



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

October 19, 2017

John Boyle
Director, Nuclear Decommissioning
Vermont Yankee Nuclear Power Station
320 Governor Hunt Road
Vernon, VT 05354

SUBJECT: NRC INSPECTION REPORT NO. 05000271/2017003, ENTERGY NUCLEAR OPERATIONS, INC., VERMONT YANKEE NUCLEAR POWER STATION, VERNON, VERMONT

Dear Mr. Boyle:

On September 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 July 17-20, 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 Corey Daniels, Senior Manager - Production, and other members of the VY staff on October 16, 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; 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; 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

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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/

Raymond J. Powell, Chief
Decommissioning, ISFSI, and Reactor HP
Branch
Division of Nuclear Materials Safety

Docket No. 05000271
License No. DPR-28

Enclosure: Inspection Report 05000271/2017003
w/Attachment

cc w/encl: Distribution via ListServ

J. Boyle

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000271/2017003
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: July 1, 2017 to September 30, 2017
Inspector: Stephen Hammann, Senior Health Physicist
Decommissioning, ISFSI, and Reactor HP Branch
Division of Nuclear Materials Safety, Region I
Approved By: Raymond Powell, Chief
Decommissioning, ISFSI, and Reactor HP Branch
Division of Nuclear Materials Safety, Region I

EXECUTIVE SUMMARY

Entergy Nuclear Operations, Inc.
Vermont Yankee Nuclear Power Station
NRC Inspection Report No. 05000271/2017003

An announced quarterly inspection was completed at Vermont Yankee Nuclear Power Station (VY) on September 30, 2017. On-site inspections were conducted on July 17-20, 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 radioactive waste management and radiological effluent and environmental monitoring. 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) 84750, 86750]

The inspector performed an on-site inspection on July 17-20, 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 reviewed activities and documentation associated with effluent and environmental monitoring to ensure that the licensee effectively controls, monitors, and quantifies releases of radioactive materials in liquid, gaseous, and particulate forms to the environment. The inspector performed a walk-down of groundwater monitoring wells, and accompanied a radiation protection technician (RPT) during collection of environmental air samples and vegetation samples and toured the Sample Preparation Facility. The inspector accompanied an RPT during collection of a spent fuel pool water sample and observed the chemistry analysis performed on the water sample. The inspector reviewed procedures, diagrams of effluent monitoring systems, the annual radiological environmental monitoring program (REMP) report, the annual radioactive effluent report, and the Off-Site Dose Calculation Manual (ODCM).

The inspector performed a review of the radwaste program to determine whether the licensee properly packages, stores, and ships radwaste for disposal. The inspector completed a walk-down of the radwaste storage locations on-site, and the frac tanks used for contaminated water. The inspector also reviewed the work packages for shipments of radwaste and contaminated water. The review included records of shipment packaging, surveying, labeling, marking, placarding, vehicle checks, and emergency instructions to ensure compliance with the applicable NRC and Department of Transportation regulations.

b. Observations and Findings

The inspector verified that effluent releases to the environment were being properly controlled, monitored, and quantified as required by NRC regulations. The inspector verified that the annual radiological effluent and the annual REMF reports demonstrated that calculated doses were below regulatory dose criteria of 10 CFR 50, Appendix I. The inspector verified effluent monitors and area radiation monitors were checked, calibrated, and maintained as specified in the ODCM.

The inspector verified solid radwaste was adequately stored, monitored, and inventories were up to date. The inspector verified that radioactive waste shipping paperwork was properly completed and Entergy personnel were knowledgeable of their duties and responsibilities. The inspector determined radwaste shipped for disposal at land disposal facilities was properly classified, described, packaged, marked, and labeled and was in proper condition for transportation.

c. Conclusions

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

3.0 Exit Meeting Summary

On October 16, 2017, the inspector presented the inspection results, via teleconference, to Corey Daniels, Senior Manager - Production, 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

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
A. Miller, RP Technician
M. Pletcher, Radiation Protection and Chemistry Manager
G. Roediger, RP Technician
T. Silko, Licensing

State of Vermont

A. Leshinskie, Engineer

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Condition Reports

CR-VTY- 2016-00881
CR-VTY- 2017-00003, 00015, 00031, 00038, 00399

Drawings

Diagram G-191177 SH. 1-4, 5920-526, 5920-3994, 5920-644

Procedures and Programs

AP 4601, Environmental Radiation Surveillance Program, Rev. 20
CHOP-STAK-2611, Stack Effluent Sampling and Analysis, Rev. 2
DP 0640, Chemistry Department Scheduling, Rev. 67
EN-RW-101, Radioactive Waste Management, Rev. 3
OP 4605, Environmental Radiation Sampling and Analysis, Rev. 49
PP 7603, Environmental Program, Rev. 6
Process Control Program, Rev. 5

Miscellaneous

Annual Radiological Environmental Operating Report - Year 2016
GZ Well Data, Jan 2017 - Aug 2017
Off-Site Dose Calculation Manual, Rev 38
Radioactive Effluent Release Report for 2016
Radwaste Package 2016-50, 2017-032, 2017-037
SFP Health Report, 8/27/27
Spent Fuel Pool Chemistry Data, Aug 2016 - Aug 2017

LIST OF ACRONYMS USED

ADAMS	Agencywide Document and Access Management System
CFR	Code of Federal Regulations
Entergy	Entergy Nuclear Operations, Inc.
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NRC	U.S. Nuclear Regulatory Commission
ODCM	Off-Site Dose Calculation Manual
REMP	Radiological Environmental Monitoring Program
RPT	Radiation Protection Technician
VY	Vermont Yankee Nuclear Power Station