STATE OF CONNECTICUT

SITING COUNCIL

DOCKET NO. 398 – NORTHEAST UTILITIES SERVICE COMPANY, ON BEHALF OF THE CONNECTICUT LIGHT AND POWER COMPANY APPLICATION FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF THE SHERWOOD SUBSTATION LOCATED AT 6 NEW CREEK ROAD, WESTPORT, CONNECTICUT	:	DOCKET NO. 398
	:	MARCH 18, 2010

DIRECT TESTIMONY OF MICHAEL LIBERTINE
REGARDING ENVIRONMENTAL MATTERS
CONCERNING THE PROPOSED SHERWOOD SUBSTATION

EXECUTIVE SUMMARY

Q. Please identify yourself and the other members of the panel who will respond to cross examination regarding environmental matters concerning the proposed Sherwood Substation ("Substation") and related facilities (the "Project").

A. I am Michael Libertine, a licensed environmental professional and Director of Environmental Services in the Middletown, Connecticut office of Vanasse Hangen Brustlin, Inc. ("VHB"). A copy of my resume is attached as Exhibit A to this testimony. In addition, Northeast Utilities Service Company employees and specialized Project consultants may be called upon to respond to questions that require knowledge of specific topics.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to summarize the environmental factors that were considered during the development of plans for the Project, factors which will continue to be important as the Project design, certification, permitting, and construction proceed.

My testimony will cover the following three topics:

1. Approach used to compile baseline environmental data;

2. Environmental studies; and

3. Environmental resources and the potential effects the Project would have on these resources.

Q. Will the Project have a significant adverse effect on the area or the environment?

A. No. Due to the Project's unique location immediately south of a multi-use transportation and energy infrastructure corridor and its careful design that minimizes environmental effects, the Project is compatible with the general area and environment.

1. APPROACH USED TO COMPILE BASELINE ENVIRONMENTAL DATA

Q. What types of data were collected to characterize existing environmental conditions in the Project area?

A. Environmental data for the Project were compiled in accordance with the specifications of the Council's June 2007 Electric Substation Facility Application Guide, and involved the collection and analysis of information to support the environmental

documents in the Application, including the performance of field investigations and consultations with state and local agencies.

Information was compiled from published sources such as the Connecticut Department of Environmental Protection ("CTDEP") files, historic and contemporary aerial photographs, soil surveys, U.S. Geological Survey maps, Federal Emergency Management Agency maps and municipal land-use plans. In addition, agencies such as the CTDEP Natural Diversity Data Base and the State Historic Preservation Office ("SHPO") were consulted regarding specific resources within the Project area.

Field surveys were conducted of wetlands, watercourses and wildlife habitats. Baseline noise studies were performed to characterize conditions in the vicinity of the proposed Substation.

2. ENVIRONMENTAL STUDIES

Q. Please describe the wetland and watercourse studies.

A. As more fully described in Exhibit 3, *Wetlands Delineation Report and Tidal Wetlands Delineation Report*, of the Application, Volume II, wetlands and watercourses located in proximity to the proposed Substation footprint were inspected and delineated in the field by professional soil scientists on February 6, 2009 and May 4, 2009. VHB wetland scientists identified wetland boundaries based on both Federal criteria (defined at 33 CFR 328-329) and State criteria set forth in the Connecticut Inland Wetlands and Watercourses Act (sections 22a-36 through 22a-45 of the Conn. Gen. Stats.). As described in Section H.3, *Existing Conditions*, of the Application, Volume I, a palustrine forested/emergent wetland system transects the Substation property (the "Property") from north to south.

Q. Are there any direct or indirect impacts to wetlands from the construction of the Project?

A. No. Construction of the proposed Substation would not result in any direct or indirect impacts on wetlands since the wetlands will be fully protected by erosion and sedimentation control measures.

Q. Are there any direct or indirect impacts to wetlands from the installation of the proposed new structures necessary for connecting the existing transmission line to the Substation?

A. No. There will be no impacts to wetlands from these installations.

Q. Are there any direct or indirect impacts to watercourses?

A. No. There would be no direct or indirect impact to the tidal perennial watercourses located off-site to the south and east of the proposed Substation yard or the watercourse that bisects the wetland on the western boundary of the Property.

Q. Does the Town of Westport regulate an upland review area associated with wetlands?

A. Yes, that area varies based on the activity. For example, the upland review area extends 50 feet from wetlands for the construction of new single-family residences, air conditioning units and power generators and 75 feet from wetlands for commercial structures and industrial uses.

Q. If either review area was applicable, are there any direct or indirect impacts associated with the Project?

A. Yes. Approximately 21,800 square feet within 75 feet of on-site wetlands (and 13,800± square feet within 50 feet) would be disturbed as a result of the proposed construction activities. These activities primarily include landscaping and, to a lesser degree, grading, construction of a portion of the fenced substation compound (1,620 square feet within 75 feet and 52 square feet within 50 feet of wetlands), and the installation of a bioswale and level spreader to treat stormwater.

Q. Will there be any substantial effects on the environment after construction of the Project is complete?

A. No. After construction is complete, the Project will have no permanent adverse effects on the environment. CL&P will take the following steps to ensure this:

- All disturbed/exposed areas would be stabilized and revegetated. These areas would be dressed with topsoil and seeded with a New England conservation/wildlife mix, to establish a cover of grasses, forbs, wildflowers and legumes that would provide both soil stability and wildlife habitat value.

- Erosion controls would remain in place until final site stabilization is achieved.

- The power transformers within the Substation would contain insulating fluid. Surrounding each transformer will be secondary containment, consisting of an Imbiber Beads Drain Protection System® for the sump, designed to hold 110% of a transformer's fluid capacity.

Q. Will the construction activities have any significant long-term adverse effect on vegetation, wildlife or habitat values?

A. No. The Substation would occupy what is currently a developed residential building lot. Construction of the Substation would require the removal of

several existing trees and landscape shrubs, but would not have significant adverse effects on wildlife or habitat values. The Property is currently used by wildlife species that are typically generalists, commonly found in the area, and adaptable to habitat modifications. The wetland habitat found on the Property would remain intact and the adjoining upland area to its east would be enhanced, ultimately increasing its wildlife value. Based on the habitat types found on the Property and surrounding area, species diversity and abundance should be maintained after the Substation is completed and operational. Thus, any effects on wildlife and wildlife habitat would be minimal and limited to temporary disturbances during construction.

Q. Does the site serve as habitat for any "Threatened Species," "Endangered Species" or "Species of Special Concern"?

A. No. There are no threatened, endangered species or species of special concern of plant or animal life on the site.

Q. Will the construction activities have any effect on Federal or State-listed species?

A. No. A letter concurring with this finding was issued by CTDEP on June 19, 2008, and reiterated on December 18, 2009. Copies of the CTDEP communications are included in Exhibit 4, *CTDEP Correspondence*, of the Application, Volume II.

Q. Please summarize the outcome of SHPO's review of the Project.

A. SHPO has determined that the Project will have no adverse effect on historic, architectural or archaeological resources on or eligible for inclusion on the

National Register of Historic Places. A letter of "no effect" was issued by the SHPO on May 21, 2009. A copy of the SHPO Determination Letter is included in Exhibit 5, *SHPO Correspondence*, of the Application, Volume II.

Q. Please describe the results of the noise analysis.

A. The noise analysis determined that the addition of the Substation would result in an increase of sound levels. However, this increase would be negligible due to the existing elevated background noise levels. Nevertheless, the projected noise levels generated by the Substation, once operable, would be below applicable noise regulations at the Property line.

To the largest extent possible, general site construction hours would be limited to 7 am to 5 pm, Monday through Friday. Because of the difficulty of scheduling outages for interconnecting to the transmission system, there could be relatively short periods when some work will need to take place on a weekend or hours beyond the 7 am to 5 pm period.

Q. Have you reviewed local, State and federal land use plans, particularly with respect to existing and future development?

A. Yes.

Q. Will the Project be consistent with the land uses and policies presented in these plans?

A. Yes. In particular, the Project has been designed to meet the intent of local land use regulations.

3. ENVIRONMENTAL RESOURCES

Q. Will the Project have any adverse effect on any water supply areas?

A. No. There are no known public water supply wells located in the vicinity of the Property. The transformers at the Sherwood Substation would contain mineral oil. However, this equipment would have secondary containment and accidental spill prevention provisions in place.

Q. How would the environment be protected from the insulating fluid used for the transformers?

A. As previously noted, surrounding each transformer will be a secondary containment system, designed to hold 110% of the transformer's fluid capacity. This design has been approved by CTDEP and incorporated into other operational substation designs by CL&P.

Q. How would the sumps be protected from storm-water infiltration?

A. A shallow trench around the entire sump will inhibit surface water that migrates towards the sumps from undermining the edge of the sump liner. This shallow trench will not prevent surface water from entering the sump and in general, any surface water that runs into the perimeter of the sump will eventually permeate through the Imbiber Bead System.

Q. Will the sumps be inspected and maintained on a regular basis?

A. Yes. The design of these sumps requires minimal maintenance. Annual maintenance inspections are performed to assess accumulations of silt and debris that could inhibit water from discharging through the system.

Q. Approximately how many trees six (6) inches or greater in diameter will be removed in connection with the construction of the Substation?

A. Approximately 70 trees six inches or greater in diameter will be removed to enable construction of the Substation footprint.

Q. What efforts were undertaken to minimize tree removal and reduce visibility of the proposed Substation?

A. CL&P took great care in the design of the Substation to promote its compatibility with the surrounding environment through the collaboration of CL&P's in-house technical design and environmental staff, its site/civil and environmental consultant, a local landscape architect, and Town staff. This process included extensive dialogue with the Conservation Director and Conservation Commission, cooperation with the abutting neighbor to the west, and input from Greens Farms Academy.

The outcome of this process includes:

- A Substation footprint elevation that will be lower than existing grade by as much as nine feet in some locations, which when combined with landscaping, would result in the perimeter fencing and lower portions of internal equipment being largely out of sight;
- Berms around portions of the Substation to further enhance the "sunken" effect of the Substation footprint;
- A comprehensive landscaping plan that effectively screens a substantial portion of the site, particularly as the plantings mature;
- The relocation of the driveway so as to minimize direct lines of sight into the Substation from locations south;
- The preservation of mature trees along New Creek Road to the extent feasible; and,
- Plantings for further screening on the adjoining property to the west.

The combination of these design elements would create a finished project that reasonably blends into the existing landscape and is consistent with surrounding land uses.

Q. Would the removal of affected trees provide significant degradation to wildlife habitat value?

A. No. Any effects on wildlife and habitat would be temporary disturbance during construction. The Property is currently used by wildlife species that are common to the region and are adaptable to minor habitat modifications. Therefore, species diversity and abundance should be maintained after the Substation is completed and operational.

Q. Will the loss of trees result in substantial visibility of the Substation to the neighbors?

A. No. There are only a few residential abutters in the immediate area of the Property (limited to locations west) and the combination of existing, intervening vegetation and topography minimize direct sight lines into the Substation. Additionally, the proposed landscaping features will further mitigate any direct views into the Substation and effectively screen the Substation from the neighboring parcels throughout the seasons.

Q. Does this conclude your testimony?

A. Yes.

Exhibit A

Resume of Michael Libertine

Michael Libertine LEP

Director, Environmental Services

Mr. Libertine is Director of Environmental Services for VHB's Middletown, CT office. A Licensed Environmental Professional, Mike has over 25 years of professional experience, including seventeen years of engineering consulting in the environmental field. His primary responsibilities involve coordination and oversight of environmental science and engineering projects in support of the utility industry.

Mr. Libertine is a Licensed Environmental Professional in Connecticut. His primary responsibilities at VHB are managing and overseeing the environmental science and engineering projects in our Middletown, Connecticut office. His experience includes siting, regulatory compliance, and permitting for utilities, municipalities and the private sector; site assessments and field investigations for property transfers; remedial strategy development; environmental due diligence; environmental assessments for NEPA compliance; RI/FS investigations; Brownfields redevelopment projects; and, remedial investigations at RCRA facilities, state and federally recognized hazardous waste sites, and Manufactured Gas Plant (MGP) sites. Mike has been Project Manager on over 1600 environmental site assessments (ESAs) and field investigations for property transfers in Connecticut, Rhode Island, New Hampshire, Massachusetts, Vermont, New Jersey, New York, Washington, D.C., Florida, Kansas, and Canada. Representative projects are summarized below.

On-Call Services, Northeast Utilities

Program Manager in support of various Connecticut projects, including assessment and permitting of bulk power substations, transmission lines/structures, transition stations, warehouse facilities, peak generation plants, and underground utility installations. Services include conducting land acquisition searches, civil engineering feasibility studies, pre-acquisition environmental due diligence evaluations, natural resources inventories of existing flora and fauna, habitat evaluations, wetland delineations, noise analysis, visual analyses, hazardous waste investigations, remedial strategy planning and implementation, site survey, layout and design drawings, landscape architecture, preparation of technical documents, coordination with State and local agencies, regulatory permitting, public outreach, and expert witness testimony.

Certificate of Environmental Compatibility and Public Need, Killingly, Connecticut

Project Manager in support of an Application to the Connecticut Siting Council (CSC) for the permitting of a new 345/115 kV substation in eastern Connecticut. This project required extensive coordination of numerous team members, including client's in-house discipline managers and engineers, consultants, legal counsel, VHB staff, and subcontractors. Mike was responsible for overseeing Site data collection and analysis, site/civil layout, and drafting of municipal documents and the Application to the CSC. Services included conducting natural resources inventories of existing flora and fauna, habitat evaluations, wetland delineation, noise and EMF analyses, hazardous waste investigations, site layout and design drawings, landscape architecture, preparation of technical documents, coordination with State and local agencies, and permitting. His team has also provided environmental monitoring for adherence to the CTDEP's General Permit for Construction Activities and environmental requirements set forth in the Client's contract documents and specifications.

Regulatory Permitting, Barbour Hill Substation Modifications, South Windsor, Connecticut

Project Manager responsible for the preparation of a Petition to the Connecticut Siting Council for a determination that no Certificate of Environmental Compatibility and Public Need was required for the proposed modifications to the Barbour Hill Substation in South Windsor,

Connecticut. The project included the replacement and expansion of an existing facility and the modification of line interconnections. Responsibilities included conducting natural resource inventories, wetland delineation, noise study, soil and groundwater sampling, property survey, preparation of site/civil design drawings, supporting graphics, photo-simulations, and local and state permit documents. Under Mr. Libertine's supervision, VHB also supported CL&P during its contractor selection process and developed a site-wide soil and water management plan for implementation during construction activities.

Certificate of Environmental Compatibility and Public Need, Stepstone Substation, Guilford, CT
Project Manager for design and permitting of a new 115-kV substation in south-central Connecticut, requiring Application to the CSC. VHB was responsible for data collection and analysis, site/civil layout, and drafting of all regulatory submissions. Services included conducting natural resources inventories of existing flora and fauna, habitat evaluations, vernal pool monitoring and assessment, noise analyses, site layout and design drawings, landscape architecture, preparation of technical documents, coordination with State and local agencies, and permitting. VHB prepared the Development and Management Plan subsequent to CSC approval, and assisted with construction plans and contract documents.

Certificate of Environmental Compatibility and Public Need, Rood Avenue Substation, Windsor, CT
Project Manager in support of design and permitting of the Rood Avenue Substation in Windsor, Connecticut. Services included conducting wetland delineations, survey, hazardous waste investigations, site layout and design drawings, landscape architecture, preparation of technical documents, coordination with State and local agencies, local and state permitting, and preparation of the Development and Management Plan for CSC approval, contract documents and construction drawings.

Certificate of Environmental Compatibility and Public Need, Waterford, CT
Project Manager in support of feasibility studies, land acquisition, design and permitting services associated with a new distribution substation in Waterford. VHB evaluated a 5-acre portion of a larger undeveloped parcel of land for the future placement of the facility and, upon determining its feasibility, assisted in surveying and separating the property for purchase. Once the land was in control of the client, VHB initiated the design and permitting process, conducting resource inventories, wetland delineation, site/civil design, and preparing local and state regulatory submissions. Upon Siting Council approval, VHB prepared the Development and Management Plan, construction documents and secured ConnDOT permits for work in state right-of-ways.

Location Review, Substation Expansion Projects, Connecticut
Project Manager in support of Location Review approvals for the expansions of two existing substations associated with the Greater Springfield Reliability Project and Interstate Reliability Project. VHB was responsible for developing Location Review documents for submission to the local wetlands and planning commissions.

Environmental Services for Wireless Telecommunications Clients, New England
Program Manager for environmental due diligence and permitting services in support of various telecommunications clients throughout New England and New York. Mr. Libertine has worked directly with the major licensed PCS carriers since 1997. Project management includes coordination and oversight of preliminary site screenings, compliance documentation and environmental assessments to fulfill NEPA requirements, land use evaluations, Phase I ESAs, Phase II field investigations, remedial planning and oversight, wetland assessments, vegetative/biological surveys, noise analyses, visual resource analyses, graphic support, preparation of regulatory applications and permitting support (including representation at municipalities and Connecticut Siting Council hearings).

Environmental Impact Evaluation for Great Path Academy , Manchester, CT
Project Manager of an Environmental Impact Evaluation (EIE) for expansion of a middle-college magnet high school serving eight member communities and operating within existing infrastructure at Manchester Community College (MCC). The proposed action included a new free-standing facility on the campus to house the school and expand parking to accommodate 500 additional vehicles to enable enrollment to increase from 75 to 300 students. Services included the preparation of the EIE in accordance with the Connecticut Environmental Policy Act to evaluate the project's associated potential environmental, social and economic impacts. Mike and his staff produced a comprehensive document, distributed for public review and comment, that assessed multiple potential sites for parking and building facilities within the MCC campus, as well as "no action" alternatives for parameters including: hydrology, traffic, visual impact on the surrounding community, energy consumption, and impacts to wildlife and habitat, potential historic and archaeological resources, forested areas, and a State-designated Greenway bike path. The result of the process was securing a Finding of No Significant Impact. The project required extensive coordination with the CTDPW, Board of Technical-Community Colleges, and MCC representatives.

EA/FONSI for State Routes 7 & 15 in Norwalk and Wilton, CT
Project Manager of Final Environmental Assessment/Section 4(f) Evaluation (EA) for Finding of No Significant Impact (FONSI) on two state projects along Routes 7 and 15 in Norwalk and Wilton, Connecticut (1998-1999). These projects, completed for ConnDOT, involved the evaluation of seven different build/no build alternatives involving two interchanges and a proposed freeway extension. The evaluation included assessments of current conditions, potential impacts of alternatives, analysis of impacts associated with proposed actions, and development of mitigation techniques to be employed during design and construction. The Final EA document was submitted to the Federal Highway Administration, which provided a determination of FONSI in March 2000.

On-Call Services for Connecticut Department of Transportation
Task Manager for ConnDOT On-Call Environmental Services contract (1993-1997). Project task management included coordination and oversight of corridor land use evaluations, preliminary site evaluations, surficial and exploratory site investigations, and emergency response procedures. Representative projects included identification and characterization of hazardous materials, chemicals, and oils within ConnDOT highway project areas.

Environmental Review and Redevelopment Planning, Stratford, CT
Project Manager supporting the Town of Stratford in assessing the feasibility of redeveloping the Stratford Army Engine Plant, which was closed under the Military Base Closure Act of 1997. The facility included over 2 million sq. ft. of space in approximately 40 buildings on a 50-acre site along the Housatonic River waterfront. This project required close coordination with the Client, VHB Planners and a socioeconomic sub-consultant to assist the town with the required steps to redevelop this industrial/military site The planning process included the assessment of existing buildings, environmental and regulatory constraints associated with industrial site redevelopment, and an analysis of alternative reuse options for community benefits and impacts. A preferred redevelopment approach was created which included significant building demolition, site cleanup, and infrastructure upgrades. VHB completed preliminary plans and remediation cost scenarios for the decontamination/demolition of site structures, schematic waterfront park layout in consideration of environmental compliance issues, roadway and drainage design, and utility modification. A green space and waterfront park, providing recreational opportunities and access to Long Island Sound for town residents, was completed in 2001.