Vermont Yankee
2Q/2011 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Feb 16, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Steam Leak on High Pressure Coolant Injection (HPCI) During Surveillance Testing
A self-revealing, Green NCV of Technical Specification 6.4, "Procedures," was identified in which maintenance and planning personnel did not involve engineering personnel as required by Entergy procedure EN-MA-101, “Fundamentals of Maintenance,” Revision 9, and EN-WM-105, “Planning,” Revision 8, resulting in the incorrect material being used to replace the gasket on the flange of High Pressure Coolant Injection System (HPCI) steam trap 23T-3. Entergy ultimately replaced the gasket with the correct material and entered this issue into their corrective action program.

The inspectors determined that the finding was more than minor because it was associated with the Human Performance attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green) in accordance with IMC 0609, Appendix A, “Determining the Significance of Reactor Inspection Findings for At-Power Situations,” using Significance Determination Process (SDP) Phases 1, 2 and 3. A Region I Senior Reactor Analyst (SRA) conducted a Phase 3 analysis because the Phase 2 analysis indicated that the finding had the potential to be greater than very low safety significance (Greater than Green). This finding had a cross-cutting aspect in the Human Performance cross-cutting area, Decision Making component, because Vermont Yankee personnel did not obtain interdisciplinary input on the decision to use a different, incorrect gasket material in a steam trap in the HPCI system.

Inspection Report# : 2011002 *(pdf)*

Significance: G Jan 02, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow Foreign Material Exclusion Procedure
. A self-revealing, non-cited violation (NCV) of very low safety significance (Green) of Technical Specifications 6.4, “Procedures,” was identified for inadequate implementation of Entergy procedure EN-MA-118, “Foreign Material Exclusion,” Revision 6, which resulted in foreign material intrusion into the Residual Heat Removal Service Water (RHRSW) system. Specifically, Entergy did not establish a Foreign Material Exclusion (FME) Zone 1 around the open RHRSW system between completing the closeout inspection and system closure following pump replacement. Entergy’s immediate corrective actions included conducting a “stand down,” reinforcing the standards and requirements for FME controls and general procedural compliance, as well as reinforcing expectations for the attention to detail of work practices. Entergy entered the issue into their corrective action program to evaluate for additional corrective measures.

The inspectors determined that the finding was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences, (i.e., core damage). Specifically, foreign material made its way into the ‘A’ Residual Heat Removal Heat Exchanger (RHR HX) and

rendered the ‘A’ RHRSW train inoperable for several days. A review of NRC Inspection Manual Chapter (IMC) 0612, Appendix E, “Minor Examples,” revealed that no minor examples were applicable to this finding. The inspectors used IMC 0609.04, “Phase 1 – Initial Screening and Characterization of Findings,” and determined that the finding required a Phase 2 review because the ‘A’ RHRSW train had an actual loss of safety function for greater than its allowed outage time (7 days). This finding was assessed using IMC 0609 and was determined to be of very low safety significance (Green) based on a Phase 2 analysis. The finding had a cross-cutting aspect in the Human Performance cross-cutting area, Work Practices component, because Entergy personnel did not follow EN-MA-118. Specifically, they did not establish a FME Zone 1 after the system closeout inspection.
Inspection Report# : 2011002 *(pdf)*

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Required Quality Control Inspections
Green. Inspectors identified a noncited violation of 10 CFR 50, Appendix B, Criterion X, “Inspection,” for the failure to ensure that Quality Control verification inspections were consistently included and correctly specified in quality-affecting procedures and work instructions for construction-like work activities as required by the Quality Assurance Program. The licensee performed extensive reviews, and inspectors performed independent reviews of the licensee’s conclusions as well as independent sampling, to confirm that improper or missed inspections did not actually affect the operability of plant equipment. Entergy initiated prompt fleet-wide corrective actions to ensure proper work order evaluation and proper inclusion of Quality Control verification inspections. This issue was entered into the corrective action program under Condition Reports CR-HQN 2009-01184 and CR-HQN-2010-0013.

The failure to ensure that adequate Quality Control verification inspections were included in quality-affecting procedures and work instructions as required by the Quality Assurance Program was a performance deficiency. This programmatic deficiency was more than minor because, if left uncorrected, it could lead to a more significant safety concern in that the failure to check quality attributes could involve an actual impact to plant equipment. This issue affected the Design Control attribute of the Mitigating Systems cornerstone because missed or improper quality control inspections during plant modifications could impact the availability, reliability, and capability of systems needed to respond to initiating events. This performance deficiency was determined to have very low safety significance in Phase 1 of the SDP, since it was confirmed to involve a qualification deficiency that did not result in a loss of operability or functionality. The inspectors determined that this performance deficiency involved a cross-cutting aspect related to the human performance in decision-making (H.1a), because the licensee did not have an effective systematic process for obtaining interdisciplinary reviews of proposed work instructions to determine whether Quality Control verification inspections were appropriate. (Section 4OA2.1.b.1)

Inspection Report# : 2010005 *(pdf)*

Significance: G Dec 31, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement the Experience and Qualification Requirements of the Quality Assurance Program
Green. Inspectors identified a noncited violation of 10 CFR 50, Appendix B, Criterion II, “Quality Assurance Program,” for the failure to implement the experience and qualification requirements of the Quality Assurance Program. As a result, the licensee failed to ensure that two individuals assigned to the position of Quality Assurance Manager met the qualification and experience requirements of ANSI/ANS 3.1-1978 as required by the Quality Assurance Program. Specifically, the individual assigned to be the responsible person for the licensee’s overall implementation of the Quality Assurance Program did not have at least 1 year of nuclear plant experience in the overall implementation of the Quality Assurance Program within the quality assurance organization prior to assuming those responsibilities. This issue was entered into the corrective action program as Condition Report CR-HQN-2010-00386.
Failure to ensure that an individual assigned to the position Quality Assurance Manager met the qualification and experience requirements of ANSI/ANS 3.1-1978 as required by the Quality Assurance Program was a performance deficiency. This performance deficiency was determined to be more than minor because, if left uncorrected, it could create a more significant safety concern. Failure to have a fully qualified individual providing overall oversight to the

Quality Assurance Program had the potential to affect all cornerstones, but this finding will be tracked under the Mitigating Systems cornerstone as the area most likely to be impacted. The issue was not suitable for quantitative assessment using existing Significance Determination Process guidance, so it was determined to be of very low safety significance using IMC 0609, Appendix M, “Significance Determination Process Using Qualitative Criteria.” The inspectors determined that there was no cross-cutting aspect associated with this finding because this issue was not indicative of current performance because the violation occurred more than 3 years ago. (Section 4OA2.1.b.2)

Inspection Report# : 2010005 *(pdf)*

Significance: G Oct 01, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Fire Scenario Resulting in Loss of Reactor Core Isolation Cooling System
The team identified a Green, Non-Cited Violation of the Vermont Yankee Nuclear Power Station Facility Operating License, Condition 3.F, in that Entergy failed to implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report. Specifically, Entergy failed to assure that reactor vessel water level would remain below the reactor core isolation cooling (RCIC) system steam line for postulated alternate shutdown fire scenarios that spuriously started a reactor feedwater pump (RFP). Entergy initiated condition report CR-VTY-2010-04682 and promptly revised the alternate shutdown procedure to additionally trip all running condensate pumps. The additional action prevented a single spurious operation from restarting or precluding a trip of the RFPs.
This finding was more than minor because it was associated with the External Factors attribute (fire) of the Mitigating Systems Cornerstone and adversely affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the availability of the RCIC system was not ensured for postulated fires in alternate shutdown areas. The team used Phase 1 of IMC 0609, Appendix F, Fire Protection Significance Determination Process, to determine that this finding was of very low safety significance (Green) because the Vermont Yankee Nuclear Power Station alternate shutdown system also includes safety relief valves and a residual heat removal train that can be utilized for reactor pressure and water level control. This finding did not have a cross-cutting aspect because the m9st significant contributor of the performance deficiency was not reflective of current licensee performance.
Inspection Report# : 2010008 *(pdf)*

Significance: G Sep 30, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadvertent Isolation of Reactor Core Isolation Cooling (RCIC) During Surveillance Testing
A self-revealing, Green, non-cited violation (NCV) of Technical Specification 6.4, “Procedures,” was identified in which technicians incorrectly performed reactor core isolation cooling (RCIC) surveillance test operating procedure (OP) 4365, “RCIC Steam Line Low Pressure Functional/Calibration,” Rev. 25, resulting in the inadvertent isolation of the RCIC system. Entergy entered this issue into their corrective action program, correctly installed the test equipment, and subsequently performed the test satisfactorily.

The inspectors determined that the finding was more than minor because it adversely affected the Human Performance attribute for the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In accordance with IMC 0609, Attachment 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to be of very low risk significance (Green) because the finding was not a design or qualification deficiency, did not represent a loss of system safety function or loss of a single train for greater than its allowed technical specification time, and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. The inspectors determined this finding had a cross-cutting aspect in the Human Performance cross-cutting area, Work

Practices component, in that Entergy failed to appropriately self-check and peer-check the digital multimeter (DMM) setup prior to connecting it to the RCIC isolation logic.

Inspection Report# : 2010004 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Last modified : October 14, 2011