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

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

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

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

My resume is attached as Exhibit ANR-RS-1.
Q3. Have you previously provided testimony to the Public Service Board, the Environmental Court, or the District Commissions?

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

Q4. What is the purpose of your testimony?

A4. The purpose of my testimony is to give the Agency’s perspective on non-radiological hazardous waste issues related to the Project and Criterion 1(B) – Waste Disposal, raise any concerns the Agency has in regards to the Project meeting the Agency’s non-radiological Hazardous Waste Management Regulations and procedures and Criterion 1(B), and provide recommendations the Agency has for addressing those concerns. 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.

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

A5. My direct review of the proposed Project is limited. I have reviewed the 2014 Non-Radiological Historical Site Assessment prepared by Radiation Safety & Control Services and other environmental reports, and performed site inspections of the North Warehouse, which is the area where the proposed Project is planned on being performed.
Q6. Please describe the Agency regulations regarding non-radiological hazardous waste disposal and management that are applicable to the Project.

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

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

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

Q8. What procedure must Petitioners follow if the project falls within the scope of the
“Procedure for Conducting Hazardous Material Investigation and Remediation
Activities Under 30 V.S.A. Section 248”?

A8. The Petitioner should review records to determine what non-radiological hazardous
materials may be or may have been located or potentially released; conduct a visual
inspection of all areas where non-radiological hazardous materials may be or may have
been located or potentially released; and develop a site-specific investigation work plan
in accordance with the Agency’s “Investigation and Remediation of Contaminated
Properties Procedure” that must be approved by the Agency.

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

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

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

A10. Based on the reports I have reviewed and the site inspection I performed on the North
Warehouse area, non-radiological hazardous materials located at this site now and in the
past may include waste oil, volatile organic compounds, and polychlorinated biphenyls.
Given the long history of non-radiological hazardous waste activities at the North
Warehouse and the Entergy Vermont Yankee Nuclear Power Station, this area should
also be investigated for possible release of the RCRA Priority Metals, semi-volatile organic compounds, and dioxin.

Q11. Has the Petitioner complied with the Agency’s procedures for conducting non-radiological hazardous material investigation and remediation activities?

A11. As part of the 2014 Non-Radiological Historical Site Assessment, the Petitioner conducted a review of historical documents and a visual inspection of the North Warehouse. However, Entergy has not developed a site investigation work plan for the North Warehouse area in accordance with the Agency’s Section 248 guidance. Due to the nature of the non-radiological hazardous waste activities that took place for decades at the North Warehouse, this work plan should include a sampling plan for non-radiological hazardous waste in the North Warehouse building materials and soils beneath and around the North Warehouse before the North Warehouse is torn down. The Agency must review and approve the work plan. In addition, Entergy must provide appropriate notice at least 90 days prior to commencement of the non-radiological aspects of the closure activities related to the North Warehouse and submit a non-radiological hazardous waste closure plan for the North Warehouse if requested by the Agency.
Q12. Why isn’t the 2014 Non-Radiological Historical Site Assessment sufficient to demonstrate compliance with the Agency’s Section 248 Guidance and the VHWMR?

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

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

A13. No. It is entirely possible that older spills of non-radiological hazardous waste would not give off an odor or show visible signs of contamination. The low human health soil standards for PCBs and dioxin could prohibit the detection of these contaminants in soils.
by visual or olfactory observation and still exceed these soil standards that could only be
detected by laboratory analysis.

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

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

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

A15. Yes.