

Vermont Yankee

1Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Oct 31, 2008

Identified By: Self-Revealing

Item Type: FIN Finding

Inadequate Preventative Maintenance 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:  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*)

Significance:  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Ineffective Reactor Building Crane Maintenance

The NRC identified a non-cited violation for Entergy's failure to take timely corrective action, as required by 10CFR50.65(a)(1), after the reactor building crane (RBC) exceeded reliability performance goals. Specifically, from April 12, 2007, when the RBC was classified as (a)(1), until May 12, 2008, when the RBC brakes failed to function during the movement of a spent fuel storage cask, Entergy failed to take corrective actions in response to the RBC not meeting established goals. This issue was entered into the licensee's corrective action program as Condition Report CR 2008 2043.

The issue is greater than minor because the failure to implement timely corrective actions resulted in the failure of the RBC brakes during the movement of a spent fuel storage cask. The finding is not suitable for evaluation under the Significance Determination Process, but has been reviewed by NRC management and was determined to be a finding of very low safety significance (Green) because the spent fuel storage cask was in an approved load path, and the refuel floor allowed the brakes to engage when sufficient load was removed from the hoist. This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, in that Entergy failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity.

Inspection Report# : [2008003](#) (*pdf*)

Mitigating Systems

Significance:  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:  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 40A2).

Inspection Report# : [2009002](#) (*pdf*)

Significance:  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.

Inspection Report# : [2008008](#) (*pdf*)

Significance:  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*)

Significance:  Apr 10, 2008

Identified By: NRC

Item Type: FIN Finding

B.5.b Phase 2 and 3 Mitigating Strategy

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance (Resources). [H.2(d)]. See inspection report for more details.

Inspection Report# : [2008007](#) (*pdf*)

Significance:  Apr 10, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

B.5.b Phase 2 and 3 Mitigating Strategy

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance (Resources). [H.2(c)]. See inspection report for more details.

Inspection Report# : [2008007](#) (*pdf*)

Significance:  Apr 10, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

B.5.b Phase 2 and 3 Mitigating Strategy

This finding, affecting the Mitigating Systems Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance (Resources). [H.2(c)]. See inspection report for more details.

Inspection Report# : [2008007](#) (*pdf*)

Barrier Integrity

Significance:  Apr 10, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

B.5.b Phase 2 and 3 Mitigating Strategy

This finding, affecting the Barrier Integrity Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance (Resources). [H.2(c)]. See inspection report for more details.

Inspection Report# : [2008007](#) (*pdf*)

Significance:  Apr 10, 2008

Identified By: NRC

Item Type: FIN Finding

B.5.b Phase 2 and 3 Mitigating Strategy

This finding, affecting the Barrier Integrity Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has a cross-cutting aspect in the area of Human Performance (Resources). [H.2(c)]. See inspection report for more details.

Inspection Report# : [2008007](#) (*pdf*)

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 : May 28, 2009