Vermont Yankee
2Q/2009 Plant Inspection Findings

Initiating Events

Significance: G Oct 31, 2008
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Preventative Maintenence Program for Reactor Building Crane
A self-revealing Finding of very low safety significance was identified for Entergy not fully developing an adequate preventive maintenance (PM) program for the reactor building crane (RBC). As a result, on May 12, 2008, when the first loaded spent fuel storage cask was removed from the spent fuel pool (SFP) and was being lowered to a height of four inches above the refueling floor, the crane brakes did not engage and the spent fuel storage cask continued to be slowly lowered to the refueling floor. This issue was entered into the licensee's corrective action program as condition report CR VTY 2008-02043.

This issue is greater than minor because the finding resulted in the failure of the RBC brakes to engage during the lowering of a loaded spent fuel storage cask. The finding was determined to be of very low safety significance (Green) because the spent fuel storage cask remained under control of the reactor building crane, was in an approved load path, and the emergency braking system was available.

Inspection Report# : 2008006 *(pdf)*

Significance: G Oct 08, 2008
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Design Change Review Causes Failure of Circulating Water System Pipe Supports
A self-revealing finding of very low safety significance was identified because Entergy did not verify the technical adequacy of a design change prior to placing the circulating water system piping in east cooling tower cell 1-1 in service. As a result, four horizontal circulating water pipe support beams failed. Upon identification of the failure, Entergy decreased reactor power to 46 percent and removed both the east and west cooling towers from service for investigation and repair. Entergy's corrective actions included immediate replacement or repair of damaged and degraded structures, verification of design change acceptability, and implementation of several procedure and policy changes.

The performance deficiency was that Entergy did not perform an adequate design review as described in Entergy procedure EN-DC-115, "Engineering Change Development." The finding was more than minor because it was associated with the Design Control attribute of the Initiating Events Cornerstone and affects the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the inadequate design change analysis resulted in the failure of horizontal pipe supports in cooling tower cell 1-1 which damaged the circulating water system piping and resulted in a significant power reduction. The finding was determined to be of very low safety significance because it did not contribute to both the likelihood of a reactor scram and the likelihood that mitigating equipment or functions would not be available. The finding had a cross-cutting aspect related to resources in the area of Human Performance. Entergy did not ensure that complete, accurate and up-to-date design documentation was available to adequately construct portions of non-safety-related cooling tower cells. Specifically, Entergy did not provide detailed drawings or instructions supported by engineering calculations to implement a design change affecting the circulating water pipe horizontal support design [H.2(c)].
Inspection Report# : 2008009 *(pdf)*

Mitigating Systems

Significance: G Jun 03, 2009
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Take Adequate Corrective Actions for a HPCI System Functional Failure
The team identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for Entergy's failure to take adequate corrective actions for a condition adverse to quality involving an issue that had the potential to negatively impact the high pressure coolant injection (HPCI) system. Specifically, Entergy failed to take timely and appropriate corrective actions commensurate with the safety significance (potential repeat functional failure of the HPCI system due to degraded direct current (DC) contactors) of the issue. Entergy's short-term corrective actions included a visual inspection of several affected DC breaker cubicles, a HPCI system operability evaluation, and interim guidance to plant operators. Entergy entered the condition into their CAP (CR 2009-1489) and performed a root cause evaluation. The finding is more than minor because it affected the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the adverse condition represented a challenge to the reliability of the HPCI system due to the system's vulnerability to a repeat
functional failure. The finding was determined to be of very low safety significance (Green) because it: was not a design or qualification deficiency confirmed not to result in loss of operability; did not represent 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; did not represent an actual loss of safety function of one or more non-technical specification trains for equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours; and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a crosscutting aspect in the area of Problem Identification and Resolution, Corrective Action Program Component, because Entergy failed to take appropriate corrective actions to address a safety issue in a timely manner, commensurate with the safety significance and complexity [P.1.d]. Specifically, Entergy did not take appropriate corrective actions to adequately address the extent of condition for a HPCI functional failure in June 2007 due to degraded DC contactors prior to April 2009.
Inspection Report# : 2009006 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to write a condition report (CR) for an adverse condition associated with water accumulating in the turbine building supply fan housing plenum area.
The inspectors identified a Green non-cited violation (NCV) of Vermont Yankee Technical Specifications Section 6.4, "Procedures," for Vermont Yankee's failure to take action to correct a specific and foreseen malfunction of a plant component. Specifically, Vermont Yankee failed to initiate a condition report (CR) for an adverse condition associated with water accumulating in the turbine building supply fan housing plenum area, which led to the inoperability of the 'A' emergency diesel generator (EDG) on January 21, 2009 for four hours. Vermont Yankee operations and maintenance personnel stopped the source of the water accumulation and restored the 'A' EDG to operable status. This NCV has since been entered into the Vermont Yankee corrective action program (CAP).

The finding was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone; and, it affected the cornerstone objective of ensuring the reliability, availability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the 'A' EDG was rendered inoperable for approximately four hours, but less than the seven-day Technical Specifications (TS) 3.10 allowed outage time. The finding had a cross-cutting aspect in the "Corrective Action Program" component of the Problem Identification and Resolution (PI&R) cross-cutting area because Vermont Yankee did not identify within the CAP the rising water level in the turbine building supply fan housing plenum area in a timely manner commensurate with its safety significance [P.1(a)]. (Section 1R12).

Inspection Report# : 2009002 *(pdf)*

Significance: G Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to perform procedurally required engineering evaluations for scaffolding.
The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for Vermont Yankee's failure to routinely perform procedurally required engineering evaluations for scaffold bracing attached to pipe supports. Specifically, Vermont Yankee failed to perform engineering evaluations on 27 out of 32 scaffolds with horizontal bracing attached to safety related pipe supports. Subsequently, each scaffold was evaluated and documented by Vermont Yankee engineering and no immediate safety issues were found. This NCV has been entered into the Vermont Yankee corrective action program (CAP).

The performance deficiency was more than minor because if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Specifically, installing scaffold bracing on pipe supports without engineering approval could place a pipe support in an unanalyzed seismic condition, which could lead to failure in a seismic event. The finding had a cross-cutting aspect in the "Work Practices" component of the Human Performance cross-cutting area because Vermont Yankee did not implement adequate management oversight of contractor work activities regarding scaffold procedural compliance. [H.4(c)]. (Section 4OA2).

Inspection Report# : 2009002 *(pdf)*

Significance: G Aug 15, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Testing of Safety Related Batteries
The team identified a finding of very low safety significance involving a non-cited violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," in that, Entergy did not properly document and evaluate safety related battery test results. Specifically, the NRC identified three instances involving the rotating uninterruptible power supply system and the alternate shutdown batteries where Entergy did not adequately evaluate test results to calculate battery capacity. In response, Entergy entered these issues into the corrective action program and demonstrated that there was sufficient margin to assure operability of the safety related batteries.

The finding is more than minor because it is associated with the human performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program Component, because Entergy did not identify issues in a timely manner commensurate with their safety significance. (IMC 0305,
Aspect P.1(a))
Inspection Report# : 2008008 *(pdf)*

Significance: G Aug 15, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Design Control for Emergency Diesel Generator Load Testing
The team identified a finding of very low safety significance involving a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," in that, Entergy did not ensure that the design basis, as defined in calculations and the Updated Final Safety Analysis Report for manual emergency diesel generator (EDG) loading, was verified by a suitable testing program. Specifically, Entergy had not performed a suitable test to demonstrate that the 1B EDG was capable of loading to a value that demonstrated its calculated maximum load during a postulated accident scenario, as allowed in operating procedures. Entergy entered the issue into their corrective action program

and completed an operability assessment, which demonstrated that the emergency diesel generators were capable of performing their design function.

The finding is more than minor because it is associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team determined the finding was of very low safety significance (Green) because it was a design or qualification deficiency confirmed not to result in a loss of standby onsite power operability or functionality.
Inspection Report# : 2008008 *(pdf)*

Significance:  Aug 15, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure for Station Blackout Load Shedding
The team identified a finding of very low safety significance (Green) involving a non-cited violation of 10 CFR 50.63, "Loss of all Alternating Current Power," in that, Entergy did not ensure that adequate battery capacity would be available during a station blackout (SBO), as assumed in the station's SBO analysis. Specifically, unrecognized delays in performing a credited manual direct current (DC) load shedding operator action, as well as an incorrectly translated minimum battery voltage referenced in the station's SBO procedure, could have resulted in the 'B' station battery capacity being insufficient during an SBO. Entergy entered the issue into the corrective action program. Entergy also recalculated the 'B' station battery capacity and determined that sufficient battery capacity existed when realistic load shedding assumptions were applied (battery remained operable).

The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was determined to be of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

Inspection Report# : 2008008 *(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 : August 31, 2009