

# FitzPatrick

## 3Q/2010 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:**  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Appendix R Fire Door Blocked Open Without Establishing Required Measures**

The inspectors identified a non-cited violation (NCV) of very low safety significance of license condition 2.C(3), "Fire Protection," because Entergy personnel blocked a fire door in the open position, defeating its required three hour fire barrier function, without establishing the required compensatory measures. Entergy entered this issue into their CAP as CR-JAF-2010-04825, issued a night order emphasizing the requirements associated with propping open fire doors, provided coaching, and submitted a procedure change request to further clarify procedural applicability requirements.

This finding is more than minor because it is associated with the protection against external events 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 fire door being affixed open without the knowledge of the control room personnel and other operators and without an assigned fire watch resulted in a barrier to fire propagation that was less robust than required by the approved fire protection program. The inspectors determined the significance of the finding using IMC 0609, Appendix F, "Fire Protection Significance Determination Process," Phase 1. The finding was determined to be of very low safety significance (Green) because the deficiency represented a low degradation rating. Specifically, the individuals involved were members of the fire brigade, qualified in fire watch duties, and only blocked the door open during resin container transfers. The inspectors determined this finding had a cross-cutting aspect in the area of human performance within the work practices component because Entergy did not effectively communicate expectations to personnel regarding the applicable procedures and personnel did not follow the procedures (H.4(b)).

Inspection Report# : [2010004](#) (*pdf*)

**Significance:**  Jul 02, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Use Largest Load During EDG Reject Surveillance Test**

The team identified a finding involving a non-cited violation of James A. FitzPatrick Technical Specification (TS) Surveillance Requirement (SR) 3.8.1.8 because Entergy did not adequately perform the largest post-accident load rejection test as required by the SR. Specifically, Entergy's surveillance test that implemented this SR rejected a load of about 1000 brake horse power (BHP) and the largest post-accident load calculated by Entergy was 1270 BHP. Entergy entered this issue into their corrective action program to evaluate operability of each emergency diesel generator (EDG) subsystem and to correct the surveillance test for rejection of the largest postaccident load. The team reviewed Entergy's operability determination and concluded it appropriately determined the EDG subsystems were operable but non-conforming to SR 3.8.1.8.

This finding is more than minor because it is associated with the Procedure Quality Attribute (maintenance and testing) of the Mitigating Systems Cornerstone and affected

the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating event to prevent undesirable consequences. The team performed a Phase 1 SDP screening, in accordance with NRC IMC 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," and determined the finding was of very low safety Significance (Green) because it was a qualification deficiency confirmed not to result in loss of operability. The team did not identify a cross-cutting aspect associated with the finding. (1 R21.2.1.1)

Inspection Report# : [2010006](#) (pdf)

**Significance:** G Jul 02, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Calculations for Offsite Power Availability**

The team identified a finding involving a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," in that Entergy did not verify the adequacy of design with respect to establishing the basis for the offsite power minimum voltage and the degraded voltage relay reset setpoint. Specifically, Entergy failed to adequately evaluate the results of load flow studies that determined safety bus voltage would be below the relay reset value following some design basis events. The team concluded that this could result in separation of the vital busses from the offsite power supply during some design basis events. Entergy entered this issue in the corrective action program to verify offsite power was operable, and instructed the offsite grid operator to raise the minimum grid voltage limit and revise the post accident grid loading profile. 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 deficiency confirmed not to result in a loss of the offsite power supply operability or functionality.

This finding had a cross-cutting aspect in the area of Human Performance Resources because the licensee did not ensure that personnel, equipment, procedures, and other resources are available to ensure complete, accurate and up-to-date design documentation. Specifically, the acceptance criteria in the recently completed calculations that evaluated the offsite power voltage limit was not correct which resulted in an incorrect evaluation of the results of the calculation. (IMC 0310, Section H.2(c)) (1 R21.2.1.2)

Inspection Report# : [2010006](#) (pdf)

**Significance:** G Jul 02, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Corrective Action on RHRSW Strainer Housing Wall Degradation**

The team identified a finding involving a non-cited violation of 10 CFR 50, Appendix 8, Criterion XVI, "Corrective Actions," for failure to identify and correct a condition adverse to quality. Specifically, Entergy did not take corrective actions to evaluate the rate of identified degradation on the 1 OS-58 1 residual heat removal service water (RHRSW) strainer casing. This resulted in a through wall leak in the strainer which was identified by the team. The team's review found that in 2006 Entergy had conducted ultrasonic test (UT) measurements of the strainer and determined that degradation was occurring. Corrective actions for the deficiency required that aUT examination be performed to monitor for further degradation but it was not performed. In response, Entergy entered the issue into the corrective action program, and conducted an UT examination at the leak location to determine the size and extent of the defect which determined that strainer's structural integrity was maintained.

The finding is more than minor because it is associated with the equipment 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 the finding was determined to be a qualification deficiency confirmed not to result in loss of operability.

This finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program Component, because Entergy did not take appropriate corrective actions to address safety issues in a timely manner. Specifically, Entergy did not take action to determine the degradation rate of the 10S581 RHRSW strainer which resulted in a through wall leak. (IMC 0310, Aspect P.1 (d)) (1 R21.2.1.3)  
Inspection Report# : [2010006](#) (*pdf*)

**Significance:**  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Fire Barrier Penetrations Not Maintained as Qualified Three Hour Fire Barriers**

A self-revealing non-cited violation (NCV) of very low safety significance of license condition 2.C(3), “Fire Protection,” was identified because Entergy personnel did not implement and maintain in effect all provisions of the approved fire protection program when multiple electrical and mechanical three hour fire barrier penetrations were not qualified to perform their required three hour fire barrier function. Entergy initiated condition report (CR)-JAF-2010-01417, CR-JAF-2010-01432, CR-JAF-2010-01438, and CR-JAF-2010-01441 to address the issues, implemented fire watches as compensatory measures, poured new qualified seals, and revised maintenance procedures for installing penetration seals to explicitly describe the need to pre-mix the powder component with the liquid elastomer.

This finding is more than minor because it is associated with the protection against external events 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, multiple fire barrier penetrations were not qualified to perform their required three hour fire barrier function and provided a barrier to fire that was less than that provided by the properly installed and qualified fire barriers. The inspectors determined the significance of the finding using Inspection Manual Chapter (IMC) 0609, Appendix F, “Fire Protection Significance Determination Process,” Phase 1. The finding was determined to be of very low safety significance (Green) because the deficiency represented a low degradation rating, since the non-qualified seals consisted of base components which had been qualified as three hour fire barriers at other nuclear facilities. The inspectors determined this finding had a cross-cutting aspect in the area of human performance within the work practices component because Entergy personnel proceeded in the face of unexpected circumstances when the packaging for the kits changed and when kits were issued without a powder component.

Inspection Report# : [2010003](#) (*pdf*)

**Significance:** SL-IV Mar 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Submit an LER for a Condition Prohibited by TS Associated with HPCI**

The inspectors identified a Severity Level IV, non-cited violation (NCV) because Entergy did not provide a written report to the NRC within 60 days after discovery of the event as required by 10 CFR 50.73, “Licensee Event Report (LER) System,” for a condition which was prohibited by Technical Specification (TS) 3.5.1, “Emergency Core Cooling Systems - Operating.”

In January, 2009, the high pressure coolant injection (HPCI) system did not pass post-maintenance testing, as a result of the failure of the HPCI system turbine stop valve 23HOV-1, to stroke open within the required time. Entergy personnel documented the condition in CR-JAF-2009-0350. The inservice test (IST) opening time for 23HOV-1 had previously exceeded the correct acceptance criteria which should have resulted in declaring the HPCI system inoperable. The inspectors determined that this condition met the criteria for reporting under 10 CFR 50.73 (a)(2)(i) (B) in that the condition was not allowed by the plant’s TSs. Entergy’s corrective actions included initiating CR-JAF-2009-03964, submitting LER 05000333/2009008-00 on January 11, 2010, and providing additional guidance for their staff on licensee event reporting requirements.

This violation involved a failure to make a required report to the NRC and is considered to impact the regulatory process. Such violations are dispositioned using the traditional enforcement process instead of the Significance Determination Process. Using the Enforcement Policy Supplement I, "Reactor Operations," example D4 which states, "A failure to make a required LER;" the NRC determined that this violation could potentially impact the regulatory process and is more than minor and categorized as a Severity Level IV violation.

The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution within the corrective action program component because Entergy personnel did not properly evaluate the condition reporting criteria.

Inspection Report# : [2010002](#) (pdf)

**Significance:**  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

**Emergency Lighting Not Monitored in Accordance with 10 CFR Part 50.65 (a)(1)**

The inspectors identified an NCV of 10 CFR Part 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," because Entergy staff did not demonstrate that the performance of the emergency lighting system had been effectively controlled through the performance of appropriate preventive maintenance and did not monitor against licensee-established goals in accordance with 10 CFR 50.65(a)(1). Specifically, the inspectors identified that a second emergency light failure had not been correctly classified as a functional failure as documented in condition report (CR)-JAF-2009-02768, initiated on August 12, 2009. The issue was entered into Entergy's corrective action program (CAP) as CR-JAF-2009-02999 and Entergy classified the emergency lighting system (a)(1) due to this repeat failure. Additionally, the emergency lighting battery preventive maintenance replacement period was reduced from 24 months to 18 months due to an excessive number of emergency lighting battery failures that occurred between 18 and 24 months.

This finding is more than minor because it affected the external factors attribute (fire) of the Mitigating Systems 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, plant operators rely on emergency lighting to provide lighting to complete actions described in emergency operating procedures in case of a partial or complete loss of normal plant lighting. Additionally, Appendix R emergency lighting supports time critical post-fire safe shutdown manual actions and the availability of the emergency lighting battery system was affected. The emergency lighting system had not been maintained sufficiently to provide for reliable operation of the equipment.

The inspectors determined the significance of the finding using IMC 0609, Appendix F, "Fire Protection Significance Determination Process." This finding affected post-fire safe shutdown. The finding was determined to be of very low safety significance (Green) because the inspectors assigned a low degradation rating in phase 1 of the SDP. The inspectors assigned a low degradation rating because the issue did not have a significant impact on safe shutdown operations: operators, carry flashlights, the three emergency portable lighting units located in the control room were available, and there were not specific plant areas that had widespread emergency lighting outages at any one time.

The inspectors determined this finding had a cross-cutting aspect in the area of problem identification and resolution within the CAP component because Entergy personnel did not address an adverse trend in the emergency lighting battery system in a timely manner. (P.1(d))

Inspection Report# : [2009005](#) (pdf)

**Significance:**  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

**Standby Liquid Control Not Monitored in Accordance with 10 CFR Part 50.65 (a)(1)**

The inspectors identified an NCV of 10 CFR Part 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," because Entergy staff did not demonstrate that the performance of the standby liquid control (SLC) system had been effectively controlled through the performance of appropriate preventive

maintenance and did not monitor against licensee-established goals in accordance with 10 CFR 50.65(a)(1). Entergy initiated CR-JAF-2009-03994 and CR-JAF-2009-04017 to address the issues and classified the SLC system as (a)(1) due to the repetitive maintenance preventable failures and the incomplete corrective actions related to increasing the PM frequency from every two months to once a month.

The inspectors determined the finding is more than minor because it affected the equipment performance attribute of the Mitigating Systems 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, plant operators rely on the SLC tank level indication in the control room for performing actions required by emergency operating procedures and the availability of this indication was affected.

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 (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 external initiating events. Specifically, the loss of control indication did not render the SLC system incapable of injecting borated water into the reactor coolant system, and operators remained capable of measuring the level of the SLC tank locally using manual dipping.

The inspectors determined this finding had a cross-cutting aspect in the area of problem identification and resolution within the CAP component because Entergy personnel did not address an adverse trend in the SLC tank level indication in a timely manner. (P.1(d))

Inspection Report# : [2009005](#) (*pdf*)

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## **Barrier Integrity**

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## **Emergency Preparedness**

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## **Occupational Radiation Safety**

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## **Public Radiation Safety**

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## **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.

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## **Miscellaneous**

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