



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

January 28, 2016

Docket No. 05000271

License No. DPR-28

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

SUBJECT: NRC INSPECTION REPORT NO. 05000271/2015010, ENTERGY NUCLEAR OPERATIONS, INC., VERMONT YANKEE NUCLEAR POWER STATION, VERNON, VERMONT

Dear Mr. Wamser:

On December 31, 2015, 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 October 26-29, and December 1-3, 2015. 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 Coley Chappell, Licensing Manager, and other members of the VY staff on January 20, 2016, 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(s), 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).

C. Wamser

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/

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

Enclosure: Inspection Report 05000271/2015010

cc w/encl: Distribution via ListServ

C. Wamser

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/

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

Enclosure: Inspection Report 05000271/2015010

cc w/encl: Distribution via ListServ

DOCUMENT NAME: G:\WordDocs\Current\Insp Letter\LDPR-28.2015010.docx

SUNSI Review Complete: SHammann

After declaring this document AAn Official Agency Record≡ it **will** be released to the Public.

ML16028A091

To receive a copy of this document, indicate in the box: AC≡ = Copy w/o attach/encl AE≡ = Copy w/ attach/encl AN≡ = No copy

OFFICE	DNMS/RI	N	DNMS/RI		DNMS/RI			
NAME	SHammann/sth		R Powell/rp					
DATE	1/27/16		1/28/16					

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 05000271/2015010
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: October 1, 2015 to December 31, 2015
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. 05000271/2015010

An announced quarterly inspection was completed at Vermont Yankee Nuclear Power Station (VY) on December 31, 2015. On-site inspections were conducted on October 26-29, and December 1-3, 2015. 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 spent fuel pool (SFP) safety, plant modifications, 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, 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 "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) 37801, 60801, 71801)

The inspector performed on-site inspections the weeks of October 26-29, and December 1-3, 2015. 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 the programs for the safe wet storage of spent fuel and verified that maintenance was being performed within the established frequencies and that the equipment was being properly maintained. The inspector performed a walk-down of the spent fuel pool (SFP), service water pumps, and fuel pool cooling heat exchangers to determine the material condition of the SFP and associated systems used to support SFP cooling.

The inspector reviewed the current status and future plans for radioactive water management at the site. The inspector performed a walk-down of various water tanks and water intrusion locations, reviewed current inventories, tank capacities, and groundwater intrusion rates. The inspector reviewed work orders and execution plans for activities taken to mitigate groundwater intrusion.

The inspector reviewed the project to place the B.5.b pump at a fixed location with pre-connected piping. The inspector performed a walk-down of the B.5.b pump placement, interviewed personnel, and observed work in-progress. The inspector reviewed engineering change (EC) packages, condition reports, and work orders to determine if the B.5.b pump permanent placement project would fulfill its function.

The inspector reviewed the project to channel spent fuel assemblies. The inspector interviewed personnel, observed spent fuel assemblies being moved from the spent fuel racks into the fuel prep machine, channels being placed on the fuel assemblies, and the fuel assemblies being returned to the spent fuel racks. The inspector reviewed plans, work orders, and condition reports to verify activities were performed in accordance with plant procedures, technical specifications (TS), and final safety analysis report (FSAR).

b. Observations and Findings

The inspector verified that safe wet storage of spent fuel was implemented adequately. The inspector verified that the maintenance and surveillance program for systems and components had been conducted in accordance with the TS requirements and established procedures.

The inspector determined that radioactive water inventories were increasing due mainly to the intrusion of groundwater at the site. The inspector verified that the water inventory is tracked daily, that the groundwater intrusion rate has slowed considerably, and that the site has excess tank capacity. The inspector determined that VY is considering options regarding disposal of on-site radioactive water inventory and is also considering options for future action to further mitigate groundwater intrusion.

The inspector verified the B.5.b pump placement and pre-connected piping was completed and testing of the pump was satisfactory. The inspector also verified that the ECs were performed in accordance with site procedures and safety reviews had been performed adequately.

The inspector determined the channeling activities were performed safely and met the TS and FSAR requirements. The inspector noted the channeling activities were performed to ensure the fuel assemblies would meet requirements for transportation which would take place at a future date.

c. Conclusions

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

3.0 Exit Meeting Summary

On January 20, 2016, the inspector presented the inspection results, via teleconference, to Coley Chappell, Licensing Manager, and other members of Entergy's staff. The inspectors confirmed that proprietary information was not removed from the site.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Ball, Mechanical Design Engineer
H. Breite, Sr. Lead Engineer
J. Card, Mechanical Systems Engineer
C. Chappell, Licensing and CA&A Manager
C. Daniels, Plant Manager
J. Meyer, Licensing
M. Pletcher, Radiation Protection and Chemistry Manager
J. Rogers, Design Engineering Manager
M. Romeo, Decommissioning Plant Manager
K. Whippie, Chemistry Supervisor
A. Zander, Shift Manager

ITEMS OPEN, CLOSED, AND DISCUSSED

None

LIST OF DOCUMENTS REVIEWED

Condition Reports

CR-VTY-2015-01355, 01533, 01550, 01620, 01638, 01680, 01730, 01767

Calculations and ECs

EC No.: 57228, B.5.b Enhancements

Procedures

AP-10090, Loss of Large Areas of the Plant Due to Fire or Explosion, Rev. 01
EGOP-10086, Service Water and Heat Exchanger Program, Rev. 00
OP 1100, Refuel Platform Operations, Rev. 46
OP-1101, Management of Refueling Activities and Fuel Assembly Movement, Rev. 56
OP 1102, Fuel Channel Operations, Rev. 26
V-EN-DC-324-DP, Decommissioning Plant Preventive Maintenance Program, Rev. 2

Procedures-Completed Surveillance Procedures

EN-NF-200, Attachment 9.1, Fuel Movement Form, completed move sheets for channeling project

Miscellaneous

ALARA Plan 150024 – Prepare CILC Fuel Assemblies for Dry Fuel Storage, Rev. 0
CILC Fuel Channeling POD for 10/14, 10/15, 10/27, 10/28
Pullman Execution Plan (PEP), Heater Room Pipe Trench Water Mitigation Crack Injection and Groundwater Mitigation for Torus and Turbine Building
RWP 20150700, Refuel Floor Support Work, Rev. 05
Water Inventory Spreadsheets, 10/26/15

Water Management Overview, 10/29/15

Ware Management Update – Overall Strategy, October 22, 2015

Work Orders

WO 00415473, Prepare CILC Fuel Assemblies For Dry Fuel Storage

WO 00411517-01, Install Permanent Vendor Installed Leak Repair

WO 00421602-13, P-70-1A: Replace Pump, Vendor to Perform Condensate Pit Permanent Leak Repair

WO 00391444-08,12,13 - B.5.b. Enhancements

WO 00422166, Change B.5.b Discharge Relief Valve Setting

LIST OF ACRONYMS USED

ADAMS	Agencywide Document and Access Management System
CFR	Code of Federal Regulations
EC	Engineering Change
Entergy	Entergy Nuclear Operations, Inc.
FSAR	Final Safety Analysis Report
IMC	Inspection Manual Chapter
IP	Inspection Procedure
NRC	U.S. Nuclear Regulatory Commission
SFP	Spent Fuel Pool
TS	Technical Specifications
VY	Vermont Yankee Nuclear Power Station