

Vermont Yankee

4Q/2011 Plant Inspection Findings

Initiating Events

Significance:  Oct 11, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Loss of Shutdown Cooling due to Tag Out Error

A self-revealing NCV of very low safety significance of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was identified because drawing B-191301, Sheet 576, “Control Wiring Diagram – Emergency Heater Drain Valve Diagram” was not of the appropriate quality to allow tagging activities to be accomplished in accordance with the drawing. As a result of the vague drawing, the wrong breaker was selected to be tagged out, resulting in an unexpected loss of shutdown cooling. Entergy took immediate corrective action to restore shutdown cooling and entered this issue into their corrective action program as CR-VTY-2011-04203.

The inspectors determined that Entergy’s tag out of the distribution breaker to Vital AC subpanel “A” due to a low quality drawing is a performance deficiency that was within Entergy’s ability to foresee and correct, and should have been prevented. This finding is more than minor because it is similar to the more than minor statement in example 4.b. in IMC 0612, Appendix E, “Examples of Minor Issues,” where an operator inadvertently operated the wrong component and caused a transient. The inspectors evaluated the finding using IMC 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings” and determined that the finding impacts the Initiating Events cornerstone. The finding required further review using IMC 0609, Appendix G, “Shutdown Operations Significance Determination Process” because the issue affected the safety of the reactor during a refueling outage. The inspectors determined that this finding was of very low safety significance (Green), using IMC 0609, Appendix G, Checklist 7, “BWR Refueling Operation with RCS Level >23’.” This determination was based on the fact that the finding did not degrade Entergy’s ability to recover decay heat removal once lost, and that the temperature increase was low enough that it did not represent a loss of control. The inspectors determined that this finding had a cross-cutting aspect in the Human Performance cross-cutting area, Resources component, because components in the tagging database were not labeled correctly [H.2(c)].

Inspection Report# : [2011005](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadvertent Trip of an Emergency Diesel Generator’s Fuel Rack

A self-revealing NCV of very low safety significance of 10 CFR 50 Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” was identified because Entergy personnel used instructions that were not appropriate to the circumstances resulting in an inadvertent trip of the “A” emergency diesel generator (EDG) fuel rack. Entergy’s corrective actions included promptly restoring the “A” EDG to an operable state, removing the qualifications for the auxiliary operator and field support supervisor involved in the event, and initiating CR-VTY-2011-05483.

There was a self-revealing performance deficiency in that Entergy personnel performed an activity affecting quality which was not prescribed by instructions appropriate to the circumstances resulting in an inadvertent trip of the “A” EDG fuel rack. This finding is more than minor because it is 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 (i.e. core damage). Specifically, the inadvertent trip

of the “A” EDG fuel rack resulted in the unplanned unavailability of the “A” EDG. The inspectors determined the significance of the finding using IMC 0609.04, “Phase 1 – Initial Screening and Characterization of Findings.” The finding was determined to be of very low safety significance because it did not represent a loss of system safety function, a loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to external initiating events. The inspectors determined that this finding had a cross-cutting aspect in the area of human performance, work practices component, because Entergy did not ensure supervisory oversight of work activity such that nuclear safety was supported [H.4(c)].

Inspection Report# : [2011005](#) (pdf)

Significance:  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:  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*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance:  Dec 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Incomplete Inventory for Spent Resin Shipment

A self-revealing NCV of very low safety significance of 10 CFR 20.1501 was identified because Entergy personnel failed to indicate the total radionuclide activity on the radioactive waste manifest for a radioactive waste shipment. 10 CFR 20.1501 requires licensees to make surveys that may be necessary to comply with the regulations of this part. 10 CFR 20.2006 (b) specifies that radioactive shipments intended for ultimate disposal must document a NRC uniform low level radioactive waste manifest in accordance with Appendix G. Appendix G, I.B.4, specifies that the shipper shall indicate the total radionuclide activity in the shipment on the radioactive waste manifest. VY radioactive waste shipment no. 2011-85 arrived at a radioactive waste processing facility on September 19, 2011, and subsequent radiation surveys by the receiving personnel identified radiation levels exceeding those indicated on the radioactive waste manifest. Entergy staff initiated CR-VTY-2011-03902, determined the shipment actually contained 17 curies of radioactive waste instead of 13.4 curies, revised the NRC form 541, and sent the revision to the radioactive waste processor to correct this error.

The inspectors determined that failing to indicate the total radionuclide activity on the radioactive waste manifest for a radioactive waste shipment is a performance deficiency that was within Entergy's ability to foresee and correct. This finding is more than minor since it affects the public radiation safety cornerstone objective, because not adequately accounting for all of the radioactive wastes in shipment no. 2011-85 had the potential for misclassifying wastes non-conservatively in subsequent radioactive waste processing and final shipment activities to a low level burial ground facility. The inspectors evaluated the finding using IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process." The inspectors determined the finding to be of very low safety significance (Green) because the error was corrected at the waste processor rather than after shipment to a waste disposal facility and did not affect low level burial ground nonconformance as evaluated under 10 CFR 61, "Licensing Requirements for Land Disposal of Radioactive Wastes." The inspectors determined that this finding had a cross-cutting aspect in the area of human performance, work control component, because Entergy did not appropriately coordinate work activities by incorporating actions to address the need for interdepartmental coordination and communication. Specifically, the impact of flushing a reactor water cleanup resin transfer line by the ALARA group on the radwaste shipping group was not sufficiently communicated or coordinated to ensure all solid radioactive wastes discharged from the plant into the waste container were accounted for in a subsequent radioactive waste shipment [H.3(b)].

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 : March 02, 2012