

**Metell, Mike**

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**From:** Bob Miller [rmiller@drm.com]  
**Sent:** Tuesday, May 23, 2006 5:25 PM  
**To:** Metell, Mike  
**Cc:** Peter Van Oot; John Marshall; Suzanne Monte  
**Subject:** Examples of Section 248 Review of Historic Sites and other Environmental Criteria  
**Attachments:** BRT-#30106-v4-01\_09\_01\_PFT\_P\_Boemig\_Test.DOC; 6480fnl.pdf; STJ-#187982-v8-ENTERGY\_VBS\_248(j)\_PF\_Boemig.DOC; 6953ord.pdf; STJ-#190823-v11-ENTERGYParkLot248jBoemigPF.DOC; 2752\_001.pdf

Mike,

At your request, attached are some examples of the Vermont statutory criteria that Entergy VY must comply with when a new project is constructed on site. Title 30 V.S.A. Section 248 is the state's development-review law for utility-related projects. Utility projects are reviewed and approved by the Vermont Public Service Board. As part of the Section 248 process, the Public Service Board looks at certain environmental criteria contained in Vermont's more general development review law known as "Act 250." (see 10 V.S.A. Section 6086).

Here are three examples of testimony submitted to the Board relating to the environmental criteria of Section 248/Act 250 and the Board's ultimate decisions. The three cases involve a request for approval of a bulk gas storage facility in 2001, a request for approval of construction of a security-barrier system in 2004 and a request for the construction of a parking lot in 2004.

The Board Orders discuss the statutory standards for environmental review under Section 248/Act 250.

Please let me know if you need any additional information.

**Bulk Gas Storage Facility**

<<BRT-#30106-v4-01\_09\_01\_PFT\_P\_Boemig\_Test.DOC>> <<6480fnl.pdf>>

**Security Barrier**

<<STJ-#187982-v8-ENTERGY\_VBS\_248(j)\_PF\_Boemig.DOC>> <<6953ord.pdf>>

**Parking Lot**

<<STJ-#190823-v11-ENTERGYParkLot248jBoemigPF.DOC>> <<2752\_001.pdf>>

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# Vermont Act 250 Handbook

By Cindy Corlett Argentine

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The *Vermont Act 250 Handbook* is your complete guide to Act 250, the law regulating land use in Vermont. It contains a thorough analysis of the Act 250 permit process, including the regulatory structure, jurisdiction, application procedures, hearings and appeals. The author thoroughly explains each of the 10 Act 250 criteria, referencing Environmental Board rules, Environmental Board decisions and Vermont Supreme Court decisions.

Written in plain English for the beginner, yet fully indexed and cross referenced for the expert, the handbook is ideal for project applicants, attorneys, concerned citizens or anyone involved in the Act 250 process.

Reprinted here is the table of contents of the revised edition of the *Vermont Act 250 Handbook*. For more information on ordering the book and other Putney Press publications, click [HERE](#).

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Bulk H<sub>2</sub>

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Petition of Vermont Yankee Nuclear )  
Power Corporation, pursuant to )  
30 V.S.A. §248(j) for a Certificate of )  
Public Good to Construct a Bulk Gas )  
Storage Facility )

Docket No. \_\_\_\_\_

PREFILED TESTIMONY OF PETER BOEMIG, P.E., L.S.

Background

1 Q1. State your name.

2 A1. Peter Boemig.

3 Q2. What is your position, and who employs you?

4 A2. I am the Principal of SVE Associates, which was retained by Vermont Yankee  
5 Nuclear Power Corporation to assist it with respect to engineering, and  
6 evaluating land-use and environmental aspects of, the Project.

7  
8 As Don Leach testified, in terms of new facilities to be built outside of the  
9 Station's existing buildings, the Project consists of the construction and operation  
10 of a bulk-gas storage facility (referenced in my testimony as the "Project") to  
11 support a hydrogen-injection system on lands owned by Vermont Yankee in  
12 Vernon, Vermont. Exhibit VY-1 is the set of site plans, construction drawings,  
13 and artist's rendering that further describes the Project.

14 Q3. What are your qualifications to sponsor the testimony you intend to present?

1 A3. Exhibit PB-1 is my resume, which provides my qualifications. In sum, I have lead  
2 responsibility at SVE Associates for engineering and evaluating the Project.

3 Q4. What is the purpose of your testimony?

4 A4. My testimony will address the Project's compliance with certain aspects of the  
5 fifth and eighth 248 criteria, which concern the Project's impact on land use and  
6 the natural environment including most of the criteria incorporated into Section  
7 248 from Act 250.

8 **Section 248(b)(5) and (8)**

9 Q5. Explain the fifth and eighth criteria of Section 248.

10 A5. Under the fifth criterion as I understand it, the Board must find that the Project will  
11 not have an undue adverse effect on aesthetics, historic sites, air and water  
12 purity, and the natural environment, with due consideration having been given to  
13 criteria specified in the statute providing for the designation of outstanding  
14 resource waters, to the first eight criteria in Act 250, and to subcriterion 9(K) of  
15 Act 250. Under the eighth criterion, the Board must also find that the Project  
16 does not involve a facility affecting or located on any segment of waters of the  
17 state that have been designated as outstanding resource waters.

18 Q6. In your opinion, do the criteria for designating outstanding resource waters apply  
19 to the Project?

20 A6. No. The Project is located some 100 feet from the Connecticut River, the  
21 nearest water body that could be so designated. Exhibit PB -2 is a letter from the  
22 Executive Officer of the Water Resources Board confirming that no portion of the

1 Connecticut River has been designated as an outstanding resource water by that  
2 Board. As I will testify later, moreover, the Project's indirect discharge to the  
3 Connecticut River (if any) will not adversely affect the river since the discharge  
4 will be so negligible as not to require the issuance of a permit by the Vermont  
5 Agency of Natural Resources, which I reference in my testimony as "VANR."

6 Q7. Do the first eight Act 250 criteria apply to the Project?

7 A7. In general, yes. My testimony will address each of the applicable Act 250 criteria  
8 in turn.

9 **Act 250 Criterion 1: Air Pollution**

10 Q8. Will the Project result in undue water or air pollution?

11 A8. No. The Project will not cause air-pollution levels that create a threat to the public  
12 health or a nuisance for nearby neighbors. Other than approximately four to six  
13 tank deliveries per month by tractor-trailers, there are no sources of air emissions  
14 from the activities at the Hydrogen Storage Area or Oxygen Alternate Site Area.

15  
16 As I will testify later, the Project will not cause water pollution and will comply with  
17 applicable regulations adopted by the Departments of Environmental  
18 Conservation and Health.

19 **Act 250 Sub-Criterion 1(A): Headwaters**

20 Q9. Is the Project in a headwaters area?

21 A9. No. The Project area is not the headwaters of applicable watersheds  
22 characterized by steep slopes and shallow soils and is located in a drainage area

1 greater than 20 square miles. The Project area is not over 1,500 feet in elevation  
2 -- the elevation is 260 feet above sea level -- and is not the watershed of a  
3 public-water supply or a significant aquifer-recharge area. The Project area is  
4 located on a sandy plateau above the Connecticut River. Any surface water in  
5 the Project area that leaches in the ground travels a short distance through the  
6 sandy soil to the Connecticut River where it discharges.

7 **Act 250 Sub-Criterion 1(B): Waste Disposal**

8 Q10. Will the Project meet any applicable regulations regarding the disposal of waste  
9 adopted by the Departments of Environmental Conservation or Health, and does  
10 it involve the injection of waste materials or harmful or toxic substances into  
11 groundwater or wells?

12 A10. The Project will not involve the disposal of waste or the injection of waste  
13 materials or harmful or toxic substances into groundwater or wells. The unused  
14 hydrogen gas in the Bulk-Hydrogen Storage Tanker will be returned to the  
15 hydrogen-gas supply facility.

16  
17 Stormwater from the Project is expected to be insignificant as the only new  
18 impervious surface will be limited to the 2,240-square-foot Hydrogen Storage  
19 Facility, the 600-square-foot, Alternate Oxygen Storage Facility, and the 29,166-  
20 square-foot Project Access Road. The impervious area involved with the Project  
21 -- approximately 0.73 acres -- is below VANR's minimum required area of one  
22 acre for a Stormwater Discharge Permit.

1  
2 The only construction debris associated with the Project will be the minor amount  
3 of trees, brush and stumps generated from clearing the route for the access road.

4 The trees and brush will be chipped and stored on the Vermont Yankee site.  
5 Stumps will be buried in the area shown on the site plan and in accordance with  
6 the requirements of VANR's Solid Waste Management Division. A permit for  
7 disposal of the stumps is not required if the stumps are buried on the owner's  
8 property.

9  
10 Otherwise, the Project will not generate industrial/manufacturing wastewater,  
11 chemicals, pesticides, batteries, hazardous wastes or any other harmful or toxic  
12 substances. There are no floor drains associated with the Project.

13 **Act 250 Sub-Criterion 1(C): Water Conservation**

14 Q11. Has the design of the Project addressed water conservation?

15 A11. The Project will not affect the station's present use of water or water-  
16 conservation measures because no new employees will be added and no  
17 additional water will be used.

18 **Act 250 Sub-Criterion 1(D): Floodways**

19 Q12. Is the Project located within a floodway?

20 A12. No. Based on review of the National Flood Insurance Maps for the Connecticut  
21 River, dated September 27, 1991, it is evident that the Project site is well outside  
22 of the 100-year floodway and floodway fringe. Exhibit PB-3 is the map.

**Act 250 Sub-Criteria 1(E) and (F): Streams and Rivers Shoreline**

Q13. Will the Project maintain the natural condition of streams whenever possible and, insofar as possible and reasonable in light of its purpose, retain rivers and river shoreline in their natural condition, allow continued access to the rivers and the recreational opportunities provided by them, retain and provide vegetation that will screen the Project, and stabilize the banks from erosion with vegetation cover?

A13. Yes. There are no streams (as defined by Act 250) in the Project area, and the nearest river shoreline is the Connecticut River, which is located more than 100 feet from the Project. No construction will occur within 100 feet of or within the Connecticut River. The Project will thus have no impact on the natural condition of the Connecticut River, its shoreline, vegetation or stability, or on the public's existing access to the river, since it in no way changes access to the river in the area of Vermont Yankee's facilities. Finally, the Project will only be marginally visible from the Connecticut River because it will be above the riverbank and screened by existing trees and vegetation.

**Act 250 Sub-Criterion 1(G): Wetlands**

Q14. Will the Project violate any rules of the Water Resources Board relating to significant wetlands?

A14. No. Based on our review of the National Wetlands Inventory Maps, dated October, 1975, and on field observations, there are no wetlands in the area of the Project. Exhibit PB-4 is the Wetlands Map.

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22

**Act 250 Criterion 2: Water Availability**

Q15. Is there sufficient water available for the reasonably foreseeable needs of the Project?

A15. The Project will not change in any way Vermont Yankee's present use of water or water-conservation measures. The Station will continue to recirculate the same amounts of water used to generate electricity and to cool the reactor.

**Act 250 Criterion 3: Burden on Existing Water Supply**

Q16. Will the Project cause an unreasonable burden on any existing water supply?

A16. No. As I just mentioned, the Project will not change in any way Vermont Yankee's present use of water or water-conservation measures.

**Act 250 Criterion 4: Erosion Control**

Q17. Will the Project cause unreasonable soil erosion or reduction in the capacity of the land to hold water?

A17. No. Due to the relatively flat nature of the Project site and the absence of drainage ways and streams around it, the risk of environmental damage due to erosion is minimal. As shown on the Project Plans at Exhibit VY-1, erosion control will be accomplished through installation of erosion-control devices (hay bales, silt fence, etc.) and loaming, seeding, fertilizing, and mulching of final grades. An erosion-control plan will be included in the Project's construction specifications.

1 Because the erosion-control plan will prevent the discharge of sediment to the  
2 Connecticut River, the Project will not result in any dangerous or unhealthy  
3 conditions downhill or downstream and will not cause unreasonable soil erosion  
4 or any lost capacity of land to hold water

5 **Act 250 Criterion 5: Transportation**

6 Q18. Will the Project cause unusual congestion or unsafe conditions with respect to  
7 transportation?

8 A18. No. It is anticipated that four to six tractor-trailers will enter and exit the project  
9 per month to service the new facility. We conducted a traffic-flow review to  
10 evaluate the Project's impact on traffic. Exhibit PB-5 is a copy of the review,  
11 which concludes that the Project will have little or no impact on existing traffic  
12 conditions. The general levels of service are acceptable and are the same for  
13 build and no-build scenarios.

14  
15 The Project will use Vermont Yankee's existing access road, as well as the  
16 proposed Project Access Road, and will not materially affect access to Vermont  
17 Yankee's existing facilities. The Project will thus not cause unreasonable  
18 congestion or unsafe conditions with respect to local highways.

19 **Act 250 Criterion 6: Educational Services**

20 Q19. Will the Project cause an unreasonable burden on the ability of the Town of  
21 Vernon to provide educational services?



1 A19. No. The Project will have no impact on educational services since it will not result  
2 in any increase in employment at Vermont Yankee and thus will not result in any  
3 increase in school-age children.

4 **Act 250 Criterion 7: Municipal or Governmental Services**

5 Q20. Will the Project place an unreasonable burden on the ability of the Town of  
6 Vernon to provide municipal or governmental services?

7 A20. No. Vermont Yankee has reviewed the Project with the Vernon Volunteer Fire  
8 Department Chief and the Vernon Selectboard. The Vernon Volunteer Fire  
9 Department has determined that it can provide adequate fire-protection services  
10 to the proposed Project site. Exhibit PB-6 is the letter from the Chief of the  
11 Vernon Volunteer Fire Department.

12  
13 Vermont Yankee met with the Vernon Selectboard on December 7, 2000, to  
14 review the Project. On December 7, 2000, the Vernon Selectboard passed a  
15 resolution finding that the Project will not interfere with the orderly development  
16 of the region or overburden municipal services. Exhibit PB-7 is a letter from the  
17 Vernon Selectboard confirming that the Project will not interfere with the orderly  
18 development of the region or overburden municipal services concerning the  
19 municipal impact of the Project.

20 The only construction debris associated with the Project will be the minor amount  
21 of trees, brush and stumps generated from clearing the route for the roadway.

22 The trees and brush will be chipped and stored on the Vermont Yankee site.

1 Stumps will be buried in the area shown on the Site Plan and in accordance with  
2 the requirements of the VANR's Solid Waste Management Division.

3  
4 The Project will not require municipal-sewer or water-supply services, new roads  
5 or additional road maintenance, other than the internal Project Access Road that  
6 will be constructed and maintained by Vermont Yankee.

7  
8 Finally, the local rescue service, Rescue, Inc., has reviewed the Project and  
9 determined that it can adequately provide rescue services to the Project as  
10 shown by their letter dated January 16, 2001. See Exhibit PB-8.

11 **Act 250 Criterion 8: Aesthetic Impact, Historical Sites and Natural Areas**

12 Q21. Will the Project have an undue adverse effect on the scenic or natural beauty of  
13 the area, aesthetics, historic sites or rare and irreplaceable natural areas?

14 **Scenic Beauty, Aesthetics**

15 A21. No. The Project site is a flat, grassy and overgrown area characterized by brush,  
16 scrub oak, poplar and white pine. Only a few of the white pine will be removed to  
17 accommodate the Project. No new landscaping is planned except minor re-  
18 grading and repair of lawns. The total impervious area created by the project is  
19 34,995 sq. ft., and the approximate total area disturbed by the project is 67,500  
20 sq. ft., with a total height approximately 15 feet above grade.

1       There is a buffer of existing large coniferous and deciduous trees between  
2       Vernon Village and the Project; these existing large trees will be retained. The  
3       Project will be protected from view from the Connecticut River and east by the  
4       existing vegetated buffer along the riverbank. The Project will be marginally  
5       visible from the Governor Hunt Road (in the winter months) and the Connecticut  
6       River but is consistent with the industrial context of the Project site.

7  
8       The buildings in the surrounding Vernon Village are a mixture of historic  
9       buildings, some newer historic interpretations, ranch houses and a modern brick  
10      school. The adjacent and visible generating station, however, is industrial in  
11      character and built with concrete and metal siding and industrial-type ancillary  
12      facilities, including transmission lines, towers and transformers.

13  
14     The only exterior lighting planned in the Hydrogen Storage Facility is the  
15     installation of five shielded, metal-halide lights that will direct light downward from  
16     four, fourteen-foot stanchions; the exterior lighting planned for the Alternate  
17     Oxygen Storage Facility's is one shielded, metal-halide light that will direct light  
18     downward from a fourteen-foot stanchion. In both cases the lighting is required  
19     for maintenance, operations and security purposes. The flow-control and light-  
20     fixture stanchions will be protected with barricades.

21

1 The new electrical-power supply will be buried underground from an existing  
2 supply source north of the cooling towers to the Project site, just inside the  
3 "Owner Controlled Area" fence on Vermont Yankee's lands. Telephone cables  
4 originating in a similar location will be routed in conduit in the same trench as the  
5 electrical source to the Project site.

6  
7 Using the Quechee test applicable to the aesthetic impact of a project under  
8 Criterion 8, it is my opinion that the Project will not result in an undue adverse  
9 impact on scenic or natural beauty or aesthetics.

10  
11 First, I do not believe that the Project will have an adverse aesthetic impact. The  
12 five considerations under Quechee for determining whether a project may have  
13 an adverse aesthetic impact are:

- 14 (1) what is the nature of the project's surroundings?  
15 (2) is the project's design compatible with its surroundings?  
16 (3) are the colors and materials selected for the project suitable for the  
17 context within which the project will be located?  
18 (4) where can the project be seen from? and  
19 (5) what is the project's impact on open space in the area?

20 In general, these considerations help determine whether the proposed project  
21 "fits" in the context of the area. As I just testified, the area surrounding the  
22 Project is dominated by Vermont Yankee's plant, which is industrial in character,

1 built with concrete and metal sidings, and includes transmission lines, towers and  
2 transformers. The Project's design and the colors and materials selected for the  
3 Project are compatible with its surroundings and suitable for the context in which  
4 the Project will be located. While the Project will be marginally visible from the  
5 Connecticut River and the Governor Hunt Road during the winter months, it will  
6 not stand out because of the buffer of existing trees and the dominance of  
7 Vermont Yankee's generating facilities in the immediate background. Finally, the  
8 Project will have little impact on open space in the area as its surroundings have  
9 been largely developed. In my opinion, the Project "fits" in the context of the  
10 area.

11  
12 Even if the Project were determined to have an adverse aesthetic impact, in my  
13 opinion that impact would not be undue. The Quechee factors for determining  
14 undue adverse impact are:

- 15 (1) does the project violate a clear, written community standard  
16 intended to preserve the aesthetic and scenic or natural beauty of  
17 the area?
- 18 (2) does the project offend the sensibilities of the average person? and
- 19 (3) has the applicant failed to take generally available mitigating steps  
20 which a reasonable person would take to improve the harmony of  
21 the proposed project with the surroundings?

1 There is no written community standard in regards to aesthetics, scenic or  
2 natural beauty. As discussed in Don Leach's testimony, the Project complies  
3 with the Windham Regional Plan and the Town of Vernon's Plan applicable to  
4 scenic resources. The Project will be in character with its surroundings,  
5 especially the adjacent Vermont Yankee facilities, so as to not offend the  
6 sensibilities of an average person. Finally, Vermont Yankee has taken generally  
7 available mitigating steps to improve the harmony of the proposed Project,  
8 including the maintenance of existing landscaping and the preservation of as  
9 much of the buffer of existing large trees surrounding the site as possible.

10 Irreplaceable Natural Areas

11 Based on review of the VANR Significant Habitat Map, dated April 3, 1997, for  
12 the Town of Vernon, there are no state designated or determined natural or  
13 fragile areas in the vicinity of the Project site. Exhibit PB-9 is the VANR  
14 Significant Habitat Map.

15 Historic Sites

16 Although there are a few buildings in the area that may be considered historic,  
17 the area has a diverse mixture of land uses including the existing generating  
18 station. Since the Project would be visually considered part of the existing  
19 power-plant facility, it will not significantly change the character of the area.  
20 Existing vegetation will act as screening from other buildings in the area,  
21 especially during summer months.

1 Vermont Yankee engaged Thomas R. Jamison, PhD, Project Director for  
2 Hartgen Archeological Associates, Inc., to provide an archeological assessment  
3 of the proposed Project. Dr. Jamison has concluded that, while much of the  
4 vicinity of the Project is sensitive for pre-contact and historic deposits due to the  
5 proximity of the Project site to the Connecticut River, presence of reported sites  
6 and early settlement of the area, the Project area was extensively disturbed  
7 during the construction of the Station in the early 1970s and therefore that no  
8 further archeological review is recommended. Exhibit PB-10 is a copy of Dr.  
9 Jamison's letter and supporting documentation.

10 **Act 250 Sub-Criterion 8(A): Wildlife and Endangered Species Habitat**

11 Q22. Are there significant habitats or rare plants or animals at or near the Project site?

12 A22. No. A review of the VANR Significant Habitat Map for the Town of Vernon  
13 indicates that there are no significant habitats of rare plants or animals at or near  
14 the Project site. Exhibit PB-9 is the VANR Significant Habitat Map. The  
15 proposed Project is in an area that is currently maintained partly as a lawn and  
16 partly with secondary growth of scrub oak, white pine and poplar trees that  
17 surround the Station. Critical wildlife habitat will not be adversely affected as a  
18 result of the Project.

19 **Act 250 Sub-Criterion 9(K): Public Investment**

20 Q23. Will the Project unnecessarily or unreasonably endanger the public or quasi-  
21 public investment in governmental and public-utility facilities, services and lands?

1 A23. No. The most significant public-utility facility is Vermont Yankee's electric-  
2 generating station. As Don Leach testifies, that public utility's operations and  
3 cost-effectiveness will be enhanced by the Project.  
4

5 The other public or quasi-public facilities, services or lands in the Project area are  
6 the New England Central Railroad mainline, the Connecticut River, the  
7 hydroelectric station located at the Vernon Dam and the Town of Vernon's roads.  
8 The Project is located approximately 2,500 feet from and will not affect the  
9 railroad. The Project will have no effect on the Connecticut River as it will be  
10 located more than 100 feet from the river and, as discussed previously, will have  
11 no scenic or water-quality impact on the river. The Project's existence will have  
12 no effect on access to or use of the river, and discharges caused by the  
13 construction and operation of the Project will be to the ground, not the river. The  
14 Project will be located approximately 1,250 feet from the hydroelectric station and  
15 will thus have no impact on that facility. Finally and again as discussed earlier,  
16 the construction and use of the Project will have no adverse traffic impact on  
17 local highways.

18 **Executive Order 80-52: Agricultural Resources**

19 Q24. Will the Project conform to Executive Order 80-52 regarding agricultural  
20 resources?

21 A24. Yes. I understand that the overall goal of Executive Order 80-52 is to ensure that  
22 development requiring state permits will not eliminate or significantly interfere



1 with agricultural activities on productive agricultural lands or reduce the potential  
2 of primary agricultural soils, taking into account whether there is a feasible and  
3 prudent alternative and whether the project has been planned to minimize its  
4 effect on such lands. Based on my review of the Soil Conservation Services Soil  
5 Survey of Windham County and Agricultural Value Groups for Soils, Windham  
6 County, the Project site is located in an area that is shown as having state-wide  
7 significant agricultural soils. The Project site is, however, not presently in  
8 agricultural use. Again, as I testified earlier, only approximately 0.73 acres of the  
9 site will be covered with impervious structures and therefore will no longer be  
10 available for future agricultural use. Based on a telephone conversation with  
11 Michael Dwayne from the Vermont Department of Agriculture, I understand that  
12 the size of the Project is comparatively small relative to the Vermont Yankee site,  
13 and therefore it is unlikely that the Project would significantly affect primary  
14 agricultural soil. Mr. Dwayne stated that it was not necessary to obtain a letter  
15 from his department to this effect.

16  
17 Finally, as John Hoffman testified, Vermont Yankee has reviewed alternatives to  
18 the Project site and concluded that there is no feasible alternative that will meet  
19 its organizational needs and be cost-effective.

20  
21 Based on the Project's location, the existing terrain and soil conditions and my  
22 review and conversation with Mr. Dwayne, it is my opinion that the Project will not

1       eliminate or significantly interfere with agricultural activities on productive  
2       agricultural lands or reduce the potential of primary agricultural soils, taking into  
3       account the alternatives to the Project and the mitigation efforts that will be  
4       implemented at the Project site.

5   Q25. Does this conclude your testimony?

6   A25. Yes.

7   BRT/30106.4

Bulk H<sub>2</sub>III. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board of the State of Vermont that:

1. The findings and conclusions of the Hearing Officer are adopted.
2. The construction and use by Vermont Yankee Nuclear Power Corporation ("Vermont Yankee") of a bulk-gas storage facility (and associated facilities), to supply hydrogen and oxygen to its existing electric-generation facility in the Town of Vernon, Vermont (the "Project") to be used for existing purposes and to allow Vermont Yankee to introduce "Hydrogen Water Chemistry" to the station's reactor water, which when combined with noble metals, reduces "Intergranular Stress Corrosion Cracking" in the reactor vessel and recirculation pipes, will promote the general good of the State of Vermont in accordance with 30 V.S.A. § 248, provided that Vermont Yankee complies with the following conditions:
  - a. Vermont Yankee shall file copies of all certifications, permits and other approvals required for the Project not previously filed with the Board, including but not limited to construction-plan approval from the Department of Labor and Industry; and
  - b. Vermont Yankee shall comply with the erosion-control plan described in its filing.
3. The attached Certificate of Public Good shall issue.

Dated at Montpelier, Vermont, this 27<sup>th</sup> day of June, 2001.

|                             |   |   |
|-----------------------------|---|---|
| <u>s/Michael H. Dworkin</u> | ) | PUBLIC SERVICE<br><br>BOARD<br><br>OF VERMONT |
|                             | ) |   |
| <u>s/David C. Coen</u>      | ) |   |
|                             | ) |   |
| <u>s/John D. Burke</u>      | ) |   |

OFFICE OF THE CLERK

FILED: June 27, 2001

ATTEST: s/Susan M. Hudson

Clerk of the Board

*NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or mail) of any technical errors, in order that any necessary corrections may be made. (E-mail address: Clerk@psb.state.vt.us)*

*Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action*

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 6480

Petition of Vermont Yankee Nuclear Power Corporation )  
for a Certificate of Public Good to construct a Bulk-Gas )  
Storage Facility in Vernon, Vermont )

Hearing at  
Montpelier, Vermont  
June 5, 2001

Order entered: 6/27/2001

PRESENT: Lawrence Lackey, Hearing Officer<sup>1</sup>  
Peter Meyer, Hearing Officer

APPEARANCES: John H. Marshall, Esq.  
Downs Rachlin & Martin PLLC  
for Vermont Yankee Nuclear Power Corporation

Geoffrey Commons, Esq.  
for Vermont Department of Public Service

Warren Coleman, Esq.  
for Agency of Natural Resources

**I. Introduction**

On February 23, 2001, Vermont Yankee Nuclear Power Corporation ("Vermont Yankee") petitioned the Public Service Board ("Board") for a certificate of public good (a "CPG") pursuant to 30 V.S.A. § 248 to construct a bulk-gas storage facility (and associated facilities) to supply hydrogen and oxygen to the electric-generation station on property owned and controlled by Vermont Yankee in Vernon, Vermont, (the "Project"). The hydrogen and oxygen will be used for existing purposes and to allow Vermont Yankee to introduce "Hydrogen Water Chemistry" to the station's reactor water, which, when combined with noble metals, reduces

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1. Subsequent to the technical hearing, the Board appointed Peter Meyer, Environmental Analyst, as Hearing Officer to replace Mr. Lackey.

"Intergranular Stress Corrosion Cracking" ("IGSCC") in the reactor vessel and recirculation pipes.

As represented in its petition, Vermont Yankee proposes to construct the Project commencing in the Summer of 2001. Pet. at 3. Vermont Yankee requested that the Board treat its application under the procedures established by subsection (j) of § 248, which allow the Board to proceed without notice and hearings for electric generation facilities if the facilities are of limited size and scope and the petition does not raise a significant issue with respect to the substantive criteria established by § 248. *Id.*; see 30 V.S.A. § 248(j). By letter dated March 5, 2001, the Board informed Vermont Yankee of the Board's conclusion that the petition did not qualify for the subsection (j) review procedure. Ltr. of 3/5/01 from Board Clerk. On March 8, 2001, therefore, Vermont Yankee amended its petition to withdraw its request for subsection (j) review and agreed to proceed under the normal procedure established by 30 V.S.A. § 248. See Amended Petition.

On March 21, 2001, the Board convened a prehearing conference on the petition at which it adopted a schedule providing for discovery and for the filing on May 4, 2001, of either a settlement between the Vermont Department of Public Service (the "Department") and Vermont Yankee or of the prefiled testimony of the Department stating its position on the Project. Tr. 3/21/01 at 4-5. The Board also asked Vermont Yankee to answer five questions about the Project. See *id.* at 8-17. The Board subsequently appointed Lawrence Lackey, Utilities Analyst, as Hearing Officer to hear Vermont Yankee's petition. On April 19, 2001, the Board concluded a site visit and then held a public hearing on the Project. See tr. 4/19/00. Only one member of the public spoke at the hearing, a representative of the Town of Vernon who advised the Board that the town supports the Project. *Id.* at 9-10.

Vermont Yankee and the Department engaged in discussions, review, informal discovery, and formal discovery with respect to this filing. By a Stipulation filed on May 4, 2001, Vermont Yankee and the Department agreed to support the issuance by the Board of a CPG for the Project. Vermont Yankee and the Department also prefiled testimony answering the Board's five questions and, in the case of the Department, reported on its analysis of the Project. Finally,

Vermont Yankee and the Department waived service of this Proposal for Decision on them pursuant to 30 V.S.A. § 811.

A technical hearing was held on June 5, 2001, at the Board Hearing Room, Chittenden Bank Building, 112 State Street, Montpelier, Vermont.

## **II. Findings**

Pursuant to 30 V.S.A. § 8, and based on the record and evidence before me, I present the following findings of fact and conclusions of law to the Board.

### **A. The Project**

1. Vermont Yankee owns and operates a boiling-water-reactor ("BWR"), nuclear-power plant (the "Station") in Vernon, Vermont, which is an electric-generation facility subject to the Board's jurisdiction. Hoffman pf. at 1; Leach pf. at 1.
2. Vermont Yankee currently uses hydrogen at the Station to cool the generator, and injects oxygen into the Station's reactor water to replace oxygen lost through the water-cooling process, thereby preventing the corrosive effect of low-oxygen water. Hoffman pf. at 2-3.
3. Vermont Yankee proposes to construct the Project to supply hydrogen and oxygen to the Station's existing operations and to introduce "Hydrogen Water Chemistry" to the reactor-water chemistry, explained in Findings 17-27 below. *Id.* at 3.
4. Specifically, the Project includes oxygen-supply tanks, hydrogen-supply tanks, flow-control equipment and isolation equipment, buried piping from the area of the tanks to existing buildings at the Station, and the construction of an access road and tanker parking and unloading area. Leach pf. at 2-3; Hoffman pf. at 2.
5. The oxygen-supply and hydrogen-supply tanks will supply oxygen and hydrogen to flow-control equipment and isolation equipment located in the existing buildings. Leach pf. at 2.
6. The hydrogen-supply tanks will be located in the "Owner Controlled Area" (or "OCA") at the south end of the Station, identified on the Project Site Plan as the "Hydrogen Storage Area." Leach pf. at 2-3.
7. The Hydrogen Storage Area will consist of bays for two hydrogen-gas tanker-trailers on a concrete pad, surrounded by a chain-link fence with a minimum height of six feet. *Id.* at 3.
8. There will be a total of five light fixtures on four, fourteen-foot stanchions at the Hydrogen Storage Area; the flow-control and light-fixture stanchions will be protected with barricades, and the hydrogen trailers will be approximately 40 feet in length, 8 feet wide and 12 feet high. *Id.* at 3; Boemig pf. at 11.

9. The trailers will be connected via a flexible line to a manifold containing pressure-reducing valves, isolation valves and maintenance valves. Leach pf. at 3.

10. At the outlet of the pressure-reducing manifold, there will be a connection to the underground piping which will transmit the hydrogen to the turbine building at the Station to supply the existing main generator's hydrogen-cooling system and a Hydrogen-Water Chemistry (or "HWC") supply system. Id. at 3.

11. Between deliveries of hydrogen gas, there will normally be one hydrogen-gas tanker at the Hydrogen Storage Area. Id.

12. A new hydrogen-gas tanker-trailer will be delivered to the Hydrogen Storage Area approximately once every two to three weeks. Id.

13. The tractor-trailer delivering the new bulk-hydrogen gas tanks will park the replacement hydrogen-gas storage tanker in the empty bay and then connect with the near-depleted tanker-trailer in the other bay for delivery back to a hydrogen-gas-supply plant. Id.

14. Vermont Yankee may store larger bulk amounts of oxygen gas in the enclosure at the location identified on the Site Plan as the "Oxygen Storage Alternate Site." Id.

15. The Oxygen Storage Alternate Site will consist of a 500- to 1,000-gallon storage tank for liquid oxygen and an external vaporizer to change the liquid oxygen to gas; the discharge of the vaporizer will be connected to piping and transmitted to the turbine building at the Station for injecting into the off-gas stream. There will be one light fixture on a fourteen-foot stanchion to provide lighting at the site. Id. at 3-4; Boemig pf. at 11.

16. The purpose of the oxygen is to assure the presence of enough oxygen to combine with any excess hydrogen to become water in the discharge line, downstream from the main condenser. Leach pf. at 4.

17. The primary purpose of the new hydrogen-injection system is to address a type of wear known as "Intergranular Stress Corrosion Cracking" in the reactor-pressure-vessel internals and recirculation-system piping. Id. at 4.

18. IGSCC in BWRs is caused because certain welded stainless steels in the reactor-vessel internals or associated piping can be susceptible to IGSCC due to the oxidizing nature of the BWR coolant. Hoffman pf. at 4.



19. The only cost-effective method to address IGSCC known today is to change the oxidizing nature of the reactor water. Id. at 4-5.

20. To change the water's oxidizing nature through HWC, Vermont Yankee will inject hydrogen into the feedwater system to cause a reduction in excess dissolved oxygen generated within the reactor systems and recirculation piping and thereby lower the corrosion potential of the reactor coolant. Id. at 3.

21. Hydrogen addition to the feedwater results in an excess ratio of hydrogen to oxygen at the entrance to the off-gas system; the HWC system therefore also provides an oxygen source upstream of the off-gas recombiner to maintain a stoichiometric mixture of hydrogen and oxygen. Id. at 3-4.

22. A potential effect of injecting hydrogen into reactor water is slightly higher internal and external radiation doses inside the Station and at the site boundary. Id. at 5.

23. Industry studies have demonstrated that the injection of noble metals in the reactor-coolant system improved the effectiveness of HWC, thereby reducing the amount of hydrogen required and, in turn, reducing any increase in radiation doses to acceptable levels at the site boundary. Id.

24. A 1996 project under the joint auspices of the Electric Power Research Institute ("EPRI") and General Electric Company showed that the injection of low levels of hydrogen in the presence of noble metals provided significant protection against IGSCC, with radiation rates essentially the same as before the injection. Id. at 10.

25. Because Vermont Yankee will utilize noble metals, radiation rates at the Station's site boundary will not increase significantly above existing levels once the hydrogen-injection system is fully operational and will remain below the EPA standard of 25 millirem per year and the State of Vermont's requirement of 20 millirem per year at the site boundary. Id. at 6.

26. Vermont Yankee seeks to commence construction of the Project in the Summer of 2001 so it will be available for use by year-end. Leach pf. at 4.

27. HWC will reduce the rate of IGSCC, thereby achieving very significant long-term cost savings by prolonging equipment life, reducing inspection costs, analysis costs, and lost power costs, and reducing radiation exposure to repair workers. Id. at 4.

*Income Personal attribute*

**B. Review of the Project Under the Criteria of 30 V.S.A. § 248(b)****Inapplicable Criteria**

28. As a wholesale utility that does not distribute electricity to the public, Vermont Yankee has not prepared and submitted for approval an integrated-resource plan or "IRP." Consequently, criterion 6 of § 248 is not applicable. Leach pf. at 15-16; *see* 30 V.S.A. § 248(b)(6).

29. The Project is not a waste-to-energy facility requiring a favorable finding under criterion 9 of § 248(b). Leach pf. at 17; *see* 30 V.S.A. § 248(b)(9).

30. Because the Project does not require access to or use of transmission facilities, criterion 10 of § 248(b) is also not applicable. Leach pf. at 17; *see* 30 V.S.A. § 248(b)(10).

31. 30 V.S.A. § 248(b)'s other criteria -- criteria 1, 2, 3, 4, 5 and 7 -- are applicable. *See* 30 V.S.A. § 248(b).

**30 V.S.A. § 248(b)(1): Orderly Development of the Region**

32. The Project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 33 through 47, below.

33. On December 6, 2000, Vermont Yankee met with the Town of Vernon Planning Commission and provided the Commission with plans for the construction of the Project as required by subsection 248(f). Leach pf. at 5; *see* 30 V.S.A. § 248(f) (Supp. 2000).

34. At the meeting held on December 6, 2000, the Vernon Planning Commission passed a resolution endorsing the Project and waiving the 45-day, pre-application review allowed under subsection (f). Leach pf. at 5; exh. VY-1 Stip (Pet. exh. DL-2).<sup>2</sup>

35. On December 7, 2000, Vermont Yankee also met with the Town of Vernon Selectboard and provided the Selectboard with an overview of the Project. Leach pf. at 5.

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2. Because exhibit VY-1 Stip consists of several documents, the parenthetical reference identifies the specific document actually cited.

36. At the December 7 meeting, the Vernon Selectboard passed a resolution finding that the Project will not interfere with the orderly development of the region and will not burden municipal services. *Id.* at 5-6; exh. VY-1 Stip (Pet. exh. DL-3).

37. The Vernon Town Plan, which was adopted on April 20, 1995, was intended to be a policy document that provides guidelines to ensure that decisions made at the local, regional and state levels are in concert with the values and goals expressed in the plan. Leach pf. at 6; exh. VY-1 Stip (Pet. exh. DL-4 at 3).

38. The Vernon Town Plan specifically cites the Station, its contribution to the community's tax base and its provision of varied employment opportunities as being largely responsible for Vernon's rural independence and self-sufficiency. Leach pf. at 6; exh. VY-1 Stip (Pet. exh. DL-4 at 17).

39. The specific policies and recommendations regarding resources and economic development under the Vernon Town Plan include the following:

- \* Balanced economic development will be pursued to provide long-range economic benefits including stable employment opportunities for town residents and an adequate local tax base;
- \* All industry, commerce and institutions must adequately control its waste, relate satisfactorily to existing land uses, minimize increases in traffic congestion, avoid contributing to sprawl or strip development or detracting from the rural character of the town, and account to the town for both direct and indirect municipal costs;
- \* Commercial and industrial development should be well-designed and attractive with ample buffer zones to protect adjacent land; and
- \* Any effort which directly or indirectly accelerates economic growth should be consistent with local and regional objectives.

Leach pf. at 6-7; exh. VY-1 Stip (Pet. Exh. DL-4 at 19).

40. The Project is consistent with these specific policies of the Vernon Town Plan. Leach pf. at 6-7; findings 33-39, *supra*.

41. On November 28, 2000, Vermont Yankee provided the Windham Regional Commission with plans for the Project as required by subsection 248(f). Leach pf. at 8; *see* 30 V.S.A. § 248(f).

42. The Windham Regional Plan, which was adopted on December 10, 1996, is intended to provide continuing guidance for change in the Windham region. Leach pf. at 9; exh. VY-1 Stip (Pet. exh. DL-5 at 4).

43. The Windham Regional Plan was designed to have its primary relevance in its application to evaluation of major projects of regional importance when applied in conjunction with applicable town plans. Leach pf. at 9; exh. VY-1 Stip (Pet. exh. DL-5 at 5).

44. The Windham Regional Commission determined that the Project is not a "project of regional importance" as defined under the Windham Regional Plan. Leach pf. at 9.

45. The Windham Regional Plan acknowledges, in any event, the significant role that the Station plays in being one of Windham County's largest employers and in serving 33% of Vermont's annual electrical requirements at the time the Plan was drafted. Leach pf. at 9-10; exh. VY-1 Stip (Pet. exh. DL-5 at 35, 36, 111).

46. The economic policies of the Windham Regional Plan include the encouragement of businesses that offer a complementary mix of jobs that include stable, year-round employment, with competitive wages, skills-training programs, and provisions for other benefits that contribute to the quality of life for all workers. Leach pf. at 10; exh. VY-1 Stip (Pet. exh. DL-5 at 43).

47. The Project is consistent with the policies of the Windham Regional Plan. Leach pf. at 10; findings 41-46, *supra*.

**30 V.S.A. § 248 (b)(2): Present and Future Demand for Service**

48. The Project is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner through energy conservation programs and measures and energy efficiency and load management measures. This finding is supported by findings 49 and 50, below.

49. Vermont Yankee is an already-built and operating electric-generation facility, 55% of the output of which is committed to meet the existing demand for service of Vermont ratepayers. Leach pf. at 12.

50. The Project will not increase or in any way affect the Station's capacity, and therefore the Project could not be avoided by cost-effective, demand-side management (or "DSM") measures or programs. *Id.*; Sherman pf. at 7.

**30 V.S.A. § 248 (b)(3): System Stability and Reliability**

51. The Project will not adversely affect system stability and reliability. By enabling the introduction of HWC, it will reduce the rate of IGSCC that may be present in the reactor-pressure vessel's internal and recirculation system piping, thereby increasing the Station's stability and reliability. Leach pf. at 13.

**30 V.S.A. § 248 (b)(4): Economic Benefit**

52. The Project will result in an economic benefit to the state and its residents. This finding is supported by findings 53 through 65, below.

53. The Project represents a capital investment of approximately \$717,000, which is part of a planned expenditure by Vermont Yankee of \$6.6 million to mitigate IGSCC through HWC. Hoffman pf. at 7-8.

54. The Project will be cost-effective in comparison to the alternative of utilizing smaller oxygen and hydrogen containers, which would be much more expensive due to the increase, per unit, in handling and transportation costs, and to a slightly more expensive alternative considered by Vermont Yankee that would have involved an internal hydrogen-supply system located inside an existing building. *Id.* at 8-9; Sherman pf. at 8-9.

55. The Project and HWC's implementation are justified and cost-effective within the remaining term of the Station's existing license from the Nuclear Regulatory Commission, which expires in 2012. Leach/Hoffman supp. pf. at 3; Sherman pf. at 9.

56. Vermont Yankee conducted a cost-benefit analysis of HWC using software developed by EPRI that identifies components of, in this case, a BWR station that could experience IGSCC. The analysis develops the probability over time that such components might be subject to IGSCC and quantifies the present-value benefit of implementing HWC by comparing its cost to the probability-adjusted cost of an outage required to repair components that experience IGSCC. Leach/Hoffman supp. pf. at 3-5.

57. Vermont Yankee identified seven components that it believes might experience IGSCC, eliminating other components because they had previously been repaired or replaced. Vermont Yankee judged that the risk that IGSCC would occur to these other components (during the remaining term of the Station's license) to be sufficiently low as to not warrant analysis. *Id.* at 4.

58. Vermont Yankee conducted a thorough evaluation of proposed alternatives and chose the least-cost alternative on a net-present-value basis. *Sherman pf.* at 6.

59. The results of Vermont Yankee's cost-benefit analysis, which compared the cost of the Project (including the HWC system) to the probability-adjusted cost of an outage required to repair components that experience IGSCC, demonstrate, under various scenarios, a net-present value savings provided by the Project between \$25 million and \$312 million. *Leach/Hoffman supp. pf.* at 5-8; *Sherman pf.* at 10.

60. Although the probability of any event occurring is never zero, with the implementation of the Project, the probability of an outage to repair components of the Station affected by IGSCC will be essentially zero. *Leach/Hoffman supp. pf.* at 5.

61. Vermont Yankee provided a detailed, line-by-line analysis of the \$6.8 million it intends to expend through this year related to HWC, including the \$717,000 that will be required for the Project. *Leach/Hoffman supp. pf.* at 7-8; *see* *exh. VY-2 Stip (Pet. exh. VY-3)*.

62. The cost of the Project is \$13.6 million on a present-value basis (over the remaining licensed life of the Station). *Leach/Hoffman supp. pf.* at 6.

63. The implementation of HWC is unrelated to proposals to ramp-up or enhance Vermont Yankee's power rating. *Sherman pf.* at 9; *Leach/Hoffman supp. pf.* at 8.

64. The Project does not involve an indefinite or indeterminable economic cost, nor a high cost associated with potential accidents, cleanup or decommissioning. *Sherman pf.* at 9.

65. Vermont Yankee will also pay property taxes assessed on the Project to the State or to the Town of Vernon. *Leach pf.* at 13.

**30 V.S.A. § 248 (b)(5): Land-Use and Environmental Criteria**

**Public Health and Safety**

66. The Project as proposed will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety. This finding is supported by findings 67 through 134, below, which are based on the criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1) through (8), 8(A) and (9)(K).

67. The Project will have no adverse effect on the existing generating Station or its transmission lines. Leach pf. at 14.

68. The Project will be designed and implemented to meet all applicable codes and standards; in particular, the Project will apply and be in compliance with the Vermont Occupational Safety and Health and Administration ("VOSHA"), the federal Occupational Safety and Health Administration ("OSHA"), the National Fire Protection Association ("NFPA"), and the American Society of Mechanical Engineers/American National Standards Institute ("ASME/ANSI") codes (together the "Codes"). Id.

69. Vermont Yankee will file with the Board a copy of the Department of Labor and Industry's construction-plans approval under the Codes when received. Leach pf. at 14.

**10 V.S.A. § 6086 (a) (1): Water and Air Pollution**

70. The Project as proposed will not result in undue water or air pollution. This finding is supported by findings 71 through 85, below.

71. The Project will not cause air-pollution levels that create a threat to public health or a nuisance for nearby neighbors as the only air emissions associated with the Project are those from the delivery vehicles traveling to and from the site; based on an estimated four to six truck trips per month, the emissions will be negligible. Boemig pf. at 3.

72. There are no other sources of air emissions from the Project. Id.

**10 V.S.A. § 6086 (a) (1)(A): Headwaters**

73. The Project area is not located in a headwaters area. The site on the Connecticut River is not characterized by steep slopes and shallow soils, it does not consist of a drainage area greater than 20 square miles, it is not over 1,500 feet in elevation (the elevation is 260 feet), it is not in the watershed of a public-water supply, and it is not a significant aquifer-recharge area. Id. at 3-4.

**10 V.S.A. § 6086 (a) (1)(B): Waste Disposal**

74. The Project as designed will meet any applicable health and environmental conservation regulations regarding the disposal of wastes, and will not involve the injection of waste materials or any harmful toxic substances into ground water or wells. This finding is supported by findings 75 and 76, below.

75. The unused hydrogen gas in the bulk-hydrogen storage tanker will be returned to the hydrogen-gas supply facility. *Id.* at 4.

76. The Project does not involve the disposal of waste other than the disposal of a minor amount of trees, brush and tree stumps that will comply with applicable local and state standards. *Id.* at 4-5.

**10 V.S.A. § 6086 (a) (1)(C): Water Conservation**

77. The Project will not affect the Station's present use of water or water-conservation measures because no new employees will be added and no additional water will be used as a result of the Project. Boemig pf. at 5.

**10 V.S.A. § 6086 (a) (1)(D): Floodways**

78. The Project site is well outside of the 100-year floodway and outside of the floodway fringe. *Id.*; exh. VY-1 (Pet. exh. PB-3).

**10 V.S.A. § 6086 (a) (1)(E) and (F): Streams and Shorelines**

79. The Project as proposed will have no impact on the natural condition of the Connecticut River or its shoreline. This finding is supported by findings 80-84, below.

80. The closest stream or river shoreline is the Connecticut River, which is located more than 100 feet from the Project. Boemig pf. at 6.

81. No construction will occur within 100 feet of, or within, the Connecticut River. *Id.*

82. The Project will not have an adverse effect on the public's access to the river, since it in no way changes access to the river in the area of the Station. *Id.*

83. The Project will only be marginally visible from the Connecticut River because it will be largely screened from view by existing vegetation along the river bank. *Id.*

84. The visual character of the Project site will be in keeping with the industrial nature of the site. *Id.* at 11.

**10 V.S.A. § 6086 (a) (1)(G): Wetlands**



85. Based on a review of the National Wetlands Mapping and field observations, there are no significant wetlands in the area of the Project. Boemig pf. at 6; exh. VY-1 (Pet. Exh. PB-4).

**10 V.S.A. § 6086 (a) (2): Water Availability**

86. The Project will not change in any way the Station's present use of water or water-conservation measures; the Station will continue to recirculate the same amounts of water used to generate electricity and to cool the reactor. Boemig pf. at 7.

**10 V.S.A. § 6086 (a) (3): Burden on Existing Water Supply**

87. The Project will not change in any way the Station's present use of water or water-conservation measures. Id.

**10 V.S.A. § 6086 (a) (4): Erosion Control**

88. The Project as designed will not result in unreasonable soil erosion or reduce the ability of the land to hold water. This finding is supported by findings 89 through 94, below.

89. The Project site is relatively flat, and there are no drainage ways and streams around the site. Id.

90. Erosion control will be accomplished through the use of silt fences and haybale dikes as shown on the Project plans. Id.

91. An erosion-control plan will be included in the Project's construction specifications. Id.

92. Because the erosion-control plan will prevent the discharge of sediment to the Connecticut River, the Project will not result in any dangerous or unhealthy situations downhill or downstream of the Station. Id. at 8.

93. Stormwater from the Project has been evaluated and determined to be consistent with the State's design practices and standards; new impervious surface will be limited to the 2,240-square-foot Hydrogen Storage Area, the 600-square-foot Oxygen Storage Alternate Site, and the 29,166-square-foot Project Access Road. Id. at 4.

94. A stormwater permit is not required for the Project because total impervious area created is approximately 0.73 acres, which is below the minimum jurisdictional requirement of one acre for a Stormwater Discharge Permit from the Vermont Agency of Natural Resources ("VANR"). Id.

**10 V.S.A. § 6086 (a) (5): Transportation**

95. The Project will not cause unreasonable congestion or unsafe conditions with respect to the only applicable transportation facilities: local highways. This finding is supported by findings 96 through 98, below.

96. SVE Associates evaluated the impact on traffic of the Project. *Id.* at 8; exh. VY-1 (Pet. exh. PB-5).

97. The traffic-evaluation study concluded that the Project will have no adverse impact on existing traffic conditions. Boemig pf. at 8.

98. The general levels of service for all involved roads are acceptable and are the same for the build and no-build scenarios. *Id.*

**10 V.S.A. § 6086 (a) (6): Educational Services**

99. The Project will have no impact on educational services. Boemig pf. at 9.

**10 V.S.A. § 6086 (a) (7): Municipal or Governmental Services**

100. The Project will have no impact on the ability of the Town of Vernon to provide municipal services. This finding is supported by findings 100 through 106, below.

101. The Project has been reviewed with the Vernon Volunteer Fire Department Chief and the Vernon Selectboard. *Id.*

102. The Vernon Volunteer Fire Department has determined that it can provide adequate fire protection services to the Project site without unduly burdening the Department and Vermont Yankee will train the Department's members in suppression and extinguishing techniques as part of its internal training program. *Id.*; exh. VY-1 (Pet. exh. PB-6).

103. On December 7, 2000, the Vernon Selectboard passed a resolution finding that the Project will not interfere with the orderly development of the region and will not burden municipal services. Boemig pf. at 9; exh. VY-1 (Pet. exh. PB-7).

104. Vermont Yankee proposes no new road construction for the Project, other than the Project Access Road. Boemig pf. at 10.

105. The Town of Vernon will not be required to provide any additional road-maintenance services as a result of the Project. *Id.*

106. The local rescue service, Rescue, Inc., has reviewed the Project and determined that it can adequately provide rescue services to the Project. Id.; exh. VY-1 (Pet. exh. PB-8).

**10 V.S.A. § 6086 (a) (8): Aesthetic Impact, Historical Sites and Natural Areas**

107. The Project will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas. This finding is supported by findings 108 through 126, below.

108. The Project site is a flat, grassy and overgrown area characterized by brush, scrub oak, poplar and white pine. Boemig pf. at 10.

109. Only a few of the white pine will be removed to accommodate the Project. Id.

110. No new landscaping is planned except minor regrading and repair of lawns. Id.

111. The Project will create a total impervious area of 32,006 sq. ft., and the approximate total area disturbed by the Project is 67,500 sq. ft. with a total height approximately 15 feet above grade. Id.

112. There is a buffer of existing large coniferous and deciduous trees between Vernon Village and the Project. Id. at 11.

113. These existing large trees will be retained. Id.

114. The Project will be marginally visible from Governor Hunt Road during winter months. Id.

115. The Project will be protected from view from the Connecticut River and east by the existing vegetated buffer along the river bank; it may be marginally visible from the Connecticut River but is consistent with the industrial context of the Project site. Id.

116. No new exterior lighting is planned for the Project except for the installation of six shielded metal-halide lights that will direct light downward from five, fourteen-foot stanchions; the lighting is required for maintenance, operations and security purposes. Id.

117. The new electrical-power supply will be buried underground from an existing supply source north of the cooling towers to the Project site, just inside the OCA fence on Vermont Yankee's lands; telephone cables originating in a similar location will be routed in a conduit in the same trench as the electrical source to the Project site. Id. at 12.

118. In general, the Project fits in the context of the area, taking into account the Station's existence, the nature of the Project surroundings, the Project's design, the Project's visibility, and the Project's impact on open space in the area. *Id.* at 12-13.

119. The Project does not violate a clear, written community standard intended to preserve the aesthetic and scenic or natural beauty of the area, as it complies with the scenic resources policies of the Vernon Town Plan and the Windham Regional Plan. *Id.* at 13-14.

120. Taking into account the visual dominance of Vermont Yankee's Station and the developed character of the nearby area, the Project will not offend the sensibilities of the average person. *Id.* at 13.

121. Vermont Yankee has taken generally available mitigating steps to improve the harmony of the proposed Project with its surroundings, including maintaining the existing landscaping, preserving as much of the buffer of existing large trees surrounding the Project site as possible, and limiting the lighting to six shielded metal-halide lights that will direct light downward. *Id.* at 11, 14.

122. Based on review of the VANR Significant Habitat Map, dated April 13, 1997, there are no state-designated or determined natural/fragile areas in the vicinity of the Project. Boemig pf. at 14; exh. VY-1 (Pet. exh. PB-9).

123. The Project will visually be considered part of the existing power-plant facility and will not significantly change the character of the area. Boemig pf. at 14.

124. Existing vegetation will act as screening from other buildings in the area, especially during summer months. *Id.*

125. The site of the Project was significantly disturbed during the construction of the Station in the early 1970s. *Id.* at 15; exh. VY-1 (Pet. exh. PB-10).

126. Because the Station's construction in the early 1970s substantially disturbed the site in which the access-road and bulk-gas storage and supply facilities will be built, no further archeological review of the Project site has been recommended. Boemig pf. at 15; exh. VY-1 (Pet. exh. PB-10).

**10 V.S.A. § 6086 (a) (8)(A): Necessary Wildlife Habitat and Endangered Species**

127. The Project will not impact any necessary wildlife habitat or endangered species sites. There are no significant habitats of rare plants or animals at or near the Project site. Boemig pf. at 15; exh. VY-1 (Pet. exh. PB-9).

128. The proposed Project is in an area that is currently maintained partly as a lawn and partly with secondary growth of scrub oak, white pine and poplar trees that surround the Station. Boemig pf. at 15.

**10 V.S.A. § 6086 (a) (9)(K): Public Investment**

129. The Project will not unnecessarily or unreasonably endanger the public or quasi-public investments in any governmental public utility facilities, services, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to such facilities, services, or lands. This finding is supported by findings 130 through 134, below.

130. The only significant impact on public investment will be on Vermont Yankee's Station. Boemig pf. at 16.

131. The Project's construction and operation will not adversely affect the State of Vermont's or Vernon's investments in highways. Id.

132. The Project is located approximately 2,500 feet away from the New England Central Railroad mainline and will not affect that facility. Id.

133. The Project will have no effect on the Connecticut River as it will be located more than 100 feet from the river, its existence has no effect on access to or use of the river, and discharges caused by construction operation on the Project will be to the ground, not the river. Id.

134. The Project is located approximately 1,250 feet from the hydroelectric station at the Vernon dam and will have no effect on that hydroelectric station. Id.

**10 V.S.A. § 1424a(d) Outstanding Resource Waters**

135. The proposed project will not affect any Outstanding Resource Waters of the state, as identified by the Water Resources Board. Boemig pf. at 2-3; exh. VY-1 Stip (Pet. exh. PB-2).

**Executive Order 80-52: Agricultural Resources**

136. The Project will not eliminate or significantly interfere with agricultural activities on productive agricultural lands or reduce the potential of primary agricultural soils, taking into

account the location of the Project, the existing terrain and soil conditions, the lack of feasible alternatives to the Project and the mitigation efforts that will be implemented at the Project site. This finding is supported by findings 137 through 142, below.

137. The overall goal of Executive Order 80-52 is to ensure that development requiring state permits will not eliminate or significantly interfere with agricultural activities on productive agricultural lands or reduce the potential of primary agricultural soils, taking into account whether there is a feasible and prudent alternative and whether the project has been planned to minimize its effect on such lands. Boemig pf. at 16-17.

138. Based on a review of the Soil Conservation Services Soil Survey of Windham County and Agricultural Value Group for Soils within Windham County, the Project site is located in an area that is shown as having state-wide significant agricultural soils. Id. at 17.

139. The Project site is not presently an agricultural use, and only approximately 0.73 acres of the site will be covered with impervious structures and therefore no longer available for future agricultural use. Id.

140. It is the position of the Vermont Department of Agriculture that, in light of the comparatively small size of the Project relative to the Vermont Yankee site, it is unlikely that the Project would significantly affect primary agricultural soil. Id.

141. The Project site is currently maintained partly as lawn and partly with secondary growth of scrub oak, white pine, and poplar trees. Id. at 15.

142. Vermont Yankee has reviewed alternatives to the Project site and concluded that there is no feasible and prudent alternative that will meet its needs and be cost-effective. Id. at 17.

**30 V.S.A. § 248 (b)(7): Vermont Electric Energy Plan**

143. Vermont's Electric Energy Plan, dated December 1994, does not specifically mention the Project but in general treats Vermont Yankee as a committed resource and encourages Vermont's utilities to minimize their cost of service. Leach pf. at 16.

144. The Electric Energy Plan's considerations do not apply to the type of bulk-gas storage facility proposed. Sherman pf. at 8.

**III. Conclusion**

Based upon all of the above evidence, the Project will promote the general good of the state.

To the extent that these findings are inconsistent with any proposed findings submitted by the parties to this case, such proposed findings are denied.

Dated at Montpelier, Vermont, this 25<sup>th</sup> day of June, 2001.

s/Peter B. Meyer

Peter B. Meyer  
Hearing Officer

Parking Lot

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 6976

Petition of Entergy Nuclear Vermont Yankee, LLC for )  
a certificate of public good, pursuant to 30 V.S.A. )  
§ 248(j), authorizing the construction of parking lots )  
totaling 991 spaces and related access road and security )  
lighting, along with minor improvements to an existing )  
parking area by the so-called Governor Hunt House, )  
other miscellaneous parking and roadway improvements )  
and the relocation of a certain portion of the proposed )  
security barrier system, on the site of its electric )  
generation station in the Town of Vernon, Vermont )

Entered:

9/21/2004

CERTIFICATE OF PUBLIC GOOD ISSUED  
PURSUANT TO 30 V.S.A. SECTION 248

IT IS HEREBY CERTIFIED that the Public Service Board of the State of Vermont this day found and adjudged that the construction by Entergy Nuclear Vermont Yankee, LLC of the 326-space Permanent Parking Area and related stormwater improvements, the 26-space Main Parking area, the 28-space Entrance Parking area, and the 55-space Gravel Parking area, and related access road and security lighting, along with minor improvements to an existing parking area by the so-called Governor Hunt House, other miscellaneous parking and roadway improvements, and the relocation (change in design) of a certain portion of the proposed security barrier system on the site of its electric generation station, the Vermont Yankee Nuclear Power Plant, in Vernon, Vermont, will promote the general good of the State of Vermont in accordance with 30 V.S.A. § 248, and a certificate of public good is hereby issued in this matter, subject to the following conditions:

1. Construction and operation of the Project shall be in accordance with the plans and evidence submitted in this proceeding.
2. The proposed 556-space Outage Parking Area (also referred to as the North Overflow Parking area on Exhibit Entergy-1, as the Gravel Parking Lot shown northward of the "Edge of Paved Parking Lot" line on Sheet 11 of Exhibit PB-14 and continued on Sheets 12 and



13 of Exhibit PB-14, and as the "Limit of Construction for Work in 2005" on Sheets 11-13) and its lighting are not approved in this Order and CPG. The Board indicated in an Order dated September 8, 2004, that it would hold a prehearing conference and site visit to address the alternatives and aesthetics issues raised by NEC with regard to the Outage Parking Area, and that the Outage Parking Area will be addressed in a separate proceeding.

3. All new lighting installed by Entergy VY to illuminate the new parking facilities and access roads shall be downcast and shielded on the sides to minimize the impacts of the lighting to adjacent properties.

4. This Certificate of Public Good shall not be transferred without prior approval of the Board.

DATED at Montpelier, Vermont, this 21st day of September, 2004.

Michael A. Darbin

John D. Beup

John D. Beup

PUBLIC SERVICE  
BOARD  
OF VERMONT

OFFICE OF THE CLERK

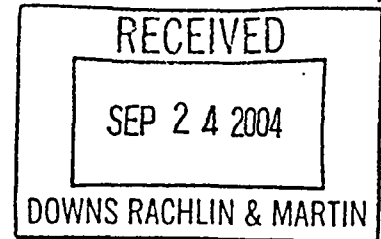
Filed: September 21, 2004

Attest: Susan M. Huber  
Clerk of the Board

*NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: Clerk@psb.state.vt.us)*

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 6976



Petition of Entergy Nuclear Vermont Yankee, )  
LLC for a certificate of public good, pursuant to )  
30 V.S.A. § 248(j), authorizing the construction )  
of parking lots totaling 991 spaces and related )  
access road and security lighting, along with )  
minor improvements to an existing parking area )  
by the so-called Governor Hunt House, other )  
miscellaneous parking and roadway )  
improvements and the relocation of a certain )  
portion of the proposed security barrier system, )  
on the site of its electric generation station in the )  
Town of Vernon, Vermont )

Order entered:

9/21/2004

I. INTRODUCTION

On June 21, 2004, the Vermont Public Service Board ("Board") received a petition from Entergy Nuclear Vermont Yankee, LLC ("Entergy VY") for a certificate of public good ("CPG") pursuant to 30 V.S.A. § 248(j) to construct several parking lots (totaling 991 parking spaces) and a related access road and security lighting, along with minor improvements to an existing parking area by the so-called Governor Hunt House, other miscellaneous parking and roadway improvements, and the relocation (change in design) of a certain portion of the proposed security barrier system ("SBS") that was approved by the Board in Docket No. 6953 (the "Entire Project") on the site of its electric generation station, the Vermont Yankee Nuclear Power Plant ("Station" or "Vermont Yankee"), in Vernon, Vermont. Entergy VY proposes to construct all portions of the Entire Project in the fall of 2004, except for the 556-space "Outage Parking Area," which it plans to construct during the spring or summer 2005 construction period, prior to the fall 2005 refueling outage.

Notice of the filing in this docket was sent on July 7, 2004, to all parties specified in 30 V.S.A. § 248(a)(4)(C) and all other interested parties. The notice stated that any party wishing to submit comments as to whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248 needed to file comments with the Board on or before

August 6, 2004. In addition, notice was published in the *Brattleboro Reformer* on July 9 and July 16, 2004, stating that any party wishing to submit comments as to whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248 needed to file comments with the Board on or before August 6, 2004.

Appearances were filed by: Geoffrey Commons, Esq., Vermont Department of Public Service ("DPS" or "Department"), on July 12, 2004; David Englander, Esq., Vermont Agency of Natural Resources ("ANR"), on August 6, 2004; and by James P. Matteau, Windham Regional Commission, on August 13, 2004.

On August 6, 2004, comments were received from the ANR, which stated:

The proposed project by Entergy Nuclear Vermont Yankee, LLC (Petitioner) does not appear to raise any significant concerns for the Agency of Natural Resources (Agency) pursuant to 30 V.S.A. § 248(b)(5) other than those issues raised by the Petitioner in its petition and direct filing and therefore, with respect to the petition for a certificate of public good, the Agency does not seek a hearing. The Agency has reviewed the Project and found that coverage under the Construction General Permit (CGP) and Stormwater Discharge permit will be necessary.

On August 6, 2004, comments were received from the Department, which stated:

The Department of Public Service has reviewed the petition and supporting materials provided in this docket. The DPS does not believe that the petition raises substantive issues with respect to the substantive criteria of 30 V.S.A. § 248, and therefore recommends that the Board grant the requested CPG without hearing.

On August 6, 2004, the New England Coalition ("NEC") filed a Petition for Leave to Intervene. In its petition, NEC claims that the Project raises seven potential issues, summarized as:

(1) the Entire Project is not inconsequential because 461 new parking spaces will be added, and the Entire Project will total 991 parking spaces;

(2) substantial habitat now available to native flora and fauna will be paved over;

(3) the Entire Project will alter run-off and groundwater flow without adequate analysis of its impacts;

(4) failure of Entergy VY to adequately analyze alternatives for an additional 461 spaces proposed only for periodic use;

- (5) no offer to offset or mitigate visual impacts, especially regarding the impacts of 461 additional windshields glaring in the sun;
- (6) potential link of proposed parking lot project to a future dry cask waste fuel storage installation; and
- (7) environmental ramifications of parking heavy trucks near the Connecticut River.

NEC requested that the Board find that Entergy VY's petition raises significant issues under 30 V.S.A. § 248, that the Board schedule a prehearing conference within 30 days, and that the Board grant NEC leave to intervene.

On August 6, 2004, Entergy VY filed an initial response to NEC's petition. Entergy VY states "unequivocally" that the location of the parking lots are not related to the location of the facilities that will be required for dry fuel storage ("DFS"), and that the DFS facilities would be located inside the owner-protected area. In response to NEC's position that the proposed parking lot raises significant issues under 30 V.S.A. § 248, Entergy VY notes that the DPS and ANR have both concluded that the Entire Project does not raise such an issue, and that the Vernon Planning Commission and the Windham Regional Commission did not ask for a hearing. In its response, Entergy VY did not specifically object to NEC's intervention. No other person commented on NEC's Petition for Leave to Intervene.

On August 13, 2004, the Board sent a memorandum to Entergy VY requesting further information to clarify certain aspects of the petition. On August 25, 2004, Entergy VY filed a response to the Board's information request.

On September 7, 2004, Entergy VY filed a copy of the Construction General Permit issued by ANR for the Entire Project. In addition, Entergy VY also gave notice that a 10-day public comment period commenced on September 1, 2004, for the Stormwater Discharge Permit, and that the ANR would make a final determination after reviewing comments received, if any.

On September 9, 2004, the Board granted permissive intervention to NEC, limited solely to the following two issues:

- the analysis of alternatives for the spaces only used periodically (the "Outage Parking Area," also referred to in Entergy VY's petition as the 556-space "North Overflow Parking" area in Exhibit Entergy-1), and
- the aesthetic impacts of the Outage Parking Area.

The Board's September 9, 2004, Order also bifurcated the Entire Project into two separate CPG proceedings – one for the permanent parking lot facilities, and the second for the outage parking lot facilities (referred to herein as the "Permanent Parking Area"<sup>1</sup> and the "Outage Parking Area,"<sup>2</sup> respectively). Bifurcation of the Entire Project was performed in this manner because the original petition contains insufficient information for the Board to make a positive finding under the aesthetics criterion [10 V.S.A. § 6086(a)(8) under 30 V.S.A. § 248(b)(5)] for the Outage Parking Area and its lighting, and because proceeding this way will allow NEC to intervene in a manner that should protect their interests while not creating an undue delay in the remainder of the proceeding, which involves replacement of parking spaces lost due to the current construction of the security-barrier system (the Permanent Parking Area), and the approval and installation of a portion of the security-barrier system.

On September 15, 2004, Entergy VY filed the Stormwater Discharge Permit issued by ANR for the Entire Project. In addition, Entergy VY filed the Erosion Prevention & Sediment Control Plan, as revised August 25, 2004, for the Entire Project, which was approved by the ANR under the Construction General Permit, which allows some of the Permanent Parking Area to be completed after October 15, 2004, subject to special requirements for wintertime construction. Entergy VY's September 15, 2004, filing also notes minor changes made by Entergy VY resulting in a reduction of the number of light fixtures proposed for the access road and the Permanent Parking Area, and also clarifies the legal ownership of the land upon which the tree buffer between the Permanent Parking Area and the Connecticut River will be retained.

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1. The Permanent Parking Area is referred to in Exhibit Entergy-1 of Entergy VY's June 18, 2004, petition as the 326-space "North Parking" area. The cover letter (dated September 14, 2004) to Entergy VY's September 15, 2004, filing, as well as the revised findings of fact included in the September 15, 2004, filing, refer to the North Parking area as the Permanent Parking Area.

2. The Outage Parking Area is referred to in Exhibit Entergy-1 of Entergy VY's June 18, 2004, petition as the 556-space "North Overflow Parking" area. The cover letter (dated September 14, 2004) to Entergy VY's September 15, 2004, filing, as well as the prefiled testimony of David McElwee submitted with the original petition, refer to the North Overflow Parking area as the Outage Parking Area.

The Board has reviewed the petition and accompanying documents and has determined that, pursuant to 30 V.S.A. § 248(j), a CPG should be issued at this time, without the notice and hearings otherwise required by 30 V.S.A. § 248, for all portions of the Entire Project except for the 556-space Outage Parking Area. Today's decision covers only the Permanent Parking Area, as further described below, and the related stormwater improvements, the access road and lighting, the Governor Hunt House parking lot, miscellaneous parking and roadway improvements and the relocation of a portion of the SBS (the "Project"). The Board will address the Outage Parking Area in a separate proceeding and order.

Throughout today's Order and CPG, the "Entire Project" shall mean the project as originally proposed in Entergy VY's petition dated June 18, 2004 (which includes the Outage Parking Area), and the "Project" shall mean the project as proposed in Entergy VY's original petition and as modified in its filing on September 15, 2004, but not including the Outage Parking Area and its lighting.

## II. FINDINGS OF FACT

### Project Description

1. Entergy VY owns and operates the Vermont Yankee Nuclear Power Plant in Vernon, Vermont, which is an electric generation facility. McElwee pf. at 1.
2. In its original petition, Entergy VY proposes to construct two new parking lots and related stormwater improvements, access road and lighting, along with minor improvements to an existing parking area by the so-called Governor Hunt House, other miscellaneous parking and roadway improvements and the relocation (change in design) of a certain portion of the security barrier system ("SBS"), which was approved by the Board on July 8, 2004, in Docket No. 6953. McElwee pf. at 1, 2-5.
3. The Project will be located on land owned by Entergy VY within the Station's Owner Controlled Area ("OCA"). McElwee pf. at 2.
4. The current number of parking spaces at the Station is approximately 530 spaces. Of these 530 spaces, 403 parking spaces will be lost to accommodate the SBS, leaving approximately 127 existing parking spaces to remain at the Station. McElwee pf. at 2.

5. The parking lots proposed in the original petition would provide permanent parking spaces to replace the 403 spaces lost due to the SBS, and would add an additional 461 new spaces (for a grand total of 991 spaces) to more efficiently accommodate parking needed for contractors that work at the Station during regularly scheduled outages, which occur approximately every 18 months for approximately 30 days each. During regularly scheduled outages, the number of employees at the Station can increase from the normal operational level of approximately 600 employees working in two shifts, to over 1,000 employees working in two shifts. The 991 spaces represent the total number of spaces expected to be needed during the transition period between the night and day shifts. Boemig pf. at 3; McElwee pf. at 2; letter dated August 25, 2004, from John H. Marshall, Esq., Downs Rachlin Martin, to Susan M. Hudson, Clerk, Vermont Public Service Board.

6. The proposed final Station parking configuration, as proposed in the original petition, would total 991 parking spaces, as described in Findings 7 through 11. The 556-space Outage Parking Area described in Finding 11 is not addressed in today's Order and CPG, but will rather be addressed in a subsequent proceeding. Today's Order and CPG address the 435 parking spaces described in findings 7 through 10, below, as well as the other proposed improvements described in findings 12 through 27 (the "Project"), below.

7. The existing entrance parking lot (also referred to as the Governor Hunt House Lot) will contain 28 spaces. The lot currently has 31 parking spaces, and three will be lost due to the Project. As part of the Project, Entergy VY also plans to make minor improvements to this lot, including the replacement of existing spots which were lost as a result of a security check point added after September 11, 2001. McElwee pf. at 3; exh. Entergy-1; letter dated August 25, 2004, from John H. Marshall, Esq., Downs Rachlin Martin, to Susan M. Hudson, Clerk, Vermont Public Service Board.

8. Twenty-six spaces will remain west of the SBS in the former main parking area. Exh. Entergy-1.

9. An existing gravel parking area of 55 spaces west of the 345 kV switchyard will remain. Exh. Entergy-1.

10. A new, paved, 326-space parking lot would be constructed adjacent to and north of the 345 kV switchyard, and generally between the 115 kV and 345 kV switchyards. This area is referred to as the 326-space "North Parking" area in Exhibit Entergy-1 and will be referred to hereafter as the "Permanent Parking Area." The construction limits of the Permanent Parking Area are shown as "Edge of Paved Parking Lot" and "Limit of Construction for Work in 2004" in Exhibit PB-14 (Erosion Prevention and Sediment Control Plan, Sheets 10-13). Exh. Entergy-1; exh. PB-14; letter dated September 14, 2004, from Suzanne M. Monte, Esq., Downs Rachlin Martin PLLC, on behalf of Entergy VY, to Susan M. Hudson, Vermont Public Service Board.

11. Subject to receiving a CPG in a separate proceeding, a new, gravel, 556-space parking lot would be constructed on a field immediately adjacent to and north of the proposed North Parking area. This parking lot is referred to as the "North Overflow Parking" area or the "Outage Parking Area". The Outage Parking Area will generally not be used for parking during the Station's normal operations, and will therefore generally be used for 30 days every 18 months. The Outage Parking Area is shown on Exhibit Entergy-1 as the 556-space North Overflow Parking, and as the gravel parking lot to the northward of the "Edge of Paved Parking Lot" line and as the "Limit of Construction for Work in 2005" in Exhibit PB-14 (Erosion Prevention and Sediment Control Plan, Sheets 11-13). McElwee pf. at 2; exh. Entergy-1; exh. PB-14. The Outage Parking Area will not be addressed in today's Order and CPG, but will rather be addressed in a subsequent proceeding. The "Project" does not include the Outage Parking Area.

12. Because a portion of the SBS will be constructed over an existing parking lot and the proposed parking lot will provide permanent replacement parking for the resulting lost spaces, Entergy VY seeks to begin construction of the replacement parking so that it is constructed and in place prior to the winter season. McElwee pf. at 5; exh. PB-14.

13. Subject to receiving a CPG in a separate proceeding, Entergy VY plans to construct the additional Outage Parking Area during the spring/summer 2005 construction period so that it will be completed prior to the 2005 fall refueling outage. McElwee pf. at 5; exh. PB-14.

14. As part of the Project, Entergy VY plans to construct an access and egress road from the current access road that will travel along the western perimeter of the Station, in front of the



Plant Support Building, to the west of the 345 kV switchyard, to the proposed location of the new parking lots. McElwee pf. at 3.

15. The exit road will branch off the new entrance road and exit on the north side of the existing Gate One. McElwee pf. at 3.

16. The access and egress roads will be designated for one-way traffic on each side of Gate One to enhance personnel safety. McElwee pf. at 3.

17. Entergy VY plans to install lighting along the new access and egress road and within the Permanent Parking Area to provide visibility and security. McElwee pf. at 3.

18. The Permanent Parking Area will contain five 30-foot light poles (two poles will have a single, 400-watt high pressure sodium downcast light facing into the Permanent Parking Area and three poles will have two 400 watt high pressure sodium downcast lights) and two 400-watt high-pressure sodium downcast lights mounted approximately 30 feet above the ground on an existing electrical transmission tower. The proposed access road will contain nine 30-foot poles with a single, 400-watt high pressure sodium downcast light facing into the Station on each pole. Exh. PB-14 (Sheets 7-11); letter dated September 14, 2004, from Suzanne M. Monte, Esq., Downs Rachlin Martin PLLC, on behalf of Entergy VY, to Mrs. Susan M. Hudson, Vermont Public Service Board.

19. Each light pole will be installed on a concrete foundation. McElwee pf. at 5; Boemig pf. at 12.

20. Trenching will be performed between the light poles and existing buildings and structures to bring power to the lights. The trenching areas will be backfilled and regraded as the necessary conduit and cabling are installed. McElwee pf. at 5; Boemig pf. at 12.

21. The proposed lighting will be angled downward, when possible, to minimize the impact, if any, to surrounding neighbors. McElwee pf. at 4.

22. The closest neighbor's house to the new lighting (at its closest point) will be approximately one hundred fifty feet away. McElwee pf. at 4.

23. The proposed security lighting will not substantially increase the amount or impact of lighting already visible from outside the Station site. McElwee pf. at 5; Boemig pf. at 14.

24. Entergy VY proposes to re-align the SBS from Station 12 + 00 to Station 23 + 00 to conform more closely to that segment of the proposed parking lot access road; this re-alignment will reduce the amount of excavation necessary for the installation of the SBS and is preferable from a security perspective. McElwee pf. at 3.

25. By order of the NRC, construction of the SBS must be completed no later than October 29, 2004. McElwee pf. at 5.

26. At the request of the Vernon Fire Chief, Entergy VY will also extend an existing dry fire hose connection from its current location directly outside the owner protected fence to a location to the west of the new security barriers, near the Plant Support Building. McElwee pf. at 3, 12; Boemig pf. at 11.

27. The Station has historically utilized a graveled road for emergency and/or temporary access to the Station from Governor Hunt Road that runs along the northerly property line of its property and the southerly property line of Paul and Mary Miller, and then in a generally southerly direction to the general area proposed for the Project. Concurrent with the Project, Entergy VY intends to repair the graveled road in its original location with limited cut and gravel fill so that the graveled road can continue to provide adequate emergency and/or temporary access to the Station. Entergy VY represents that the road was built as part of the pre-section-248 construction.<sup>3</sup> McElwee pf. at 4.

**Orderly Development of the Region**

[30 V.S.A. § 248(b)(1)]

28. The Project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipality. This finding is supported by findings 29 through 42, below.

29. By letter dated June 10, 2004, Entergy VY provided the Town of Vernon Planning Commission with plans for the construction of the Project as required by subsection 248(f). McElwee pf. at 6.

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3. The Station was originally constructed prior to the enactment of 30 V.S.A. § 248.

30. By letter dated June 15, 2004, the Vernon Planning Commission stated that it had agreed to waive the 45-day notice pursuant to § 248(f) and had determined that the Project will not unduly interfere with the orderly development of the region or overburden municipal and governmental services in the Town of Vernon. McElwee pf. at 6; exh. DM-3.

31. At its meeting held on June 7, 2004, the Vernon Selectboard voted that the Project will not unduly interfere with the orderly development of the region and will not overburden municipal and governmental services in the Town of Vernon. McElwee pf. at 6; Boemig pf. at 11; exh. DM-2.

32. The Vernon Town Plan, which was adopted on November 3, 2003, was intended to be a policy document that provides guidelines to ensure that decisions made at the local, regional and state levels are in concert with the values and goals expressed in the plan. McElwee pf. at 6-7; exh. DM-4 at 2.

33. The plan specifically cites the Station, its contribution to the community's tax base and its provision of varied employment opportunities as being largely responsible for Vernon's rural independence and self-sufficiency. McElwee pf. at 7; exh. DM-4 at 17.

34. The Vernon Town Plan states the town's policy to encourage land uses that help to protect river corridors, scenic highways and roads, scenic views and other scenic resources. McElwee pf. at 7; exh. DM-4 at 33.

35. The Project will not adversely affect river corridors, scenic highways and roads, scenic views or other scenic resources. The Project will be sited near Entergy VY's electric generation facility, which is industrial in character, consists of concrete and metal sidings and includes transmission lines, towers and transformers. The Project is not located on a scenic highway or road. McElwee pf. at 7-8.

36. On June 9, 2004, Entergy VY provided the Windham Regional Commission ("WRC") with plans for the Project as required by Section 248(f). McElwee pf. at 8.

37. By letter dated June 15, 2004, Mr. James P. Matteau, Executive Director of the WRC, responded that the Project will not have an adverse aesthetic effect and will not unduly interfere with the orderly development of the region. The WRC further waived the 45-day, pre-application review allowed under subsection 248(f). McElwee pf. at 8; exh. DM-5.

38. The Windham Regional Plan, which was adopted in December 2001, is intended to provide continuing guidance for change in the Windham region. McElwee pf. at 8; exh. DM-6 at 2.

39. The Windham Regional Plan is to be used by the WRC, town planning commissions, selectboards, state agencies, landowners and citizens to provide guidance for local planning and development initiatives, guide basic decisions for planning programs at the WRC, serve as a basis for evaluation and review of developments and subdivisions proposed under Act 250, and assist in determining compatibility of agency plans affecting land use with regional and local planning and development priorities. McElwee pf. at 8; exh. DM-6 at 3.

40. The Windham Regional Plan acknowledges the significant role the Station plays in providing 33% of Vermont's annual electrical requirements at the time the Plan was drafted. Vermont Yankee provides 38 percent and 36 percent of the electricity supplied to Vermont customers by Central Vermont Public Service Corporation ("CVPS") and Green Mountain Power Corporation ("GMP"), respectively. McElwee pf. at 9; exh. DM-6 at 65.

41. The Windham Regional Plan references the 1999 Vermont Yankee Economic Study conducted by the Vermont Department of Public Service, which found that in the mix of power supplies for CVPS and GMP, Vermont Yankee is the lowest-cost, long-term supply. McElwee pf. at 9; exh. DM-6 at 65.

42. The Project is consistent with the policies of the Vernon Town Plan and the Windham Regional Plan. McElwee pf. at 9.

**Need for Present and Future Demand for Service**

[30 V.S.A. § 248(b)(2)]

43. The Project will not affect power generation or transmission, and therefore this criterion is not applicable. McElwee pf. at 9-10.

**System Stability and Reliability**

[30 V.S.A. § 248(b)(3)]

44. Because the Station, and the transmission lines that serve it, will not change if the Project is constructed, system stability and reliability will not be affected. McElwee pf. at 10.

**Economic Benefit to the State**

[30 V.S.A. § 248(b)(4)]

45. The Project will not have an adverse economic effect; this finding is supported by findings 46 through 55, below.

46. The Project represents a substantial capital investment in Vermont that will be entirely borne by Entergy VY. McElwee pf. at 10.

47. Entergy VY considered several alternatives to the Project and determined that the proposed location and design are the most cost-effective and appropriate to provide the replacement parking needed as a direct result of constructing the SBS. McElwee pf. at 10-11.

48. The Project indirectly enhances security by making it possible to construct a portion of the SBS over existing parking facilities. McElwee pf. at 11.

49. Recognizing the benefits of increased security for the Station (which, as previously found, is a committed resource supplying one-third of Vermont's electric supply), the Project will provide an economic benefit to the state and its residents. McElwee pf. at 11.

50. One of the alternative locations considered by Entergy VY was the cornfield between the Station and neighboring properties along the Governor Hunt Road, which would have provided more convenient parking access to the Station. McElwee pf. at 11.

51. Entergy VY sent letters to neighbors along the Governor Hunt Road, as well as members of the Vernon Elementary School Board and the Vernon Selectboard, and held a meeting with neighbors along Governor Hunt Road to discuss the proposed parking plan in the cornfield location. McElwee pf. at 11.

52. At the meeting neighbors identified a concern that the cornfield location could potentially cause adverse aesthetic and traffic impacts. McElwee pf. at 11.

53. The cornfield location would also remove more productively and currently farmed agricultural lands from future production than the proposed location of the Project. McElwee pf. at 11.

54. The Project as proposed avoids additional direct and indirect costs associated with the cornfield location. McElwee pf. at 11.

55. Entergy VY held a follow-up meeting with neighbors to present the Project as now proposed, at which all neighbors in attendance expressed general support for the Project. McElwee pf. at 11-12.

**Aesthetics, Historic Sites, Air and Water Purity,  
the Natural Environment and Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

56. The Project (which does not include the Outage Parking Area) will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety. This finding is supported by findings 57 through 129 below, which are based on the criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1) through (8), 8(A) and (9)(K).

**Public Safety**

57. As further described below, the Chief of the Vernon Fire Department and the Chief of the Vernon Police Department have reviewed the Project plans and determined that the Project will not have an adverse effect on the public health and safety. McElwee pf. at 12; exhs. PB-5, PB-6.

58. The Chief of the Fire Department raised a concern that the installation of the SBS would limit the accessibility to an existing fire hose connection for the purposes of fighting a fire at the Plant Support Building. While the proposed parking lots do not affect the fire hose access, Entergy VY has committed to the Vernon Fire Chief that it will extend the existing dry hose connection from the current location near the owner protected fence to a location on the west side of the new barriers, which will be accessible from the new access road being installed as part of the Project. The Chief of the Vernon Fire Department has agreed with this proposal and determined that the Project will not have an adverse effect on the public health and safety. McElwee pf. at 12.

**Outstanding Resource Waters**

[10 V.S.A. § 1424(a)(d)]

59. The Project will not be located on or near any segment of any outstanding resource waters, as defined by the Vermont Water Resources Board. Boemig pf. at 2; exh. PB-2.

**Water and Air Pollution**

[10 V.S.A. § 6086(a)(1)]

60. The Project as proposed will not result in undue water or air pollution; this finding is supported by findings 61 through 84, below.

61. The Project will not cause air pollution levels that create a threat to public health or a nuisance for nearby neighbors. There will be no sources of emissions other than minimal dust during construction. Boemig pf. at 3-4.

62. Dust will be controlled during construction by quickly seeding and mulching non-roadway areas when completed, and through the use of water spray trucks as necessary. Boemig pf. at 4.

63. The Entire Project (including the Outage Parking Area) will add an additional 461 net parking spaces, resulting in a total Station parking capacity of 991 vehicles, which is less than the 1,000 space threshold for an indirect source permit under Section 5-503 of the Vermont Air Pollution Control Regulations. Boemig pf. at 4; exh. Entergy-1.

**Headwaters**

[10 V.S.A. § 6086(a)(1)(A)]

64. The Project is not in a headwaters area. Boemig pf. at 4.

65. Specifically, the Project area is not the headwaters of applicable waters as characterized by steep slopes and shallow soils and has a drainage area greater than 20 square miles. Boemig pf. at 4-5.

66. The Project area is not over 1,500 feet in elevation – the elevation is between 252 feet and 263 feet above sea level – and is not the watershed of a public water supply designated by the Vermont Department of Health. Boemig pf. at 5.

67. The Project area is not a significant aquifer recharge area. Boemig pf. at 5.

**Waste Disposal**

[10 V.S.A. § 6086(a)(1)(B)]

68. The Project does not involve the disposal of waste. Boemig pf. at 5.

69. The Project will not generate industrial or manufacturing wastewater, chemicals, pesticides, batteries, radiation, hazardous wastes or any other harmful or toxic substances. Boemig pf. at 5.

70. The Project will not involve the injection of waste materials or any harmful or toxic substances into groundwater or wells. Boemig pf. at 5.

71. The total area of impervious surface proposed for the Entire Project (including the Outage Parking Area) is approximately 9.6 acres, of which approximately 7 acres is new impervious surface, and approximately 2.6 acres is redeveloped existing impervious surface. The total area of impervious surface proposed for the Project (excluding the Outage Parking Area) is approximately 5.7 acres, of which approximately 3.1 acres is new impervious surface, and approximately 2.6 acres is redeveloped existing impervious surface. Boemig pf. at 9; exh. PB-14.

72. Entergy VY applied to the ANR for a Stormwater Discharge Permit for the Entire Project. On September 15, 2004, Entergy VY filed the Stormwater Discharge Permit issued by the ANR for the Entire Project. Exhs. PB-11, PB-15.

#### Water Conservation

[10 V.S.A. § 6086(a)(1)(C)]

73. The Project will not have water-supply or wastewater connections, and therefore no additional water will be used as a result of the Project. Boemig pf. at 6.

#### Floodways, Streams, and Shorelines

[10 V.S.A. §§ 6086(a)(1)(D), (E) & (F)]

74. The Project site is outside of the 100-year floodway and outside of the floodway fringe. Boemig pf. at 6; exh. PB-3.

75. The Project as proposed will have no impact on the natural condition of the Connecticut River or its shoreline. This finding is supported by findings 76 through 81, below.

76. There are no streams in the Project area. The closest river shoreline is the Connecticut River. Boemig pf. at 7.

77. At its closest point, the Project will be located more than 50 feet from the Connecticut River's riverbank. Boemig pf. at 7.



78. No construction will occur within 50 feet of the riverbank. Boemig pf. at 7.

79. The Project will have no impact on the natural condition of the Connecticut River, its shoreline, vegetation or stability. Boemig pf. at 7.

80. The Station is a secure site, so no access to the water for recreation is presently provided from the property. Boemig pf. at 7.

81. With the potential exception of the Outage Parking Area, the visual character of the Project site will be in keeping with the industrial nature and existing lighting of the Station. In addition, the existing vegetation along the riverbank will provide some screening from the Connecticut River. Boemig pf. at 7.

#### Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

82. Based on a review of the National Wetlands Inventory Mapping, there are no Class I or Class II wetlands in the area of the Project. Boemig pf. at 7; exh. PB-4.

83. There are several un-mapped or Class III wetland areas involved in the Project site. Boemig pf. at 8; exh. PB-7.

84. The Project will impact less than 3,000 square feet of the Class III wetland areas. Therefore, the Project activity is covered under U.S. Army Corps of Engineers Vermont General Permit #58 without the need for further permitting. Boemig pf. at 8.

#### Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)&(3)]

85. As the Project does not require water supply or wastewater connections, it complies with these criteria. Boemig pf. at 8.

#### Soil Erosion

[10 V.S.A. § 6086(a)(4)]

86. The Project as designed will not result in unreasonable soil erosion or reduce the capacity of the land to hold water so that a dangerous or unhealthy condition may result. This finding is supported by findings 87 through 92, below.

87. The Project site is relatively flat, and there are no drainage ways or streams around the construction site. Therefore, the risk of environmental damage due to erosion is minimal.

Boemig pf. at 8.

88. Entergy VY applied to the ANR for a Construction General Permit for stormwater discharges from the Project during construction. On September 7, 2004, Entergy VY filed the Construction General Permit issued by the ANR for the Project. Exhs. PB-10, PB-12, PB-14.

89. Changes in stormwater runoff caused by the Project will be addressed in accordance with the current ANR requirements for stormwater runoff, which include providing treatment of the prescribed water quality volume, providing infiltration of the required groundwater recharge volume (of stormwater), and checking affected stormwater pathways to ensure any changes in runoff rate will not cause an erosive condition downstream. Stormwater treatment methods include the use of grassy swales, infiltration basins, and stormwater ponds. Boemig pf. at 9.

90. The total area of impervious surface proposed for the Entire Project (including the Outage Parking Area) is approximately 9.6 acres, of which approximately 7 acres is new impervious surface, and approximately 2.6 acres is redeveloped existing impervious surface. The total area of impervious surface proposed for the Project (excluding the Outage Parking Area) is approximately 5.7 acres, of which approximately 3.1 acres is new impervious surface, and approximately 2.6 acres is redeveloped existing impervious surface. Boemig pf. at 9; exh. PB-14.

91. Entergy VY applied to the ANR for a Stormwater Discharge Permit for the Entire Project. On September 15, 2004, Entergy VY filed the Stormwater Discharge Permit issued by the ANR for the Entire Project. Exhs. PB-11, PB-15.

92. By following the methods outlined in the Erosion Prevention Sediment Control Plan submitted as part of the Construction General Permit application, the potential for discharge of sediment or erosion of the Project area will be minimized. Boemig pf. at 9; exhs. Entergy-1, PB-14.

**Transportation Systems**

[10 V.S.A. § 6086(a)(5)]

93. The Project will not cause unreasonable congestion or unsafe conditions with respect to local highways, which are the only affected transportation facilities. This finding is supported by findings 94 through 96, below.

94. Aside from a limited temporary increase in construction vehicles during construction, the Project's limited traffic – similar to, but far less than, traffic during a scheduled outage – will not cause unusual congestion or unsafe transportation conditions. Boemig pf. at 10.

95. The Project will improve traffic flow to and from the Station by separating employee traffic from delivery vehicle traffic and by providing a separate exit lane that bypasses the area where vehicles can be checked. Boemig pf. at 10.

96. Access from Governor Hunt Road to the Station will remain unchanged from the existing access. Boemig pf. at 10.

**Educational Services**

[10 V.S.A. § 6086(a)(6)]

97. The Project will have no impact on educational services. It will not change employment at Vermont Yankee nor, therefore, the number of children to be educated in the area. Boemig pf. at 10.

**Municipal Services**

[10 V.S.A. § 6086(a)(7)]

98. The Project will have no impact on the ability of the Town of Vernon to provide municipal services. This finding is supported by findings 99 through 105, below.

99. The Project has been reviewed with the Vernon Fire Chief, the Vernon Police Chief and the Vernon Selectboard. Boemig pf. at 11.

100. The only comment received during these reviews was from the Fire Chief requesting an extension of the existing dry pipe fire line from the plant security fence to the west side of the SBS near the Plant Support Building. Entergy VY incorporated the Fire Chief's request into the design of the Project as shown on Exhibit Entergy-1. Boemig pf. at 11; exh. Entergy-1.

101. Other than the one comment received from the Fire Chief, the Vernon Fire and Police Departments have found that (i) they can provide adequate fire and police protection to the Project without overburdening the Departments, and (ii) the Project will not have an undue, adverse effect on the public health and safety. Boemig pf. at 11; exhs. PB-5, PB-6.

102. At its June 7, 2004, meeting, the Vernon Selectboard voted that the Project will not interfere with the orderly development of the region and will not overburden municipal services. McElwee pf. at 6; Boemig pf. at 11; exh. DM-2.

103. The Project will not require municipal sewer or water supply services. Boemig pf. at 11.

104. Vermont Yankee proposes no new public road construction for the Project. Boemig pf. at 11.

105. The Town of Vernon will not be required to provide any additional road maintenance services as a result of the Project. Boemig pf. at 11.

**Aesthetics, Historic Sites and Rare and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

106. The Project is proposed to be located on generally disturbed areas amongst the existing Station facilities. Exh. Entergy-1; exh. PB-14.

107. Most of the Project will be located between 252 feet and 263 feet above sea level, which is approximately ten to eighteen feet below the elevation of Governor Hunt Road. Boemig pf. at 13-14.

108. The existing buffer of mature trees outside of the SBS between the Project and the Connecticut River on land now or formerly owned by USGen New England, Inc., and the existing screen of trees between the Project and Governor Hunt Road, will be retained. Boemig pf. at 13; exhs. Entergy-1, PB-14 (Sheet 10 of 17); letter dated September 14, 2004, from Suzanne M. Monte, Esq., Downs Rachlin Martin PLLC, on behalf of Entergy VY, to Susan M. Hudson, Vermont Public Service Board.

109. Existing trees along the OCA fence line will provide some screening for that portion of the Project that is located at a slightly higher elevation than Governor Hunt Road. Boemig pf. at 14.

110. Existing vegetation will provide some screening for the Project from other buildings in the area, especially during the summer months. Boemig pf. at 16.

111. The additional lighting from the Project will not substantially increase the amount or impact of lighting already visible from outside the Station site. McElwee pf. at 5; Boemig pf. at 13.

112. The additional lighting from the Project will be marginally visible from Governor Hunt Road. Boemig pf. at 15.

113. The adjacent and visually dominant nuclear power Station is industrial in character and contains concrete and metal siding with transmission lines, towers and transformers. The Station is also well lit. Boemig pf. at 14.

114. The Project's design will be compatible with the appearance of the generating station. Boemig pf. at 15.

115. The Project does not violate a clear, written community standard intended to preserve the aesthetic and scenic or natural beauty of the area. It complies with the scenic resources policies of the Vernon Town Plan and the Windham Regional Plan. Boemig pf. at 15; McElwee pf. at 6-9.

116. The Project will not offend the sensibilities of the average person, when taking into account the visual dominance of the Station and the developed character of the nearby area. Boemig pf. at 15.

117. Entergy VY has taken generally available mitigating steps to improve the harmony of the proposed Project with its surroundings, including maintaining the existing buffer of trees between the parking lot and Governor Hunt Road and between the parking lot and the Connecticut River, and limiting the lighting to be installed to the extent necessary to provide visibility and security for the new parking area and access road. Boemig pf. at 16.

118. The proposed Project will be visually considered part of the existing power plant facility and will not significantly change the character of the area. Boemig pf. at 16.

119. Some of the site of the Project was extensively disturbed during the construction of the Station in the early 1970s and has been actively used for high-tension towers, stormwater lines, access roads, a rail line and storage of materials. Boemig pf. at 16-17.

120. In 1991, Entergy VY's predecessor, Vermont Yankee Nuclear Power Corporation, commissioned a Phase I Cultural Resource Investigation by Hanson Engineers Incorporated ("Hanson Engineers") for the purpose of evaluating the construction of a low-level radioactive waste disposal facility in a larger area that included the proposed parking area; the proposed parking area is encompassed largely within the study area designated as Area V in the 1991 Phase I Cultural Resources Study. Boemig pf. at 17; exh. PB-8 at 5-2.

121. Shovel probe excavations conducted by Hanson Engineers indicated that significant cutting and filling has occurred across Area V, and that construction of the various improvements in Area V have altered the ground surface and compromised any cultural resources that may have been present in Area V. Boemig pf. at 17; ex. PB-8 at 5-3.

122. The portion of the parking area and access road not subject to the 1991 Phase I Cultural Resources Study has been the source of even greater construction activity and use over the years of the Station's construction and operation. Boemig pf. at 17.

#### Discussion

Based on the above findings, the Board finds that the proposed Project will not have an undue adverse effect on the aesthetics or scenic and natural beauty of the area. In reaching this conclusion, the Board has relied on the Environmental Board's methodology for determination of "undue" adverse effects on aesthetics and scenic and natural beauty as outlined in the so-called Quechee Lakes decision. Quechee Lakes Corporation, #3W0411-EB and 3W0439-EB, dated January 13, 1986.

As required by this decision, it is first appropriate to determine if the impact of the Project will be adverse. The Project would have an adverse impact on the aesthetics of the area if its design is out of context or not in harmony with the area in which it is located. If it is found that the impact would be adverse, it is then necessary to determine that such an impact would be "undue." Such a finding would be required if the Project violates a clear written community standard intended to preserve the aesthetics or scenic beauty of the area, if it would offend the sensibilities of the average person, or if generally available mitigating steps would not be taken to improve the harmony of the Project with its surroundings. The Board's assessment of whether a

particular project will have an "undue" adverse effect based on these standards should be significantly informed by the overall societal benefits of the project.<sup>4</sup>

The proposed Project<sup>5</sup> will not have an adverse effect on the aesthetics of the area. The Project involves the construction of a parking lot, security-barrier system, and associated access road and security lighting at the nuclear-power Station, which is already industrial in character and contains concrete and metal siding with transmission lines, towers and substations. The proposed facilities will be constructed in the midst of and will be compatible with the existing appearance of the generating station facilities. The additional lighting proposed will not create an adverse impact because the Station is currently well lit.

Even if the Project did have an adverse aesthetic impact, such impact would not be undue. The Project does not violate a clear, written community standard, is not shocking or offensive, and would not likely require additional mitigation because the visual appearance of the Station should not change. The Town of Vernon Planning Commission and the Windham Regional Commission were notified of the proposed Project and did not recommend any changes to the proposal. The Project is proposed in the midst of the existing Station facilities, and its presence will not be shocking, and will not offend the sensibilities of the average person. The existing buffer of trees between the parking lot and Governor Hunt Road and between the parking lot and the Connecticut River will be maintained, and the lighting to be installed was limited to the extent necessary to provide visibility and security for the new parking area and access road.

#### Necessary Wildlife Habitat and Endangered Species

[10 V.S.A. § 6086(a)(8)(A)]

123. There are no known occurrences of rare, threatened or endangered species in the Project area, and critical wildlife habitat will not be adversely affected by the Project. Based upon a review of the Project by Everett Marshall of the Vermont Fish and Wildlife Nongame and

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4. Docket 6884, Order of 4/21/04 at 20-21.

5. The 556-space Outage Parking Area was excluded from the Project and is not addressed in this Order and CPG because the Board determined that there is insufficient information in the petition to make a positive finding for the aesthetic impact of the Outage Parking Area and for its lighting. NEC correctly raised this issue in its Petition for Leave to Intervene.

Natural Heritage Program for potential impacts to rare, threatened and endangered species and a search of the Department's databases, there are no known occurrences in the Project area. Mr. Marshall noted that there are several rare species associated with the Connecticut River adjacent to the Project site, but he did not anticipate any impact to these species. Boemig pf. at 16-18; exh. PB-9.

**Development Affecting Public Investments**

[10 V.S.A. § 6086(a)(9)(K)]

124. The Project will not unnecessarily or unreasonably endanger the public or quasi-public investments in any governmental public-utility facilities, services, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to, such facilities, services, or lands. This finding is supported by findings 125 through 129, below.

125. The most significant public-utility facility is Entergy VY's electric generating Station, and the Station will be enhanced by the Project. Boemig pf. at 18.

126. The Project is located approximately 1,100 feet away from New England Central Railroad mainline and will not affect that facility. Boemig pf. at 18.

127. The Project will have minimal affect on the Connecticut River as the majority of the Project will be located more than 50 feet away from the riverbank and will have limited, if any, scenic impact and no water-quality impact on the river. Boemig pf. at 18.

128. The Project is located approximately 1,000 feet from the Vernon dam and will have no effect on the hydroelectric station located at the dam. Boemig pf. at 18.

129. The construction and use of the Project will have no permanent traffic impact on state or local highways and a very limited impact during construction. Boemig pf. at 18.

**Least-Cost Integrated Resource Plan**

[30 V.S.A. § 248(b)(6)]

130. As a wholesale utility that does not distribute electricity to the public, Entergy VY has not been required to prepare or submit for approval an integrated-resource plan (or "IRP"). McElwee pf. at 17; *see* Docket No. 6812, Order of 3/15/04.



**Compliance with Electric Energy Plan**

[30 V.S.A. § 248(b)(7)]

131. Vermont's Electric Energy Plan, dated December 1994, does not specifically mention the Project, but in general it treats the Station as a committed resource and encourages Vermont's utilities to minimize their cost of service. McElwee pf. at 13.

132. The Plan states (at page 2-1) that "[a] utility must at a minimum provide, and carry out the planning necessary to continue providing, adequate services at reasonable prices, meeting industry standards for reliability and quality of service." McElwee pf. at 13.

133. On September 14, 2004, Entergy VY filed a letter issued by the Department on August 10, 2004, which stated that, in accordance with 30 V.S.A. § 202(f), the Project is . . . . consistent with the 1994 *Vermont Twenty-Year Electric Plan*.

**Outstanding Resource Waters**

[30 V.S.A. § 248(b)(8)]

134. The Project will not be located on or near any segment of any outstanding resource waters, as defined by the Vermont Water Resources Board. Boemig pf. at 2; exh. PB-2.

**Waste to Energy Facilities**

[30 V.S.A. § 248(b)(9)]

135. The Project is not a waste-to-energy facility, and therefore this criterion is not applicable. McElwee pf. at 13-14.

**Existing or Planned Transmission Facilities**

[30 V.S.A. § 248(b)(10)]

136. The Project does not require access to or use of transmission facilities, and therefore this criterion is not applicable. McElwee pf. at 14.

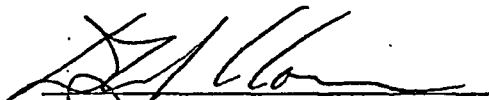
**III. CONCLUSION**

Based upon all of the above evidence, we conclude that the Project will be of limited size and scope, the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248, the public interest is satisfied by the procedures authorized by 30 V.S.A. § 248(j), and the proposed Project will promote the general good of the state.

IV. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the State of Vermont Public Service Board that the construction by Entergy Nuclear Vermont Yankee, LLC of the 326-space Permanent Parking Area and related stormwater improvements, the 26-space Main Parking area, the 28-space Entrance Parking area, and the 55-space Gravel Parking area, and related access road and security lighting, along with minor improvements to an existing parking area by the so-called Governor Hunt House, other miscellaneous parking and roadway improvements, and the relocation (change in design) of a certain portion of the proposed security barrier system on the site of its electric generation station, the Vermont Yankee Nuclear Power Plant, in Vernon, Vermont, will promote the general good of the State of Vermont in accordance with 30 V.S.A. § 248, and a certificate of public good shall be issued in the matter, subject to the conditions set forth in the certificate of public good. This Order and certificate of public good specifically do not approve the 556-space Outage Parking Area, which will be addressed in a separate proceeding.

Dated at Montpelier, Vermont this 21st day of September, 2004.



PUBLIC SERVICE  
BOARD  
OF VERMONT

OFFICE OF THE CLERK

FILED: September 21, 2004

ATTEST: Susan M. Hudson

Clerk of the Board

*Notice to Readers: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: Clerk@psb.state.vt.us)*

*Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.*

Security Barrier

STATE OF VERMONT

PUBLIC SERVICE BOARD

Petition of Entergy Nuclear Vermont )  
Yankee, LLC, pursuant to 30 V.S.A. )  
§ 248(j) for a Certificate of Public Good ) Docket No. \_\_\_\_\_  
to Construct a Security Barrier System )  
in the Town of Vernon )

**PREFILED TESTIMONY OF PETER BOEMIG**

**Background**

1 Q1. State your name.

2 A1. Peter Boemig.

3 Q2. What is your position, and by whom are you employed?

4 A2. I am the Chief Engineer and Manager of SVE Associates, which was retained by Entergy  
5 Nuclear Vermont Yankee, LLC, or "Entergy VY," to assist it with the construction of the  
6 Project. As Mr. McElwee testified, the Project consists of the construction and operation  
7 of an approximately 3,200-foot long, approximately four-foot high, and approximately  
8 five-foot wide security-barrier system, with two vehicle-access gates and two small  
9 gravel, emergency-access roads, on lands owned by Entergy VY in Vernon, Vermont.  
10 Exhibit Entergy-1 is a set of plans that further depict the Project.

11 Q3. What are your qualifications to sponsor the testimony you intend to present?

12 A3. Exhibit PB-1 is my resume, which provides my qualifications. In sum, I have lead  
13 responsibility at SVE Associates in connection with its work on site evaluation for and  
14 construction of the Project.

15 Q4. What is the purpose of your testimony?

A4. My testimony will address the Project's compliance with most aspects of the fifth Section 248 criterion, which concerns the Project's impact on land use and the natural environment and includes most of the criteria incorporated into Section 248 from Act 250, as well as the eighth Section 248 criterion addressing outstanding resource waters. My testimony will also address applicable Section 248 criteria in the context of security enhancements installed or to be installed at the Station to meet Nuclear Regulatory Commission, or "NRC," security requirements, which include four security towers and fencing installed in 2002 and two security towers and security lighting that will be installed this fall. Finally, my testimony will address the replacement of a 1,000-gallon gas underground-storage tank with a similar above-ground storage tank in a different location as part of the security enhancements at the Station.

**Section 248(b)(5) and (8)**

Q5. Explain the fifth and eighth criteria of Section 248.

A5. Under the fifth criterion as I understand it, the Board must find that the Project will not have an undue adverse effect on aesthetics, historic sites, air and water purity, and the natural environment, with due consideration having been given to the criteria specified in the statute providing for the designation of outstanding resource waters. ~~the first eight criteria in Act 250, and Subcriterion 9(K) of Act 250.~~ Under the eighth criterion the Board must also find that the Project does not involve a facility affecting or located on any segment of waters of the state that have been designated as outstanding resource waters.

1 Q6. In your opinion, do the criteria for designating outstanding resource waters apply to the  
2 Project?

3 A6. No. The Project is located on the Connecticut River, which has not been designated an  
4 outstanding resource water. As confirmed in Exhibit PB-2, a letter from the Executive  
5 Officer of the Water Resources Board, no portion of the Connecticut River has been  
6 designated as an outstanding resource water by that Board.

7 Q7. Do the first eight Act 250 criteria apply to the Project?

8 A7. In general, yes. My testimony will address each of the applicable Act 250 criteria in turn.  
9

10 **Act 250 Criterion 1: Air Pollution**

11 Q8. Will the Project result in undue water or air pollution?

12 A8. No. The Project will not cause air-pollution levels that create a threat to the public health  
13 or a nuisance for nearby neighbors. There are no sources of air emissions from the  
14 Project, other than minimal dust during construction. Dust will be controlled during  
15 construction by quickly seeding and mulching non-roadway areas when completed and  
16 through the use of water-spray trucks as necessary.

17  
18 As I will testify later, the Project will not cause water pollution and will comply with  
19 applicable regulations adopted by the Departments of Environmental Conservation and  
20 Health.

**Act 250 Sub-Criterion 1(A): Headwaters**

Q9. Is the Project in a headwaters area?

A9. No. The Project area is not the headwaters of applicable watersheds characterized by steep slopes and shallow soils and is located in a drainage area greater than 20 square miles. The Project area is not over 1,500 feet in elevation—the elevation is approximately 252 feet above sea level—and is not the watershed of a public-water supply designated by the Department of Health. The Project area is located on existing paved and grassy areas and a sandy plateau above the Connecticut River. Any surface water in the Project area that runs off the pavement or leaches in the ground travels a short distance through the sandy soil to the Connecticut River where it discharges along the riverbank. The surface water does not have the opportunity to reach the bedrock aquifer in any significant amount, and the Project is thus not located in a significant aquifer-recharge area.

**Act 250 Sub-Criterion 1(B): Waste Disposal**

Q10. Will the Project meet any applicable regulations regarding the disposal of waste adopted by the Departments of Environmental Conservation or Health, and does it involve the injection of waste materials or harmful or toxic substances into groundwater or wells?

A10. The Project does not involve the disposal of waste. The Project will not generate industrial/manufacturing wastewater, chemicals, pesticides, batteries, radiation, hazardous wastes or any other harmful or toxic substances. As a result, the Project will not involve the injection of any waste materials or harmful or toxic substances into groundwater or wells.

1 Closure of the existing underground-storage tank and replacement with a new above-  
2 ground storage tank will not result in the disposal of any wastes and will comply with all  
3 applicable standards of the Vermont Agency of Natural Resources Department of  
4 Environmental Conservation, which I reference herein as "VANR," and the Vermont  
5 Department of Labor and Industry, respectively.  
6

7 **Act 250 Sub-Criterion 1(C): Water Conservation**

8 Q11. Has the design of the Project addressed water conservation?

9 A11. This criterion is not applicable to the Project. The Project will not have water-supply or  
10 wastewater connections and therefore no additional water will be used at the Station as a  
11 result of the Project.  
12

13 **Act 250 Sub-Criterion 1(D): Floodways**

14 Q12. Is the Project located within a floodway?

15 A12. No. Based on review of the National Flood Insurance Mapping for the Connecticut  
16 River, dated September 27, 1991, it is evident that the Project site is well outside of the  
17 100-year floodway and floodway fringe. Exhibit PB-3 is the Floodway Map.  
18

19 **Act 250 Sub-Criteria 1(E) and (F): Streams and Rivers Shoreline**

20 Q13. Will the Project maintain the natural condition of streams whenever possible and, insofar  
21 as possible and reasonable in light of its purpose, retain rivers and river shoreline in their  
22 natural condition, allow continued access to the rivers and the recreational opportunities

1 provided by them, retain and provide vegetation that will screen the Project, and stabilize  
2 the banks from erosion with vegetation cover?

3 A13. Yes. There are no streams in the Project area, and the nearest river shoreline is the  
4 Connecticut River. The barrier system will extend from the current Owner Controlled  
5 Area, or "OCA," fence on the northeast side of the property, around the high-voltage  
6 switchyard, across a portion of the existing employee parking area, across the existing  
7 access road, up to the side of the west cooling tower, between the cooling towers, and  
8 back to the OCA fence on the southeast side of the property. The OCA fence is  
9 approximately 30 to 50 feet from the shoreline on the north and south ends of the barrier.

10  
11 The Project is necessary to enhance plant security and to comply with NRC requirements.  
12 Moreover, the Project will have no impact on the natural condition of the Connecticut  
13 River, its shoreline, vegetation or stability. Vermont Yankee is a secure site, so no access  
14 to the water for recreation is presently provided from the property. Aside from the  
15 security towers and additional security lighting, the Project will not likely be visible from  
16 the Connecticut River because it will be screened from view by the existing vegetation  
17 along the riverbank. Depending on vegetation growth, the Project may be visible from a  
18 boat in certain locations of the Connecticut River. Finally, as discussed later in my  
19 testimony, the visual character of the Project will be in keeping with the industrial nature  
20 and existing lighting of the Station.



1 **Act 250 Sub-Criterion 1(G): Wetlands**

2 Q14. Will the Project violate any rules of the Water Resources Board relating to significant  
3 wetlands?

4 A14. No. Based on our review of the National Wetlands Inventory Mapping, dated October,  
5 1975, there are no significant wetlands in the area of the Project. Exhibit PB-4 is the  
6 Wetlands Map.

7 **Act 250 Criterion 2: Water Availability**

8 Q15. Is there sufficient water available for the reasonably foreseeable needs of the Project?

9 A15. Again as the Project will not have water-supply or wastewater connections, this criterion  
10 is not applicable to the Project.

11

12 **Act 250 Criterion 3: Burden on Existing Water Supply**

13 Q16. Will the Project cause an unreasonable burden on any existing water supply?

14 A16. Again, this criterion is not applicable to the Project because there will be no water-supply  
15 or wastewater connections.

16

17 **Act 250 Criterion 4: Erosion Control**

18 Q17. Will the Project cause unreasonable soil erosion or reduction in the capacity of the land to  
19 hold water?

20 A17. No. Due to the relatively flat nature of the Project site and the absence of drainage ways  
21 and streams around it, the risk of environmental damage due to erosion is minimal. The  
22 Project's soil erosion-control plan is provided in Exhibit Entergy-1.

1 By following the methods outlined in the erosion control plan, the potential for discharge  
2 of sediment or erosion of the Project area will be kept to a minimum. It is my  
3 professional opinion that this Project as designed will not cause unreasonable soil erosion  
4 or reduction in the capacity of the land to hold water so that a dangerous or unhealthy  
5 condition may result.

6  
7 Changes in stormwater-runoff caused by the Project are expected to be insignificant. The  
8 Project will be partially constructed on existing impervious areas although there will be  
9 approximately 22,320 square feet of new impervious area added to the site. This Project  
10 will not require a Stormwater Discharge Permit from VANR since the total impervious  
11 area added at the site since June 1, 2002, will be less than two acres, in accordance with  
12 Section 1264 of Title 10 of Vermont Statutes Annotated.

13  
14 The barrier system will be constructed with large concrete blocks placed or poured  
15 directly on the existing surface. Minor surface preparation may be required to establish a  
16 good bearing surface underneath some blocks on slopes and those blocks crossing  
17 drainage ways. Moreover, the barriers will be spaced apart to allow water to flow  
18 between the barriers so that the existing flow of stormwater will not be significantly  
19 disrupted by the Project.

**Act 250 Criterion 5: Transportation**

Q18. Will the Project cause unusual congestion or unsafe conditions with respect to transportation?

A18. No. Although there will be a limited temporary increase in construction vehicles and delivery trucks bringing the new barrier system on site during construction, the Project's limited traffic—similar to but far less than traffic during a scheduled outage—will not cause unusual congestion or unsafe transportation conditions. The Project will increase the security of the Station by keeping unauthorized vehicles out of the Protected Area or "PA."

A portion of the proposed barrier system will be constructed on an existing parking lot within the OCA. As a result, most of the parking spaces presently within this area will be lost. Until permanent replacement parking facilities can be permitted and constructed, temporary replacement parking will be available within the southern end of the existing OCA, where personnel associated with outages at the Station currently park. This temporary replacement parking is located within the OCA and therefore will not cause unusual congestion or unsafe conditions with respect to public transportation. Subject to timely issuance of appropriate permits, Entergy VY plans to have permanent replacement parking available by as soon as practicable.

**Act 250 Criterion 6: Educational Services**

Q19. Will the Project cause an unreasonable burden on the ability of the Town of Vernon to provide educational services?

A19. No. The Project will have no impact on educational services: It will not change the number of employees at Entergy VY and therefore the number of employee children educated in the area.

**Act 250 Criterion 7: Municipal or Governmental Services**

Q20. Will the Project place an unreasonable burden on the ability of the Town of Vernon to provide municipal or governmental services?

A20. No. Entergy VY has reviewed the Project with the Vernon Fire Chief, the Vernon Police Chief and the Vernon Selectboard. The Vernon Fire and Police Departments have found that (i) they can provide adequate fire and police protection to the Project without burdening the Departments and (ii) the Project will not have an undue, adverse effect on the public health and safety. Exhibits PB-5 and PB-6 are the respective letters to that effect from the Chief of the Vernon Fire and Police Departments.

As Mr. McElwee has testified, by letter dated May 3, 2004, the Vernon Selectboard stated that, upon review of such plans, the Selectboard found that the Project will not unduly interfere with the orderly development of the region or overburden municipal and governmental services in the Town of Vernon. Exhibit DM-2 is the letter from the Vernon Selectboard.

1 The Project will not require municipal sewer or water-supply services, new public roads  
2 or additional road maintenance.

3  
4 **Act 250 Criterion 8: Aesthetic Impact, Historical Sites and Natural Areas**

5 Q21. Will the Project have an undue adverse effect on the scenic or natural beauty of the area,  
6 aesthetics, historic sites or rare and irreplaceable natural areas?

7  
8 **Scenic Beauty, Aesthetics**

9 A21. No. The Project site is an existing parking lot, grassy areas, and existing access roadways  
10 within the OCA. Landscaping, minor surface preparation, excavation and trenching will  
11 be performed as I will show later.

12  
13 The barrier system will be comprised of large concrete blocks placed or poured directly  
14 on existing surface (grass, gravel, pavement, concrete, etc.). The dimensions of each  
15 block are approximately four-feet high, approximately five-feet wide, and approximately  
16 sixteen-feet long; these dimensions may vary slightly depending upon the specific  
17 location where they are being installed, the surface conditions that exist where the blocks  
18 are to be installed, and transportation limitations. Each block will be spaced apart to  
19 allow surface water to flow between and around the blocks. Minor surface preparation  
20 may be performed to make the ground stable and level for installation of some of the  
21 blocks. Where necessary, additional site preparation may be performed to provide for  
22 drainage and surface-water runoff.

1 Vehicle-access points will be installed at the north and south ends of the barrier system.

2 The south vehicle-access point will be electrically-operated, which will require trenching  
3 to existing Entergy VY buildings and structures for installation of power and control  
4 circuits.

5  
6 Two small, gravel-access roads will be constructed adjacent to each vehicle-access point  
7 to maintain site and emergency vehicle access. The new access roads will be constructed  
8 on existing access roads to the extent possible.

9  
10 A number of trees will be removed and additional, limited security lighting added within  
11 the OCA to provide visibility for the Entergy VY security force and to comply with NRC  
12 orders for this new restricted area.

13  
14 The trees that will be removed are within the OCA and include all trees within the  
15 security barrier. The number and location of trees that will be removed will be limited to  
16 the extent necessary for the Station to meet security needs and NRC requirements.

17  
18 As shown on Exhibit Entergy-1, and as I will describe next, the additional security  
19 lighting will include a total of six 30-foot light poles, two 20-foot light poles and eight  
20 15-foot light poles: three 30-foot light poles with two 400W high-pressure sodium lights  
21 mounted on each pole at the north end of the barrier system; three 30-foot light poles with  
22 two 400W high-pressure sodium lights mounted on each pole at the south end of the

1 barrier system; two 20-foot light poles, with two 400W high-pressure sodium lights  
2 mounted on each pole, along the west side of the barrier system; and eight 15-foot light  
3 poles at the vehicle-access gates—four light poles at the south gate and four light poles at  
4 the north gate—with a 150W high-pressure sodium downcast light mounted on each pole.  
5 Each light pole will be installed on a concrete foundation. Trenching will be required  
6 between the light poles and existing buildings and structures to bring power to the lights.  
7 This additional security lighting will not substantially increase the amount or impact of  
8 lighting already visible from outside the Station site.

9  
10 The six security towers are approximately eight-feet wide, ten-feet long and nine-feet  
11 high, located on galvanized structural-steel frames along the fence line around the PA.  
12 The four security towers installed in 2002 are located on support structures that are no  
13 taller than 25 feet above grade, for a total height of no more than 34 feet above grade; the  
14 two security towers that will be installed in 2004 are similar in design and color to the  
15 2002 security towers and are located on no taller than 37-foot support structures above  
16 grade, for a total height of 46 feet or less above grade. Each security tower will be placed  
17 on a reinforced, concrete-foundation pad. Stairs and access landings, as appropriate, will  
18 be constructed from galvanized, structural-steel shapes to provide access to each security  
19 tower from inside the PA. A picture of an existing security tower is provided as Exhibit  
20 Entergy-2.

1       Excavation for each guard-tower foundation and footing will be approximately 25-feet  
2       wide, 25-feet long, and 6-feet deep. Sides of the excavation will be sloped as necessary  
3       to meet any safety requirements. This area will be backfilled and regraded upon  
4       completion. Trenching will be required to bring power and communications to the  
5       security towers from existing buildings and structures. Once the necessary conduit and  
6       cabling are installed, the trenching area will be backfilled and regraded.

7  
8       The additional fencing installed in 2002 included a 12-foot high chain-link fence, with  
9       barbed wire at the top, inside the existing fence, and a four-foot-high chain-link nuisance  
10      fence outside the existing fence, both of which follow the existing security fence. A  
11      picture of the existing and new fencing is provided as Exhibit Entergy-2.

12  
13      The replacement 1000-gallon above-ground gas storage tank will be located near the  
14      receiving building as shown on Exhibit Entergy-1. Exhibit Entergy-3 provides a picture  
15      of a typical above-ground storage tank and the tank and foundation specifications.

16  
17      While the security towers and additional security lighting will be marginally visible from  
18      Governor Hunt Road, the security-barrier system, fencing and above-ground storage tank  
19      will not be readily visible outside the OCA. Most of the security barrier system will be  
20      located at the same base elevation as the plant (approximately 252 feet above sea level),  
21      which is approximately eighteen feet below the elevation of Governor Hunt Road. That  
22      portion of the Project that is located at a slightly higher elevation will be screened by the



1 existing trees along the OCA fence line. The Project, other than the security towers and  
2 additional security lighting, will generally be protected from being viewed from the  
3 Connecticut River and the east side of the OCA by the existing vegetated buffer along the  
4 river bank as noted previously. The adjacent and visible generating Station is industrial  
5 in character and built with concrete and metal siding and has ancillary facilities including  
6 transmission lines, towers and transformers. The existing Station is also well lit.

7  
8 Using the Quechee test applicable to the aesthetic impact of a project under Criterion 8, it  
9 is my opinion that the Project will not result in undue adverse impact on scenic or natural  
10 beauty or aesthetics. First, I do not believe that the Project will have an adverse aesthetic  
11 impact. The five considerations under Quechee for determining whether a project may  
12 have an adverse aesthetic impact are:

- 13 (1) what is the nature of the project's surroundings?  
14 (2) is the project's design compatible with its surroundings?  
15 (3) are the colors and materials selected for the project suitable for the context  
16 within which the project will be located?  
17 (4) where can the project be seen from? and  
18 (5) what is the project's impact on open space in the area?

19 In general, these considerations help determine whether the proposed project "fits" in the  
20 context of the area. As I just testified, the area surrounding the Project is dominated by  
21 Entergy VY's plant, which is industrial in character, built with concrete and metal sidings  
22 and includes transmission lines, towers and transformers. The Project's concrete, steel

1 and metal design will be compatible with the surroundings and suitable for the context in  
2 which the Project will be located. While portions of the Project will be marginally visible  
3 from Governor Hunt Road, the Project will not stand out because of the buffer of existing  
4 trees, the elevation at which the Project is installed, and the dominance of Entergy VY's  
5 generating facilities. Finally, the Project will have little impact on open space in the area  
6 as its surroundings have been largely developed. In my opinion, the Project "fits" in the  
7 context of the area.

8  
9 Even if the Project were determined to have an adverse aesthetic impact, in my opinion  
10 that impact would not be undue. The Quechee factors for determining undue adverse  
11 impact are:

- 12 (1) does the project violate a clear, written community standard intended to  
13 preserve the aesthetic and scenic or natural beauty of the area?
- 14 (2) does the project offend the sensibilities of the average person? and
- 15 (3) has the applicant failed to take generally-available mitigating steps which  
16 a reasonable person would take to improve the harmony of the proposed  
17 project with the surroundings?

18 As discussed in Mr. McElwee's testimony, the Project complies with the written  
19 standards of the Windham Regional Plan and the Town of Vernon Plan applicable to  
20 scenic resources. The Project will be in character with its surroundings, especially the  
21 adjacent Entergy VY facilities, so as to not offend the sensibilities of an average person.  
22 Finally, Entergy VY has taken generally-available mitigating steps to improve the

1 harmony of the proposed Project, including the maintenance of existing landscaping  
2 when possible and limiting the security lighting to be installed and the number of trees to  
3 be removed within the OCA to the extent necessary for the Station to meet security needs  
4 and NRC requirements.

5  
6 Irreplaceable Natural Areas

7 According to Mr. Everett Marshall of the Vermont Fish and Wildlife Department  
8 Nongame and Natural Heritage Program, there are no significant natural habitats  
9 identified on the Project site. Entergy VY has requested a letter from Mr. Marshall  
10 confirming his conclusion and will file that letter with the Board upon receipt.

11  
12 Historic Sites

13 Since the proposed Project would be visually considered part of the existing power-plant  
14 facility, it will not significantly change the character of the area. Existing vegetation will  
15 act as screening from other buildings in the area, especially during summer months.

16  
17 As the Project area was extensively disturbed during the construction of the Station in the  
18 early 1970s, no archeological review of the Project site is needed.

19  
20 Act 250 Sub-Criterion 8(A): Wildlife and Endangered Species Habitat

21 Q22. Are there significant habitats or rare plants or animals at or near the Project site?

1 A22. No. As I previously discussed, Mr. Everett Marshall of the Vermont Fish and Wildlife  
2 Department Nongame and Natural Heritage Program has concluded that there are no  
3 significant natural habitats identified on the Project site. Upon receipt, Entergy will file a  
4 letter with the Board from Mr. Marshall confirming his conclusion. The proposed Project  
5 is in an area that is currently a parking lot, grassy areas, and existing access roadways.  
6 Critical wildlife habitat would not be adversely affected as a result of the Project.  
7

8 **Act 250 Sub-Criterion 9(K): Public Investment**

9 Q23. Will the Project unnecessarily or unreasonably endanger the public or quasi-public  
10 investment in governmental and public-utility facilities, services and lands?

11 A23. No. The most significant public-utility facility is Entergy VY's electric-generating  
12 station. As Mr. McElwee testified, the purpose of the Project is to increase security at the  
13 Station, and therefore any quasi-public investment in the Station will be enhanced by the  
14 Project.  
15

16 The other public or quasi-public facilities, services or lands in the Project area are the  
17 New England Central Railroad mainline, the Connecticut River, the hydroelectric station  
18 located at the Vernon Dam and the Town of Vernon roads. The Project is located  
19 approximately 2,500 feet away from the New England Central Railroad mainline and will  
20 have no impact on that facility. The Project will have minimal affect on the Connecticut  
21 River as the majority of the Project is located away from the river and, as discussed  
22 previously, will have limited scenic and no water-quality impact on the river. The Project

1 will be located approximately 750 feet from the hydroelectric station located at the  
2 Vernon Dam and will thus have no impact on that facility. Finally, and again as  
3 discussed earlier, the construction and use of the Project will have no permanent traffic  
4 impact on state or local highways and a very limited impact during construction.  
5

6 **Executive Order 80-52: Agricultural Resources**

7 Q24. Will the Project conform to former Executive Order 80-52 regarding agricultural  
8 resources?

9 A24. Yes. I understand that the overall goal of Executive Order 80-52 was to ensure that  
10 development requiring state permits will not eliminate or significantly interfere with  
11 agricultural activities on productive agricultural lands or reduce the potential of primary  
12 agricultural soils, taking into account whether there is a feasible and prudent alternative  
13 and whether the project has been planned to minimize its effect on such lands. Based on  
14 my review of the Soil Conservation Services Soil Survey of Windham County and  
15 Agricultural Value Groups for Soils, Windham County, the Project site is located in an  
16 area that is shown as having state-wide significant agricultural soils.  
17

18 As I stated, the Project site is currently a parking lot, grassy areas, and existing access  
19 roadways and is not presently in agricultural use. The setting and/or pouring of the  
20 concrete barriers on existing pervious ground will not affect future use of these soils for  
21 agriculture. Additionally, the entire Project site is not feasible for agricultural use due to  
22 its existing development and close proximity to plant operations. As Mr. McElwee

1 testified, Entergy VY has concluded that there is no alternative that will meet its security  
2 needs and be cost-effective. Moreover, the Project is a security measure necessary to  
3 meet the security requirements imposed by the NRC.

4  
5 Based on the foregoing, it is my opinion that the Project will not eliminate or  
6 significantly interfere with agricultural activities on productive agricultural lands or  
7 reduce the potential of primary agricultural soils, taking into account the alternatives to  
8 the Project and the minimal amount of soil disturbance of the Project.

9 Q25. Does this conclude your testimony?

10 A25. Yes.

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 6953

Petition of Entergy Nuclear Vermont Yankee,     )  
LLC, pursuant to 30 V.S.A. § 248(j) for a     )  
Certificate of Public Good for Authority to     )  
Construct a Security Barrier System at the     )  
Vermont Yankee Nuclear Power Plant in the     )  
Town of Vernon     )

Order entered: 7/9/2004

I. INTRODUCTION

On May 6, 2004, the Vermont Public Service Board ("Board") received a petition from Entergy Nuclear Vermont Yankee, LLC ("Entergy VY") for a certificate of public good ("CPG") pursuant to 30 V.S.A. § 248(j) to construct a security-barrier system and related security enhancements ("Project") on the site of its electric-generation station, the Vermont Yankee Nuclear Power Plant ("Station" or "Vermont Yankee"), in Vernon, Vermont.

The proposed Project, as described in the petition filed in this proceeding, is the construction of a security-barrier system consisting of a concrete-block security barrier with two vehicle-access gates, two related gravel-access roads, two new security towers, and new security lighting. In addition, the Project includes the relocation and replacement of an underground fuel storage tank currently located inside the Protected Area with a similar-size above-ground tank to be located outside the Protected Area. Entergy VY also seeks approval for security fencing and four security towers constructed by Vermont Yankee Nuclear Power Corporation in 2002 to meet additional requirements imposed by the Nuclear Regulatory Commission ("NRC") in direct response to the events of September 11, 2001.

On June 21, 2004, the Board received a petition from Entergy VY proposing "to construct a parking lot and . . . and the relocation of a certain portion of the security barrier system, or "SBS," which is pending before the Board in Docket No. 6953". Docket No. 6976 petition at 1.

The findings and approvals contained in this Order and CPG pertain only to the plans and information submitted in this proceeding (Docket No. 6953), and the relocation (more appropriately, a change in design) of a certain portion of the SBS will be addressed in Docket No. 6976.

Pursuant to 30 V.S.A. § 248(j), the Board determined that the proposed facilities are of limited size and scope, the petition does not raise a significant issue with respect to the substantive criteria established by 30 V.S.A. § 248, and that the public interest is satisfied by the procedures authorized by subsection 248(j). Notice of the filing in this docket was sent on May 10, 2004, to all parties specified in 30 V.S.A. § 248(a)(4)(C) and all other interested parties. The notice stated that any party wishing to submit comments as to whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248 needed to file comments with the Board on or before June 10, 2004. In addition, notice was published in the *Brattleboro Reformer* on May 13 and May 20, 2004, stating that any party wishing to submit comments as to whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248 needed to file comments with the Board on or before June 10, 2004.

On June 10, 2004, comments were received from the Vermont Department of Public Service ("DPS" or "Department"), which stated:

The Department has reviewed the filing. The facilities are of limited size and scope, and do not raise significant issues with respect to the substantive criteria of 30 V.S.A. § 248. Additionally, the public interest is satisfied by the procedures authorized by subsection 248(j). The proposed project is designed to address security enhancements to comply with Nuclear Regulatory Commission requirements. Because the project is directed at security enhancements at the plant, the Department affirmatively supports the project as designed.

No other comments were received.

The Board has reviewed the petition and accompanying documents and agrees that, pursuant to 30 V.S.A. § 248(j), a CPG should be issued without the notice and hearings otherwise required by 30 V.S.A. § 248.



## **II. FINDINGS**

### **Project Description**

1. Entergy VY owns and operates the Vermont Yankee Nuclear Power Plant in Vernon, Vermont, which is an electric-generation facility. McElwee pf. at 1.

2. To comply with United States Nuclear Regulatory Commission ("NRC") requirements, Entergy VY proposes to construct the Project on land owned by Entergy VY within the Station's Owner Controlled Area ("OCA") and surrounding the Protected Area ("PA"). The Project consists of a concrete-block security-barrier system, approximately 3,200 feet in length, approximately four feet high (except where otherwise indicated on Exhibit Entergy-1) and approximately five feet wide, with two vehicle-access gates and two small, gravel-access roads. *Id.* at 1, 3-4; findings 4-16, below.

3. In addition to the Project, as described in finding 2, above, Entergy VY seeks approval for the proposed construction of two security towers, security lighting, security fencing, and replacement of an underground fuel storage tank located within the Protected Area with a similar above-ground tank to be located outside the Protected Area near the receiving building. Entergy VY also seeks approval for security fencing and four security towers constructed by Vermont Yankee Nuclear Power Corporation in 2002 to meet additional requirements imposed by the Nuclear Regulatory Commission ("NRC") in direct response to the events of September 11, 2001. Petition at 1; McElwee pf. at 1-3; findings 17-41, below.

4. The security-barrier system ("SBS") will extend from the current OCA fence on the northeast side of the property, around the 345 kV switchyard, across a portion of the existing employee parking area, across the existing access road, up to the side of the west cooling tower, between the cooling towers, and back to the OCA fence on the southeast side of the property. McElwee pf. at 4.

5. Entergy VY designed the location of the SBS to comply with NRC orders and still maintain accessibility to critical components and structures within the OCA. *Id.*

6. The SBS will be comprised of precast or poured-on-site concrete blocks that are approximately four feet high, approximately five feet wide and up to sixteen feet long; these dimensions may vary slightly depending upon the specific location where the blocks are

installed, the surface conditions that exist where they are to be installed, and transportation limitations. *Id.*; Boemig pf. at 11.

7. Where pre-cast barriers do not fit well within the topography of the planned barrier route, barriers will be installed by building a form and pouring concrete in place; the same drainage and ground preparation and support process will be used with this type of installation. McElwee pf. at 4.

8. The SBS will be constructed on an existing parking lot, grassy areas and existing access roadways within the OCA. The SBS blocks will be placed directly on existing surface (grass, gravel, pavement, concrete, etc.). Minor surface preparation may be performed to provide a good bearing surface underneath each block. Additional site preparation will be performed where necessary to provide adequate drainage and surface water runoff. *Id.* at 4; Boemig pf. at 11.

9. The blocks will be spaced apart to allow surface water to flow between and around the blocks. McElwee pf. at 5; Boemig pf. at 11.

10. The blocks will be constructed with lifting eyes to allow placement using a mobile crane; this will allow the blocks to be temporarily moved in the event that future work activities require the blocks to be moved. McElwee pf. at 5.

11. Personnel-access points will be installed where necessary to allow access to equipment and other plant structures. *Id.*

12. Two vehicle-access points will be installed – one at the north end of the SBS and one at the south end of the SBS—as shown on Exhibit Entergy-1. The north vehicle-access point will have two manually-operated vehicle gates, or "active barriers"; the south vehicle-access point will have two electrically-operated vehicle gates. *Id.*; Boemig pf. at 12; exh. Entergy-1.

13. Power to the electrically-operated active barriers will be provided from existing Entergy VY buildings and structures; barrier operation will be controlled by Entergy VY security personnel. Trenching will be required to install power and control circuits from existing Entergy VY buildings and structures to the electrically-operated gates. Boemig pf. at 12; McElwee pf. at 5.

14. Two small, gravel-access roads will be constructed adjacent to each vehicle-access point to maintain site and emergency vehicles access, as shown on Exhibit Entergy-1. McElwee pf. at 5; Boemig pf. at 12; exh. Entergy-1.

15. At the north vehicle access, the roadway will be constructed inside the SBS from the existing road, and will travel east approximately 145 feet to the road leading to the plant-ventilation stack and low-level, waste-storage pad. At the south vehicle access, the roadway will be constructed outside the SBS from the existing plant access road, and will travel east along the SBS, and then south to an existing road running adjacent to the west cooling tower, and will be approximately 335 feet in length. McElwee pf. at 5-6; Boemig pf. at 12.

16. The Project will prevent unauthorized vehicular access into portions of the OCA and provide additional security at the Station. McElwee pf. at 9.

17. In accordance with commissioning and NRC requirements, Entergy VY has had to maintain a security fence around the PA. *Id.* at 2.

18. In 2002, in direct response to the events of September 11, 2001, and to meet additional requirements imposed by the NRC, Vermont Yankee Nuclear Power Corporation installed four security towers, a second 12-foot high chain-link security fence inside the existing security fence, and a four-foot high nuisance fence outside the existing security fence. *Id.* at 2, 6; Boemig pf. at 13-14.

19. Entergy VY plans to construct two additional security towers and add limited security lighting to meet its ongoing obligation to comply with NRC security requirements. McElwee pf. at 2, 6-8; Boemig pf. at 12-14.

20. Entergy VY plans to install the two new security towers by September 1, 2004, to provide sufficient time to train its security force on the new equipment, as well as on new defense strategies, prior to a scheduled NRC review in early October. McElwee pf. at 10.

21. The existing and proposed security towers are approximately eight feet wide, ten feet long, and nine feet high and are mounted on support structures constructed with galvanized, structural-steel shapes (tube steel, channels, beams, etc.). *Id.* at 6; Boemig pf. at 13; Exh. Entergy-2.

22. The four security towers installed in 2002 are located on support structures that are no taller than 25 feet above grade, for a total height of 34 feet or less above grade; the two security towers that will be installed in 2004 are similar in design and appearance to the 2002 security towers, and are located on support structures that are no taller than 37 feet above grade, for a total height of 46 feet or less above grade. McElwee pf. at 6; Boemig pf. at 13; exh. Entergy-2.

23. Each security tower is set on a reinforced concrete foundation, with stairs and access landings, as appropriate, constructed from galvanized, structural-steel shapes to provide access to each of the security towers from inside of the PA. McElwee pf. at 7; Boemig pf. at 13; exh. Entergy-2.

24. The approximate area to be excavated for each new security tower's foundation and footings will be 25 feet wide, 25 feet long, and 6 feet deep, with sloped sides to meet applicable safety requirements; upon completion, the area will be backfilled and regraded. McElwee pf. at 7; Boemig pf. at 14.

25. Trenching will be required from existing Entergy VY buildings and structures to bring power and communications to the new security towers; upon installation of the underground conduit and cabling, the trench will be backfilled and regraded. McElwee pf. at 7; Boemig pf. at 14.

26. The additional fencing installed in 2002 included a 12-foot chain-link fence with barbed wire at the top inside the existing security fence and a four-foot-high chain-link nuisance fence outside the existing fence, both of which follow the existing security fence; Exhibit Entergy-2 provides a picture of the existing and new security fencing. McElwee pf. at 2, 6; Boemig pf. at 14; exh. Entergy-2.

27. The proposed security lighting includes a total of six 30-foot light poles, two 20-foot light poles and ten 15-foot light poles. The lights consist of three 30-foot light poles with two 400W high-pressure sodium lights mounted on each pole at the north end of the barrier system; three 30-foot light poles with two 400W high-pressure sodium lights mounted on each pole at the south end of the barrier system; two 20-foot light poles, with two 400W high-pressure sodium lights mounted on each pole on the west side of the barrier system; and eight 15-foot light poles at the vehicle-access points – four light poles at the south point and four light poles at the north

point – with a 150W high-pressure sodium light mounted on each pole. McElwee pf. at 7-8; Boemig pf. at 12-13; exh. Entergy-1.

28. Each light pole will be installed on a concrete foundation. McElwee pf. at 8; Boemig pf. at 13.

29. Trenching will be performed between the light poles and existing buildings and structures to bring power to the lights. McElwee pf. at 8; Boemig pf. at 13.

30. The proposed lighting will be angled downward, when possible, to minimize the effect, if any, to surrounding neighbors. McElwee pf. at 7.

31. The closest neighbor's house to the new lighting (at its closest point) will be approximately one hundred fifty feet away. *Id.*

32. The proposed security lighting will not substantially increase the amount or impact of lighting already visible from outside the Station site. *Id.* at 8; Boemig pf. at 13.

33. Finally, as part of the security enhancements at the Station, Entergy VY also plans to close a 1,000-gallon gas underground storage tank currently located within the PA, and replace it with a similar above-ground tank located outside the PA near the receiving building, in accordance with relevant Vermont Agency of Natural Resources ("ANR") and Department of Labor and Industry regulations. McElwee pf. at 2, 9; Boemig pf. at 5, 14; exhs. Entergy-1, 3.

34. The Project includes removal of a number of trees within the OCA and installation of security lighting to provide visibility in the new SBS-restricted area and to comply with NRC requirements. McElwee pf. at 6-8; Boemig pf. at 12-13.

35. The number and location of trees that will be removed will be limited to the extent necessary for the Station to meet security needs and NRC requirements; the trees that will be removed are within the OCA, including all trees inside the SBS. McElwee pf. at 6; Boemig pf. at 12; exh. Entergy-1.

36. The Project is one of a number of heightened security measures that Entergy VY has implemented, and is implementing, to enhance the Station's security against sabotage or terrorist attack and in response to requirements imposed by the NRC. McElwee pf. at 9.

37. The NRC has modified existing security requirements and imposed additional security requirements on all nuclear facilities as a result of the terrorist attacks of 2001 and the continuing generalized high-threat-level environment. *Id.*

38. The NRC's final guidance has only recently become available to licensed facilities; the nuclear industry, along with the Nuclear Energy Institute ("NEI"), have just completed the required review of the NRC guidance and agreed to appropriate site modifications; Entergy VY sent this agreement, outlining Entergy VY's compliance with NRC orders, to the NRC by letter dated April 28, 2004. *Id.*

39. By order of the NRC, all work necessary to meet the security requirements must be completed no later than October 29, 2004. *Id.*

40. Entergy VY plans to complete the remaining physical modifications, and complete security officer training on those modifications, in time to utilize the new defensive strategies during the NRC review in early October. *Id.* at 10.

41. The sole purpose of the Project is to enhance security at the Station. *Id.*

#### **Orderly Development of the Region**

[30 V.S.A. § 248(b)(1)]

42. The Project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land-conservation measures contained in the plan of any affected municipality. This finding is supported by findings 43 through 55, below.

43. By letter dated April 28, 2004, Entergy VY provided the Town of Vernon Planning Commission with plans for the construction of the Project. McElwee pf. at 11.

44. By letter dated April 28, 2004, the Vernon Planning Commission stated that it had agreed to waive the 45-day notice pursuant to 30 V.S.A. § 248(f) and had determined that the Project will not unduly interfere with the orderly development of the region or overburden municipal and governmental services in the Town of Vernon. *Id.* at 11; exh. DM-3.

45. At its meeting held on May 3, 2004, the Vernon selectboard voted that the Project will not unduly interfere with the orderly development of the region and will not overburden

municipal and governmental services in the Town of Vernon. McElwee pf. at 11; Boemig pf. at 10; exh. DM-2.

46. The Vernon Town Plan, which was adopted on November 3, 2003, is intended to be a policy document that provides guidelines to ensure that decisions made at the local, regional and state levels are in concert with the values and goals expressed in the plan. McElwee pf. at 11; exh. DM-4 at 2.

47. The Vernon Town Plan specifically cites the Station, its contribution to the community's tax base and its provision of varied employment opportunities as being largely responsible for Vernon's rural independence and self-sufficiency. McElwee pf. at 12; exh. DM-4 at 17.

48. The Vernon Town Plan states the town's policy to encourage land uses that help to protect river corridors, scenic highways and roads, scenic views and other scenic resources. McElwee pf. at 12; exh. DM-4 at 33.

49. The Project will not adversely affect river corridors, scenic highways and roads, scenic views or other scenic resources. The Project will be sited near Entergy VY's electric-generation facility, which is industrial in character, consists of concrete and metal sidings and includes transmission lines, towers and transformers. The Project will not adversely affect the view of the Connecticut River corridor. The Project is not located on a scenic highway or road. McElwee pf. at 12.

50. On April 13, 2004, and April 29, 2004, Entergy VY provided the Windham Regional Commission ("WRC") with plans for the Project. *Id.* at 13.

51. By letter dated April 29, 2004, James P. Matteau, Executive Director of the WRC, stated that the Project will not have an adverse aesthetic effect and will not unduly interfere with the orderly development of the region. The WRC further waived the 45-day notice requirement of subsection 248(f). McElwee pf. at 13; exh. DM-5.

52. The Windham Regional Plan, which was adopted in December 2001, is intended to provide continuing guidance for change in the Windham region. McElwee pf. at 13; exh. DM-6 at 2.

53. The Windham Regional Plan is designed to be used by the WRC, town planning commissions, selectboards, state agencies, landowners and citizens to provide guidance for local

planning and development initiatives, guide basic decisions for planning programs at the WRC, serve as a basis for evaluation and review of developments and subdivisions proposed under Act 250, and assist in determining compatibility of agency plans affecting land use with regional and local planning and development priorities. McElwee pf. at 13; exh. DM-6 at 3.

54. The Windham Regional Plan acknowledges the role the Station plays in providing (at the time the Plan was drafted) 33% of Vermont's annual electrical requirements. Vermont Yankee provides 38% and 36% of the electricity supplied to Vermont customers by Central Vermont Public Service Corporation ("CVPS") and Green Mountain Power Corporation ("GMP"), respectively. McElwee pf. at 14; exh. DM-6 at 65.

55. The Project is consistent with the policies of the Vernon Town Plan and the Windham Regional Plan. McElwee pf. at 14.

**Need for Present and Future Demand for Service**

[30 V.S.A. § 248(b)(2)]

56. The Project will not affect power generation or transmission, and therefore, this criterion is not applicable. *Id.* at 14-15.

**System Stability and Reliability**

[30 V.S.A. § 248(b)(3)]

57. Because the Station, and the transmission lines that serve it, will not change if the Project is constructed, system stability and reliability will not be affected. *Id.*

**Economic Benefit to the State**

[30 V.S.A. § 248(b)(4)]

58. The Project will not have an adverse economic effect. This finding is supported by findings 59 and 60, below.

59. The Project represents a substantial capital investment in Vermont that will be entirely borne by Entergy VY. McElwee pf. at 15.

60. Because it will enhance security for the Station, which is described above as a committed resource supplying one-third of Vermont's electric supply, the Project will have an economic benefit to the state and its residents. *Id.* at 15-16; finding 54, above.



**Aesthetics, Historic Sites, Air and Water Purity,  
the Natural Environment and Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

61. The Project as proposed will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment, and public health and safety. This finding is supported by findings 62 through 66, below, which address public safety, and by findings 67 through 142, below, which address the criteria specified in 10 V.S.A. §§ 1424(a)(d) and 6086(a)(1)-(8)(A) and (9)(k).

62. The Project will have no adverse effect on the existing Station or its transmission lines. McElwee pf. at 16.

63. The Project is required to meet NRC requirements. *Id.*

64. The Project is one of a number of heightened security measures that Entergy VY has implemented and will implement to enhance the Station's security against sabotage or terrorist attack. *Id.*

65. The primary purpose of the Project is to further secure the Station and prevent unauthorized vehicular access into portions of the OCA. *Id.*

66. As further described below, the Chief of the Vernon Fire Department and the Chief of the Vernon Police Department have reviewed the Project plans and determined that the Project will not have an adverse effect on the public health and safety. *Id.*; exhs. PB-5, PB-6.

**Outstanding Resource Waters**

[10 V.S.A. § 1424(a)(d)]

67. There are no watercourses in the vicinity of the Project that have been designated as outstanding resource waters. Boemig pf. at 3; exh. PB-2.

**Water and Air Pollution**

[10 V.S.A. § 6086(a)(1)]

68. The Project as proposed will not result in undue water and air pollution. This finding is supported by findings 69 through 91, below.

69. The Project will not result in air-pollution levels that create a threat to public health or a nuisance for nearby neighbors. There will be no sources of emissions other than minimal dust during construction. Boemig pf. at 3.

70. Dust will be controlled during construction by quickly seeding and mulching non-roadway areas when completed and through the use of water-spray trucks as necessary. *Id.*

71. There are no other sources of air emissions from the Project. *Id.*

72. The Project will not result in water pollution and will comply with applicable regulations adopted by the Departments of Environmental Conservation and Health. *Id.*

#### Headwaters

[10 V.S.A. § 6086(a)(1)(A)]

73. The Project is not in a headwaters area. Specifically, the Project area is not the headwaters of applicable waters as characterized by steep slopes and shallow soils and has a drainage area greater than 20 square miles. *Id.* at 4.

74. The Project area is not over 1,500 feet in elevation – the elevation is approximately 252 feet – and is not the watershed of a public-water supply designated by the Vermont Department of Health. *Id.*

75. The Project area is not a significant aquifer-recharge area. *Id.*

#### Waste Disposal

[10 V.S.A. § 6086(a)(1)(B)]

76. The Project does not involve the disposal of waste. *Id.*

77. The Project will not generate industrial or manufacturing wastewater, chemicals, pesticides, batteries, radiation, hazardous wastes or any other harmful or toxic substances. *Id.*

78. The Project will not involve the injection of waste materials or any harmful or toxic substances into groundwater or wells. *Id.*

79. Closure of the existing underground-storage tank and replacement with a new above-ground storage tank will not result in the disposal of any wastes and will comply with all applicable standards of the VANR and the Vermont Department of Labor and Industry, respectively. *Id.* at 5.

**Water Conservation**

[10 V.S.A. § 6086(a)(1)(C)]

80. This criterion is not applicable since the Project will not have water-supply or wastewater connections, and therefore no additional water will be used as a result of the Project. *Id.*

**Floodways, Streams, and Shorelines**

[10 V.S.A. §§ 6086(a)(1)(D), (E) &(F)]

81. The Project site is outside of the 100-year floodway and outside of the floodway fringe. *Id.*; exh. PB-3.

82. The Project as proposed will have no impact on the natural condition of the Connecticut River or its shoreline. This finding is supported by findings 83 through 90, below.

83. There are no streams in the Project area; the closest river shoreline is the Connecticut River. Boemig pf. at 6.

84. Ends of the security barrier system will abut the current OCA fence on the northeast and southeast sides of the property. *Id.*

85. The OCA fence is approximately 30 to 50 feet from the shoreline on the north and south ends of the barrier. *Id.*

86. The Project will have no impact on the natural condition of the Connecticut River, its shoreline, vegetation or stability. *Id.*

87. The Station is a secure site, so no access to the water for recreation is presently provided from the property. *Id.*

88. Aside from the security towers and additional security lighting, the Project will not likely be visible from the Connecticut River because it will be screened from view by the existing vegetation along the riverbank. *Id.*

89. Depending on vegetation growth, the Project may be visible from a boat in certain locations of the Connecticut River. *Id.*

90. The visual character of the Project site will be in keeping with the industrial nature and existing lighting of the Station. *Id.*

**Wetlands**

[10 V.S.A. § 6086(a)(1)(G)]

91. Based on a review of the National Wetlands Inventory Mapping, there are no significant wetlands in the area of the Project. *Id.* at 7; exh. PB-4.

**Sufficiency of Water and Burden on Existing Water Supply**

[10 V.S.A. §§ 6086(a)(2)&(3)]

92. Since the Project will not have water-supply or wastewater connections, these criteria are not applicable to the Project. Boemig pf. at 7.

**Soil Erosion**

[10 V.S.A. § 6086(a)(4)]

93. The Project as designed will not result in unreasonable soil erosion or reduce the ability of the land to hold water. This finding is supported by findings 94 through 102, below.

94. The Project site is relatively flat, and there are no drainage ways or streams around the construction site. Therefore, the risk of environmental damage due to erosion is minimal. Boemig pf. at 7.

95. The Project's soil erosion-control plan is provided in Exhibit Entergy-1. *Id.*; exh. Entergy-1.

96. By following the methods outlined in the erosion control plan, the potential for discharge of sediment or erosion of the Project area will be kept to a minimum. The Project as designed will not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result. Boemig pf. at 8; *see* exh. Entergy-1.

97. Changes in stormwater-runoff caused by the Project are expected to be insignificant. Boemig pf. at 8.

98. The Project will be partially constructed on existing impervious areas; approximately 22,320 square feet of new impervious area will be added to the site. *Id.*

99. On June 10, 2004, the ANR issued a Construction General Permit to discharge stormwater for the construction of a security barrier system, installation of additional site lighting, construction of 2 gravel access roads, construction of a concrete pad for a 1000-gallon above-ground gas tank, and related work. Winter construction (after October 15<sup>th</sup>) is not

authorized. Letter dated June 10, 2004, from Wallace McLean, ANR, to Jay K. Thayer, Entergy VY. The Notice of Intent to Discharge Stormwater Runoff from a Construction Site Subject to General Permit No. 3-9001 (2003) filed by Jay K. Thayer of Entergy VY, dated May 26, 2004, estimated a soil disturbance of approximately 1 acre.

100. The SBS will be constructed by placing or pouring large concrete blocks directly on the existing surface. Boemig pf. at 8, 11.

101. Minor surface preparation may be performed to establish a good bearing surface underneath some blocks on slopes and those blocks crossing drainage ways. *Id.*

102. The blocks will be spaced apart to allow water to flow between the blocks. Therefore, the existing flow of stormwater will not be significantly disrupted by the Project. *Id.*

#### **Transportation Systems**

[10 V.S.A. § 6086(a)(5)]

103. The Project will not cause unreasonable congestion or unsafe conditions with respect to local highways, which are the only transportation facilities that will be affected by the project. This finding is supported by findings 104 through 108, below.

104. Aside from a limited temporary increase in construction vehicles and delivery trucks bringing the new barrier system to the site during construction, the Project's limited traffic will not cause unusual congestion or unsafe transportation conditions. Boemig pf. at 9.

105. A portion of the Project will be constructed on an existing parking lot within the OCA, resulting in the loss of most of the parking spots within this area. *Id.*

106. Until permanent replacement parking facilities can be permitted and constructed, Entergy VY will provide temporary replacement parking within the southern end of the existing OCA, where personnel associated with outages at the Station currently park. *Id.*

107. This temporary replacement parking is located within the OCA, and therefore will not cause unusual congestion or unsafe conditions with respect to public transportation. *Id.*

108. Subject to timely issuance of appropriate permits, Entergy VY plans to construct permanent replacement parking facilities as soon as practicable. *Id.*

**Educational Services**

[10 V.S.A. § 6086(a)(6)]

109. The Project will have no impact on educational services. It will not change employment at Vermont Yankee, and therefore will not affect the number of children to be educated in the area. *Id.* at 10.

**Municipal Services**

[10 V.S.A. § 6086(a)(7)]

110. The Project will have no impact on the ability of the Town of Vernon to provide municipal services. This finding is supported by findings 111 through 116, below.

111. The Project has been reviewed with the Vernon Fire Chief, the Vernon Police Chief and the Vernon Selectboard. Boemig pf. at 10.

112. The Vernon Fire and Police Departments have found that (i) they can provide adequate fire and police protection to the Project without overburdening the Departments, and (ii) the Project will not have an undue, adverse effect on the public health and safety. *Id.*; exhs. PB-5, 6.

113. At its May 3, 2004, meeting, the Vernon Selectboard voted that the Project will not interfere with the orderly development of the region and will not overburden municipal services. McElwee pf. at 11; Boemig pf. at 10; exh. DM-2.

114. The Project will not require municipal sewer or water-supply services. Boemig pf. at 11.

115. Vermont Yankee proposes no new public road construction for the Project. *Id.*

116. The Town of Vernon will not be required to provide any additional road maintenance services as a result of the Project. *Id.*

**Aesthetics, Historic Sites  
and Rare and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

117. The Project will not have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas. This finding is supported by findings 118 through 133, below.

118. While the proposed security towers and additional security lighting will be marginally visible from Governor Hunt Road, the SBS and above-ground storage tank will not be readily visible outside the OCA. Boemig pf. at 14.

119. Most of the SBS will be located at the same base elevation as the plant – approximately 252 feet above sea level – which is approximately eighteen feet below the elevation of Governor Hunt Road. *Id.*

120. Existing trees along the OCA fence line will screen that portion of the Project that is located at a slightly higher elevation than Governor Hunt Road. *Id.* at 14-15.

121. The Project, other than the security towers and additional security lighting, will generally be protected from view from the Connecticut River and the east side of the OCA by the existing vegetated buffer along the river bank. *Id.* at 15.

122. The adjacent and visually dominant nuclear-power Station is industrial in character and contains concrete and metal siding with transmission lines, towers and transformers. The Station is also well lit. *Id.*

123. The concrete, steel, and metal design of the Project will be compatible with the existing appearance of the generating station. *Id.* at 15-16.

124. While portions of the Project will be marginally visible from Governor Hunt Road, the Project will not stand out because of the buffer of existing trees, the elevation at which the Project is installed, and the visual dominance of Entergy VY's generating facilities. *Id.* at 16.

125. Because the surrounding area has been largely developed, the Project will have little impact on open space in the area. *Id.*

126. In general, the Project "fits" in the context of the area, taking into account the existence of the Station, the nature of the Project surroundings, the Project's design and visibility, and the Project's impact on open space in the area. *Id.*

127. The proposed Project will be visually considered part of the existing power-plant facility and will not significantly change the character of the area. *Id.* at 17.

128. The Project does not violate a clear, written community standard intended to preserve the aesthetic and scenic or natural beauty of the area, as it complies with the scenic resources

policies of the Vernon Town Plan and the Windham Regional Plan. *Id.* at 16; McElwee pf. at 10-14.

129. Taking into account the visual dominance of the Station and the developed character of the nearby area, the Project will not offend the sensibilities of the average person. Boemig pf. at 16.

130. Entergy VY has taken generally-available mitigating steps to improve the harmony of the proposed Project with its surroundings, including maintaining the existing landscaping when possible and limiting the lighting to be installed and the number of trees to be removed to the extent necessary for the Station to meet security needs and NRC requirements. *Id.* at 16-17.

131. According to a letter dated May 5, 2004, from Everett Marshall of the Vermont Department of Fish and Wildlife Nongame and Natural Heritage Program, there are no known occurrences of rare, threatened and endangered species in the project area. The letter further states that there are several rare species associated with the Connecticut River adjacent to the project site, but no impact to these species is anticipated. Letter dated May 5, 2004, from Everett Marshall, ANR, to John Goodell, SVE Associates.

132. The site of the Project was significantly disturbed during the construction of the Station in the early 1970s. Boemig pf. at 17.

133. Because the Station's construction in the early 1970s substantially disturbed the site, no archeological review of the Project site is needed. *Id.*

#### Discussion

Based on the above findings, the Board finds that the proposed Project will not have an undue adverse effect on the aesthetics or scenic and natural beauty of the area. In reaching this conclusion, the Board has relied on the Environmental Board's methodology for determination of "undue" adverse effects on aesthetics and scenic and natural beauty as outlined in the so-called Quechee Lakes decision. Quechee Lakes Corporation, #3W0411-EB and 3W0439-EB, dated January 13, 1986.

As required by this decision, it is first appropriate to determine if the impact of the Project will be adverse. The Project would have an adverse impact on the aesthetics of the area if its design is out of context or not in harmony with the area in which it is located. If it is found



that the impact would be adverse, it is then necessary to determine that such an impact would be "undue." Such a finding would be required if the Project violates a clear written community standard intended to preserve the aesthetics or scenic beauty of the area, if it would offend the sensibilities of the average person, or if generally available mitigating steps would not be taken to improve the harmony of the Project with its surroundings. The Board's assessment of whether a particular project will have an "undue" adverse effect based on these standards should be significantly informed by the overall societal benefits of the project.<sup>1</sup>

The proposed Project will not have an adverse effect on the aesthetics of the area. The Project involves the construction of a security-barrier system at the nuclear-power Station, which is already industrial in character and contains concrete and metal siding with transmission lines, towers and transformers. The concrete, steel, and metal design of the Project will be compatible with the existing appearance of the generating station. The additional lighting proposed will not create an adverse impact because the Station is currently well lit.

Even if the Project did have an adverse aesthetic impact, such impact would not be undue. The Project does not violate a clear, written community standard, is not shocking or offensive, and this Project would not require mitigation because the visual appearance of the Station should not change. The Town of Vernon Planning Commission and the Windham Regional Commission were notified of the proposed Project and did not recommend any changes to the proposal. Since all construction takes place on the existing nuclear power Station site, its presence will not be shocking, and will not offend the sensibilities of the average person. For the reasons described in the paragraph above, mitigation would not be required for this Project since the proposed construction is compatible with the existing Station.

**Necessary Wildlife Habitat and Endangered Species**

[10 V.S.A. § 6086(a)(8)(A)]

134. The Project will not affect any necessary wildlife habitat or endangered species sites, and there are no significant natural habitats on the Project site. *Id.* at 18; finding 131, above.

135. The proposed Project site is in an area that is currently a parking lot, grassy areas and existing access roadways. Boemig pf. at 18.

---

1. Docket 6884, Order of 4/21/04 at 20-21.

**Development Affecting Public Investments**

[10 V.S.A. § 6086(a)(9)(K)]

136. The Project will not unnecessarily or unreasonably endanger the public or quasi-public investments in any governmental public-utility facilities, services, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to, such facilities, services, or lands. This finding is supported by findings 137 through 142, below.

137. The only significant impact on public investment will be on Entergy VY's facilities. Boemig pf. at 18.

138. The Project's construction and operation will not adversely affect the State's or Vernon's investments in highways. *Id.* at 19.

139. The Project is located approximately 2,500 feet away from New England Central Railroad mainline and will not affect that facility. *Id.* at 18.

140. The Project will have minimal effect on the Connecticut River, as the majority of the Project will be located away from the river and will have limited scenic and no water-quality impact on the river. *Id.*

141. The Project is located approximately 750 feet from the Vernon dam and will have no effect on the hydroelectric station located at the dam. *Id.* at 18-19.

142. The construction and use of the Project will have no permanent traffic impact on state or local highways and a very limited impact during construction. *Id.* at 19.

**Least-Cost Integrated Resource Plan**

[30 V.S.A. § 248(b)(6)]

143. As a wholesale utility that does not distribute electricity to the public, Entergy VY is not required to prepare or submit for approval an integrated-resource plan (or "IRP"). Consequently, this criterion is not applicable. McElwee pf. at 17; *see* Docket No. 6812, Order of 3/15/04.

**Compliance with Electric Energy Plan**

[30 V.S.A. § 248(b)(7)]

144. The Project is consistent with the Vermont Twenty-Year Electric Plan. On June 18, 2004, the Department issued a letter to that effect in accordance with 30 V.S.A. § 202(f).

**Outstanding Resource Waters**

[30 V.S.A. § 248(b)(8)]

145. The Project will not be located on or anywhere near any segment of any outstanding resource waters, as defined by the Vermont Water Resources Board. Boemig pf. at 3; exh. PB-2.

**Waste to Energy Facilities**

[30 V.S.A. § 248(b)(9)]

146. The Project is not a waste-to-energy facility, and therefore this criterion is not applicable. McElwee pf. at 18.

**Existing or Planned Transmission Facilities**

[30 V.S.A. § 248(b)(10)]

147. The Project does not require access to or use of transmission facilities, and therefore this criterion is not applicable. *Id.*

**III. CONCLUSION**

Based upon all of the above evidence, we conclude that the proposed construction will be of limited size and scope, the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248, the public interest is satisfied by the procedures authorized by 30 V.S.A. § 248(j), and the proposed project will promote the general good of the state.

**IV. ORDER**

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the State of Vermont Public Service Board that the construction by Entergy Nuclear Vermont Yankee, LLC of an approximately 3,200-foot long, approximately four-foot high and approximately five-foot wide security-barrier system with vehicle-access gates and gravel-access roads, in addition to four existing and two new security towers, additional security fencing, supplemental security lighting, and the replacement of an underground, fuel-storage tank with a similar, above-ground, fuel-storage tank at the site of its existing electric-generation facility in the Town of Vernon, Vermont, will promote the general good of the State of Vermont in accordance with 30 V.S.A. § 248, and a certificate of public good shall be issued in the matter.

Dated at Montpelier, Vermont this 9<sup>th</sup> day of July, 2004.

|                        |   |                |
|------------------------|---|----------------|
| _____                  | ) |                |
|                        | ) | PUBLIC SERVICE |
|                        | ) |                |
| <u>s/David C. Coen</u> | ) | BOARD          |
|                        | ) |                |
|                        | ) | OF VERMONT     |
| <u>s/John D. Burke</u> | ) |                |

OFFICE OF THE CLERK

FILED: July 9, 2004

ATTEST: s/Judith C. Whitney  
Deputy Clerk of the Board

*Notice to Readers: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: Clerk@psb.state.vt.us)*

*Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.*

STATE OF VERMONT  
PUBLIC SERVICE BOARD

|   |   |                  |
|---|---|------------------|
| Petition of Entergy Nuclear Vermont       | ) |                  |
| Yankee, LLC, pursuant to 30 V.S.A.        | ) |                  |
| § 248(j) for a Certificate of Public Good | ) | Docket No. _____ |
| to Construct a Parking Lot in the         | ) |                  |
| Town of Vernon                            | ) |                  |

**PREFILED TESTIMONY OF PETER BOEMIG**

**Background**

- 1 Q1. State your name.
- 2 A1. Peter Boemig.
- 3 Q2. What is your position, and by whom are you employed?
- 4 A2. I am the Chief Engineer and Manager of SVE Associates, which was retained by Entergy
- 5 Nuclear Vermont Yankee, LLC, or "Entergy VY," to assist it with the construction of the
- 6 Project. As Mr. McElwee testified, the Project consists of the construction of a parking
- 7 lot, access road, other miscellaneous parking and roadway improvements, and the
- 8 relocation of a portion of the security barrier system, or "SBS," which is currently under
- 9 review by the Board in Docket No. 6953 on lands owned by Entergy VY in Vernon,
- 10 Vermont. Exhibit Entergy-1 is a set of plans that further depict the Project.
- 11 Q3. What are your qualifications to sponsor the testimony you intend to present?
- 12 A3. Exhibit PB-1 is my resume, which provides my qualifications. In sum, I have lead
- 13 responsibility at SVE Associates in connection with its work on site evaluation for and
- 14 construction of the Project.
- 15 Q4. What is the purpose of your testimony?

1 A4. My testimony will address the Project's compliance with most aspects of the fifth Section  
2 248 criterion, which concerns the Project's impact on land use and the natural  
3 environment, and includes most of the criteria incorporated into Section 248 from Act  
4 250, as well as the eighth Section 248 criterion addressing outstanding resource waters.

5  
6 **Section 248(b)(5) and (8)**

7 Q5. Explain the fifth and eighth criteria of Section 248.

8 A5. Under the fifth criterion as I understand it, the Board must find that the Project will not  
9 have an undue adverse effect on aesthetics, historic sites, air and water purity, and the  
10 natural environment, with due consideration having been given to the criteria specified in  
11 the statute providing for the designation of outstanding resource waters, the first eight  
12 criteria in Act 250, and Subcriterion 9(K) of Act 250. Under the eighth criterion the  
13 Board must also find that the Project does not involve a facility affecting or located on  
14 any segment of waters of the state that have been designated as outstanding resource  
15 waters.

16 Q6. In your opinion, do the criteria for designating outstanding resource waters apply to the  
17 Project?

18 A6. No. The Project is located on the Connecticut River, which has not been designated an  
19 outstanding resource water. As confirmed in Exhibit PB-2, a letter from the Executive  
20 Officer of the Water Resources Board, no portion of the Connecticut River has been  
21 designated as an outstanding resource water by that Board.

22 Q7. Do the first eight Act 250 criteria apply to the Project?

1 A7. In general, yes. My testimony will address each of the applicable Act 250 criteria in turn.

2  
3 **Act 250 Criterion 1: Air Pollution**

4 Q8. Will the Project result in undue water or air pollution?

5 A8. No. The Project will not cause air-pollution levels that create a threat to the public health  
6 or a nuisance for nearby neighbors.

7  
8 The primary purpose of the Project is to replace the 403 parking spaces presently located  
9 in the Station main parking lot that will be lost as a result of the SBS project. The Station  
10 site has additional parking areas with a total of approximately 127 parking spaces,  
11 resulting in a total, current number of parking spaces at the Station of approximately 530  
12 spaces.

13  
14 Entergy VY has scheduled "outages" every 18 months to re-load fuel at the Station and  
15 perform scheduled maintenance activities. Each of these outages lasts approximately 30  
16 days. Depending on the scope of work of the outage, up to several hundred contractors  
17 are employed in shifts at the Station during the outage to perform the re-fueling and  
18 maintenance work. These outages can increase the number of workers at the Station  
19 from the normal operational level of approximately 600 employees working in two shifts,  
20 to over 1,000 employees working in two shifts.

1       Entergy VY proposes to add an additional 461 net parking spaces to the existing base of  
2       530 parking spaces to accommodate the contractors on site during the periodic outages

3  
4       In total, the proposed Project will result in a total parking area or areas at the Station with  
5       a parking capacity of 991 vehicles; or less than 1,000 motor vehicles. As such, the  
6       Project does not require an indirect source permit under Section 5-503 of the State of  
7       Vermont Air Pollution Control Regulations. The existing parking areas and proposed  
8       replacement parking area are shown on Exhibit Entergy-1.

9  
10      There are no other sources of air emissions from the Project, other than minimal dust  
11      during construction. Dust will be controlled during construction by quickly seeding and  
12      mulching non-roadway areas when completed and through the use of water-spray trucks  
13      as necessary.

14  
15      As I will testify later, the Project will not cause water pollution and will comply with  
16      applicable regulations adopted by the Departments of Environmental Conservation and  
17      Health.

18  
19      **Act 250 Sub-Criterion 1(A): Headwaters**

20      Q9.   Is the Project in a headwaters area?

21      A9.   No. The Project area is not the headwaters of applicable watersheds characterized by  
22      steep slopes and shallow soils and is located in a drainage area greater than 20 square



1 miles. The Project area is not over 1,500 feet in elevation—the elevation is between 252  
2 feet and 263 feet above sea level—and is not the watershed of a public-water supply  
3 designated by the Department of Health. The Project area is located on existing paved  
4 and grassy areas and a sandy plateau above the Connecticut River. Any surface water in  
5 the Project area that runs off the pavement or leaches in the ground travels a short  
6 distance through the sandy soil to the Connecticut River where it discharges along the  
7 riverbank. The surface water does not have the opportunity to reach the bedrock aquifer  
8 in any significant amount, and the Project is thus not located in a significant aquifer-  
9 recharge area.

10  
11 **Act 250 Sub-Criterion 1(B): Waste Disposal**

12 Q10. Will the Project meet any applicable regulations regarding the disposal of waste adopted  
13 by the Departments of Environmental Conservation or Health, and does it involve the  
14 injection of waste materials or harmful or toxic substances into groundwater or wells?

15  
16 A10. The Project does not involve the disposal of waste. The Project will not generate  
17 industrial/manufacturing wastewater, chemicals, pesticides, batteries, radiation,  
18 hazardous wastes or any other harmful or toxic substances. As a result, the Project will  
19 not involve the injection of any waste materials or harmful or toxic substances into  
20 groundwater or wells.

1 As I discuss later in my testimony, Entergy VY is applying for a General Permit for  
2 Stormwater Discharge From Construction Sites from the Vermont Agency of Natural  
3 Resources, or "VANR." Entergy VY will file a copy of the General Permit with the  
4 Board upon receipt, and understands that it cannot commence construction on the Project  
5 until such Permit has been obtained.  
6

7 **Act 250 Sub-Criterion 1(C): Water Conservation**

8 Q11. Has the design of the Project addressed water conservation?

9 A11. This criterion is not applicable to the Project. The Project will not have water-supply or  
10 wastewater connections and therefore no additional water will be used at the Station as a  
11 result of the Project.  
12

13 **Act 250 Sub-Criterion 1(D): Floodways**

14 Q12. Is the Project located within a floodway?

15 A12. No. Based on review of the National Flood Insurance Mapping for the Connecticut  
16 River, dated September 27, 1991, it is evident that the Project site is well outside of the  
17 100-year floodway and floodway fringe. Exhibit PB-3 is the Floodway Map.  
18

19 **Act 250 Sub-Criteria 1(E) and (F): Streams and Rivers Shoreline**

20 Q13. Will the Project maintain the natural condition of streams whenever possible and, insofar  
21 as possible and reasonable in light of its purpose, retain rivers and river shoreline in their  
22 natural condition, allow continued access to the rivers and the recreational opportunities

1 provided by them, retain and provide vegetation that will screen the Project, and stabilize  
2 the banks from erosion with vegetation cover?

3 A13. Yes. There are no streams in the Project area, and the nearest river shoreline is the  
4 Connecticut River. At its closest point, the Project will be located more than 50 feet from  
5 the Connecticut River's riverbank. No construction will occur within 50 feet of the  
6 riverbank.

7  
8 The Project thus will have no impact on the natural condition of the Connecticut River,  
9 its shoreline, vegetation or stability. Vermont Yankee is a secure site, so no access to the  
10 water for recreation is presently provided from the property. The Project will be  
11 minimally visible, if at all visible, from the Connecticut River because it is some distance  
12 from and will be largely screened from view by the existing vegetation along the  
13 riverbank. Finally, as discussed later in my testimony, the visual character of the Project  
14 will be in keeping with the industrial nature and existing lighting of the Station.

15 **Act 250 Sub-Criterion 1(G): Wetlands**

16 Q14. Will the Project violate any rules of the Water Resources Board relating to significant  
17 wetlands?

18 A14. No. Based on our review of the National Wetlands Inventory Mapping, dated October,  
19 1975, there are no Class I or Class II wetlands in the area of the Project. Exhibit PB-4 is  
20 a copy of the Wetlands Map.

1        There are several un-mapped, Class III wetland areas involved in the Project site. Exhibit  
2        PB-7 is a letter report from William Lattrell, Professional Wetlands Scientist, of Valley  
3        Environmental Services that describes the Class III wetland areas. The Project will  
4        impact less than 3,000 square feet of these wetland areas; therefore the activity is covered  
5        under U.S. Army Corps of Engineers Vermont General Permit # 58 without the need for  
6        further permitting.

7  
8        **Act 250 Criterion 2: Water Availability**

9        Q15. Is there sufficient water available for the reasonably foreseeable needs of the Project?

10      A15. Again, as the Project will not have water-supply or wastewater connections, this criterion  
11      is not applicable to the Project.

12  
13      **Act 250 Criterion 3: Burden on Existing Water Supply**

14      Q16. Will the Project cause an unreasonable burden on any existing water supply?

15      A16. Again, this criterion is not applicable to the Project because there will be no water-supply  
16      or wastewater connections.

17  
18      **Act 250 Criterion 4: Erosion Control**

19      Q17. Will the Project cause unreasonable soil erosion or reduction in the capacity of the land to  
20      hold water?

21      A17. No. Due to the relatively flat nature of the Project site and the absence of drainage ways  
22      and streams around it, the risk of environmental damage due to erosion is minimal. A

1 Construction General Permit, or "CGP," for stormwater discharges from large  
2 construction sites will be obtained for this project prior to the start of any construction.  
3 One of the requirements of the CGP is that an Erosion Prevention Sediment Control, or  
4 "EPSC," plan be developed and implemented prior to any ground disturbance.  
5 Changes in stormwater-runoff caused by the Project will be addressed in accordance with  
6 the current VANR requirements for stormwater runoff. These requirements include  
7 providing treatment of the prescribed water quality volume, providing infiltration of the  
8 required groundwater recharge volume (of stormwater), and checking affected  
9 stormwater pathways to ensure any changes in runoff rate will not cause an erosive  
10 condition downstream. Stormwater treatment methods include the use of grassy swales,  
11 infiltration basins, and stormwater ponds. The Project will be partially constructed on  
12 existing impervious areas although there will be approximately seven acres of new  
13 impervious area added to the site. Entergy VY will apply for a Stormwater Discharge  
14 Permit from VANR and will file a copy of the permit with the Board upon receipt.  
15

16 By following the methods outlined in the Erosion Prevention Sediment Control plan  
17 (prepared for the CGP), the potential for discharge of sediment or erosion of the Project  
18 area will be kept to a minimum. It is my professional opinion that this Project as  
19 designed will not cause unreasonable soil erosion or reduction in the capacity of the land  
20 to hold water so that a dangerous or unhealthy condition may result.  
21  
22

**Act 250 Criterion 5: Transportation**

Q18. Will the Project cause unusual congestion or unsafe conditions with respect to transportation?

A18. No. Although there will be a limited temporary increase in construction vehicles during construction, the Project's limited traffic—similar to but far less than traffic during a scheduled outage—will not cause unusual congestion or unsafe transportation conditions. Once the Project is complete, traffic flow to and from the Station will be improved by separating the employee traffic from delivery vehicle traffic and by providing a separate exit lane that bypasses the area where vehicles are checked. Access from Governor Hunt Road to the Station will remain unchanged from the existing access.

**Act 250 Criterion 6: Educational Services**

Q19. Will the Project cause an unreasonable burden on the ability of the Town of Vernon to provide educational services?

A19. No. The Project will have no impact on educational services: It will not change the number of employees at Entergy VY and therefore the number of employee children educated in the area.

**Act 250 Criterion 7: Municipal or Governmental Services**

Q20. Will the Project place an unreasonable burden on the ability of the Town of Vernon to provide municipal or governmental services?

1 A20. No. Entergy VY has reviewed the Project with the Vernon Fire Chief, the Vernon Police  
2 Chief and the Vernon Selectboard. From these reviews, the only comment was from the  
3 Fire Chief who requested an extension of the existing dry pipe fire line from the plant  
4 security fence to the west side of the SBS near the Plant Support Building. This change  
5 was then incorporated into the design and is shown on Exhibit Entergy-1. The Vernon  
6 Fire and Police Departments have found that (i) they can provide adequate fire and police  
7 protection to the Project without burdening the Departments and (ii) the Project will not  
8 have an undue, adverse effect on the public health and safety. Exhibits PB-5 and PB-6  
9 are the respective letters to that effect from the Chief of the Vernon Fire and Police  
10 Departments.

11  
12 As Mr. McElwee has testified, by letter dated June 8, 2004, the Vernon Selectboard  
13 stated that, upon review of such plans, the Selectboard found that the Project will not  
14 unduly interfere with the orderly development of the region or overburden municipal and  
15 governmental services in the Town of Vernon. Exhibit DM-2 is the letter from the  
16 Vernon Selectboard.

17  
18 The Project will not require municipal sewer or water-supply services, new public roads  
19 or additional road maintenance.  
20  
21  
22

**Act 250 Criterion 8: Aesthetic Impact, Historical Sites and Natural Areas**

Q21. Will the Project have an undue adverse effect on the scenic or natural beauty of the area, aesthetics, historic sites or rare and irreplaceable natural areas?

**Scenic Beauty, Aesthetics**

A21. No. The Project site is generally flat and includes paved and grassy areas within the Owner Controlled Area, or "OCA." Excavation, grading, trenching, and paving will be performed as parts of this project.

The proposed location for the parking lot is north of the existing 345 kV switchyard.

To access the new parking area, Entergy VY proposes to construct an access road extending from the existing access road, along the westerly side of the Station property, in front of the Plant Support Building, and past the 345 kV switchyard to the new parking area. Lighting will be installed along the new access road and throughout the parking lot to provide visibility and security.

As shown on Exhibit Entergy-1, and as I will describe next, this lighting will include a total of eight 20-foot light poles and fourteen 30-foot light poles with 400 watt high-pressure sodium downcast lights mounted on each pole. Also, there will be two 400 watt high pressure sodium downcast lights mounted approximately 30 feet above the ground on an existing electrical transmission tower located in the northeast corner of the 345 kV switchyard. Each light pole will be installed on a concrete foundation. Trenching will be



1 required between the light poles and existing buildings and structures to bring power to  
2 the lights. As the necessary conduit and cabling are installed, the trenching area will be  
3 backfilled and regraded. This additional lighting will not substantially increase the  
4 amount or impact of lighting already visible from outside the Station site.

5  
6 Entergy VY also plans to make miscellaneous parking and roadway improvements as part  
7 of the Project, including the replacement of parking spots next to the so-called Governor  
8 Hunt House that were lost when the Station added a security checkpoint after September  
9 11, 2001.

10  
11 Finally, Entergy VY plans to re-align the SBS from Station 12 + 00 to Station 23 + 00 to  
12 follow the proposed parking lot access road, which will reduce the extent of excavation  
13 required as part of the SBS project and is preferable for security reasons. The proposed  
14 barrier location is indicated on Exhibit Entergy-1 as "Alternate Barrier Location."

15  
16 Entergy VY will maintain the existing buffer of mature trees outside of the SBS between  
17 the parking lot and the Connecticut River, and the exiting screen of trees between the  
18 proposed parking lot and Governor Hunt Road.

19  
20 While the additional lighting will be marginally visible from Governor Hunt Road, the  
21 rest of the Project will not be readily visible outside the OCA. Most of the Project will be  
22 located between 252 feet and 263 feet above sea level, which is approximately 10 to 18

1 feet below the elevation of Governor Hunt Road. That portion of the Project that is  
2 located at a slightly higher elevation will be screened by the existing trees along the OCA  
3 fence line. The Project, other than the additional lighting, will generally be protected  
4 from being viewed from the Connecticut River and the east side of the OCA by the  
5 existing buffer of mature trees and the vegetated buffer along the river bank as noted  
6 previously. The adjacent and visible generating Station is industrial in character and built  
7 with concrete and metal siding and has ancillary facilities including transmission lines,  
8 towers and transformers. The existing Station is also well lit.

9  
10 Using the Quechee test applicable to the aesthetic impact of a project under Criterion 8, it  
11 is my opinion that the Project will not result in undue adverse impact on scenic or natural  
12 beauty or aesthetics. First, I do not believe that the Project will have an adverse aesthetic  
13 impact. The five considerations under Quechee for determining whether a project may  
14 have an adverse aesthetic impact are:

- 15 (1) what is the nature of the project's surroundings?
- 16 (2) is the project's design compatible with its surroundings?
- 17 (3) are the colors and materials selected for the project suitable for the context  
18 within which the project will be located?
- 19 (4) where can the project be seen from? and
- 20 (5) what is the project's impact on open space in the area?

21 In general, these considerations help determine whether the proposed project "fits" in the  
22 context of the area. As I just testified, the area surrounding the Project is dominated by

1       Entergy VY's plant, which is industrial in character, built with concrete and metal sidings  
2       and includes transmission lines, towers and transformers. The Project's design will be  
3       compatible with the surroundings and suitable for the context in which the Project will be  
4       located. While the Project's lighting will be marginally visible from Governor Hunt  
5       Road, the Project will not stand out because of the buffer of existing trees, the elevation  
6       at which the Project is installed, and the dominance of Entergy VY's generating facilities.  
7       Finally, the Project will have little impact on open space in the area as its surroundings  
8       have been largely developed. In my opinion, the Project "fits" in the context of the area.

9  
10       Even if the Project were determined to have an adverse aesthetic impact, in my opinion  
11       that impact would not be undue. The Quechee factors for determining undue adverse  
12       impact are:

- 13       (1)     does the project violate a clear, written community standard intended to  
14               preserve the aesthetic and scenic or natural beauty of the area?
- 15       (2)     does the project offend the sensibilities of the average person? and
- 16       (3)     has the applicant failed to take generally-available mitigating steps which  
17               a reasonable person would take to improve the harmony of the proposed  
18               project with the surroundings?

19       As discussed in Mr. McElwee's testimony, the Project complies with the written  
20       standards of the Windham Regional Plan and the Town of Vernon Plan applicable to  
21       scenic resources. The Project will be in character with its surroundings, especially the  
22       adjacent Entergy VY facilities, so as to not offend the sensibilities of an average person.

1 Finally, Entergy VY has taken generally-available mitigating steps to improve the  
2 harmony of the proposed Project, including the maintenance of the existing buffer of  
3 trees between the parking lot and Governor Hunt Road and the parking lot and the  
4 Connecticut River, and limiting the lighting to be installed to the extent necessary to  
5 provide visibility and security for the new parking areas and access road.  
6

7 Irreplaceable Natural Areas

8 Mr. Everett Marshall of the Vermont Fish and Wildlife Department Nongame and  
9 Natural Heritage Program, reviewed the SBS Project for potential impacts to rare,  
10 threatened and endangered species. Based upon Mr. Marshall's search of the  
11 Department's databases, there are no known occurrences in the Project area. Mr.  
12 Marshall noted that there are several rare species associated with the Connecticut River  
13 adjacent to the SBS Project site, but that he did not anticipate any impact to these species.  
14 We have requested a letter from Mr. Marshall supporting his conclusions for this Project,  
15 and will file the letter with the Board upon receipt.

16 Historic Sites

17 Since the proposed Project would be visually considered part of the existing power-plant  
18 facility, it will not significantly change the character of the area. Existing vegetation will  
19 act as screening from other buildings in the area, especially during summer months.  
20

21 Some of the Project area was extensively disturbed during the construction of the Station  
22 in the early 1970s and has since been actively used for high-tension towers, stormwater

1 lines, access roads, a rail line and storage of materials. In 1991, Entergy VY's  
2 predecessor, Vermont Yankee Nuclear Power Corporation, commissioned a Phase I  
3 Cultural Resource Investigation by Hanson Engineers Incorporated ("Hanson Engineers")  
4 for the purpose of evaluating the construction of a low-level radioactive waste disposal  
5 facility in a larger area that included the proposed parking area. The 1991 Phase I  
6 Cultural Resources Study is provided as Exhibit PB-8. The proposed parking area is  
7 encompassed largely within the study area designated as Area V in the 1991 Phase I  
8 Cultural Resources Study (Exhibit PB-8 at 5-2). Shovel probe excavations conducted by  
9 Hanson Engineers indicated that significant cutting and filling has occurred across Area  
10 V, and that construction of the various improvements in Area V have altered the ground  
11 surface and compromised any cultural resources that may have been present in Area V  
12 (Exhibit PB-8 at 5-3). The portion of the parking area and access road not subject to the  
13 1991 Phase I Cultural Resources Study has been the source of even greater construction  
14 activity and use over the years of the Station's construction and operation.

15  
16 **Act 250 Sub-Criterion 8(A): Wildlife and Endangered Species Habitat**

17 Q22. Are there significant habitats or rare plants or animals at or near the Project site?

18 A22. No. As I previously discussed, Mr. Everett Marshall of the Vermont Fish and Wildlife  
19 Department Nongame and Natural Heritage Program has concluded that there are no  
20 known occurrences of rare, threatened or endangered species in the SBS Project area.  
21 While Mr. Marshall noted that there are several rare species associated with the  
22 Connecticut River adjacent to the SBS Project site, he did not anticipate any impact to

1       these species. We have requested a letter from Mr. Marshall supporting his conclusions  
2       for this Project, and will file the letter with the Board upon receipt. Critical wildlife  
3       habitat would not be adversely affected as a result of the Project.

4  
5       **Act 250 Sub-Criterion 9(K): Public Investment**

6       Q23. Will the Project unnecessarily or unreasonably endanger the public or quasi-public  
7       investment in governmental and public-utility facilities, services and lands?

8       A23. No. The most significant public-utility facility is Entergy VY's electric-generating  
9       station. As Mr. McElwee testified, that public utility will be enhanced by the Project.

10  
11       The other public or quasi-public facilities, services or lands in the Project area are the  
12       New England Central Railroad mainline, the Connecticut River, the hydroelectric station  
13       located at the Vernon Dam and the Town of Vernon roads. The Project is located  
14       approximately 1100 feet away from the New England Central Railroad mainline and will  
15       have no impact on that facility. The Project will have minimal affect, if any, on the  
16       Connecticut River as it will be located more than 50 feet from the riverbank and, as  
17       discussed previously, will have limited, if any, scenic impact, and no water-quality  
18       impact on the river. The Project will be located approximately 1000 feet from the  
19       hydroelectric station located at the Vernon Dam and will thus have no impact on that  
20       facility. Finally, and again as discussed earlier, the construction and use of the Project  
21       will have no permanent traffic impact on state or local highways and a very limited  
22       impact during construction.

1 **Executive Order 80-52: Agricultural Resources**

2 Q24. Will the Project conform to former Executive Order 80-52 regarding agricultural  
3 resources?

4 A24. Yes. I understand that the overall goal of Executive Order 80-52 was to ensure that  
5 development requiring state permits will not eliminate or significantly interfere with  
6 agricultural activities on productive agricultural lands or reduce the potential of primary  
7 agricultural soils unless there is no feasible and prudent alternative and taking into  
8 account whether the project has been planned to minimize its effect on such lands. Based  
9 on my review of the Soil Conservation Services Soil Survey of Windham County and  
10 Agricultural Value Groups for Soils, Windham County, the Project site is located in an  
11 area that is shown as having state-wide significant agricultural soils.

12  
13 As I previously stated, much of the Project site is currently actively used and is not  
14 presently in agricultural use. Specifically, there are high-tension towers, stormwater  
15 lines, an existing rail line, and access roads running through approximately 3.5 acres of  
16 the Project site that make that portion of the Project site not viable for agricultural use.  
17 Most of the Project site is not feasible for agricultural use due to its existing development  
18 and close proximity to plant operations.

19  
20 Among available siting options, the proposed location for the Project presents the least  
21 impact to agricultural soils, while still meeting the Project's goal of providing  
22 replacement parking for parking facilities lost to comply with Nuclear Regulatory

1 Commission, or "NRC," mandates and periodic parking for outage contractors. Entergy  
2 VY originally proposed siting the Project in a cornfield between the Station and  
3 neighboring properties along the Governor Hunt Road that is presently fully used for  
4 agricultural production. This location was preferable to the current proposed Project site  
5 in terms of proximity the Station, access to Governor Hunt Road and ease of access to  
6 overall Station operations. Entergy VY, however, chose not to pursue this location due to  
7 the concerns of neighbors along Governor Hunt Road and because that location would  
8 eliminate existing agricultural activities on those productive agricultural lands. There are  
9 no other feasible and prudent alternative sites for the Project on the lands owned by  
10 Entergy VY that would not have a greater impact on existing agricultural activities on  
11 productive agricultural lands. Entergy VY has taken generally available mitigation  
12 efforts, including utilizing and expanding to the fullest extent possible existing parking  
13 areas near the Governor Hunt House and the Plant Support Building; and placing as much  
14 of the new parking areas as possible on lands that are already disturbed or otherwise not  
15 presently available for agricultural production.

16  
17 Based on the foregoing, it is my opinion that the Project will not eliminate or  
18 significantly interfere with agricultural activities on productive agricultural lands or  
19 reduce the potential of primary agricultural soils, taking into account the alternatives to  
20 the Project, the relatively small amount of previously un-disturbed land involved in the  
21 Project, and the generally available mitigation efforts undertaken by Entergy VY.



1 Q25. Does this conclude your testimony?

2 A25. Yes.

3 **Error! Reference source not found.**