



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

June 2, 2011

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

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION –  
NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION  
REPORT 05000271/2011008

Dear Mr. Colomb:

On April 21, 2011, the United States Nuclear Regulatory Commission (NRC) completed an inspection at your Vermont Yankee Nuclear Power Station. The enclosed report documents the inspection results discussed with Mr. C. Wamser, General Manager, Plant Operations and other members of your staff.

This inspection examined activities conducted under your license as they relate to identification and resolution of problems and compliance with the Commission's rules and regulations and conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

Based on the samples selected for review, the inspection team concluded that Entergy was generally effective in identifying, evaluating and resolving problems. Vermont Yankee personnel identified problems at a low threshold and entered them into the Corrective Action Program (CAP). In most cases, Vermont Yankee screened issues appropriately for operability and reportability, and prioritized issues commensurate with the safety significance of the problems. Causal analyses appropriately considered extent of condition, generic issues, and previous occurrences. Corrective actions addressed the identified causes and were typically implemented in a timely manner.

During the course of this inspection one self-revealing non-cited violation (NCV) of very low security significance (Green) was identified. As this finding is related to the Physical Security Cornerstone, the details of the finding are being documented in Security inspection report 05000271/2011404 which will be issued in parallel with this report. If you contest the NCV discussed in this report, you should follow the instructions for responding to the NCV or cross cutting aspect assigned to the finding contained in the 05000271/2011404 inspection report cover letter.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the

NRC's document system (ADAMS). ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

 A handwritten signature in black ink, appearing to read "Donald E. Jackson".

FOR

Donald E. Jackson, Chief  
Projects Branch 5  
Division of Reactor Projects

Docket No. 50-271  
License No. DPR-28

Enclosure: Inspection Report No. 05000271/2011008  
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NRC's document system (ADAMS). ADAMS is accessible from the NRC website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

*/RA by Thomas C. Setzer Acting For/*

Donald E. Jackson, Chief  
Projects Branch 5  
Division of Reactor Projects

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**U.S. NUCLEAR REGULATORY COMMISSION****REGION I**

Docket No.: 50-271

License No.: DPR-28

Report No.: 05000271/2011008

Licensee: Entergy Nuclear Operations, Inc.

Facility: Vermont Yankee Nuclear Power Station

Location: 320 Governor Hunt Road  
Vernon, Vermont 05354-9766

Dates: April 4 through April 21, 2011

Team Leader: Andrew Rosebrook, Senior Project Engineer, Division of Reactor Projects  
(DRP)

Inspectors: Joseph D'Antonio, Senior Operations Engineer, Division of Reactor  
Safety (DRS)  
Jeffrey Bream, Physical Security Inspector, DRS  
Sarah Rich, Resident Inspector Vermont Yankee, DRP

Approved by: Donald E. Jackson, Chief  
Projects Branch 5  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000271/2011008; 4/04/2011 – 4/21/2011; Vermont Yankee Nuclear Power Station; Biennial Baseline Inspection of Problem Identification and Resolution (PI&R). One finding was identified in the area of problem identification.

This Nuclear Regulatory Commission (NRC) team inspection was performed by three regional inspectors and one resident inspector. The inspectors identified one finding of very low security significance (Green) during this inspection and classified this finding as a non-cited violation (NCV). The significance of most findings is indicated by their color (Green, White, Yellow, Red) using NRC Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or assigned a severity level after NRC management review. Cross-cutting aspects associated with findings are determined using IMC 0310, "Components Within the Cross-Cutting Areas." The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

### Problem Identification and Resolution

The inspectors concluded that Entergy was generally effective in identifying, evaluating, and resolving problems. Entergy personnel generally identified problems, entered them into the Corrective Action Program (CAP) at a low threshold, and prioritized issues commensurate with their safety significance. In most cases, Entergy appropriately screened issues for operability and reportability, and performed causal analyses that appropriately considered extent of condition, generic issues, and previous occurrences. The inspectors also determined that Entergy typically implemented corrective actions (CAs) to address the problems identified in the CAP in a timely manner. However, the inspectors identified a violation of NRC requirements, in the area of Corrective Action Program - Problem Identification.

The inspectors concluded that, in general, Entergy adequately identified, reviewed, and applied relevant industry operating experience to Vermont Yankee (VY) operations. In addition, based on those items selected for review, the inspectors determined that Entergy's self-assessments and audits were thorough.

Based on the interviews the inspectors conducted over the course of the inspection, observations of plant activities, and reviews of individual CAP and employee concerns program issues, the inspectors did not identify any indications that site personnel were unwilling to raise safety concerns, nor did they identify any conditions that could have had a negative impact on the site's safety conscious work environment.

### **Cornerstone: Physical Security.**

- **Green.** The inspectors identified a finding of very low security significance (Green) involving a NCV of 10 CFR 73.55 (k)(2) and the VY Physical Security Plan. The details of this finding are documented in Security Inspection Report 05000271/2011404. This finding has a cross-cutting aspect in the area of Human Performance-Work Practices-Human Performance Error Prevention Techniques because Entergy staff failed to conduct proper peer and self checking techniques which would have identified and precluded the issue. [H.4.(a)]

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA2 Problem Identification and Resolution (71152B)

This inspection constitutes one biennial sample of PI&R as defined by Inspection Procedure 71152. All documents reviewed during this inspection are listed in the Attachment to this report.

#### .1 Assessment of Corrective Action Program Effectiveness

##### a. Inspection Scope

The inspectors reviewed the procedures that described Entergy's CAP at VY. To assess the effectiveness of the CAP, the inspectors reviewed performance in three primary areas: problem identification, prioritization and evaluation of issues, and CA implementation. The inspectors compared performance in these areas to the requirements and standards contained in 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," and Entergy procedure EN-LI-102, "Corrective Action Program," Revision 16. For each of these areas, the inspectors considered risk insights from the station's risk analysis and reviewed condition reports (CRs) selected across the seven cornerstones of safety in the NRCs Reactor Oversight Process. The inspectors selected items from the following functional areas for review: engineering, operations, maintenance, emergency preparedness, radiation protection, chemistry, physical security, and oversight programs.

##### (1) Effectiveness of Problem Identification

The team reviewed Entergy's procedures that describe the CAP at the Vermont Yankee Nuclear Power Station (VYNPS). Entergy personnel identified problems by initiating CRs for conditions adverse to quality, plant equipment deficiencies, industrial or radiological safety concerns, or other significant issues. CRs were subsequently screened for operability and reportability, categorized by significance level (A, most significant, through D, least significant), and assigned to personnel for evaluation and resolution or trending. The inspectors reviewed CRs, system health reports, a sample of completed corrective and preventative maintenance work orders, completed surveillance test procedures, operator logs, and periodic trend reports. The inspectors also completed field walkdowns of accessible portions of various systems on site, including the high pressure coolant injection system (HPCI), the reactor core isolation cooling system (RCIC) and the automatic depressurization system (ADS). Additionally, the inspectors reviewed a sample of CRs written to document issues identified through internal self-assessments, audits, emergency preparedness drills, and the operating experience program. The inspectors completed this review to verify that Entergy entered conditions adverse to quality into their CAP as appropriate.

(2) Effectiveness of Prioritization and Evaluation of Issues

The team evaluated the process for assigning and tracking issues to ensure that issues were screened for operability and reportability, prioritized for evaluation and resolution in a timely manner commensurate with their safety significance, and tracked to identify adverse trends and repetitive issues. The inspectors reviewed the evaluation and prioritization of a sample of CRs issued since the last NRC biennial PI&R inspection completed in April 2009. The inspectors also reviewed CRs that were assigned lower levels of significance that did not include formal cause evaluations to ensure that they were properly classified. The inspectors' review included the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of resolution. The inspectors assessed whether the evaluations identified likely causes for the issues and developed appropriate CAs to address the identified causes. The team observed condition review group (CRG) meetings in which Entergy personnel reviewed new CRs for prioritization and assignment, and Station Oversight Review Committee (SORC) meetings which reviewed the quality of all root cause analysis (RCAs) and select apparent cause evaluations (ACEs). Further, the team reviewed equipment operability determinations, reportability assessments, and extent-of-condition reviews for selected CRs to verify these specific reviews adequately addressed equipment operability, reporting of issues to the NRC, and the extent of condition and extent of cause reviews of problems, when warranted.

(3) Effectiveness of Corrective Actions

The inspectors reviewed Entergy's completed CAs through documentation review and, in some cases, field walkdowns to determine whether the actions addressed the identified causes of the problems. The inspectors also reviewed CRs for adverse trends and repetitive problems to determine whether CAs were effective in addressing the broader issues. The inspectors reviewed Entergy's timeliness in implementing CAs and effectiveness in precluding recurrence for significant conditions adverse to quality. The inspectors also reviewed a sample of CRs associated with selected NCVs and findings to verify that Entergy personnel properly evaluated and resolved these issues. In addition, the inspectors expanded the CA review to five years to evaluate Entergy actions related to HPCI and ADS systems. Systems for the five year review were selected based upon plant risk significance and systems selected during previous PI&R inspections.

b. Assessment

(1) Effectiveness of Problem Identification

The inspectors determined that Entergy's performance was adequate in the area of Problem Identification. This was based on the selected samples reviewed, plant walkdowns, and interviews of site personnel. The inspectors determined that, in general, Entergy personnel identified problems and entered them into the CAP at a low threshold. For the issues reviewed, the inspectors noted that problems or concerns had been appropriately documented in enough detail to understand the issues. The inspectors observed managers and supervisors at CRG meetings appropriately questioning and challenging CRs to ensure clarification of the issues. The inspectors determined that Entergy trended equipment and programmatic issues, and CR descriptions appropriately included reference to repeat occurrences of issues. The

inspectors concluded that personnel were identifying trends at low levels. In general, the inspectors did not identify issues or concerns that had not been appropriately entered into the CAP for evaluation and resolution. In response to several minor issues identified by the team, Entergy personnel promptly initiated CRs and/or took immediate action to address the issue. However, the inspectors did identify one finding in this area. The finding is related to the Physical Security Cornerstone and is documented in Security Inspection Report 05000271/2011404.

The inspectors identified a potential trend where plant operators were not consistently entering unexpected control room alarms into the CAP. This trend was also discussed in NRC Inspection Report 05000271/2010005 (ML110390550). In some instances, unexpected control room alarms associated with known conditions were documented only in the control room logs and not in the CAP. Specifically, a review of operator logs conducted by the resident inspectors over a two year period identified that alarms caused by the electric fire pump starting due to system deficiencies were inconsistently documented in the CAP. Approximately 25% of the unexpected alarms sampled by the residents were not documented in the CAP. Although Entergy has developed corrective actions to address this potential trend after the residents brought this potential trend to their attention, the team noted a few examples where unexpected alarms caused by water leakage into the hydraulic control unit accumulators were not entered into the CAP. Effective condition trending cannot be performed if all occurrences are not being documented. The issue was evaluated using NRC IMC 0612 Appendix B, "Issue Screening," and Appendix E, "Minor Issues," and was determined to be a minor violation of Entergy's CAP procedure EN-LI-102, "Corrective Action Program," since plant operators responded to the alarms and took the required actions to ensure equipment availability and operability.

The inspectors also identified examples over the inspection period where Entergy failed to identify issues during the performance of infrequently performed evolutions, maintenance activities, and post maintenance testing (PMT) which contributed to plant events and/or resulted in violations of station and NRC requirements.

- NRC Inspection Report 05000271/2010003 (ML102100320) documented a self-revealing, Green NCV of Technical Specification (TS) 6.4, "Procedures." On May 17, 2010, operators inadvertently drained water from the reactor pressure vessel (RPV) during integrated emergency core cooling system (ECCS) testing. Specifically, Entergy failed to establish the initial plant conditions necessary to perform integrated ECCS testing without causing an inadvertent drain down of the vessel through the main steam lines, the HPCI and the RCIC turbines, and into the torus. Plant conditions had been established to perform the integrated ECCS test but were subsequently changed to support core reassembly and not reestablished prior to commencing the test resulting in the test occurring with RCS water level above the main steam lines with the steam plugs removed, which resulted in an unplanned reactor coolant system (RCS) level transient.
- NRC Inspection Report 05000271/2011002 (ML102100320), documents a self-revealing, Green NCV of TS 6.4, "Procedures," in which maintenance and planning personnel did not involve engineering personnel as required by Entergy procedures, resulting in the incorrect material being used to replace the gasket on the flange of HPCI steam trap 23T-3. On February 16, 2011 the HPCI steam trap gasket failed resulting in HPCI having to be isolated and the HPCI space and reactor building

being temporarily evacuated. One of the contributing causes to this event (CR-VTY-2011-00667) was an inadequate post maintenance test (PMT). Due to known leakage past LCV-53 and leakage through the steam trap internals, system pressure could not be built up during the PMT. These conditions were known and recently documented in the CAP (CR-VYT-2011-0404); however, this was not recognized how it affected the PMT. As a result the PMT was inadequate to demonstrate system integrity. When the quarterly HPCI surveillance was conducted days later, full system pressure was applied to the steam trap and the gasket failed.

- CR-VYT-2010-03660 identified that during the inspection period a programmatic issue related to quality control (QC) hold point inspections were not completed or were performed by non-qualified inspectors. This was done as a part of the corporate review of concerns raised by the NRC. At VY, five instances during refueling outage (RFO) 28 were identified where QC hold point inspections were completed by non qualified personnel or had been marked as "not applicable" and not completed. This was not identified by the work package closeout review. The NRC documented a Green NCV against 10 CFR 50 Appendix B Criteria X, "Inspections," in NRC Inspection Report 05000271/2010005 (ML110390550) for Entergy Corporation wide issues related to QC hold point inspections.

## (2) Effectiveness of Prioritization and Evaluation of Issues

The inspectors determined that Entergy's performance in this area was adequate. This was based upon the observation that, in general, Entergy appropriately prioritized and evaluated issues commensurate with the safety significance of the identified problem. Entergy screened CRs for operability and reportability, categorized the CRs by significance, and assigned actions to the appropriate department for evaluation and resolution. The condition report screening process considered human performance issues, radiological safety concerns, repetitiveness, adverse trends, and potential impact on the safety conscious work environment.

Based on the sample of CRs reviewed, the inspectors noted that the guidance provided by Entergy's CAP implementing procedures appeared sufficient to ensure consistency in categorization of issues. Operability and reportability determinations were generally performed when conditions warranted and in most cases, the evaluations supported the conclusion. Causal analyses appropriately considered the extent of condition or problem, generic issues, and previous occurrences of the issue. However, the inspectors did note some observations in Entergy's prioritization and evaluation of the following issues:

### HPCI Steam Trap 23T-3

NRC Inspection Report 05000271/2011002 (ML102100320), documents a self-revealing, Green NCV of TS 6.4, "Procedures," in which maintenance and planning personnel did not involve engineering personnel as required by Entergy procedures, resulting in the incorrect material being used to replace the gasket on the flange of HPCI steam trap 23T-3. On February 16, 2011 the HPCI steam trap gasket failed resulting in HPCI having to be isolated and the HPCI space and reactor building being temporarily evacuated.

On February 1, 2011, the HPCI system was removed from service to repair a small steam leak in non-safety related one-inch piping downstream of steam trap 23T-3. The flange on the steam trap had to be disassembled to access and replace the piping with the steam leak. The flange was originally sealed with a spiral wound flexitallic gasket. This type of gasket was not readily available and the licensee determined that a Garlock 9920 gasket was an acceptable replacement. The decision was made by maintenance supervision based on a previous technical evaluation (04-00600 Revision 0) provided in the work package by the planning department. This technical evaluation states that this material should not be used in systems greater than 250 psig. This limitation was misinterpreted and the Garlock 9920 gasket was put into place on 23T-3. In addition, the maintenance personnel incorrectly applied OP 0212, "General Bolting Requirements," by using the table for a flexitallic gasket. This resulted in the torque values used being inadequate. Thus as a result of this inadequate equivalent part evaluation, an improper gasket material was used and insufficient torque values were applied. This resulted in the HPCI steam trap gasket failing when full system pressure was applied on February 16, 2011.

#### HPCI Steam Trap Internals:

CR 2011-0404 was written on February 1, 2011 for a hole discovered in the HPCI steam Trap 23T-3 internals. Steam Trap 23T-3 is the ASME code class 2 boundary and a defect in an ASME code piping system would be a degraded condition and require an operability review. However, this CR was incorrectly classified as a 'D' CR and no evaluation of current operability was performed even though a decision was made to restore the system with this known degraded condition. Following the February 16, 2011 HPCI steam trap gasket failure event discussed above, Engineering Management identified that an operability determination had not been performed for the steam trap internals and wrote a new CR (CR-VYT-2011-711). It was determined that HPCI system safety function and integrity was not affected and the safety related piping system was determined to be operable but degraded. The issue was evaluated using NRC IMC 0612 Appendix B, "Issue Screening," and Appendix E, "Minor Issues," and was determined to be a minor violation of Entergy's CAP procedure EN-LI-102, "Corrective Action Program," since when the operability determination was completed, the non-conforming condition was not determined to adversely impact the system safety function or operability.

#### SRV Evaluation:

LER 05000271/2010-002-00&01: Inoperability of Main Steam Safety Relief Valves (SRVs) Due to Degraded Thread Seals. During the 2010 RFO, the pneumatic actuators for the four SRVs were tested and leakage was identified through the shaft-to-piston thread seal that was in excess of the design requirement on two of the four SRVs. The inspectors determined that the licensee's evaluation did not specifically identify two apparent causes or significant contributing causes. The SRV vendor did not submit a Part 21 report for the SRV issue due to the Type 2 actuator being used in an application outside of two design parameters. The design deficiencies were:

- Design ambient temperature for the Type 2 actuator is 150 degrees F according to the vendor design documents. The actuators at VY are exposed to an ambient temperature environment up to 185-190 degrees F according to the CR. This would

result in a 35-40 degree F loss of margin for the BUNA N thread sealant (rated at 210-250 degrees F.)

- The Type 2 actuator has cooling slots, where as the Type 1 actuator does not. These cooling slots were not accounted for when the Type 1 actuator was replaced with the Type 2 actuator and the cooling slots were covered by insulation. This caused the designed convection cooling of the actuator internals to be lost. As a result, the BUNA-N thread seal material was exposed to high temperature for a longer period, which increased the potential for degradation of the BUNA-N thread seals.

These concerns have not been addressed in the current plant configuration, as the Type 2 actuators are currently in use with the same insulation configuration. The current operability determination is based on empirical leak rate data measured from the degraded actuators following the 2010 RFO. This operability determination was reviewed by the inspectors and provides a reasonable basis for continued operability until the Fall 2011 RFO, due to sufficient margin being available in the safety-related nitrogen back up supply for the pneumatic actuation system to overcome worst case leakage for all design cases. In addition, this supply is routinely monitored via operator rounds. Corrective actions planned by the licensee include replacing the Type 2 actuator with a new design which is less temperature sensitive and modifying the insulation package around the actuator. Although not developed specifically for these apparent causes or contributing causes (ACs/CCs), the CAs will address these design issues. The issue was evaluated using NRC IMC 0612 Appendix B, "Issue Screening" and Appendix E, "Minor Issues," and was determined to be a minor violation of Entergy's CAP procedure EN-LI-102, "Corrective Action Program." NRC Inspection Report 05000271/2011002 documents an LER closeout review and two Licensee Identified Violations related to the discovery of the SRV issue. Since the previously unidentified ACs/CCs would not result in current operability being drawn into question and CAs are in place which would also address these causes, the issue is considered to be a minor violation of 10 CFR 50 Appendix B Criterion XVI, "Corrective Action."

#### Potential Trend of Lack of Rigor in Reviewing Vendor Evaluations:

The inspectors identified a potential trend based upon significant plant events which Entergy may have been able to prevent by conducting more rigorous reviews of vendor modifications and equivalency evaluations:

- NRC Inspection Report 05000271/2010003 documents in Section 40A3 that on May 25, 2010, the VYNPS experienced a main generator trip and lockout due to a high differential current on a 345KV tie line. This resulted in a main turbine trip and reactor scram. Prior to the main generator trip, the licensee was raising reactor power from 70 percent to 74.5 percent at 1 percent every 3 minutes. This was the highest power level reached after tying in the new Vermont Electric Power Company (VELCO) switchyard to 345KV system. Entergy determined that the main generator trip was initiated by a high differential current caused by differences in the winding ratios between the current sensors in the VY switchyard and the new VELCO switchyard. As the generator power was raised, the current sensors deviated sufficiently to cause the main generator to trip. While the resident inspectors determined that no performance deficiency existed since this was VELCO metering equipment and a VELCO modification to that equipment, it was recognized that

Entergy Engineering did not conduct a rigorous review of the switchyard modification due to poor communication between VELCO and VY staff regarding the scope of VELCO's modification. Entergy likely would have been able to identify the plant trip risk and taken actions to prevent the scram had they been better aware of the scope of work involved.

- NRC Inspection Report 05000271/2011002 documents an LER closeout review and two Licensee Identified Violations related to inoperability of Main Steam Safety Relief Valves (SRVs) due to degraded thread seals. During the 2010 RFO, the pneumatic actuators for the four SRVs were tested and leakage was identified through the shaft-to piston thread seal that was in excess of the design requirement on two of the four SRVs. Material testing determined that the apparent cause of the degraded thread seal condition was thermal degradation. During RFO27, Entergy discovered that the SRV Vendor no longer supported the Type-1 SRV actuators which VY had. The vendor recommended replacing the Type 1 actuators with a Type 2 actuator. The Type 1 actuator has silicone thread sealants which are rated up to ~390 degrees F while a Type 2 actuator uses BUNA-N polymer which is rated up to 210-250 degrees F. Entergy Engineering staff overly relied upon the vendor's recommendation and did not conduct an appropriate equivalency review on their own. Thus when the Type 2 actuator was used at VY, the valve was exposed to higher temperatures which resulted in thermal degradation and air leakage from the actuator. This issue is discussed further above.

### (3) Effectiveness of Corrective Actions

The inspectors determined that Entergy's performance in this area was adequate. This was based upon the observation that CAs for identified deficiencies were generally timely and adequately implemented. For significant conditions adverse to quality, Entergy identified actions to prevent recurrence. The inspectors concluded that CAs to address the sample of NRC NCVs and findings since the last problem identification and resolution inspection were timely and effective. The inspectors did observe some weaknesses in Entergy's resolution of degraded conditions. For example:

#### Compounding of Corrective Actions:

The inspectors identified a trend related to CAs and corrective actions to prevent recurrence (CAPRs) not being completed due to compounding CAs. Compounding or "Daisy Chaining" is where a CA from one CR is linked to another CR such that the original CR can be closed out. Compounding can involve multiple station level CRs (Horizontal) or involve CAs being moved from the station level to the corporate level and back (Vertical). This practice creates a vulnerability where CAs get lost in the CAP and the associated work orders are allowed to be cancelled and deferred and the CA or CAPR is not completed. Entergy's staff conducting CR closeout reviews and Quality Assurance Staff conducting reviews of NCVs and RCAs identified a number of CAs and three CAPR which were either not completed or the CAs taken did not meet the intent of the original CAs/CAPR. Since the CR closeout reviews are a credited part of the CAP, Entergy's program did identify these missed CAs/CAPR, and the actions were subsequently scheduled or completed, there is no violation of regulatory requirements; however, the relatively large number of issues identified by the final closure reviews indicates a potential vulnerability which needs to be addressed. This is a long standing concern which was also discussed during the 2009 PI&R team inspection.

Corporate Procedures Change Removed CAPR:

In 2008, Entergy received a Notice of Violation (NOV) for a Greater than Green security finding. Entergy's RCA for the finding documented in CR-VYT-2008-1146 developed a CAPR to revise a corporate security procedure EN-NS-204. These actions were completed and EN-NS-204 Revision 1 was issued containing the procedure revisions specified by the CAPR. VY Security personnel identified during the closure review of a 2011 Corporate CR that the current revision of EN-NS-204 Revision 6 no longer contained the guidance specified by the 2008 CAPR. This issue was entered into the station and corporate CAPs. It was discovered that there were no process controls in place to prevent a CAPR from being revised in a corporate procedure. Such a process does exist for station level procedures. The corporate procedure was being revised to reinstate the guidance of the 2008 CAPR. The issue was evaluated using NRC IMC 0612 Appendix B, "Issue Screening" and Appendix E, "Minor Issues," and was determined to be a minor violation of Entergy's CAP procedure EN-LI-102, "Corrective Action Program." The issue was determined to be minor because there was no repetition of the 2008 performance deficiency as a result of the CAPR being removed from the procedure.

Long Term Corrective Actions (LTCAs):

The inspectors noted a potential weakness under timely and effective CAs. Entergy's CA process allows CAs to remain open for greater than six months without a long term CA review as long as they do not require a design change, NRC review, multiple training cycles or a plant outage to be implemented. In addition, the inspectors found several examples of actions that had their due dates extended past the six month mark without documentation stating why the extension was acceptable. This allows conditions to go uncorrected for an extended period of time without a documented review to determine if compensatory actions are needed. The issue was evaluated using NRC IMC 0612 Appendix B, "Issue Screening," and Appendix E, "Minor Issues," and was determined to be a minor violation of Entergy's CAP procedure EN-LI-102, "Corrective Action Program." The issue was determined to be minor because there were no instances identified where this practice challenged operability of safety related equipment. Additionally, Entergy tracked the status of these LTCAs, and extensions had been approved in accordance with Entergy's CAP procedures. Entergy entered the inspector's observation into their CAP as CR-VTY-2011-01639.

c. Findings

The inspectors identified a finding of very low security significance (Green) involving a NCV of 10 CFR 73.55 (k)(2) and the VY Physical Security Plan. The details of this finding are documented in Security Inspection Report 05000271/2011404. This finding has a cross-cutting aspect in the area of Human Performance-Work Practices-Human Performance Error Prevention Techniques because Entergy staff failed to conduct proper peer and self checking techniques which would have identified and precluded the issue. [H.4.(a)]

No other findings were identified.

## .2 Assessment of the Use of Operating Experience

### a. Inspection Scope

The inspectors reviewed a sample of CRs associated with review of industry operating experience to determine whether Entergy appropriately evaluated the operating experience information for applicability to VY and had taken appropriate actions, when warranted. The inspectors also reviewed evaluations of operating experience documents associated with a sample of NRC generic communications to ensure that Entergy adequately considered the underlying problems associated with the issues for resolution via their CAP. In addition, the inspectors observed various plant activities to determine if the station considered industry operating experience during the performance of routine and infrequently performed activities.

### b. Assessment

The inspectors determined that Entergy's performance in this area was good. This was based on the observation that Entergy appropriately considered industry operating experience information for applicability, and used the information for corrective and preventive actions to identify and prevent similar issues when appropriate. The inspectors determined that operating experience was appropriately applied and lessons learned were communicated and incorporated into plant operations and procedures when applicable. The inspectors also observed that industry operating experience was routinely discussed and considered during the conduct of Plan-of-the-Day meetings and pre-job briefs. Entergy also effectively used operational experience in the development of 10 CFR 50.65(a)(1) action plans and as a part of higher level ACEs and RCAs.

### c. Findings

No findings were identified.

## .3 Assessment of Self-Assessments and Audits

### a. Inspection Scope

The inspectors reviewed a sample of audits, including the most recent audit of the CAP, departmental self-assessments, and assessments performed by independent organizations. Inspectors performed these reviews to determine if Entergy entered problems identified through these assessments into the CAP, when appropriate, and whether they initiated CAs to address identified deficiencies. The inspectors evaluated the effectiveness of the audits and assessments by comparing audit and assessment results against self-revealing and NRC-identified observations made during the inspection.

### b. Assessment

The inspectors determined that Entergy's performance in this area was good. This was based on the observation that Entergy's self-assessments, audits, and other internal Entergy assessments were generally critical, thorough, and effective in identifying issues. The inspectors observed that Entergy personnel knowledgeable in the subject

completed these audits and self-assessments in a methodical manner. Entergy completed these audits and self-assessments to a sufficient depth to identify issues which were then entered into the CAP for evaluation. In general, the station implemented CAs associated with the identified issues commensurate with their safety significance.

c. Findings

No findings were identified.

.4 Assessment of Safety Conscious Work Environment

a. Inspection Scope

During interviews with station personnel, the inspectors assessed the safety conscious work environment at VY. Specifically, the inspectors interviewed personnel to determine whether they were hesitant to raise safety concerns to their management and/or the NRC. The inspectors also interviewed the station Employee Concerns Program coordinator to determine what actions are implemented to ensure employees were aware of the program and its availability with regards to raising safety concerns. The inspectors reviewed the Employee Concerns Program files to ensure that Entergy entered issues into the CAP when appropriate.

b. Assessment

During interviews, Entergy staff expressed a willingness to use the CAP to identify plant issues and deficiencies and stated that they were willing to raise safety issues. The inspectors noted that no one interviewed stated that they personally experienced or were aware of a situation in which an individual had been retaliated against for raising a safety issue. All persons interviewed demonstrated an adequate knowledge of the CAP and the Employee Concerns Program. Based on these interviews, the inspectors concluded that there was no evidence of an unacceptable safety conscious work environment and no significant challenges to the free flow of information.

c. Findings

No findings were identified.

40A3 Event Follow-up (71153- 1 sample)

(Closed) Licensee Event Report (LER) 05000271/2011-001-00, Inoperability of the High Pressure Coolant Injection System Due to Failure to Follow Procedures.

On February 16, 2011, with the plant at 100 percent power, VY was preparing to perform a scheduled quarterly surveillance on the HPCI system. During initial startup of the HPCI system, audible and visual indications of steam leakage were observed by personnel in the vicinity of the HPCI room. A local fire alarm was received in the control room and operators were dispatched and confirmed that the alarm was due to the steam leak in the HPCI room. The HPCI steam supply was isolated and an eight-hour notification was made to the NRC per 10 CFR 50.72(b)(3)(v)(D).

The investigation determined that a flanged connection associated with steam trap 23T-3 was the source of the leak. The event was attributed to a maintenance activity that was performed on February 1, 2011 where the steam trap was disassembled to facilitate a piping weld repair. Following the pipe repair, the steam trap was reassembled using a Garlock 9920 gasket material because there was no spiral wound gasket material available. The investigation determined that the Garlock 9920 gasket was not appropriate for this application. In addition, post maintenance testing was performed but it was subsequently determined that the system configuration did not expose the affected flanges to full operating pressure and temperature. This event was determined to be reportable per 10 CFR 50.73 (a)(2)(v)(D) as an event or condition that could have prevented fulfillment of a safety function needed to mitigate the consequences of an accident and since the condition existed longer than the limiting condition for operability of the HPCI system (i.e., 14 days), the event is also reportable under 10 CFR 50.73 (a)(2)(i)(B) as a condition prohibited by TSs.

NRC Inspection report 05000271/2011002 (ML102100320), documents a self-revealing, Green NCV of TS 6.4, "Procedures," in which maintenance and planning personnel did not involve engineering personnel as required by Entergy procedures, resulting in the incorrect material being used to replace the gasket on the flange of HPCI steam trap 23T-3. The inspectors reviewed this LER. No additional violations were noted. This LER is closed.

#### 4OA6 Meetings, Including Exit

On April 21, 2011, the inspectors presented the inspection results to Mr. C. Wamser, General Manager, Plant Operations, and other members of the VY staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTALINFORMATION

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee Personnel

A. Johnson, Security Supervisor  
H. Swaby, System Engineer  
J. Devinentis, Senior Lead Licensing Engineer  
J. Patrick, Superintendent Security Operations  
P. Ryan, Manager Security Operations  
J. Hardy, Chemistry Manager  
J. Rogers, Design Engineering Manager  
D. Jeffries, Electrical and I&C Engineering Supervisor  
M. Brown, Radiation Operations Supervisor  
D. Grimes, Civil Design Engineer  
W. Sparko, Balance of Plant Engineer  
B. Naeck, Mechanical Systems Engineer  
B. Pittman, Assistant Operations Manager  
R. Current, System Engineer  
B. Wanczyk, Licensing Manager  
P. Corbett, QA Manager  
A. Bradford, Reactor Operator  
W. Manning, Senior Reactor Operator  
D. Boyce, Auxiliary Operator  
R. Booth, System Engineer  
S. Goodwin, System Engineer  
D. McElwee, Employee Concerns Representative.

NRC Personnel

L. Lewin, NRR  
R. Bernardo, NRR  
A. Ziedonis, Acting VY SRI  
D. Spindler, VY SRI  
J. Trapp, Region I

## LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

### Opened and Closed

None

### Closed:

|                          |     |  |
|--------------------------|-----|--|
| LER 05000271/2011-001-00 | LER | Inoperability of the High Pressure Coolant Injection System due to Failure to Follow Procedures. |
|--------------------------|-----|--|

### Discussed:

|                     |     |                                       |
|---------------------|-----|---------------------------------------|
| 05000271/2011404-01 | NCV | Physical Security Cornerstone Finding |
|---------------------|-----|---------------------------------------|

## LIST OF DOCUMENTS REVIEWED

### Section 40A2: Problem Identification and Resolution

#### Audits and Self-Assessments

LO-VTYLO-2007-00116  
 LO-VTYLO-2008-00049  
 LO-VTYLO-2008-00079  
 LO-VTYLO-2009-00016  
 LO-VTYLO-2009-00031  
 LO-VTYLO-2009-00037  
 LO-VTYLO-2009-00134  
 LO-VTYLO-2009-00144  
 LO-VTYLO-2009-00154  
 LO-VTYLO-2009-00174  
 LO-VTYLO-2009-00204  
 LO-VTYLO-2009-00208  
 LO-VTYLO-2009-00227  
 LO-VTYLO-2010-00011  
 LO-VTYLO-2010-00039  
 LO-VTYLO-2010-00050  
 LO-VTYLO-2010-00054  
 LO-VTYLO-2010-00061  
 LO-VTYLO-2010-00079  
 LO-VTYLO-2010-00098  
 LO-VTYLO-2010-00102  
 LO-VTYLO-2010-00107  
 LO-VTYLO-2011-00041  
 LO-VTYLO-2011-00045  
 QS -2011-VY-001 Follow-Up for VTY2010-03036  
 QS-2010-VY-002 Follow-Up for VTY 2009-04211  
 QS-2010-VY-010 Dated 7/21/2010

QS-2010-VY-019 Follow-Up for VTY 2010-03782  
 QS-2010-VY-021 Follow-Up for VTY 2010-04266  
 QS-2011-VY-003 Follow-Up for VTY 2010-05143  
 Snapshot Assessment / Benchmark On: Operations Control Room Procedures 2/15/2011  
 Snapshot Assessment Operations department personnel qualifications 2/19/2010  
 Snapshot Assessment: Evaluate if mispositionings / status control issues relate to procedures  
 3/6/2010.  
 Snapshot Self Assessment Control Room Logkeeping 9/23/10.  
 Snapshot Self Assessment Control Room Logkeeping for 10/24/09 to 1/16/10.  
 Snap Shot Self Assessment VY Quarterly Trend Report Fourth Quarter 2010

Condition Reports (\* indicates that condition report was generated as a result of this inspection)

|            |            |            |
|------------|------------|------------|
| 2006-02523 | 2010-00029 | 2010-02773 |
| 2008-00049 | 2010-00069 | 2010-02828 |
| 2008-00637 | 2010-00075 | 2010-02952 |
| 2008-01146 | 2010-00075 | 2010-02952 |
| 2008-01244 | 2010-00118 | 2010-02975 |
| 2008-01723 | 2010-00118 | 2010-03016 |
| 2009-00016 | 2010-00275 | 2010-03036 |
| 2009-00662 | 2010-00275 | 2010-03057 |
| 2009-00882 | 2010-00395 | 2010-03071 |
| 2009-00910 | 2010-00488 | 2010-03178 |
| 2009-00911 | 2010-00532 | 2010-03206 |
| 2009-00960 | 2010-00587 | 2010-03233 |
| 2009-00992 | 2010-00692 | 2010-03269 |
| 2009-01039 | 2010-00720 | 2010-03384 |
| 2009-01160 | 2010-00809 | 2010-03384 |
| 2009-01205 | 2010-00870 | 2010-03412 |
| 2009-01671 | 2010-00977 | 2010-03552 |
| 2009-01981 | 2010-01019 | 2010-03552 |
| 2009-02000 | 2010-01145 | 2010-03580 |
| 2009-02024 | 2010-01183 | 2010-03598 |
| 2009-02096 | 2010-01280 | 2010-03601 |
| 2009-02222 | 2010-01292 | 2010-03647 |
| 2009-02931 | 2010-01422 | 2010-03660 |
| 2009-02931 | 2010-01531 | 2010-03661 |
| 2009-03049 | 2010-01557 | 2010-03782 |
| 2009-03198 | 2010-01612 | 2010-03793 |
| 2009-03215 | 2010-01623 | 2010-03794 |
| 2009-03388 | 2010-01623 | 2010-03802 |
| 2009-03516 | 2010-01817 | 2010-03961 |
| 2009-03516 | 2010-02162 | 2010-03968 |
| 2009-03641 | 2010-02187 | 2010-04108 |
| 2009-03753 | 2010-02355 | 2010-04165 |
| 2009-03753 | 2010-02564 | 2010-04167 |
| 2009-03925 | 2010-02578 | 2010-04217 |
| 2009-04142 | 2010-02582 | 2010-04266 |
| 2009-04211 | 2010-02754 | 2010-04266 |
| 2009-04234 | 2010-02757 | 2010-04280 |
| 2010-00013 | 2010-02757 | 2010-04282 |

|            |            |                |
|------------|------------|----------------|
| 2010-04282 | 2010-05673 | 2011-01038     |
| 2010-04305 | 2011-00025 | 2011-01276     |
| 2010-04308 | 2011-00109 | 2011-01291     |
| 2010-04342 | 2011-00134 | 2011-01401*    |
| 2010-04401 | 2011-00192 | 2011-01435*    |
| 2010-04682 | 2011-00204 | 2011-01447*    |
| 2010-04698 | 2011-00244 | 2011-01447*    |
| 2010-04734 | 2011-00301 | 2011-01451*    |
| 2010-04826 | 2011-00303 | 2011-01485*    |
| 2010-04883 | 2011-00404 | 2011-01487*    |
| 2010-05037 | 2011-00615 | 2011-01518*    |
| 2010-05062 | 2011-00667 | 2011-01565*    |
| 2010-05095 | 2011-00697 | 2011-01568*    |
| 2010-05096 | 2011-00711 | 2011-01636*    |
| 2010-05128 | 2011-00751 | 2011-01639*    |
| 2010-05143 | 2011-00849 | HQN-2009-01184 |
| 2010-05203 | 2011-00849 | HQN-2010-00013 |
| 2010-05268 | 2011-00895 | HQN-2010-00244 |
| 2010-05268 | 2011-00896 | HQN-2010-00386 |
| 2010-05303 | 2011-00900 | HQN-2010-00634 |
| 2010-05342 | 2011-00903 | HQN-2011-00177 |
| 2010-05366 | 2011-00925 | HQN-2011-00373 |
| 2010-05458 | 2011-00930 |                |
| 2010-05458 | 2011-00942 |                |
| 2010-05520 | 2011-01037 |                |

### Drawings

B-191301 Sheet 1447 Rev 12, "HPCI System Isolation Valves"  
 B-191301 Sheet 1454 Rev 32, "HPCI System Annunciators"  
 G-191169 SH 1 Rev 52 and Sh2 Rev 43, "Flow Diagram for HPCI System."  
 G-191174 Sh1 Rev 43 and SH2 Rev 24, "Flow Diagram for RCIC."  
 G-191301 SH. 1, 480V Aux. One Line Diagram SWGR Bus 9, MCC-9A, 9C  
 G-191301 SH. 2, 480V Aux. One Line Diagram MCC-9B, 9D, 89A  
 HPCI Piping Isometric Drawing HPCI Room Part 3A Rev 00

### Operating Experience

IN 2006-02, Use of Galvanized Supports and Cable Trays with Meggitt Si 2400 Stainless-Steel-Jacketed Electrical Cables  
 IN 2006-22, New Ultra-Low-Sulfur Diesel Fuel Oil Could Adversely Impact Diesel Engine Performance  
 IN 2007-28, Potential Common Cause Vulnerabilities in Essential Service Water Systems Due to Inadequate Chemistry Controls  
 IN 2007-29, Temporary Scaffolding Affects Operability of Safety-Related Equipment  
 IN 2008-02, Findings Identified During Component Design Bases Inspections  
 IN 2008-09, Turbine-Driven Auxiliary Feedwater Pump Bearing Issues  
 IN 2008-11, Service Water System Degradation at Brunswick Steam Electric Plant Unit 1  
 IN 2009-02, Biodiesel in Fuel Oil Could Adversely Impact Diesel Engine Performance  
 IN 2009-04, Age-Related Constant Support Degradation  
 IN 2011-02 Reactivity Management

## RIS 08-14, Use of Tormis Computer Code for Assessment of Tornado Missile Protection

NCVs and Findings

2009-005-01 LPCI Availability During Surveillance  
 2010-002-02 EDG Availability During Surveillance  
 2010-005-01 Failure to Perform Required Quality Control Inspections  
 2010-005-02 Failure to Implement the Experience Requirements of the Quality Assurance Program

Procedures

EN-DC-205, "Maintenance Rule Monitoring" Rev. 3  
 EN-DC-206, "Maintenance Rule (A)(1) Process" Rev. 1  
 EN-DC-346, "Cable Reliability Program" Rev. 1  
 EN-FAP-LI-0004, "Performance indicators" Rev. 11  
 EN-LI-102, "Corrective Action Program" Rev. 16  
 EN-LI-104, "Self-Assessment and Benchmark Process" Rev. 6  
 EN-LI-108, "Event Notification and Reporting" Rev. 4  
 EN-LI-108-01, "10 CFR 21 Evaluation and Reporting" Rev. 00  
 EN-LI-118, "Root Cause Analysis Process" Rev. 13  
 EN-LI-119, "Apparent Cause Evaluation Process" Rev. 11  
 EN-LI-120, "Energy Trending Process" Revs. 9 & 10  
 EN-NS-200, "Security Reporting Requirements" Rev. 5  
 MTMP-CTS-52114-10, "Cooling Tower Structural Inspection and Repair" Rev. 0  
 OE 3107 Appendix CC, "RPV Venting or Depressurization Via MSIVs" Rev. 27  
 OE 3107 Appendix HH, "Torus (TVS-86) Venting Via 8 Inch Hardened Vent Flowpath to the Stack" Rev. 27  
 ON-3158, "Reactor Building High Area Temperature/Water Level Procedure" Rev. 10  
 OP 0105, "Plant Startup" Rev. 89  
 OP 4127, "John Deere Diesel Generator Surveillance" Rev. 24  
 OP 4152, "Equipment and Floor Drain Sump and Totalizer Surveillance" Rev. 48  
 OP 4306, "Control Rod Block System Logic Test" Rev. 28  
 OP 52114 "Cooling Tower Structural Inspection and Repair" Rev. 2  
 OP-0212, "General Bolting Guidelines" Rev. 7  
 OP4100, "ECCS Integrated Auto Initiation Test" Rev. 48 and Completed Surveillance Dtd 5/17/2010  
 OP-4306, "Control Rod Block System logic Test" Rev. 28  
 OP4343, "Automatic Depressurization System Logic Test" Rev. 31  
 OPOP-ALTSD-3126, "Shutdown Using Alternate Shutdown Methods" Rev. 00  
 OPOP-ALTSD-3126, "Shutdown Using Alternate Shutdown Methods" Rev. 00  
 OPST-ADS-4122-01, "Auto Blowdown System Surveillance from the Control Room" Rev.1  
 OP-ST-HPCI-4120, "HPCI System Surveillance" Rev. 00  
 OT 3122, "Loss of Normal Power" Rev 43  
 Physical Security Plan  
 Site Protective Strategy

Work Requests and Orders

WO 173364-01  
WO 177186-01  
WO 178169-14  
WO 178170-31  
WO 225566  
WO 225566  
WO 252692  
WO 259823  
WO 52188833-01  
WR 189195  
WR 214284  
WR 227202

Miscellaneous

4th quarter 2010 system health reports  
ADS Logic Relay Sheets dated 1/11.  
CARB Agenda, Meeting Number 2011-013  
Chemistry 2011 Annual ALARA Plan, Rev. 0  
Control Room Annunciators Action Plan - 3/28/2011  
Control Room Operator Logs for 2/15/2011, 2/16/2011, 5/16/2010, and 5/17/2010.  
Deficient Maintenance Backlog Report dated 4/4/2011.  
Dry Fuel Storage 2011 Annual ALARA Plan, Rev. 0  
Electrical Maintenance 2011 Annual ALARA Plan, Rev. 0  
Engineering 2011 Annual ALARA Plan, Rev. 0  
Federal Register Notice 57 Fed Reg 41378 1992.  
Instrumentation and Controls 2011 Annual ALARA Plan, Rev. 0  
LER 50-271-2011-001.  
Maintenance Aggregate Index For 2010  
Maintenance Rule Monthly Report for March 2011  
Maintenance Support 2011 Annual ALARA Plan, Rev. 0  
Mechanical Maintenance 2011 Annual ALARA Plan, Rev. 0  
NRC Event Notifications: 45009, 45313, 45613, 45957, 45958, 45987, 46038, 46069, 46070, 46212, 46618.  
NUREG 1022 Rev 2, "10 CFR 50.72 and 50.73 reporting guidelines."  
ODMI: "Steam leak on NNS HPCI Steam Line Drain Pipe Between HPCI V23-42 and V23-43."  
ODMI: FCV-6-12A and FCV-6-12B indicate incorrect positions at 100% power  
OIG-11-A-08," Audit of NRC's Implementation of 10 CFR Part 21 Reporting of Defects and Noncompliance." Dated March 23, 2011.  
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PMCR 100803 "Inspect and Pump Manholes as Necessary" 12/16/2010  
PMRQ 50042926-03  
Rad Waste/Decon 2011 Annual ALARA Plan, Rev. 0  
Radiation Protection 2011 Annual ALARA Plan, Rev. 0  
Refuel Floor 2011 Annual ALARA Plan, Rev. 0  
Reportability Template PRO Responses dated 3/15/2011.

System health Reports for ADS and HPCI Systems from 2006-2010.  
System Importance Rankings by Risk Achievement Worth Method- VY 1998 IPE Update.  
Tech Evaluation 04-000600 Rev 00 and ENN-04-0064 rev 00 dated 2/11/04  
TERI 069 Rev 0, "Technical Evaluation of Replacing items"  
Vermont Yankee Backlog Trend Report for 2011 dated 4/4/2011  
Vermont Yankee Maintenance Backlog Report dated 4/4/2011  
Vermont Yankee Quality Assurance Manual Rev 21.  
Vermont Yankee Technical Specification Licensee Amendment 236.  
Vermont Yankee Technical Specification Proposed Change No 291 Dated April 13, 2010.  
Vermont Yankee Procedure Academy  
Vermont Yankee Procedure Improvement Transition Plan March 2011  
Vermont Yankee USFAR, Technical Specifications, Technical Requirements Manual, and Off  
Site Dose Calculation Manual.  
VTY CRG Summary Agenda Report, 4/15/2011  
VY CAP Performance Indicators for 2009 – 2011.  
VY CRG Meeting Packages 4/5/11, 4/7/11, and 4/18/11.  
VY Daily Plant Status Reports. (4/4/11- 4/21/11)  
VY List of Trending CRs dated 4/4/2011  
VY Radiation Worker Trip Tickets Forms.  
VYNPS 10 CFR 50.65 Maintenance Rule Scoping Basis.  
VYNPS In Scope/ Risk Significance Maintenance Rule Scoping Basis Document Rev 3  
Attachment 1  
VYSE-MRL-2007-039 "Performance Improvement/Action Plan for Buildings - Annunciator  
Subsystem" Rev. 3.1  
VYSE-MRL-2008-013 "Performance Improvement/Action Plan for Advanced Off Gas Equipment  
Train 'A'" Rev 1  
VYSE-MRL-2010-011 "Performance Improvement/Action Plan for Circulating Water - System"  
Rev. 0  
VYSE-MRL-2010-013 "Performance Improvement/Action Plan for Primary Containment  
Atmosphere Control - System" Rev. 1  
VYSE-MRL-2010-027 "Performance Improvement/Action Plan for Circulating Water -  
Aggregate" Rev. 0  
VYSE-MRL-2010-030 "Performance Improvement/Action Plan for Instrument Air System Train  
'A'" Rev. 0

**LIST OF ACRONYMS**

|         |  |
|---------|--|
| ACE     | Apparent Cause Evaluation                          |
| ACs/CCs | Apparent Causes and/or Contributing Causes         |
| ADAMS   | Agency-wide Documents Access and Management System |
| ADS     | Automatic Depressurization System                  |
| ASME    | American Society of Mechanical Engineers           |
| CA      | Corrective Actions                                 |
| CAP     | Corrective Action Program                          |
| CAPR    | Corrective Actions to Prevent Recurrence           |
| CFR     | Code of Federal Regulations                        |
| CR      | Condition Report                                   |
| CRG     | Condition Review Group                             |
| ECCS    | Emergency Core Cooling System                      |
| EN      | Event Notification                                 |
| HPCI    | High Pressure Coolant Injection System             |
| IMC     | Inspection Manual Chapter                          |
| LER     | Licensee Event Report                              |
| LTCA    | Long Term Corrective Actions                       |
| NCV     | Non-Cited Violation                                |
| NRC     | Nuclear Regulatory Commission                      |
| PARS    | Publicly Available Records System                  |
| PI&R    | Problem Identification & Resolution                |
| PMT     | Post Maintenance Test                              |
| QA      | Quality Assurance                                  |
| QC      | Quality Control                                    |
| RCA     | Root Cause Analysis                                |
| RCIC    | Reactor Core Isolation Cooling System              |
| RCS     | Reactor Coolant System                             |
| RFO     | Refueling Outage                                   |
| RPV     | Reactor Pressure Vessel                            |
| SDP     | Significance Determination Process                 |
| SLDI    | Steam Leak Detection and Isolation System          |
| SORC    | Station Oversight Review Committee                 |
| SRV     | Safety Relief Valve                                |
| TS      | Technical Specifications                           |
| VELCO   | Vermont Electric Power Company                     |
| VY      | Vermont Yankee                                     |
| VYNPS   | Vermont Yankee Nuclear Power Station               |
| WO      | Work Order   |
| WR      | Work Request                                       |