



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION I  
2100 RENAISSANCE BLVD., SUITE 100  
KING OF PRUSSIA, PA 19406-2713

July 30, 2015

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

SUBJECT: NRC INSPECTION REPORT NO. 05000271/2015008 AND ISFSI REPORT NO. 07200059/2015001, ENTERGY NUCLEAR OPERATIONS, INC., VERMONT YANKEE NUCLEAR POWER STATION, VERNON, VERMONT

Dear Mr. Wamser:

On June 30, 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). Inspection activities were performed between April 1 and June 30, 2015, and included in-office reviews of information supplied by Entergy Nuclear Operations, Inc. 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 inspectors, interviews with personnel, and a review of procedures and records. The results of this inspection were discussed with Mr. C. Wamser, Site Vice President, and other members of your staff on July 9, 2015, and are described in the enclosed report. No findings of safety significance were identified.

In accordance with 10 Code of Federal Regulations (CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure, and your response (if any) 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).

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/*

Marc Ferdas, Chief  
Decommissioning and Technical Support  
Branch  
Division of Nuclear Materials Safety

Docket Nos: 050-00271, 072-00059  
License No: DPR-28

Enclosure: Inspection Report 05000271/2015008 and 07200059/2015001  
w/Attachment: Supplemental Information

cc w/encl: Distribution via ListServ

C. Wamser

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Docket No: 050-00271, 072-00059

License No: DPR-28

Report No: 05000271/2015008 and 07200059/2015001

Licensee: Entergy Nuclear Operations, Inc. (Entergy)

Facility: Vermont Yankee Nuclear Power Station (VY)

Location: Vernon, VT 05354

Dates: April 1 through June 30, 2015

Inspectors: S. Rich, Acting Senior Resident Inspector  
Division of Reactor Projects

S. Hammann, Senior Health Physicist  
Division of Nuclear Materials Safety

S. Barr, Senior Emergency Preparedness Inspector  
Division of Reactor Safety

D. Silk, Senior Operations Engineer  
Division of Reactor Safety

S. LaVie, Senior Emergency Preparedness Specialist  
Inspection and Regulatory Improvement Branch  
Office of Nuclear Security and Incident Response

E. Burket, Emergency Preparedness Inspector  
Division of Reactor Safety

M. Draxton, Project Engineer  
Division of Reactor Projects

Approved by: Marc Ferdas, Chief  
Decommissioning and Technical Support Branch  
Division of Nuclear Materials Safety

Enclosure

**EXECUTIVE SUMMARY**

Entergy Nuclear Operations, Inc.  
Vermont Yankee Nuclear Power Station  
NRC Inspection Report Nos. 05000271/2015008 and 07200059/2015001

An announced quarterly inspection was completed at VY on June 30, 2015. On-site inspections and in-office reviews of information supplied by Entergy were performed during the inspection period from April 1 to June 30, 2015. The inspection included a review of: organizational and management controls, design changes, plant modifications, self-assessments, corrective action program (CAP), site operations, maintenance, surveillance testing, spent fuel pool (SFP) safety, Independent Spent Fuel Storage Installation (ISFSI) operation, occupational radiation exposure, radioactive material transportation, and emergency preparedness (EP). The inspection consisted of observations by the inspectors, interviews with Entergy personnel, a review of procedures and records, and plant walk-downs.

The U.S. Nuclear Regulatory Commission's (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." VY is currently in the "Post Operation Transition Phase" of decommissioning as described in IMC 2561. The NRC's program for overseeing the safe operation of an ISFSI is described in IMC 2690, "Inspection Program for Dry Storage of Spent Reactor Fuel at Independent Spent Fuel Storage Installations and for 10 CFR Part 71 Transportation Packages."

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 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**

#### **2.1 Organization, Management, and Cost Controls at Permanently Shutdown Reactors [Inspection Procedure (IP) 36801]**

##### **a. Inspection Scope**

The inspectors conducted document reviews, performed observations, and interviewed plant personnel to verify the following:

- Entergy established procedures and processes to resolve employee and safety concerns and effectively resolved identified problems;
- Entergy appropriately implemented the Technical Specifications, Technical Requirements Manual, and Fire Protection Plan requirements and commitments;
- Regulatory requirements were properly implemented with respect to the site organization and staff qualifications;
- Entergy appropriately addressed generic communications from the NRC;
- Certified fuel handler and employee training programs were implemented in accordance with Entergy procedures and NRC requirements; and
- Entergy's decommissioning activities were initiated, sequenced and performed in a manner consistent with the Post Shutdown Decommissioning Activities Report (PSDAR).

The inspectors also observed security drills conducted by Entergy on May 6, 2015.

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

Entergy appropriately implemented organizational and management controls in accordance with regulatory requirements, license conditions and the Technical Specifications. Entergy's transition activities were in accordance with the PSDAR. The inspectors noted that Entergy reviewed 10 CFR Part 21 notifications and information notices issued by the NRC and placed them in their CAP as needed. The inspectors noted that the certified fuel handlers had met the requirements of the certified fuel

handler training program, and that the training program matched the one approved by the NRC. Items identified by Entergy as areas for improvement were placed in their CAP.

c. Conclusions

No findings of significance were identified.

2.2 Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors (IP 37801)

a. Inspection Scope

The inspectors conducted document reviews and interviews with plant personnel to verify the following:

- Entergy procedures and processes conform to the regulations and guidance associated with 10 CFR 50.59;
- Procedures and controls were followed and the applicable changes were effectively implemented in the field, plant procedures, drawings, and training programs;
- Changes made by Entergy under 10 CFR 50.59 did not require prior NRC approval; and
- Changes to preventive maintenance, corrective maintenance and operational procedures for required equipment were implemented in accordance with Entergy's processes and procedures.

The inspectors reviewed the modification of a small, air-cooled diesel generator to power loads formerly supplied by the emergency diesel generators, and the planned abandonment of the emergency diesel generators. The inspectors also reviewed the addition of filters and demineralizers to the SFP to replace the previously abandoned ones. The inspectors reviewed the completed engineering change packages for planned changes to the direct current power supply system, the service water system, and the condensate transfer system.

b. Observations and Findings

The inspectors determined that the changes made to plant systems did not require prior NRC approval. Entergy adequately implemented safety reviews, design changes and modifications in accordance with applicable regulatory requirements, license conditions and the Technical Specifications.

c. Conclusions

No findings of significance were identified.

## 2.3 Self-Assessment, Auditing, and Corrective Actions at Permanently Shutdown Reactors (IP 40801)

### a. Inspection Scope

The inspectors conducted document reviews and interviews with plant personnel to verify the following:

- Entergy management performed observations of maintenance and surveillance activities, operations evolutions, and training;
- Entergy performed benchmarking and self-assessments; and
- Issues or problems were identified and corrected in accordance with the CAP.

The inspectors reviewed CAP documents on a daily basis to determine:

- If a sufficiently low threshold for problem identification existed;
- If follow-up evaluations were of sufficient quality, including extent of condition; and
- If Entergy assigned timely and appropriate prioritization for issue resolution commensurate with the significance of the issue.

The inspectors verified that Entergy evaluated issues with the potential for safety or regulatory consequence for apparent and/or common causes. The inspectors observed a sample of condition report review group meetings.

### b. Observations and Findings

The inspectors determined that issues were identified by Entergy at an appropriate threshold and entered into the CAP. Issues were effectively screened, prioritized and evaluated commensurate with safety significance during condition report review group meetings. Entergy's evaluations determined the significance of issues and included appropriate corrective actions. The inspectors noted that Entergy management attended pre-job briefs and surveillances at an appropriate frequency and retained their oversight role.

The inspectors attended the corrective action review board meeting on April 2 that discussed the apparent cause evaluation performed for condition report (CR)-VTY-2015-403, on the failure of the 'A' and 'B' service water pumps to develop pressure and flow due to icing in the service water bay. Additional information concerning this issue is described in NRC Inspection Report 05000271/2015007, dated May 8, 2015 (ML15131A237). The inspectors noted that Entergy determined the correct cause of the failures and that the proposed corrective actions addressed the cause. However, the apparent cause evaluation had a limited extent of condition discussion, in that it only covered the pumps that draw from the service water bay, which includes the service water pumps and the fire water pumps, but did not consider the need for ice prevention in the deep basin, which supplies water for the B.5.b pump. Additionally, the apparent cause evaluation did not include an equipment failure evaluation, contrary to the instructions in procedure V-EN-LI-102, "Performance Improvement Program." Entergy



wrote CR-VTY-2015-599 to document the observation and revised the apparent cause evaluation to include the missing information. No new corrective actions were needed to address either the expanded extent of condition or the results of the equipment failure evaluation.

c. Conclusions

No findings of significance were identified.

2.4 Spent Fuel Pool Safety at Permanently Shutdown Reactors (IP 60801)

a. Inspection Scope

The inspectors verified the safe wet storage of spent fuel in the SFP. The review included criticality controls and SFP instrumentation and leakage detection. The inspectors reviewed SFP drawings, integrated logic diagrams and calibration records for the SFP level, temperature and leakage detectors. The inspectors also reviewed operator rounds to verify Entergy was checking the telltale drains for leakage.

The inspectors reviewed the results of SFP neutron absorber testing conducted in 2014. The inspectors verified that the test results did not show significant degradation of the boron neutron absorbers. The inspectors also reviewed Entergy's heavy loads program document and the work package for a heavy lift that occurred over the fuel pool to verify Entergy minimized the risk of a load drop that could crush the spent fuel into a critical geometry.

b. Observations and Findings

The inspectors determined that Entergy was safely storing spent fuel in wet storage. Spent fuel pool instrumentation, alarms, and leakage detection systems were being appropriately maintained. Entergy's criticality controls for the wet storage of spent fuel were appropriate.

c. Conclusions

No findings of significance were identified.

2.5 Maintenance and Surveillance at Permanently Shutdown Reactors (IP 62801)

a. Inspection Scope

The inspectors conducted plant tours throughout the inspection period to observe the impact of work activities on site operations, and how worker safety was being maintained. During these walk-downs, the inspectors evaluated the housekeeping and the material condition of structures and components that support decommissioning. The inspectors also assessed area radiological condition and radiological access controls, including posting and labeling.

The inspectors observed surveillances conducted on the service water pumps and on the electric fire pump. The inspectors also reviewed surveillance records on the station blackout diesel generator (SBODG) enclosure fire protection system. The inspectors observed post-maintenance testing on the 'A' standby fuel pool cooling pump. The inspectors reviewed troubleshooting associated with degraded performance of the 'A' standby fuel pool cooling heat exchanger, (CR-VTY- 2015-0984) including observing the state of the heat exchanger when it was opened for inspection and cleaning.

The inspectors also reviewed Entergy's maintenance rule monitoring of the SBODG, buildings and structures, standby fuel pool cooling system and service water system to verify they were appropriately monitoring system performance.

b. Observations and Findings

The inspectors noted that throughout the inspection period housekeeping and plant material condition standards were being maintained. Changing radiological conditions were addressed in a prompt and timely manner by Entergy. Workers followed work plans, surveillance procedures and industrial safety protocols and were aware of job controls specified in work instructions. Entergy appropriately prioritized corrective maintenance on the remaining systems required for permanent cessation of operations. The inspectors verified that when equipment issues occurred, Entergy staff implemented the appropriate troubleshooting procedures to identify and correct the equipment deficiency identified.

On May 4, while conducting a surveillance on the SBODG enclosure fire protection system, technicians inadvertently caused a lockout of the SBODG (CR-VTY-2015-0798). The diesel generator was not running at the time. Entergy was performing the surveillance for the first time since it had been put in service in 2013, and the work order had not been updated to reflect that the work could affect the availability of the SBODG. The inspectors determined that the technicians did not employ human performance error prevention tools that could have prevented the lockout. The lockout was reset promptly, so it did not impact the ability of the SBODG to provide station loads within two hours of a station blackout.

On May 27, operators switched standby fuel pool cooling trains from 'A' to 'B' and noticed that the 'A' train required significantly more service water flow for cooling than the 'B' train. The inspectors determined that Entergy performed appropriate testing on the 'A' standby fuel pool cooling train to determine the cause of the degraded performance, verified the fuel pool cooling function was maintained, and performed timely corrective maintenance (heat exchanger cleaning) to restore the train to full cooling capacity.

The inspectors identified that service water bay freezing documented in condition report CR-VTY-2015-403 had not been recorded as a maintenance rule functional failure. Although the service water system maintained its functionality while the bay was partially frozen, the 'A' and 'B' trains of the service water system experienced functional failures. Entergy entered this into their corrective action program as CR-VTY-2015-1119 and updated the maintenance rule database to include the functional failures. Because

these were the only functional failures on the 'A' and 'B' trains in the last three years, Entergy did not need to take further actions.

c. Conclusions

No findings of significance were identified.

2.6 Decommissioning Performance and Status Reviews at Permanently Shutdown Plants (IP 71801)

a. Inspection Scope

The inspectors observed site meetings which were used by Entergy to plan, review, assess, and schedule site activities. The inspectors reviewed portions of Entergy's activities associated with the abandonment of systems and equipment not needed to support decommissioning operations.

The inspectors conducted document reviews, observations and interviews with plant personnel to verify:

- Activities were in accordance with license conditions and docketed commitments, as well as within the bounds of the docketed PSDAR;
- Appropriate plant staffing was maintained and management oversight of licensee and supplemental activities were performed;
- Pre-job briefs were conducted for facility operations including maintenance, surveillance, operations, and decommissioning activities;
- Plant material condition of structures, systems and components was maintained at a high level to ensure safe storage of spent fuel;
- The storage of combustibles and flammables were in accordance with plant procedures and the Fire Protection Plan for the subject location;
- Installed fire detection and suppression systems were effectively maintained, surveillances performed, and systems were capable of performing their intended function; and
- Site fire brigade training was effective.

The inspectors assessed operability and functionality of systems necessary for safe decommissioning through control room and plant walk-downs of the following systems: radioactive effluent monitoring, SFP cooling (including level and temperature control), and radiation protection monitors and alarms. The inspectors also assessed the operability and functionality of equipment that was important to emergency preparedness or provided normal and standby electrical power. The inspectors reviewed ongoing in-plant work activities to ensure they were evaluated for risk and potential plant impacts. The inspectors verified that operations shift turnovers appropriately communicated pertinent plant status.

b. Observations and Findings

The inspectors determined that Entergy conducted decommissioning activities in accordance with the regulations and license requirements. The inspectors also verified that the activities to transition to a SAFSTOR condition were in accordance with Technical Specifications, the Updated Safety Analysis Report and the PSDAR.

During a walk-down of the control room on June 22, 2015, the inspectors informed Entergy of an ongoing G4-class geomagnetic disturbance. The operators contacted the independent system operator, who confirmed the disturbance, and stated that Entergy had not been notified because they are no longer a generating station. The geomagnetic disturbance had the potential to affect off-site power distribution. Entergy began performing the actions specified in procedures OPOP-PHEN-3127, "Natural Phenomena," and MTAP-10084, "Work Management Process." Entergy wrote CR-VTY-2015-1143 to evaluate the need for a change to site procedures to reflect the reduced impact of a loss of off-site power in the current defueled configuration.

c. Conclusions

No findings of significance were identified.

2.7 Operation of an Independent Spent Fuel Storage Installation (IP 60855)

a. Inspection Scope

The inspectors evaluated Entergy's activities related to long-term operation and monitoring of their ISFSI, and verified that activities were being performed in accordance with the Certificate of Compliance (CoC), technical specifications, regulations, and licensee procedures. The NRC's program for overseeing the safe operation of an ISFSI is described in IMC 2690.

The inspectors performed tours of the ISFSI pad to assess the material condition of the pad and the loaded HI-STORM 100 over packs (HI-STORMs), and to verify that transient combustibles were not being stored in the vicinity of the HI-STORMs. The inspectors observed an operator performing the daily HI-STORM surveillances in accordance with TS requirements. The inspectors also confirmed that physical inventories (material control and accountability) were conducted annually and were maintained as required by the regulations.

The inspectors reviewed radiological records from periodic dry fuel storage pad surveys to confirm that radiation levels measured around the casks did not increase. The inspectors reviewed radiation protection procedures and radiation work permits (RWPs) associated with ISFSI operations.

The inspectors also reviewed the CAP, to ensure that issues were appropriately being entered, prioritized, and evaluated commensurate with their safety significance.

b. Observations and Findings

The inspectors determined that Entergy operated their ISFSI in accordance with the regulatory requirements and the CoC. There were no 10 CFR 72.48 screenings since the last inspection in April 2013.

c. Conclusions

No findings of significance were identified.

2.8 Decommissioning Emergency Preparedness Scenario Review and Exercise Evaluation (IP82401)

a. Inspection Scope

The inspectors performed an on-site inspection on May 12-15, 2015, of the biennial EP exercise to assess the adequacy of Entergy's conduct of the exercise and its capability to assess emergency response organization (ERO) performance via a formal critique process. Entergy designed the exercise scenario and objectives to satisfy the requirement of 10 CFR 50, Appendix E, Section IV.F.2.j to provide the opportunity for their ERO to demonstrate proficiency in the key skills necessary to respond to a hostile action directed at the plant site.

Prior to the May 13, 2015, EP exercise, the NRC inspectors conducted an in-office review of the exercise objectives and scenario, which Entergy had submitted to the NRC, to determine if the exercise would test major elements of the Vermont Yankee Nuclear Power Station Emergency Plan.

The exercise evaluation consisted of observation and assessment of Entergy's performance in the biennial full-participation exercise, the overall adequacy of Entergy's emergency response facilities, and a review of other performance areas, which included: the ERO's recognition of abnormal plant conditions; command and control; intra- and inter-facility communications; prioritization of mitigating activities; interface with offsite agencies; and the overall implementation of the emergency plan and its implementing procedures. Following the exercise, the inspectors observed Entergy's critique process to ensure the process identified and corrected weaknesses associated with the May 13, 2015, exercise.

b. Observations and Findings

The inspectors noted that the scenario developed by Entergy was plausible based on current plant conditions and that it included opportunities that allowed for the demonstration of proficiency in key skills necessary to implement the principle functional areas of emergency response.

The inspectors performed independent observations of emergency response organization performance in the simulator control room, emergency operations facility, alternate facility and joint information center. The inspectors noted areas for

improvement associated with the conduct of the exercise, however, Entergy's critique process identified those issues and entered them into the CAP (CR-VTY-2015-0857, CR-VTY-2015-0873, CR-VTY-2015-0878). Additionally, the inspectors determined the areas for improvement identified were minor in nature and would not impact Entergy's ability to implement their emergency plan in the event of an actual radiological emergency.

c. Conclusions

No findings of significance were identified.

2.9 Occupational Radiation Exposure (IP 83750) and Solid Radioactive Waste Management and Transportation of Radioactive Materials (IP 86750)

a. Inspection Scope

Inspectors reviewed radiation work permits, as low as reasonably achievable (ALARA) plans, procedures, and radiological survey data for the work activities to remove control rod drive mechanisms (CRDMs) to determine the effectiveness of site radiological programs and to verify radiation work activities were pre-planned effectively to limit worker exposure. Inspectors compared the dose results achieved with the intended dose established in the ALARA planning for the CRDM removal project to assess Entergy's performance with respect to maintaining individual and collective radiation exposures ALARA and to ensure occupational dose is appropriately monitored. The inspectors evaluated the reasons for differences between the intended and actual work activity doses.

The inspectors observed radiological surveys being performed on transport containers for waste from the CDRM project and interviewed the radiation protection technicians (RPTs) performing the surveys. The inspectors reviewed the records of shipment packaging, surveying, labeling, marking, placarding, vehicle checks, and emergency instructions. The inspectors also reviewed the shipping papers inside the transport vehicle and interviewed the driver of the vehicle to ensure compliance with the applicable NRC and Department of Transportation regulations.

b. Observations and Findings

The inspectors determined that post-job reviews were conducted and identified problems were entered into the CAP. The inspectors determined that survey records were clear and complete and the RPTs were using appropriate instrumentation with current calibrations. Surveys were being performed as described in plant procedures. The inspectors verified that radioactive waste shipping paperwork was properly completed and Entergy personnel were knowledgeable of their duties and responsibilities. Inspectors noted that all but two of the CRDMs were removed and shipped. The radioactive waste characterization of the CRDMs for shipment was performed by WMG Inc. and the CRDMs were shipped back to the manufacturer.

c. Conclusions

No findings of significance were identified.

**3.0 Exit Meeting**

On July 9, 2015, the inspectors presented the inspection results to Mr. C. Wamser, Site Vice President, and other members of the Entergy staff who acknowledged the inspection results. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

**SUPPLEMENTAL INFORMATION**

**PARTIAL LIST OF PERSONS CONTACTED**

Vermont Yankee Personnel

C. Wamser, Site Vice President  
M. Romeo, Decommissioning Plant Manager  
J. Boyle, Engineering and Technical Director  
P. Paradis, Decommissioning Director  
E. Harms, Senior Operations Manager  
M. McKenney, Emergency Preparedness Manager  
P. Ryan, Security Manager  
C. Chappell, Licensing and CA&A Manager  
J. Rogers, Design Engineering Manager  
M. Pletcher, Radiation Protection and Chemistry Manager  
J. Laughney, QA Manager  
A. Zander, Shift Manager  
T. Marstaller, Shift Manager  
N. Jennison, Shift Manager  
R. Felumb, CA&A Supervisor  
R. Mauthe, I&C Maintenance Supervisor  
M. Prusak, Mechanical Maintenance Supervisor  
H. Breite, Mechanical Systems Engineer  
M. Flynn, Electrical Design Engineer  
J. Stasolla, I&C Systems Engineer  
J. Paradis, Operations Instructor  
C. Dissinger, Emergency Planner  
P. Jerz, Work Week Manager  
M. O'Brien, Civil Design Engineer  
M. Ball, Mechanical Design Engineer  
R. Burns, Programs Engineer  
J. Card, Mechanical Systems Engineer

**ITEMS OPENED, CLOSED, AND DISCUSSED**

None



**LIST OF DOCUMENTS REVIEWED****2.1 Organization, Management, and Cost Controls at Permanently Shutdown Reactors (IP 36801)**Condition Reports

CR-VTY-2015-0181	CR-VTY-2015-0448	CR-VTY-2015-0486
CR-VTY-2015-0296	CR-VTY-2015-0449	CR-VTY-2015-0499
CR-VTY-2015-0447	CR-VTY-2015-0485	

Miscellaneous

Certified Fuel Handler Training Program Description Task – Training Matrix, 3/27/15  
 Long Range Retraining Schedule, 3/27/15  
 Certified Fuel Handler Qualification Standard, 8/18/14  
 Refuel Activities JPM Records  
 WT-WTVTY-2013-230  
 Qualification/Exemption Approval Forms

**2.2 Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors (IP 37801)**Procedures

PP 7023, "Control of Heavy Loads Program Document," Revision 4

Work Orders

WO 379932, "EC48595 – Safstor Modification – Use the Torus as a CST"  
 WO 386198, "Install Underwater Demin/Filter; EC 54243"

Miscellaneous

B-191300, Sheet 19, "Power Distribution & Motor Data, 480V MCC-7A," Revision 25  
 B-191300, Sheet 19A, "Power Distribution & Motor Data, 480V MCC-7A," Revision 31  
 EC 48595, "Use the Torus as the CST Safstor Modification"  
 EC 55437, "Route 2.5" Lines thru Doorway Vice Corebore"  
 EC 54243, "Use of Tri Nuclear Demin and Filter Units in SFP"

**2.3 Self-Assessment, Auditing, and Corrective Actions at Permanently Shutdown Reactors (IP 40801)**Miscellaneous

LO-VTYLO-2015-0007  
 LO-VTYLO-2015-0005

**2.4 Spent Fuel Pool Safety at Permanently Shutdown Reactors (IP 60801)**Procedures

V-EN-LI-102, "Performance Improvement Program," Revision 24

Condition Reports

CR-VTY-2015-0742	CR-VTY-2015-0403
CR-VTY-2015-0612	CR-VTY-2015-599

Drawings

G-191173, Sheet 1, "Flow Diagram Fuel Pool Cooling and Cleanup System," Revision 40  
 G-191173, Sheet 2, "Flow Diagram Fuel Pool Cooling and Cleanup System," Revision 10

G-191219, "Reactor Fuel Storage Pool Piping Plans and Sections," Revision 8  
G-191691, "Pool Liner and Gates – Sheet 4," Revision 9  
5920-3364, "North and West Walls of Fuel Storage Pool," Revision 0

Miscellaneous

ARS 21002, "CRP 9-4 Alarm Response Sheets," Revision 17  
ARS 21009, "FPC Alarm Response Sheets," Revision 3  
EC 57228, "Relocation of B.5.b Pump"

**2.5 Maintenance and Surveillance at Permanently Shutdown Reactors (IP 62801)**

Procedures

AP 0211, "Predictive Maintenance Process – Vibration Monitoring," Revision 15  
OP 4181, "Service Water/Alternate Cooling System Surveillance," Revision 82  
AP 10088, "Safstor Work Schedule Risk Management," Revision 2  
OP 43106, "Fuel Pool Level Functional/Calibrating," Revision 8  
OP 4179, "Standby Fuel Pool Cooling Surveillance," Revision 23  
VYOPF 2179.01, "SFPC Operating Data," February 5 – May 5, 2015  
OP 2179, "Standby Fuel Pool Cooling," Revision 18  
V-EN-DC-150, "Condition Monitoring of Maintenance Rule Structures," Revision 8  
VY-RPT-13-00010, "Maintenance Rule RFO 30 Summary Report," Revision 0  
OPSP-SBO-10067-01, "Monthly Station Blackout Diesel Generator Load Bank Test," Revision 6  
EN-MA-125, "Troubleshooting Control of Maintenance Activities," Revision 17  
V-EN-DC-205, "Maintenance Rule Monitoring," Revision 6

Condition Reports

CR-VTY-2015-0196	CR-VTY-2015-0799
CR-VTY-2015-0403	CR-VTY-2015-0801
CR-VTY-2015-0465	CR-VTY-2015-0984
CR-VTY-2015-0639	CR-VTY-2015-1119
CR-VTY-2015-0738	CR-VTY-2015-0984
CR-VTY-2015-0798	

Maintenance Rule Scoping Documents

Maintenance Rule Database

Work Orders

WO 52608119, "P-19-2A Pump and Coupling Lubrications"  
WO 52593154, "Service Water Valve and Pump Operability Testing"  
WO 52543075, "OP4339 (1Y) Test Misc. Non-Vital Areas Fire Protection Zones"  
WO 00362648, "Inspect and Replace Gaskets on Fuel Pool Gate-1"  
WO 02-001440, "Replace Fuel Pool Gate Gaskets"  
WO 00362650, "Inspect and Replace if Required Gaskets on Fuel Pool Gate-2"  
WO 52216892, "V19-220; Perform MC2 Testing Per OP 5217"  
WO 52327811, "V19-220; Routine Inspection of Limitorque Operator per OP 5220"  
WO 52216893, "Perform MC2 Testing per OP 5217"  
WO 52327812, "V19-221; Routine Inspection of Limitorque Operator OP 5220"  
WO 52513387, "V19-224 IST Closure Test; OPST-4028-02 (RFO)"  
WO 52199503, "Check Valve Disassembly & Inspection; V19-224"  
WO 05000113, "Check Valve Inspection for Swing Type Check Valves (Standard PM)"  
WO 05-001272, "Check Valve Indication for Swing Type Check Valves (Standard PM)"  
WO 00321103, "Check Valve Indication for Swing Type Check Valves (Standard PM)"  
WO 00321111, "LT-19-63B; Perform Required EQ Maintenance"

WO 52416810, "Replace Cover O-Ring after Calibration, EQ Maintenance"  
WO 52416811, "Replace Cover O-Ring after Calibration, EQ Maintenance"  
WO 52416812, "Replace Cover O-Ring after Calibration, EQ Maintenance"  
WO 52115409, "Inspect 1M Contactor in 71UPP to Verify no damage was caused"

Miscellaneous

BVY 15-022, "Notification of Changes to Regulatory Commitments," updated March 27, 2015  
VYOPF 4105.02, "Eighteen Month Fire Pump Operational Performance and Capacity Check and Diesel Fire Pump Alarm/Shutdown Test," completed 6/17/15

**2.6 Operation of an Independent Spent Fuel Storage Installation (IP 60855)**

Procedures

V-EN-NF-200, "Special Nuclear Material Control," Revision 12  
V-EN-DC-215, "Fuel Selection for Holtec Dry Cask Storage," Revision 6  
OP 0150, "Conduct of Operations and Operator Rounds," Revision 195

Condition Reports

CR-VTY-2013-0604	CR-VTY-2014-2665
CR-VTY-2013-0787	CR-VTY-2014-3114
CR-VTY-2013-1093	CR-VTY-2014-3563
CR-VTY-2013-4002	CR-VTY-2014-4039
CR-VTY-2013-4840	CR-VTY-2014-4077
CR-VTY-2013-4841	CR-VTY-2014-4089
CR-VTY-2013-5744	CR-VTY-2015-0266
CR-VTY-2014-0641	CR-VTY-2015-0275
CR-VTY-2014-2234	CR-VTY-2015-0276
CR-VTY-2014-2406	CR-VTY-2015-0280
CR-VTY-2014-2462	

Miscellaneous

10 CFR 72.212 Report, Docket 72-0059, "HI-STORM 100 System," Revision 5

**2.7 Decommissioning Performance and Status Reviews at Permanently Shutdown Plants (IP 71801)**

Procedures

OPOP-PHEN-3127, "Natural Phenomena," Revision 19

Condition Reports

CR-VTY-2015-1143

**2.8 Decommissioning Emergency Preparedness Scenario Review and Exercise Evaluation (82401)**

Procedures

AP 3125, "Emergency Plan Classification and Action Level Scheme," Revision 25  
EPOP-AFA-10083, "Alternate Facility Activation," Revision 0  
EPOP-CR-3540, "Control Room Actions during an Emergency," Revision 4  
EPOP-MED-3508, "On-Site Medical Emergency," Revision 0  
EPOP-OSC-3544, "Operation of the Operations Support Center," Revision 1  
EPOP-TSC-3542, "Operation of the Technical Support Center," Revision 3  
OP 3020, "Fire Emergency Response Procedure," Revision 59

OPOP-SECU-3132, Operations Department Response to Security Events, Rev 4  
V-EN-EP-307, "Hostile Action Based Drills & Exercises," Revision 2

Condition Reports

CR-VTY-2015-0856	CR-VTY-2015-0871
CR-VTY-2015-0857	CR-VTY-2015-0873
CR-VTY-2015-0858	CR-VTY-2015-0875
CR-VTY-2015-0859	CR-VTY-2015-0876
CR-VTY-2015-0864	CR-VTY-2015-0877
CR-VTY-2015-0866	CR-VTY-2015-0878
CR-VTY-2015-0867	CR-VTY-2015-0880
CR-VTY-2015-0869	

Miscellaneous

Emergency Plan Full Participation Exercise Scenario Package, dated March 24, 2015  
Vermont Yankee Emergency Plan, Revision 51  
Vermont Yankee Nuclear Power Station Emergency Action Level Technical Basis, Revision 15

**2.9 Occupational Radiation Exposure (IP 83750) and Solid Radioactive Waste Management and Transportation of Radioactive Materials (IP 86750)**

Procedures

EN-RW-102, "Radioactive Shipping Procedure," Revision 12  
ERP-105-DP, "Radiological Work Permits," Revision 0  
EN-RP-110-DP, "ALARA Program," Revision 0  
EN-RP-110-05-DP, "Decommissioning Plant ALARA Planning and Controls," Revision 0

Miscellaneous

ALARA Plan # 150019  
Alternate Straight Bill of Lading, 2015-18  
Radioactive Material Manifest, 2015-18  
Survey Logbook: #15-258, CRD Box # 1347-S; #15-259, CRD Box # 1350-S; #15-260, CRD Box # 1341-S  
WMG, Package Characterization Report, 2015-18  
WMG, DOT Classification Summary, 2015-18

Procedures-Completed Surveillance Procedures

EN-RW-102, Attachment 9.1, "Radioactive Shipment Document Checklist," 2015-18  
EN-RW-102, Attachment 9.2, "Shipping Checklist – LSA/SCO/Exclusive Use and Domestic," 2015-18  
EN-RW-102, Attachment 9.13, "Radioactive Material Shipment Truck Survey Form," 2015-18  
EN-RW-102, Attachment 9.14, "Instructions for Maintenance Exclusive Use Shipment Controls," 2015-18

**LIST OF ACRONYMS USED**

ADAMS	Agencywide Document Access and Management System
ALARA	As Low As Reasonably Achievable
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CoC	Certificate of Compliance
CR	Condition Report
CRDM	Control Rod Drive Mechanism
Entergy	Entergy Nuclear Operations, Inc.
EP	Emergency Preparedness
ERO	Emergency Response Organization
FSAR	Final Safety Analysis Report
IMC	Inspection Manual Chapter
IP	Inspection Procedure
ISFSI	Independent Spent Fuel Storage Installation
NRC	U.S. Nuclear Regulatory Commission
PSDAR	Post Shutdown Decommissioning Activities Report
RPT	Radiation Protection Technician
RWP	Radiation Work Permit
SAFSTOR	Safe Storage of Spent Fuel
SBODG	Station Blackout Diesel Generator
SFP	Spent Fuel Pool
TS	Technical Specification
VY	Vermont Yankee