Vermont Yankee
1Q/2007 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2007
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Establish Minimum Thread Engagement for the "A" SW Pump Packing Gland Studs Results in Unplanned Unavailability
. A self-revealing finding was identified because Entergy mechanics did not meet station expectations for establishing minimum thread engagement when installing packing gland studs into the "A" service water pump stuffing box during the replacement of pump packing. The lack of adequate stud engagement ultimately resulted in the gland studs backing out of the stuffing box and the extrusion of packing from the "A" service water pump. Entergy personnel took immediate actions to re-install the gland studs, replace the extruded packing, and return the "A" service water pump to available status approximately 10 hours later.

The finding is more than minor because it is associated with the Equipment Performance attributes of both the Initiating Events and Mitigating Systems Cornerstones and because it affects the associated Cornerstone objectives of limiting the likelihood of those events that upset plant stability and ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors conducted a Phase 2 analysis and determined that the finding was of very low safety significance.
Inspection Report# : 2007002 *(pdf)*

Significance: G Mar 31, 2007
Identified By: Self-Revealing
Item Type: FIN Finding
Error Made by Electrical Maintenance Department Technicians Results in the Need for a Reactor Power Reduction
A self-revealing finding was identified due to a procedure performance error made by Electrical Maintenance Department technicians while performing switchyard testing. As a result, one of three 345 kilovolt offsite power lines and one of two 115 kilovolt power supplies to the startup transformers were inadvertently isolated requiring control room operators to reduce reactor power to approximately 65 percent to meet grid stability limits. This procedure performance error was entered into Entergy's corrective action program for resolution.

The finding is more than minor because it is associated with the Equipment Performance-Maintenance attribute of the Initiating Events Cornerstone and affected the associated cornerstone objective of limiting the likelihood of those events that upset plant stability (i.e., performance of a power reduction). The finding is of very low safety significance because performing the power reduction did not contribute to the likelihood of both a reactor trip and the unavailability of mitigating equipment. The cause of this finding is related to the cross-cutting area of Human Performance, in that, technicians failed to follow procedures.
Inspection Report# : 2007002 *(pdf)*

Significance: G Sep 30, 2006
Identified By: NRC
Item Type: FIN Finding
Vermont Yankee Did Not Correct Conditions Leading to the Continued Accumulation of Dust on Non-Safety Related Electrical Bus Grounding Resistors
A self-revealing finding was identified because Vermont Yankee did not correct a previously identified condition that allowed the continued accumulation of dust on non-safety related 4160 Volt electrical bus 2 grounding resistor banks. This accumulation of dust ultimately contributed to the inadvertent initiation of the east switchgear room CO2 fire suppression system, declaration of an unusual event (UE), and performance of a rapid power reduction.

The finding is greater than minor because it is associated with the Equipment Performance-Maintenance attribute of the Initiating Events Cornerstone and affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability (i.e., performance of a rapid power reduction). The inspectors conducted a Phase 1 screening of the finding in accordance with IMC 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations." The finding was determined to be of very low safety significance because performing the rapid power reduction did not increase the likelihood of a loss of coolant accident, did not contribute to the likelihood of both a reactor trip and the unavailability of mitigating equipment, and did not increase the likelihood of a fire or flooding event.
Inspection Report# : 2006004 *(pdf)*

Mitigating Systems

Significance: G Mar 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Design Control Associated with CST Vortexing Analysis
The inspectors identified an NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control." Specifically, Entergy did not use an appropriate method for calculating the effects of vortexing within the condensate storage tank which could have impacted high pressure coolant injection system and reactor core isolation cooling system performance under certain accident conditions. This design control issue was entered into Entergy's corrective action program for resolution. Immediate corrective actions taken by Entergy included maximizing the available volume of water in the condensate storage tank and requiring control room operators to manually realign the suction of the high pressure coolant injection and reactor core isolation cooling systems from the condensate storage tank to the torus if level decreased below 17.5 percent.

The finding is more than minor because it is associated with the Design Control attribute of the Mitigating Systems Cornerstone and because it affects the associated Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesired consequences. The finding is of very low safety significance because it did not result in a loss of operability of either the high pressure coolant injection system or the reactor core isolation cooling system. The cause of this finding is related to the cross-cutting area of Problem Identification and Resolution, in that, Entergy did not effectively evaluate relevant internal and external operating experience related to non-conservative condensate storage tank vortexing analyses.
Inspection Report# : 2007002 *(pdf)*

Significance: G Mar 31, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow Procedure Results in Unplanned "A" Emergency Diesel Generator Shutdown and Unavailability
. A self-revealing NCV of Vermont Yankee Technical Specification 6.4, "Procedures," was identified when operators failed to follow a surveillance procedure for the emergency diesel generator fuel oil transfer system. As a result, the "A" diesel automatically shut down and was declared unavailable when its fuel oil supply was isolated. Entergy restored the system to a standby alignment and entered this issue into their corrective action program.

The finding is more than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems Cornerstone and because it affects the associated Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance because it did not result in a loss of system safety function; did not represent actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; and was not risk significant due to seismic, flooding, or severe weather initiating events. The cause of this finding has a cross-cutting aspect in the area of Human Performance, in that, personnel failed to follow the established procedure.
Inspection Report# : 2007002 *(pdf)*

Significance: G Sep 30, 2006

Identified By: NRC
Item Type: FIN Finding
Entergy Did Not Incorporate Industry Operating Experience into the Preventive Maintenance Strategies for the "A" RBCCW Pump Motor
A self-revealing finding of very low safety significance was identified because Entergy did not effectively incorporate existing industry operating experience into the preventive maintenance (PM) strategy for the "A" reactor building closed cooling water (RBCCW) system pump motor as required by Entergy's PM program. As a result, conditions that ultimately resulted in the failure of the "A" RBCCW pump motor went unrecognized.

The finding is greater than minor because it is associated with the Equipment Performance attributes of both the Initiating Events and Mitigating Systems Cornerstones and because it affects the associated Cornerstone objectives to limit the likelihood of those events that upset plant stability and to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors conducted a Phase 1 screening of the finding in accordance with IMC 0609, Appendix A, and determined that a Phase 2 screening was required since the finding affected two or more Cornerstones. The inspectors conducted a Phase 2 screening and determined that the finding was of very low safety significance (Green) since no solved accident sequences resulted in a risk significance less than or equal to nine as indicated on the counting rule worksheet. A contributing cause of this finding is related to the cross-cutting area of Problem Identification and Resolution (PI&R). Entergy did not implement and institutionalize industry operating experience through changes to PM strategies for large pump motors.
Inspection Report# : 2006004 *(pdf)*

Significance: G Aug 18, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Appendix R Power Supply Surveillance Test
The team identified a green, non-cited violation of 10CFR50, Appendix R (App R), General Requirements for failure to create and schedule surveillances to ensure App R components were operable. The team reviewed two modifications related to the replacement of 24 VDC ECCS Power supply components with a Division I, II and designated App R power converters. The App R converter was installed to supply power to the Division II panel in the event of a postulated design basis fire. The team determined that a periodic surveillance had not been created to verify the circuit from the App R converter to the distribution panel was operable after the equipment was placed in service. Entergy intends to create a new surveillance to correct the omission.

The issue is considered to be more than minor because if left uncorrected it could lead to a more significant safety concern and affect the Mitigating System Cornerstone attribute to ensure the availability of equipment. The issue was evaluated in accordance with the Appendix F Fire SDP and because the circuit had been tested satisfactorily as part of the 2005 modification post maintenance test the issue screens to green. This finding has a crosscutting aspect in Human Performance Resources related to ensuring equipment procedures are available.
Inspection Report# : 2006007 *(pdf)*

Significance: G Aug 18, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Clogged SW Strainer Procedure
The team identified a green, non-cited violation of Technical Specification 6.4 Procedures, for Entergy's failure to establish an adequate procedure to address degraded service water (SW) flow conditions. The station's Loss of Service Water procedure permits operators to bypass the SW strainer if the strainer backwash feature was unavailable. The team determined Entergy had not evaluated the potential for river water debris to compromise the availability of downstream safety-related components. Entergy is currently evaluating design and procedural improvements and has entered this issue into their corrective action program for resolution.

The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating System cornerstone and affects its objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance (Green) since it did not result in a loss of safety system function and the team did not identify any events where operators had bypassed strainers and challenged safety systems.

Inspection Report# : 2006007 *(pdf)*

Significance: G Aug 18, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Corrective Actions for HPCI/RCIC Terry Turbine Controller Flow Oscillations
The team identified a green, non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, for failure to take actions to correct a condition adverse to quality related to significant flow oscillations caused by the Terry turbine flow/speed controllers for both the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) systems. Entergy observed large flow oscillations during injection into the vessel from both the RCIC and HPCI systems following a plant trip in July 25, 2005. The team determined the licensee failed to take actions to correct the flow oscillation conditions and the operability determination performed following the event did not address all equipment performance deficiencies. The licensee has entered the issue into their corrective action program, performed an operability determination and implemented compensatory measures to address the issue.

The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating system cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. The finding was determined to be of very low safety significance (Green) since it did not result in a loss of safety system function. This issue has a crosscutting aspect in the area of Problem Identification and Resolution, corrective actions, in that the licensee failed to take appropriate corrective actions to address this safety issues in a timely manner.
Inspection Report# : 2006007 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: W Oct 06, 2006
Identified By: Self-Revealing
Item Type: AV Apparent Violation
Radioactive Material Shipment Package Dose Rate Exceeded
The inspector identified a self-revealing finding, involving a failure to properly prepare and ship a package containing radioactive material in a manner that assured, under conditions normally incident to transport, conformance with Department of Transportation (DOT) radiation level limitations specified by 49 CFR 173.441(a), i.e., 200 millirem per hour (mrem/h) on any external surface of the package. Accordingly, the finding was also considered an apparent violation of the requirements of 10 CFR 71.5 and 49 CFR 173.441(a). The finding involved an August 31, 2006 radioactive material shipment, via an exclusive-use open transport vehicle, that was determined to have 820 mrem/h on the external surface of a package upon receipt at the shipping destination. The licensee entered this performance deficiency in its corrective action program; completed a root cause evaluation; and initiated corrective measures, including various process improvements to prevent recurrence.

This finding is more than minor since it affected the Public Radiation Safety cornerstone, and involved an occurrence in the licensee's radioactive material transportation program that was contrary to DOT regulations. Preliminarily, the significance

of this finding is considered as having low to moderate safety significance, since the radiation level was greater than two times the limit (400 mrem/h), but less than five times the limit (1000 mrem/h) specified by the DOT regulatory requirement. Though the surface of the package was inaccessible to the public during transport, that aspect was fortuitous and not the result of design or package preparation by the licensee; and the condition had the potential to adversely affect personnel who would normally receive the package or respond to an incident involving the package, with a reasonable expectation that the package conformed with DOT radiation limitations. This finding is documented within the licensee's corrective action system as CR-VTY-2006-02723.
Inspection Report# : 2006011 *(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : June 01, 2007