



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

July 27, 2017

John Boyle  
Director, Nuclear Decommissioning  
320 Governor Hunt Road  
Vernon, VT 05354

SUBJECT: NRC INSPECTION REPORT NO. 05000271/2017002, ENTERGY NUCLEAR OPERATIONS, INC., VERMONT YANKEE NUCLEAR POWER STATION, VERNON, VERMONT

Dear Mr. Boyle:

On June 30, 2017, 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 May 1-3, 2017. 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 July 10, 2017, and are described in the enclosed report. No findings of safety significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document system (ADAMS), accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

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).

J. Boyle

2

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 mcr for/*

Raymond J. Powell, Chief  
Decommissioning and Technical Support  
Branch  
Division of Nuclear Materials Safety

Docket No. 05000271  
License No. DPR-28

Enclosure: Inspection Report 05000271/2017002  
w/Attachment

cc w/encl: Distribution via ListServ

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Inspection No. 05000271/2017002  
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: April 1, 2017 to June 30, 2017  
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. 05000271/2017002

An announced quarterly inspection was completed at Vermont Yankee Nuclear Power Station (VY) on June 30, 2017. On-site inspections were conducted on May 1-3, 2017. 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 organization, management, decommissioning schedule, and occupational radiation exposure. 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, no findings of safety significance were identified.

## 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 Code of Federal Regulations (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 SAFSTOR phase of decommissioning as described in IMC 2561.

### **2.0 SAFSTOR Performance and Status Review**

#### **a. Inspection Scope [Inspection Procedures (IPs) 36801, 83750]**

The inspector performed an on-site inspection on May 1-3, 2017. 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 conducted document reviews, observed activities, and interviewed plant personnel to verify the following: regulatory requirements were properly implemented with respect to the site organization, staffing and staff qualifications; certified fuel handler and employee training programs were implemented in accordance with Entergy procedures and NRC requirements; Entergy established procedures and processes to resolve employee safety concerns, disseminate safety information and effectively resolve identified problems; and Entergy's decommissioning activities were performed in a manner consistent with the Post Shutdown Decommissioning Activities Report (PSDAR) and schedule changes to the PSDAR were consistent with NRC regulations and guidance.

The inspector reviewed documentation, observed radiation protection (RP) technician activities on the refuel floor, and interviewed staff to verify the following: planning and preparation for radiation work is adequate; training and qualifications of RP staff meet the requirements of the site training program; personal dosimetry and exposure control meet regulatory requirements; control of radioactive materials, contamination, surveys and monitoring are performed as required by regulation and plant procedures; and occupational exposure is maintained as low as reasonably achievable (ALARA).

#### **b. Observations and Findings**

The inspector verified that management oversight was adequate for the SAFSTOR phase of decommissioning and that no significant changes had been made to the VY SAFSTOR organization since the previous inspection. The inspector determined that training programs were being appropriately implemented, workers check their training qualifications weekly via computerized system, and training reports are generated weekly and reviewed by the training coordinator. The inspector determined safety issues are reported to management daily and a weekly report out of all safety issues is reviewed by management. The inspector noted that VY made a schedule change that

impacted the information contained in their PSDAR. The change was related to the timeline for the dry fuel storage loading campaign. The change was documented in a letter to the NRC, dated April 12, 2017 (ML17104A050).

The inspector determined that survey records were clear and complete, and RP technicians used appropriate instruments for the surveys. The inspector noted most routine surveys, instrument calibrations and daily source checks of instruments are performed on back shift. The inspector verified technician training and qualifications were up to date. The inspector verified that ALARA plans were performed as needed and were effective in limiting worker exposure and occupational dose for 2016 was acceptable for the scope of the radiological activities being performed. The inspector noted that the RP staff may be supplemented with contractors depending on the project.

c. Conclusions

Based on the results of this inspection, no findings of safety significance were identified.

**3.0 Exit Meeting Summary**

On July 10, 2017, the inspector presented the inspection results, via teleconference, to Jack Boyle, Director, Nuclear Decommissioning, 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

D. Andrews, RP Technician  
J. Boyle, Decommissioning Director  
H. Breite, Sr. Lead Engineer  
C. Chappell, Manager – Design and Programs  
C. Daniels, Senior Manager Production  
J. Ewell, Senior HP Specialist  
S. Hill, Training Coordinator  
A. Miller, RP Technician  
M. Pletcher, Radiation Protection and Chemistry Manager  
T. Silko, Licensing

State of Vermont

A. Leshinskie, Engineer

**ITEMS OPEN, CLOSED, AND DISCUSSED**

None

**LIST OF DOCUMENTS REVIEWED**

Condition Reports

CR-VTY-2017-00267, 00285, 00299

Procedures

TDD 1.0 SAFSTOR Systematic Approach to Training (SAT), Rev. 3  
V-EN-IS-101, Industrial Safety and Health Program, Rev. 6  
QA-2-6-2015-VY-1, Combined Chemistry, Effluents and Environmental Monitoring Audit  
EN-RP-102, Radiological Control, Rev. 4  
EN-RP-201, Dosimetry Administration, Rev 4  
EN-RP-202, Personnel Monitoring, Rev. 9  
EN-RP-203, Dose Assessment, Rev. 6  
EN-RP-208, Whole Body Counting/In-Vitro Bioassay, Rev. 6  
AP 0548, Controlled Area Exposure Monitoring, Rev 8  
DP 4531, Radioactive Contamination Surveys, Rev. 32  
DP 0545, Fuel Pool Storage Requirements, Rev. 17  
OP4530, Dose Rate Radiation Surveys, Rev. 29  
V-EN-RP-110-DP, ALARA Program, Rev. 2

Radiation Protection

ALARA Plan 2017-01, ISFSI Loading, Processing and Transport to Dry Fuel Storage, Rev. 0  
Survey Log Book 17-0159, 0161, 0162, 0164, 0166, 0168, 0170

Miscellaneous

Organization Chart, 2/8/17  
SAFSTOR CFHTPD, Certified Fuel Handler Training Program Description, Rev. 1  
SAFSTORTPD, SAFSTOR Training Program Description, Rev. 3  
SAFSTOR Radiation Protection TPD Task to Training Matrix, Rev. 0



Miscellaneous (Cont'd)

WT-WTHQN-2017-00103

Process Applicability Determination, EC 68729

Safety Observations, 2017, Weeks 10-17

**LIST OF ACRONYMS USED**

ADAMS	Agencywide Document and Access Management System
ALARA	As Low As Reasonably Achievable
CFR	Code of Federal Regulations
Entergy	Entergy Nuclear Operations, Inc.
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NRC	U.S. Nuclear Regulatory Commission
PSDAR	Post Shutdown Decommissioning Activities Report
RP	Radiation Protection
VY	Vermont Yankee Nuclear Power Station