



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PA 19406-2713

May 4, 2016

EA-16-049

Mr. Christopher Wamser  
Site Vice President  
Entergy Nuclear Operations, Inc.  
Vermont Yankee Nuclear Power Station  
Vernon, VT 05354

SUBJECT: NRC INSPECTION REPORT NO. 05000271/2016001, ENTERGY NUCLEAR OPERATIONS, INC., VERMONT YANKEE NUCLEAR POWER STATION, VERNON, VERMONT, AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Wamser:

On March 31, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed its quarterly inspection under Inspection Manual Chapter 2561, "Decommissioning Power Reactor Inspection Program," at the permanently shut down Vermont Yankee Nuclear Power Station (VY). On-site inspections were performed on February 1-4, and March 29-31, 2016. In-office reviews of information supplied by Entergy Nuclear Operations, Inc. were also performed during the inspection period. The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and the conditions of your license. The inspection consisted of observations by the inspector, interviews with personnel, and a review of procedures and records. The results of the inspection were discussed with you and other members of the VY staff on April 18, 2016, and are described in the enclosed report.

Based on the results of this inspection, the NRC has determined that one Severity Level IV violation of NRC requirements was identified and is described in the subject inspection report. This violation was evaluated in accordance with the NRC Enforcement Policy, the current version of which is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. However, in consideration of the circumstances in this case, the NRC has determined that it is appropriate to exercise enforcement discretion in accordance with Section 3.5 of the Enforcement Policy to refrain from issuing an enforcement action for this violation. Specifically, the staff recognizes that there were issues associated with the clarity of regulatory guidance on this issue.

Current NRC regulations and guidance are included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select Radioactive Waste; Decommissioning of Nuclear Facilities; then Regulations, Guidance and Communications. The current Enforcement Policy is included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents; then Enforcement Policy (Under 'Related Information'). You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

C. Wamser

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No reply to this letter is required. Please contact Steve Hammann, at 610-337-5399, if you have any questions regarding this matter.

Sincerely,

***/RA JNick f/***

James Trapp, Director  
Division of Nuclear Materials Safety

Docket No. 05000271

License No. DPR-28

Enclosure: Inspection Report 05000271/2016001  
w/Attachment

cc w/encl: Distribution via ListServ

C. Wamser

2

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DATE	4/29/16		4/28/16 via email	5/4/16	5/4/16

\*see previous concurrence

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Inspection No. 05000271/2016001  
Docket No. 05000271  
License No. DPR-28  
Licensee: Entergy Nuclear Operations, Inc. (Entergy)  
Facility: Vermont Yankee Nuclear Power Station (VY)  
Location: Vernon, VT 05354  
Inspection Dates: January 1, 2016 to March 31, 2016  
Inspector: Stephen Hammann, Senior Health Physicist  
Decommissioning and Technical Support Branch  
Division of Nuclear Materials Safety, Region I  
Approved By: Raymond Powell, Chief  
Decommissioning and Technical Support Branch  
Division of Nuclear Materials Safety, Region I

## EXECUTIVE SUMMARY

Entergy Nuclear Operations, Inc.  
Vermont Yankee Nuclear Power Station  
NRC Inspection Report No. 05000271/2016001

An announced quarterly inspection was completed at Vermont Yankee Nuclear Power Station (VY) on March 31, 2016. On-site inspections were conducted on February 1-4, and March 29-31, 2016. In-office reviews of information supplied by Entergy Nuclear Operations, Inc. (Entergy) were also performed during the inspection period. The inspection included a review of self-assessments, corrective action program (CAP), audits, safety reviews, and decommissioning performance. The inspection consisted of observations by the inspector, interviews with Entergy personnel, a review of procedures and records, and plant walk-downs. The NRC's program for overseeing the safe operation of a shut-down nuclear power reactor is described in Inspection Manual Chapter (IMC) 2561, "Decommissioning Power Reactor Inspection Program."

Based on the results of this inspection, a Severity Level (SL) IV violation of 10 Code of Federal Regulations (CFR) 50.82(a)(8)(ii) was identified. 10 CFR 50.82(a)(8)(ii) states, in part, that initially, three percent (3%) of the generic amount of decommissioning funds as specified in § 50.75 may be used for decommissioning planning. Contrary to the requirement, Entergy withdrew decommissioning funds for an activity that was not directly related to decommissioning planning. Specifically, on February 4, 2015, Entergy withdrew decommissioning funds for operational spent fuel management planning activities prior to receiving an exemption from the applicable regulations.

This apparent violation of 10 CFR 50.82(a)(8)(ii) was evaluated in accordance with the NRC Enforcement Policy, the current version of which is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. Failure to receive an exemption from 10 CFR 50.82(a)(8)(ii) prior to using funds for non-decommissioning activities was determined to be a SL IV violation pursuant to the Enforcement Policy. However, in consideration of the circumstances in this case, the NRC has determined that it is appropriate to exercise enforcement discretion in accordance with Section 3.5 of the Enforcement Policy to refrain from issuing an enforcement action for this violation. Specifically, the staff recognizes that there were issues associated with the clarity of regulatory guidance on this issue.

## **REPORT DETAILS**

### **1.0 Background**

On January 12, 2015, VY certified the permanent removal of fuel from the reactor vessel [Agencywide Document and Access Management System (ADAMS) Accession No. ML15013A426]. This met the requirements of 10 CFR 50.82(a)(1)(i) and 50.82(a)(1)(ii). On January 20, 2015, the NRC notified VY that the Operating Reactor Assessment Program would cease on January 24, 2015 and that implementation of the Decommissioning Power Reactor Inspection Program would begin on January 25, 2015 (ADAMS Accession No. ML15020A482). VY is currently in the "Post Operation Transition Phase" of decommissioning as described in IMC 2561.

### **2.0 Post Operation Transition Phase Performance and Status Review**

#### **a. Inspection Scope (Inspection Procedures (IPs) 36801, 37801, 40801, 71801)**

The inspector performed on-site inspections the weeks of February 1-4, and March 29-31, 2016. In-office reviews of information supplied by Entergy were also performed during the inspection period. The inspection consisted of observations by the inspector, interviews with Entergy personnel, a review of procedures and records, and plant walk-downs.

The inspector reviewed documents and interviewed VY personnel to verify Entergy management performed audits and self-assessments, and ensured issues were identified and corrected in accordance with the site's CAP. The inspector reviewed a representative selection of CAP documents to determine if a sufficiently low threshold for problem identification existed, follow-up evaluations were of sufficient quality, and Entergy assigned timely and appropriate prioritization for issue resolution commensurate with the significance of the issue.

The inspector conducted document reviews and interviews with plant personnel to verify Entergy procedures and processes conformed to the regulations and guidance associated with 10 CFR 50.59 and changes made by Entergy under 10 CFR 50.59 did not require prior NRC approval. The inspector reviewed the qualification and training for 10 CFR 50.59 evaluators, process applicability determination for evaluations, and an evaluation performed of the reactor building crane.

The inspector reviewed the current status and future plans for radioactive water management at the site. The inspector performed a walk-down of frac tanks and bladders and toured the water intrusion locations in the turbine building. The inspector reviewed current inventories, tank capacities, and groundwater intrusion rates. The inspector reviewed preliminary plans for activities to mitigate groundwater intrusion.

The inspector reviewed the status of the on-going project to channel spent fuel assemblies, the spent fuel pool (SFP) clean-up project, and radwaste shipment from the SFP. The inspector interviewed personnel, and observed locations of the radwaste transport cask and liners containing radwaste. The inspector interviewed workers, and reviewed radiation work permits, plans, work orders, and condition reports to verify activities were performed in accordance with plant procedures and technical specifications (TS). The inspector reviewed radiation surveys of the radwaste transport cask and transport vehicle and reviewed shipping paperwork for the first radwaste shipment to verify compliance with the regulations.

b. Observations

The inspector determined that issues were being identified and entered into the CAP and evaluated commensurate with their safety significance. The inspector verified audits were being performed by qualified individuals independent of the organization being audited.

The inspector determined that 10 CFR 50.59 screenings and evaluations are being performed and that Entergy has trained and qualified individuals to perform the evaluations. The inspector determined that changes under 10 CFR 50.59 did not require prior NRC approval and safety reviews were performed for design changes and modifications.

The inspector determined that radioactive water inventories were being tracked on a daily basis and continues to be a priority for Entergy management. The inspector verified that VY has been making waste water shipments to control the overall inventory and the shipments meet regulatory requirements. The inspector determined that VY management continues to assess options regarding disposal of on-site radioactive water inventory and to further mitigate groundwater intrusion.

The inspector determined the SFP clean-up and channeling activities were performed safely and in accordance with plant procedures. The inspector reviewed the first of two shipments of radwaste from the SFP clean-up project and determined the shipment met the regulatory requirements. The inspector verified the activities were performed in accordance with the post shutdown decommissioning activities report.

c. Findings

The report documents a SL IV violation of 10 CFR 50.82(a)(8)(ii). 10 CFR 50.82(a)(8)(ii) states, in part, that initially, three percent (3%) of the generic amount of decommissioning funds as specified in § 50.75 may be used for decommissioning planning. Contrary to the requirement, Entergy used decommissioning funds in a manner that was not directly related to decommissioning planning. Specifically, Entergy used decommissioning funds for operational spent fuel management planning activities prior to receiving an exemption from the applicable regulations.

Underlying the issue is the interpretation of operational spent fuel management planning activities versus operational spent fuel management activities. VY management drew a

distinction between the two, based on guidance contained in Regulatory Guide (RG) 1.184, "Decommissioning of Nuclear Power Reactors." Specifically RG 1.184 states, in part, "The staff recognizes that during planning for decommissioning, it is necessary to consider activities leading to license termination and the storage of spent fuel; therefore, the staff's interpretation of the appropriate use of these planning funds will permit planning for all issues related to the decommissioning of the facility." As such, VY management concluded that an exemption was not required to withdraw and use funds for operational spent fuel management planning activities.

Seemingly in contrast to the above, RG 1.184 also states, in part, that "This regulatory guide does not contain guidance on the management or funding for the storage of spent reactor fuel. Requirements for the storage and management of spent fuel, and for financial assurance are separate from site decommissioning activities and are contained in 10 CFR 50.54(bb)." Specifically, 50.54(bb) requires that licensees submit to the NRC a plan for spent fuel management which includes funding for spent fuel management. After consultation with the Office of General Counsel, the staff's position is that the initial three percent withdrawal from the decommissioning trust fund allowed for decommissioning planning is limited to paper studies related to decommissioning activities as defined in 10 CFR 50.2 and cannot be used for spent fuel management planning.

On January 6, 2015, Entergy requested exemptions to allow the use of funds from the Vermont Yankee decommissioning trust fund for irradiated fuel management activities. On June 17, 2015, the NRC staff approved exemptions from requirements of 10 CFR § 50.75(h)(1)(iv) and 50.82(a)(8)(i)(A) for Entergy to use funds in this manner. These exemptions would have allowed Entergy to withdraw funds from the VY decommissioning trust fund for operational spent fuel management planning activities. However, at the time of the February 4, 2015 withdrawal, these exemptions had not been approved.

This apparent violation of 10 CFR 50.82(a)(8)(ii) was evaluated in accordance with the NRC Enforcement Policy, the current version of which is included on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. Failure to receive an exemption from 10 CFR 50.82(a)(8)(ii) prior to using funds for non-decommissioning activities was determined to be a Severity Level IV violation pursuant to the Enforcement Policy. However, in consideration of the circumstances in this case, the NRC has determined that it is appropriate to exercise enforcement discretion in accordance with Section 3.5 of the Enforcement Policy to refrain from issuing an enforcement action for this violation. Specifically, the staff recognizes that there are issues associated with the clarity of regulatory guidance on this issue.

After being informed of the potential 10 CFR 50.82(a)(8)(ii) violation, Vermont Yankee initiated a fleet-wide condition report (CR-HQN-2015-01346) to initiate interim actions to prevent other Entergy sites from withdrawing funds for spent fuel management planning expenditures, pending clarification of NRC guidance.



### **3.0 Exit Meeting Summary**

On April 18, 2016, the inspector presented the inspection results, via teleconference, to Chris Wamser, Site Vice President, and other members of Entergy's staff. The inspector confirmed that proprietary information was not removed from the site.

**PARTIAL LIST OF PERSONS CONTACTED**

Licensee

H. Breite, Sr. Lead Engineer  
C. Chappell, Licensing and CA&A Manager  
P. Couture, Licensing  
C. Daniels, Plant Manager  
J. Laughney, QA Supervisor  
J. Meyer, Licensing  
M. Pletcher, Radiation Protection and Chemistry Manager  
B. Prypen, Engineering  
K. Whippie, Chemistry Supervisor  
A. Zander, Shift Manager

**ITEMS OPEN, CLOSED, AND DISCUSSED**

05000271/2016001-01; Decommissioning Funds Used In A Manner Not Directly Related To Decommissioning Planning

**LIST OF DOCUMENTS REVIEWED**

Condition Reports

CR-VTY-2015-00098, 00404, 00454, 00781, 00984, 01512, 01513, 01528, 01585, 01636, 01861, 02003, 02004, 02005, 02068  
CR-VTY-2016-00005, 00011, 00018, 00054, 00071, 00088, 00175, 00218, 00243

Drawings

Drawing G-191314, G-191532, G-191661

Procedures

EN-LI-101, 10 CFR 50.59 Evaluations, Rev. 12  
FQC-ADM-5059, 10 CFR 50.59 Review Program Qualification Card, Rev. 1  
MMMP-INSP-5240-11, Reactor Building Crane Periodic and Wire Rope Inspections, Rev. 5  
MTVN-SFP-10125, Operation of the Advanced Crusher-Shear, Rev. 00  
MTVN-SFP-10126, Operation of the Control Rod Blade Crimper, Rev.00  
MTVN-SFP-10127, Operation of the LPRM Cutter, Rev.00  
RVPN-RW-10128, Receipt of Unloaded 3-60B Shipping Cask and Preparation for Loading, Rev. 00  
RVPN-RW-10129, 3-60B Shipping Cask Wet Loading, Rev. 00  
RVPN-RW-10130, Preparation of Loaded 3-60B Shipping Cask for Transportation, Rev. 00  
V-EN-LI-100, Process Applicability Determination, Rev. 19  
V-EN-LI-102, Performance Improvement Program, Rev 26

Procedures-Completed Surveillance Procedures

10 CFR 50.59 Evaluation #2015-001/0

ALARA Plan, Spent Fuel Pool Cleanout, Rev. 0

EN-RW-102, Radioactive Shipping Procedure, Attachment 9.1, 9.12, 9.13, 9.14, Shipment Number 2016-24, Rev. 11

Miscellaneous

Audit # QA-14-15-2015-VY-1, Radiation Protection and Radwaste

Process Water and Intrusion Water Inventory, 1/26/16

Radiation Protection/Radwaste Audit Plan/Memo, QA-14-15-2015-VY-1

RSCS Intercept Well Supplemental Oversight Plan

RWP 20160702, Spent Fuel Pool Cleanout Project

RWP In Progress Review, Spent Fuel Pool Cleanout Project, 3/23/16

SW Pump Running Hours, Updated 2/1/16

Turbine Building Pilot Hole Locations and Sample Results

Vermont Yankee Apparent Cause Evaluation, CR-VTY-2015-2003

Vermont Yankee Nuclear Power Station, Quality Assurance Program Manual, Rev. 3

Water Management Inventory, 1/26/2016

Work Orders

WO 430584-01, TB Groundwater In-leakage Mitigation

WO 00418360, 01-07, Perform Spent Fuel Pool Clean Out of Non-Fuel SNM

**LIST OF ACRONYMS USED**

ADAMS	Agencywide Document and Access Management System
CAP	Corrective Action Program
CFR	Code of Federal Regulations
Entergy	Entergy Nuclear Operations, Inc.
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NRC	U.S. Nuclear Regulatory Commission
RG	Regulatory Guide
SFP	Spent Fuel Pool
SL	Severity Level
TS	Technical Specifications
VY	Vermont Yankee Nuclear Power Station