

STATE OF VERMONT
PUBLIC SERVICE BOARD

Petition of Entergy Nuclear Vermont Yankee,)
LLC, and Entergy Nuclear Operations, Inc., For a) Docket No. 8300
Certificate of Public Good Pursuant to 30 V.S.A.)
§ 248 and 10 V.S.A. § 6522 to Construct a Second)
Independent Spent Fuel Storage Installation)
("ISFSI") at the Vermont Yankee Nuclear Power)
Station)
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PREFILED TESTIMONY OF RICHARD SPIESE

On Behalf of the Vermont Agency of Natural Resources, Department of Environmental
Conservation, Waste Management and Prevention Division

Summary of Testimony

Mr. Spiese is an Environmental Analyst in the SITES Management Section of the Waste Management and Prevention Division and provides an overview of the applicable Vermont Hazardous Management Regulations and procedures and outlines the steps required to comply with these regulations and procedures and Criterion 1B – Waste Disposal. The recommendations in this testimony are not intended to and should not affect the timeline for any work on this project if the Board issues the Certificate of Public Good.

1 **Q1. Please state your name, place of employment, and position.**

2 A1. My name is Richard Spiese. I am employed by the Vermont Agency of Natural
3 Resources, Department of Environmental Conservation, Waste Management &
4 Prevention Division, Sites Management Section, 1 National Life Drive-Davis 1,
5 Montpelier, Vermont 05620. My title is Environmental Analyst VI.

6
7 **Q2. Please describe your education, professional background, and tenure at the Agency
8 of Natural Resources.**

9 A2. I have a degree from The Pennsylvania State University in Geological Sciences, and
10 continued my education at The University of Vermont in Natural Resources (ANR), with
11 an emphasis in Environmental Engineering. I have worked in Waste Management for the
12 State of Vermont for almost 28 years. I have numerous public affiliations and have
13 written many articles pertaining to my work. In my work related to Vermont Yankee, I
14 have worked on the Agency of Natural Resources Vermont Hazardous Materials
15 Response Team as a plume tracker for over 10 years. I provided hydrogeologic support
16 to the Vermont Department of Health when the tritium release was discovered at
17 Vermont Yankee, and have been supporting the ANR on non-radiological hazardous
18 waste matters pertaining to the decommissioning of Vermont Yankee.

19

20 My resume is attached as **Exhibit ANR-RS-1**.

21

1 **Q3. Have you previously provided testimony to the Public Service Board, the**
2 **Environmental Court, or the District Commissions?**

3 A3. I testified at the Public Service Board in response to the tritium release at Vermont
4 Yankee.

5

6 **Q4. What is the purpose of your testimony?**

7 A4. The purpose of my testimony is to give the Agency's perspective on non-radiological
8 hazardous waste issues related to the Project and Criterion 1(B) – Waste Disposal, raise
9 any concerns the Agency has in regards to the Project meeting the Agency's non-
10 radiological Hazardous Waste Management Regulations and procedures and Criterion
11 1(B), and provide recommendations the Agency has for addressing those concerns. The
12 recommendations in this testimony are not intended to and should not affect the timeline
13 for any work on this project if the Board issues the Certificate of Public Good.

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15

16 **Q5. Please describe the scope of your review of the proposed Project?**

17 A5. My direct review of the proposed Project is limited. I have reviewed the 2014 Non-
18 Radiological Historical Site Assessment prepared by Radiation Safety & Control Services
19 and other environmental reports, and performed site inspections of the North Warehouse,
20 which is the area where the proposed Project is planned on being performed.

21

1 **Q6. Please describe the Agency regulations regarding non-radiological hazardous waste**
2 **disposal and management that are applicable to the Project.**

3 A6. Entergy Nuclear Vermont Yankee is a generator of non-radiological hazardous waste
4 subject to state regulation under the Vermont Hazardous Waste Management Regulations
5 (VHWMR). The Agency is authorized by federal law to administer the VHWMR in lieu
6 of a federal hazardous waste program under the federal Resource Conservation and
7 Recovery Act Subtitle C hazardous waste regulations. The VHWMR govern the
8 management of non-radiological hazardous wastes generated, transported, treated, stored,
9 or disposed of in the State. In addition to the VHWMR, the Hazardous Waste Program
10 maintains a variety of procedures and guidance documents to assist with implementation
11 of the VHWMR. Under the VHWMR, generators of non-radiological hazardous waste
12 are subject to the general management standards set forth in subchapter 3, including the
13 generator closure requirements of VHWMR § 7-309(c). For example, Entergy must
14 provide notification of intent to commence non-radiological aspects of closure or partial
15 closure activities by submitting a Pre-Closure Notification Form to the Agency at least 90
16 days before beginning closure activities. The Agency may also require that Entergy
17 submit a non-radiological closure or partial closure plan for investigating releases of non-
18 radiological hazardous materials that were released or may have been released at the
19 portion of the site being closed. My understanding of the proposed Project is that the
20 North Warehouse will be torn down, and soils will be removed to prepare the subgrade
21 for a concrete slab. These materials and disturbed soils will need to be investigated for
22 possible non-radiological hazardous compounds of concern based on the past and current

1 use of the area. If non-radiological hazardous constituents are identified above Agency
2 Soil Screening Values, Entergy must prepare a plan and receive approval on how these
3 soils will be managed.

4
5 **Q7. Does the Agency follow specific procedures for non-radiological hazardous material**
6 **investigation and remediation activities where a proposed Section 248 project will**
7 **involve disturbance of any areas where non-radiological hazardous material may be**
8 **located now or in the past, or where non-radiological hazardous material may have**
9 **been released into the environment?**

10 A7. Yes, the Waste Management and Prevention Division's "Procedure for Conducting
11 Hazardous Material Investigations and Remediation Activities Under 30 V.S.A. Section
12 248" sets forth a procedure for projects that will involve disturbance of any areas where
13 non-radiological hazardous material may be located now or in the past, or where non-
14 radiological hazardous material may have been released into the environment. The
15 guidance is attached as **Exhibit ANR-RS-2**.

16
17 **Q8. What procedure must Petitioners follow if the project falls within the scope of the**
18 **"Procedure for Conducting Hazardous Material Investigation and Remediation**
19 **Activities Under 30 V.S.A. Section 248"?**

20 A8. The Petitioner should review records to determine what non-radiological hazardous
21 materials may be or may have been located or potentially released; conduct a visual
22 inspection of all areas where non-radiological hazardous materials may be or may have

1 been located or potentially released; and develop a site-specific investigation work plan
2 in accordance with the Agency's "Investigation and Remediation of Contaminated
3 Properties Procedure" that must be approved by the Agency.

4
5 **Q9. Does the Project involve disturbance of any areas where non-radiological hazardous**
6 **material may be located now or in the past, or where non-radiological hazardous**
7 **material may have been released into the environment?**

8 A9. Yes, the Project involves the removal of the North Warehouse and disturbance of the
9 soils beneath and around the North Warehouse, which has been the primary short-term
10 non-radiological hazardous waste storage area for the Entergy Vermont Yankee Nuclear
11 Power Station for decades. In addition, waste oil has been burned in the North
12 Warehouse and non-radiological hazardous materials in the emissions from the boiler
13 may have settled in the soils around the building.

14
15 **Q10. Please describe what non-radiological hazardous materials may be located now or in**
16 **the past, or where non-radiological hazardous material may have been released into**
17 **the environment in the area that will be disturbed by the Project.**

18 A10. Based on the reports I have reviewed and the site inspection I performed on the North
19 Warehouse area, non-radiological hazardous materials located at this site now and in the
20 past may include waste oil, volatile organic compounds, and polychlorinated biphenyls.
21 Given the long history of non-radiological hazardous waste activities at the North
22 Warehouse and the Entergy Vermont Yankee Nuclear Power Station, this area should

1 also be investigated for possible release of the RCRA Priority Metals, semi-volatile
2 organic compounds, and dioxin.

3
4 **Q11. Has the Petitioner complied with the Agency's procedures for conducting non-**
5 **radiological hazardous material investigation and remediation activities?**

6 A11. As part of the 2014 Non-Radiological Historical Site Assessment, the Petitioner
7 conducted a review of historical documents and a visual inspection of the North
8 Warehouse. However, Entergy has not developed a site investigation work plan for the
9 North Warehouse area in accordance with the Agency's Section 248 guidance. Due to
10 the nature of the non-radiological hazardous waste activities that took place for decades
11 at the North Warehouse, this work plan should include a sampling plan for non-
12 radiological hazardous waste in the North Warehouse building materials and soils
13 beneath and around the North Warehouse before the North Warehouse is torn down. The
14 Agency must review and approve the work plan. In addition, Entergy must provide
15 appropriate notice at least 90 days prior to commencement of the non-radiological aspects
16 of the closure activities related to the North Warehouse and submit a non-radiological
17 hazardous waste closure plan for the North Warehouse if requested by the Agency.

18
19
20

1 **Q12. Why isn't the 2014 Non-Radiological Historical Site Assessment sufficient to**
2 **demonstrate compliance with the Agency's Section 248 Guidance and the**
3 **VHWMR?**

4 A12. Entergy did not conduct any soil or other sampling for non-radiological hazardous waste
5 as part of the 2014 Non-Radiological Historical Site Assessment. Rather, Entergy
6 reviewed available records and conducted a visual inspection of the North Warehouse
7 and concluded that there are no "known" non-radiological hazardous waste releases in the
8 North Warehouse area. Given that this warehouse served as the primary short-term non-
9 radiological hazardous waste storage area for the Entergy Nuclear Vermont Yankee
10 Power Station for decades and was the location where waste oil was burned, it is possible
11 that non-radiological hazardous waste materials may have been released into the
12 environment. In this case, there may not be records of releases that happened 20-30 years
13 ago and older non-radiological hazardous waste spills would not be apparent from a
14 visual inspection of the building and surface soils.

15
16 **Q13. Is it sufficient for Entergy to only conduct soil sampling for non-radiological**
17 **hazardous wastes if they detect an odor or visual staining during the construction**
18 **process?**

19 A13. No. It is entirely possible that older spills of non-radiological hazardous waste would not
20 give off an odor or show visible signs of contamination. The low human health soil
21 standards for PCBs and dioxin could prohibit the detection of these contaminants in soils

1 by visual or olfactory observation and still exceed these soil standards that could only be
2 detected by laboratory analysis.

3

4 **Q14. Do you have any recommendations to the Board for conditions to be included in any**
5 **CPG issued for this Project?**

6 A14. Yes. The Board should include a condition that Entergy submit a non-radiological
7 hazardous waste site investigation work plan for the North Warehouse area in accordance
8 with the Agency's "Investigation and Remediation of Contaminated Properties
9 Procedure"; comply with the "Procedure for Conducting Hazardous Material
10 Investigation and Remediation Activities Under 30 V.S.A. Section 248"; and comply
11 with the closure requirements in Subchapter 3 of the VHWMR for the non-radiological
12 hazardous waste aspects of the closure of the North Warehouse area.

13

14 **Q15. Does this conclude your testimony?**

15 A15. Yes.