveys will be performed during spring season 2015.

e. Connecticut Light & Power currently employs a vegetation management plan that promotes and maintains early successional shrubland habitat within its electrical

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[1] Devine, Buzz. 2010. *Important Bird Area Conservation Plan Naugatuck State Forest.* Connecticut Department of Energy and Environmental Protection. (p. 1)
[2] Devine, Buzz. 2010. *Important Bird Area Conservation Plan Naugatuck State Forest.* Connecticut Department of Energy and Environmental Protection. (p. 35)
[3] Devine, Buzz. 2010. *Important Bird Area Conservation Plan Naugatuck State Forest.* Connecticut Department of Energy & Environmental Protection. (p. 52)
[4] *Grassland Habitat Conservation Initiative.* October 2006. Connecticut Department of Environmental Protection. (Appendix A)

transmission right-of-way that is located in the northwest corner of the subject property. The proposed project will not impact this early successional habitat.

f. Grassland dependent bird species that also utilize shrubland habitat include the following: Northern Harrier, American Kestrel and Vesper Sparrow.[5]

[5] Tefft, Brian C. 2006. **Managing Shrublands and Old Fields (Chapter 4)** in *Managing Grasslands, Shrublands and Young Forests for Wildlife, A Guide for the Northeast.* J.D. Oehler, D.R. Covell, S. Capel, B. Long (editors). Published by the Northeast Upland Habitat Technical Committee, Massachusetts Division of Fisheries & Wildlife. (p.34)

Witness: **Lynn Gresock**
Dean Gustafson

Question Middlebury-3:

Please restate the qualifications of Lynn Gresock and Dean Gustafson to respond to Question CSC-8 and 9 (Interrogatories CSC-2, 1/26/15) regarding impacts on birds from the stacks or their lighting.

Response:

Ms. Gresock's contribution to the response to Question CSC-8 addressed the status of the ongoing FAA review and the discussion of anticipated lighting requirements. This information was based upon the Facility's previous FAA Determinations of No Hazard, as well as updated information from the FAA regarding lighting systems. Ms. Gresock's qualifications to respond to this question are outlined in her resume, provided in the Response to Q-Middlebury-2, dated January 8, 2015 (Set 1) that documents her over 30 years of experience in providing permitting support to numerous power projects. Most projects have involved FAA review, and many have involved the need for obstruction lighting.

The Response to Q-CSC-9 was actually prepared by Fred Sellars and Dean Gustafson. Fred Sellars provided the information regarding the stack configuration and temperature. As reflected in his resume, also provided in Q-Middlebury-2, dated January 8, 2015, (Set 1), he bases this response on over 35 years of permitting and other support for power projects. Dean Gustafson provided the portion of both responses focused on ecological issues. His expertise to address ecological matters was discussed in the Response to Q-Middlebury-2, dated January 8, 2015 (Set 1) and in the Response to Q-Middlebury-1, dated February 24, 2015 (Set 2).

Witness: Dean Gustafson

Question Middlebury-4:

How much of the total area of the proposed facility's site,

a. Is currently forested?

b. Has a determination been made as to how many large trees will be retained in on the 26 acre site, as recommended by CT DEEP?

c. On a percentage basis, how much forest habitat will remain?

d. Does the proposed construction sequence prepared by Civil 1 include any seasonal restrictions on tree clearing?

e. What impact would removal of this amount of forest have on the ability of the site to support Red Bat, Hoary Bat, or Silver Bat?

Response:

a. Approximately 17 acres of the project site is currently forested. Please refer to the Existing Habitat Map.

b. A tree survey has not been performed on the project site. Approximately 2.3 acres of forest habitat will be retained post development. Please refer to the attached Proposed Habitat Map.

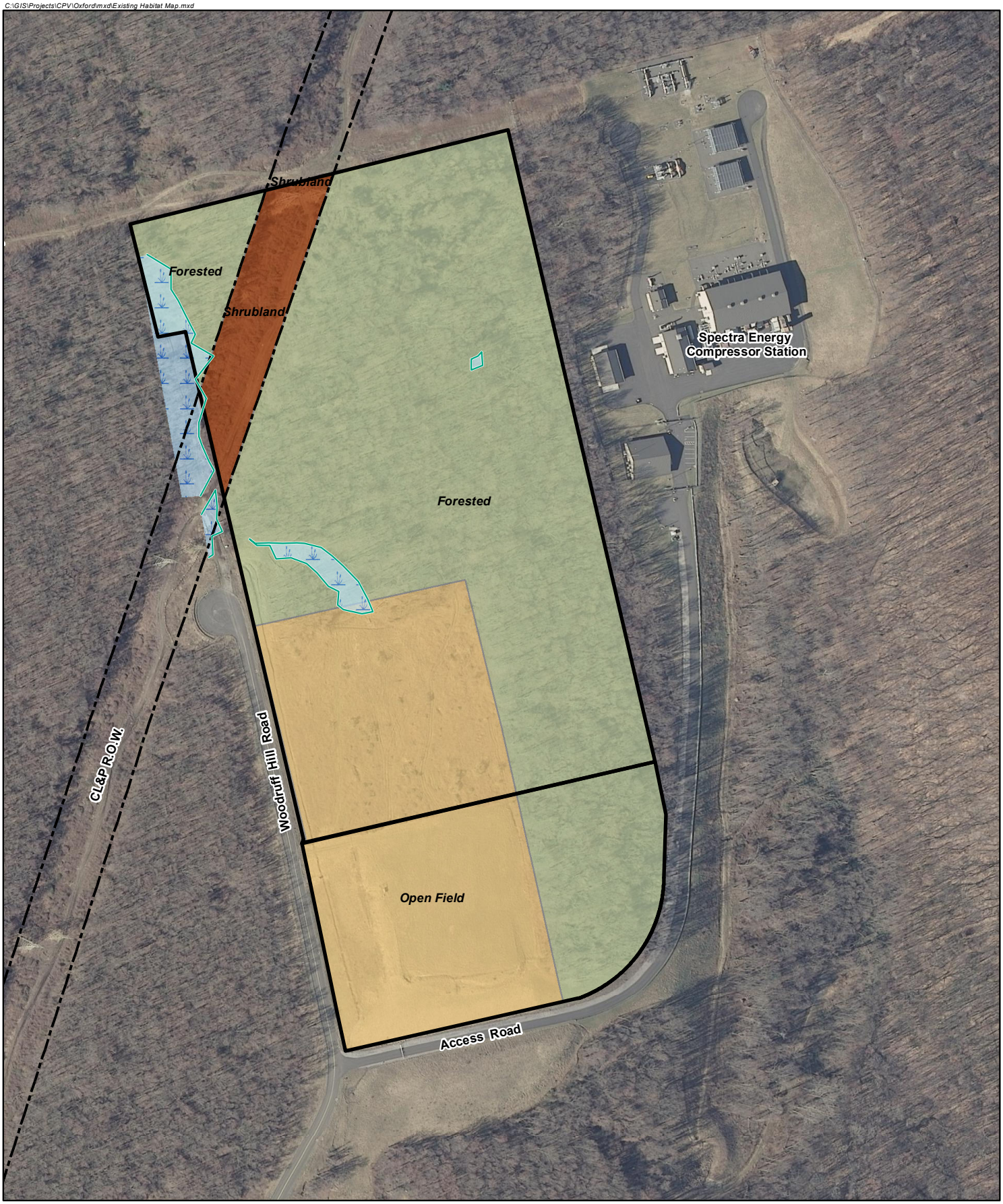
c. Approximately 13.5 percent of the forest habitat will remain.

d. Please refer to Applicant's Response to Q-CSC-6, dated 1/26/15, (Set 2) identifying the proposed tree clearing seasonal restriction to protect State Special Concern bat species identified in proximity to the project site (Red Bat, Hoary Bat and Silver-haired Bat). This tree clearing seasonal restriction will be incorporated onto the Development & Management Plans.

e. Many of Connecticut's bat species utilize mature hardwood trees for roosting during the summer months with feeding occurring in open areas including wetlands, open fields and around street lights. If Red Bat, Hoary Bat and/or Silver-haired Bat are

utilizing forested habitat on the project site, the remaining 2.3 acres of forest habitat at the north end of the subject property would still have the ability to provide roosting habitat and the forest edges provided by the CL&P and Algonquin Gas ROWs would provide feeding habitat.

C:\GIS\Projects\CPV\Oxford\mxd\Existing Habitat Map.mxd



Legend

- CL&P R.O.W.
- Subject Property (+/- 26.5 Acres)
- Wetland Boundary
- Wetland Area

Existing Habitat Type

- Forested (+/- 17 Acres)

Early Successional Habitats:

- Shrubland (+/- 1.4 Acres)
- Open Field (+/- 8.1 Acres)

N
W E
S

250 125 0 250
Feet

Existing Habitat Map

Proposed CPV Towantic Energy Center
Woodruff Hill Road
Oxford, Connecticut

Base Map Source: 2012 Aerial Photograph (CTECO)
Map Scale: 1 inch = 250 feet
Map Date: March 2015

ALL-POINTS TECHNOLOGY CORPORATION

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Legend

- CL&P R.O.W.
- Proposed Fence - Project Limits (+/- 22.5 Acres)
- Subject Property (+/- 26.5 Acres)
- Wetland Boundary
- Wetland Area

Proposed Habitat Type

- Forested (+/- 2.3 Acres)

Early Successional Habitats:

- Shrubland (+/- 1.4 Acres)
- Open Field (+/- 0.3 Acres)
- Developed (+/- 22.5 Acres)

N W E S

250 125 0 250 Feet

Proposed Habitat Map

Proposed CPV Towantic Energy Center
Woodruff Hill Road
Oxford, Connecticut

Base Map Source: 2012 Aerial Photograph (CTECO)
Map Scale: 1 inch = 250 feet
Map Date: March 2015

ALL-POINTS TECHNOLOGY CORPORATION

Witness: Curtis Jones

Question Middlebury-5:

The DEEP recommendations include avoiding impacts to Eastern Box Turtle be implemented.

a. Will barrier-type erosion controls be present during the periods late August through September and March through mid-May when amphibians and reptiles are most active?

b. Since it appears that the plan calls for silt fence to be present during these peak times of amphibian and reptile migration, have they been laid out to conform to DEEP's recommendation?

c. Does the erosion control plan specify only products that do not have netting?

d. Will rip-rap be covered with native stream bank material?

e. Does the proposed construction sequence include any measures to protect the state-listed Eastern Box Turtle?

Response:

a. Yes.

b. We recognize that utilizing staggered (i.e., syncopated) silt fence arrays on discrete linear projects (e.g., driveway crossings or ROW maintenance projects) is preferable to prevent interruption of wildlife movements, particularly during the spring breeding period. However, at this site full build-out is proposed within the limits of clearing. In this scenario, utilizing a staggered silt fence array that allows wildlife to pass through is not advisable, as it is important to restrict wildlife from entering the active construction zone in order to prevent direct mortality of animals. Therefore, a continuous silt fence exclusion barrier is proposed around the active construction zone in order to limit direct wildlife mortality. This exclusion barrier will be installed from November through March (prior to the start of earthwork) in order to avoid the peak movement period for amphibians and reptiles and also avoid the bird nesting and bat roosting seasons. Based on the results of the proposed spring of 2015 surveys for reptiles and amphibians, the configuration and installation time

of the proposed silt fence barrier may be modified.

c. Sheet C320 specifies that the Erosion Control Blanket consist of a 100% straw matrix sewn into a photo-degradable net. Development & Management Plans will modify this Erosion Control Blanket specification to consist of the following: erosion control blankets and fiber rolls shall be composed of processed fibers mechanically bound together to form a continuous matrix (net less) or netting composed of planar woven natural biodegradable fiber to avoid/minimize wildlife entanglement.

d. No. Wildlife Biologist Eric Davison spoke via phone with Elaine Hinsch of CT DEEP on February, 27 2015 regarding this specific recommendation outlined in her June 10, 2014 letter to Lynn Gresock of Tetra Tech, Inc. Based on the substance of that discussion, this recommendation was intended for intermittent or perennial stream habitats where the utilization of rip-rap might impede the movement of small turtles. This site contains no intermittent or perennial stream habitats. All proposed areas of riprap are associated with stormwater structures and are confined to the interior of the development with the exception of a single discrete culvert outlet "splash pad" proposed on the east side of the Spectra Energy access road.

e. A herpetofauna protection program would be proposed during construction that includes the following elements aimed at reducing direct mortality of box turtle and other wildlife:

    (1) Installation of a continuous silt fence isolation barrier around the entire proposed work zone. This barrier will be installed from November through March in order to avoid the peak movement period for amphibians and reptiles and will also avoid the bird nesting and bat roosting seasons.

    (2) Once the barrier fence is installed, herpetofauna sweeps of the isolated construction area will be conducted prior to initiation of earthwork activities to remove any individual animals from the construction zone. Once construction begins, the barrier fence will be periodically inspected and repaired as necessary.

    (3) Education of contractors will include posting of wildlife notice signs around the construction site identifying state-listed species and other herpetofauna that may be encountered and procedures to follow for safe removal of wildlife from the active construction zone.

    Based on the results of the proposed late spring of 2015 surveys for eastern box turtle, the configuration and installation timing of the proposed silt fence barrier may be modified.

Witness: Andrew J. Bazinet

Question Middlebury-6:

Based on the relationship of the proposed facility to the abutting Spectra natural gas compression station:

a. Comment on whether Wetland 1 be avoided by shifting the project onto Lot 9B by lot line revision of Lot 9?

b. Could the Stormwater Basin A be relocated onto Lot 9B, even if the driveway to the compressor plant remained in place?

Response:

CPV Towantic, LLC does not own or have an option to purchase Lot 9B. As a result, the suggested relocations are not feasible.

Witness: Curtis Jones

Question Middlebury-7:

Is the power plant considered a Land Use or Activity with Potential for Higher Pollutant Loads as per CT DEEP 2004 Stormwater Manual?

Response:

Yes.

Witness: Curtis Jones

Question Middlebury-8:

Are trees to be planted around the stormwater basins sufficient to shade the entire basins?

Response:

No trees are proposed to be planted around the stormwater basins.

Witness: Curtis Jones

Question Middlebury-9:

If trees are not to be planted around the stormwater basins, what is the mechanism by which stormwater will be cooled, as stated in you Stormwater Management and Erosion Control Report?

Response:

Please refer to Late Filed Exhibit 2c, dated January 30, 2015, page 2.

Witness: Curtis Jones

Question Middlebury-10:

Will dewatering be required for the proposed facility?

Response:

Please see the Geotechnical Investigation Report compiled by Burns and Roe Enterprises, Inc. in January, 2001, attached to the Response to Q-CSC-2, dated 1/26/15 (Set 2).

Witness: Andrew J. Bazinet

Question Middlebury-11:

Do the plans call for disposal of dewatering wastes by infiltration into the ground?

Response:

As stated in Section 6 of the Geotechnical Investigation Report prepared by Burns and Roe, Inc. dated January 2001, *"Groundwater levels are expected to fluctuate with daily and seasonal climatic conditions. Due to the silty nature of the soils on-site, localized groundwater may be encountered in shallow excavations especially if construction commences after a rainy season and/or heavy rainfall. Localized groundwater, if encountered during construction, may be controlled using conventional sump pump techniques."* Excessive groundwater will be pumped to the two temporary sediment traps A & B at the northern and southern ends of the site for dewatering. Additional smaller, temporary sediment traps may be added during construction as needed.

Witness: Curtis Jones

Question Middlebury-12:

Are the soils and underlying tills restricted in their capacity for infiltration?

Response:

Please see the Geotechnical Investigation Report compiled by Burns and Roe Enterprises, Inc. in January, 2001, attached to the Response to Q-CSC-2, dated 1/26/15 (Set 2).

Witness: Fred Sellars

Question Middlebury-13:

In comparing the predicted concentration PM2.5 contour map LFE-Connecticut CSC 2-Q and Windrose Plot:

a. Please identify the wind direction and velocity factored into the model.

b. Does the wind speed vary the levels of concentration?

c. Please provide PM2.5 contour plan map wind speed of 3.1 mph (50% of the 6.2 mph average) predicted in the Windrose Plot.

d. Please provide PM2.5 contour plan map wind speed of 9.3 mph (150% of the 6.2 mph average) predicted in the Windrose Plot.

Response:

a. The air quality modeling incorporates five years (2008-2012) of hourly surface and upper-air meteorological data collected, processed and provided by the Connecticut Department of Energy and Environmental Protection (DEEP). The contour plot is based on the results of modeling using these actual hourly meteorological observations as opposed to a single assumed wind direction and velocity. Per DEEP modeling guidance, the plot is based on the annual average of the five years of data assuming worst-case load conditions, in this instance both turbines firing ultra-low sulfur distillate (ULSD) oil, plus the simultaneous operation of the emergency diesel generator and the fire pump engine continuously for five years, even though ULSD use would be limited to 720 hours per year and operation of the fire pump and emergency generator would be very infrequent.

b. Wind speed is among a number of factors that affect plume dispersion and the modeled concentration level.

c. Please see the response to 13 a. above. The modeling was not completed using a single wind speed, nor would such an approach provide meaningful results.

d. Please see the response to 13 a. above. The modeling was not completed using a single wind speed, nor would such an approach provide meaningful results.