

# Dresden 2

## 3Q/2010 Plant Inspection Findings

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### Initiating Events

**Significance:**  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Provide An Adequate Procedure for Several Instrument Maintenance Surveillance Tests**

The inspectors identified a NCV of Technical Specification (TS) 5.4.1 for the failure to provide an adequate procedure for the verification of correct installation and restoration of equipment during an instrument maintenance surveillance test in May 2010. The licensee's corrective actions included a task to add requirements for an independent verification of the removal of volt ohm meters (VOMs) in the ohm meter mode in 17 affected procedures. The licensee entered this finding into the corrective action program as issue report (IR) 1068559.

Using IMC 0612, Appendix E, "Examples of Minor Violations," issued on September 20, 2007, the inspectors determined that there were no similar examples to this finding in Appendix E. The inspectors referenced IMC 0612, Appendix B, "Issue Screening," dated January 1, 2010. The inspectors determined that the finding was more than minor based on Block 9, Figure 2, paragraph 2.b, "If left uncorrected, would the finding become a more significant safety concern." The inspectors determined that the failure to perform an independent verification that a testing configuration had been returned to normal could result in the inability of a system or component to perform its function which would be a more significant safety concern. No systems had been incorrectly returned to service as a result of the inadequate procedure and, therefore, this violation had very low safety significance. This finding had a cross cutting aspect in the area of Problem Identification and Resolution - Corrective Actions because the licensee did not address a previously identified safety issue in a timely manner.

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

**Significance:**  Jun 30, 2010

Identified By: Self-Revealing

Item Type: FIN Finding

#### **Failure To Perform An Adequate Inspection of Circulating Water Valve 3 4402 C**

On January 22, 2010, a finding of very low safety significance was self revealed for failure to perform an adequate inspection of the grease condition of the 3 4402 C valve actuator HBC gear box, which was contrary to the requirements of MA AA 723 301, "Periodic Inspection of Limitorque Model SMB/SB/SBD 000," Revision 3. No violation of regulatory requirements occurred because valve 3 4402 C was a nonsafety-related component. The licensee planned to drill inspection ports into and/or replace the HBC gear boxes for valves 2/3 34403 A(B)(C)(D) and 2/3 34402 A(B)(C)(D) and 2 34402 C and change the preventive maintenance requirement to perform a 12 year mechanical inspection of the HBC gear box. This finding was placed in the licensee's corrective action program as IR 1034444, "Failure of the 3 4402 C Condenser Inlet Valve."

The finding was determined to be more than minor because the finding could be reasonably viewed as a precursor to a significant event. Specifically, valve 3 4402 C acted as an inlet in the circulating water system for the south water box. When the valve failed, it was almost completely closed. Had the valve failed open, circulating water would have been diverted from the condenser potentially causing a loss of vacuum that would have resulted in a reduction in power and/or a turbine trip and reactor trip. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, Initiating Events Cornerstone Column, Transient Initiators question 1, does the finding contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available, was answered "no," and, therefore, screened as Green. This finding had no cross cutting aspect due to the issues involved in this valve failure were not indicative of current performance.

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

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# Mitigating Systems

**Significance:**  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

## **Failure to Identify and Correct Test Procedures to Assess the As-Found Trip Setpoint for Pressure Switches that Satisfy Technical Specification Functions**

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to assure that conditions adverse to quality associated with pre-conditioning were promptly identified and corrected. The licensee's corrective actions included actions for Engineering to evaluate all the Technical Specification functions that do not have test valves installed on their pressure switches and justify the potential unacceptable preconditioning as acceptable or take other actions as appropriate. The licensee entered this finding into the corrective action program as issue report (IR) 1120159.

The finding was determined to be more than minor because it impacted the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors did not identify any cross-cutting aspect associated with this finding. The inspectors evaluated the finding using IMC 0609, "Significance Determination Process," Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings." The inspectors answered "No" to all questions in the Mitigation System Cornerstone column of Table 4a, "Characterization Worksheet for IE, MS, and BI Cornerstones," therefore, the finding screened as Green (very low safety significance).

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

**Significance:**  Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

## **LPCI Room Heat up Calculation Deficiencies**

The inspectors identified a NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," having very low safety significance (Green) related to whether the equipment in the low pressure coolant injection (LPCI) corner rooms would remain within environmental qualification limits during a design basis loss of coolant accident.

Specifically, the licensee's heat up calculation contained discrepancies and failed to evaluate the worst case effects post-extended power uprate when determining the heat up in the LPCI corner rooms. This finding was entered into the licensee's corrective action program as AR00763663, AR00742158, AR00883207, AR01055863, and AR01060243, and an operability call performed by the licensee concluded that there are sufficient conservatisms in the calculation that equipment in the corner rooms remained operable.

The finding was more than minor because it was associated with the attribute of design control, which affected the Mitigating Systems Cornerstone objective of ensuring the availability and reliability of safety related systems. This finding is of very low safety significance (Green) because the design deficiency was confirmed not to result in loss of operability or functionality. The inspectors did not identify a cross cutting aspect associated with this finding because this was a legacy design issue and, therefore, was not reflective of current performance.

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

**Significance:**  Jun 30, 2010

Identified By: NRC

Item Type: FIN Finding

## **Failure to Monitor Unit 3 Drywell Temperature**

A finding of very low safety significance was identified by the inspectors on May 3, 2010, for the failure to monitor Unit 3 (U3) drywell temperature per commitments made to the NRC within LER 88 22, Supplement 2 to ensure that equipment in the drywell was operating within environmental qualification limits. No violation of regulatory requirements occurred. The licensee's corrective actions were to reinstate the temperature monitoring of both drywells, perform walkdowns of both drywells for correct placement and to verify functionality of drywell thermocouples, improve administrative requirements on plant engineering turnover from one engineer to another, and train engineers to focus on identifying and validating assumptions when performing or reviewing technical products. This finding was placed in the licensee's corrective action program as IR 1064681.

The finding was determined to be more than minor because the finding was associated with the Mitigating Systems

Cornerstone attribute of Equipment Performance and affected the cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to monitor drywell temperatures and evaluate those temperatures against environmental qualification limits would have resulted in the motor operator for valve 3 1301 1 to exceed its qualified life without the licensee's knowledge after D3R21. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a for the Mitigating Systems Cornerstone. The inspectors were able to answer the first question, is the finding a design or qualification deficiency confirmed not to result in loss of operability or functionality, "yes" and, therefore, the finding screened as Green. The inspectors did not identify a cross cutting aspect associated with this finding because the age of the finding did not reflect current performance.

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

**Significance:**  Jun 30, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **2/3 Emergency Diesel Generator (EDG) Overvoltage during Division I Undervoltage**

A finding of very low safety significance (Green) and associated NCV of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion XI, "Test Control," was self revealed on November 16, 2009, for the failure to perform adequate post modification testing which allowed an improper wiring condition to exist for years before an inappropriate action by a nuclear station operator exposed the problem. The licensee generated issue report 994101 to address this issue. Corrective actions implemented by the licensee to address this issue included correcting the improper wiring configuration and creating a training request to have enhanced post maintenance testing requirement training given to all plant engineers, design engineers and maintenance work planners.

Using IMC 0612, Appendix B, "Issue Screening," the inspectors determined that the finding was more than minor because it impacted the Mitigating Systems Cornerstone attribute of procedure quality to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors completed a Phase 1 significance determination of this issue using IMC 0609, Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings." The inspectors answered "no" to all questions in the Mitigating Systems Cornerstone column of Table 4a, "Characterization Worksheet for IE, MS, and BI Cornerstones." Therefore, the finding screened as Green (very low safety significance). Because the behavior leading to this event occurred in 1986, the inspectors determined that this event was not indicative of current performance and, therefore, no cross cutting area was affected.

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

**Significance:**  May 21, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Establish Heat Exchanger Inspection Procedures Appropriate for the Circumstances**

The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," having very low safety significance for the failure to establish inspection procedures that were appropriate for the circumstances for the NRC Generic Letter (GL) 89-13 program heat exchangers. Specifically, procedures did not contain adequate guidance for partially blocked heat exchanger tubes found to be completely blocked. As a result, the licensee did not evaluate the as-found conditions of the 2/3 Emergency Diesel Generator (EDG) jacket water heat exchangers; therefore, did not determine the heat exchangers were not bounded by applicable design documents. The licensee entered this issue into its corrective action program.

The performance deficiency was determined to be more than minor because it was associated with the mitigating system cornerstone attribute of procedure quality and affected the cornerstone objective. This finding was of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The inspectors determined that the finding had a cross-cutting aspect in the area of human performance because the licensee did not use a conservative assumption in decision making. Specifically, the licensee did not use a conservative assumption when establishing the acceptance criteria for the inspection of heat exchangers. H.1(b)

Inspection Report# : [2010007](#) (pdf)

**Significance:**  May 21, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Improper Reclassification of LPCI Pump Mechanical Seals**

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion II, "Quality Assurance Program," for improperly classifying Low Pressure Coolant Injection (LPCI) pump mechanical seals as non-safety-related. The licensee subsequently concluded that the seals should be classified as safety-related based upon Exelon procedure SM-AA-300 and parts classification Guide M-1994-300, and reclassified them as safety-related.

The performance deficiency was determined to be more than minor because if left uncorrected, it would become a more significant safety concern. This finding was of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The inspectors determined that the finding had a cross-cutting aspect in the area of human performance because the licensee did not adopt a requirement to demonstrate that the proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disapprove the action. H.1(b)

Inspection Report# : [2010007](#) (pdf)

**Significance:**  May 21, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Perform Adequate Testing to Confirm Acceptable Fast Bus Transfer Time**

The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion XI, A Test Control, @ for the failure to have an adequate post-maintenance test for circuit breakers to confirm fast bus transfer capability. Specifically, the licensee failed to ensure that either vendor overhaul procedures or the station procedure for receipt inspection confirmed that breaker timing tests were performed after the circuit breakers were overhauled at a vendor facility. The licensee entered this issue into its corrective action program.

The finding was more than minor because if left uncorrected, the finding could have the potential to lead to a more significant safety concern. This finding was of very low safety significance (Green) because the test deficiency was confirmed not to result in loss of operability or functionality. The inspectors did not identify a cross-cutting aspect associated with this finding because it was not reflective of current performance.

Inspection Report# : [2010007](#) (pdf)

**Significance:**  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Significance of Potentially Submerged Safety and Non safety-related Low Voltage Power and Control Power Cables**

The inspectors identified a finding of very low safety significance with an associated Non Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control." Specifically, licensee personnel failed to maintain safety related cables in underground manholes from becoming repeatedly submerged, which resulted in subjecting the cables to an environment for which they were not qualified. As corrective action, the licensee generated work order (WO) 01271108 on September 24, 2009, to remove the seals on the conduit which contained the cables and which kept water from draining out of the conduit. This issue was entered into the licensee's corrective action program as Issue Report (IR) 975308.

The finding was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone attribute of equipment performance and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance because it was a qualification deficiency that did not result in a loss of operability. The inspectors concluded that there was not a cross cutting issue associated with this violation.

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

**Significance:**  Dec 31, 2009



Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Operating Personnel Incorrectly Placed Clearance Tags**

A finding of very low safety significance and associated NCV of Technical Specification 5.4.1 was self-revealed for the failure to meet the requirements of Clearance Order (CO) 69631 by removing shorting links instead of fuses as required by the CO on November 12, 2009. As a result, protective relaying was unintentionally removed from the Unit 2 main power transformer TR-2, the unit auxiliary transformer TR 21, and the reserve auxiliary transformer TR-22. This issue was entered into the licensee's CAP as Issue Report 992290. Corrective actions included: coaching of the individuals involved with the incorrect placing of the out-of-service and a placard on the device that was incorrectly repositioned was changed to include the specific equipment part number of the shorting links.

The finding was determined to be more than minor because the finding could reasonably be viewed as a precursor to a significant event. The finding was evaluated using the SDP in accordance with IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process Phase 1 Operational Checklists For Both PWRs and BWRs," Checklist 6, dated May 25, 2004. This checklist stated that for a finding to require a Phase 2 or 3 determination, it would require an increase in the likelihood of a loss of offsite power or degrade the licensee's ability to cope with a loss of offsite power. The ability of the licensee to cope with a loss of offsite power was not impacted because at least one emergency diesel generator was operable during the entire period. The inspectors determined that neither of these conditions were met so the finding screened as Green. This finding had a cross-cutting aspect in the area of Human Performance, Work Practices. H.4(a)

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

**G**

**Significance:** Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

### **NRC Inspector-Identified Control Room Alarm Isolation Valve Out-of-Position**

The inspectors identified a finding of very low safety significance and associated NCV of Technical Specification 5.4.1 for the licensee failing to follow Dresden procedure DOP 2-1500-M1, "LPCI System Mechanical Checklist," Revision 39. On September 24, 2009, the inspectors identified valve 2-1501-42A, U2 low pressure coolant injection (LPCI) A pump gland leak-off valve, was closed instead of open as required by DOP 2-1500-M1. With this valve closed instead of open, the control room alarm for LPCI pump seal leakage would not have been able to fulfill its function. The issue was entered into the licensee's CAP as IR 969490. The licensee's corrective actions included changing maintenance procedure DMP 1500 05, "LPCI Pump Maintenance," step G.25.d to include the case drain valve equipment numbers and sign offs to position and verify the valves; and Operations Department Management addressed the operations department personnel about this issue.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Specifically, the valve isolated an alarm in the control room. The inspectors concluded this finding was associated with the Mitigating Systems Cornerstone using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a, dated January 10, 2008. This finding has a cross-cutting aspect in the area of Human Performance, Work Practices because the licensee did not have any documentation as to how or when the valve was placed into the position it was in. The design and location of the valve precluded that the valve was accidentally placed into the position it was found in. Therefore, the inspectors concluded that either the failure to use human error prevention techniques or maintaining proper documentation of activities caused the mispositioning of valve 2-1501-42A. H.4.(a) (Section 1R15)

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

**G**

**Significance:** Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

### **Preconditioning the Unit 2 Emergency Diesel Generator Prior to Performing TS Surveillance Requirements**

The inspectors identified a finding of very low significance and associated NCV of 10 CFR 50 Appendix B, Criterion XI, "Test Control", because the licensee unacceptably preconditioned the Unit 2 Emergency Diesel Generator (EDG) prior to performing Technical Specification (TS) Surveillance Requirements (SR) 3.8.1.19.c.4, 3.8.1.12.c.3, and 3.8.1.10. These TS SRs involved verifying that the EDG supplied steady state frequency would be acceptable following a loss of offsite power coincident with and without a loss of coolant accident, and following the loss of the largest post accident load. Specifically, the inspectors identified that the licensee routinely performed governor oil

change outage maintenance activities which involved a section that tuned the Unit 2 diesel governor's response to a load change just prior to performing these TS SRs. This issue has been entered into the licensee's CAP as IR 1000609. The licensee had not reached a conclusion on corrective actions by the end of the inspection period.

This finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Unacceptable preconditioning the EDG could mask latent performance issues and affect the ability of the EDG to supply safety-related power to vital loads during an event. The inspectors performed a Phase 1 SDP evaluation and determined that this issue was Green because it did not result in an inoperable Unit 2 EDG. The failure to adequately coordinate the work activity of the preventive maintenance and post-maintenance testing with the TS SR activities was the principal contributor to this finding and was reflective of recent performance. This finding had a cross-cutting aspect in the area of Work Control. Specifically, the licensee did not appropriately coordinate work activities by incorporating actions to address the impact of the work as different job activities. The scheduling of the work activities resulted in the pre conditioning of the EDG prior to performing the surveillance tests. H.3(b) (Section 1R19)

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

**Significance:**  Dec 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Failure to Ensure a Safety-related Plus was Ordered and installed in the 2/3 Emergency Diesel Generator Turbo Lube Oil "Y" Strainer**

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion IV, "Procurement Document Control," was self-revealed for the licensee's failure to ensure a safety-related plug was ordered and installed where required in the 2/3 EDG turbo lube oil "Y" strainer. Instead, a non-conforming part was installed, which resulted in a one-half gallon per minute oil leak and removal of the diesel generator from service. The issue was entered into the licensee's CAP as IR 926605. Corrective actions included inspection of all other diesel generators to ensure the non-conforming condition did not exist on another machine, revising the procurement documents to ensure that future parts include a pressure retaining pipe plug with approved material, and adding a requirement for a quality inspection to be performed to "inspect the strainer for metallic pipe plug in blow down port." Individual procedure compliance issues were addressed through the station's performance improvement initiatives. The finding was determined to be more than minor because the finding was similar to IMC 0612, Appendix E, Example 5 c because an incorrect and inadequate part was installed and the system was returned to service. This performance deficiency impacted the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. A Phase 3 SDP risk evaluation was performed by the regional Senior Risk Analyst who determined the risk significance of the finding to be less than 1.0E-6/yr delta core damage frequency (CDF) and less than 1.0E-7/yr delta LERF, which represents a finding of very low safety significance. Failure of plant personnel to question the plastic shipping plug before the equipment was installed and returned to service was not in compliance with MA-AA-716 008, "Foreign Material Exclusion Program," and, therefore, inspectors determined that this event was cross-cutting in Human Performance, Work Practices, Procedural Compliance for failure of personnel to follow the procedure. H.4(b) (Section 40A3.3)

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

**Significance:**  Nov 18, 2009

Identified By: NRC

Item Type: FIN Finding

### **Ventilation System One-Time Inspection Results (40A5.1.b(1))**

A finding of very low safety-significance (Green) was identified by the inspectors for the licensee's failure to adequately evaluate and address an aging effect identified by the ventilation system one-time inspection program in accordance with the license renewal Program Basis Document B.1.23C. The licensee entered this issue into the corrective action program, and initiated periodic inspections to manage the aging effect.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Specifically, failure to address the aging effect would not provide assurance that the intended function of in scope ventilation systems would be maintained consistent with the current licensing basis through the period of extended operation. This finding is of very low safety-significance (Green) because it did not result in a loss of operability, did not represent an actual loss of safety function, and is not potentially risk-significant due to external events. The cause of this finding is related to the cross-cutting aspect in the area of Human

Performance, Work Practices, because the licensee did not ensure proper supervisory and management oversight of work activities, such that nuclear safety is supported. Specifically, supervisory expectations for follow-up were not adequately conveyed prior to the completion of the program.

Inspection Report# : [2009007](#) (pdf)

**Significance:**  Nov 18, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

### **Unit 2 SBLC Tank Thickness Calculation Errors (40A5.1.b(2))**

A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the failure to accurately translate the design bases for the Standby Liquid Control (SBLC) tank into specifications, drawings, procedures, and instructions. Specifically, the SBLC tank wall thickness used in a design basis calculation was incorrect. The licensee initiated IR 983037 to address deficiencies in the calculation.

The finding was determined to be more than minor because the finding was associated with the mitigating systems cornerstone attribute of design control and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the design basis calculations did not demonstrate that the tank will remain available following design basis seismic events. This finding is of very low safety-significance (Green) because it did not result in a loss of operability. The inspectors did not identify a cross-cutting aspect associated with this finding as it was not indicative of current performance.

Inspection Report# : [2009007](#) (pdf)

**Significance:**  Nov 18, 2009

Identified By: NRC

Item Type: FIN Finding

### **Failure to Inspect the Non-EQ Electrical Connections Subject to Localized Adverse Environment**

A finding of very low safety-significance was identified by the inspectors for the licensee's failure to implement a program in accordance with the license renewal program basis Document B.1.33. Specifically, the licensee failed to develop and implement a program to perform visual inspections of the accessible non environmentally-qualified electrical connections located in adverse localized environments. The licensee subsequently entered the issue into their corrective action program as AR00977284 to re-perform the inspection and revise documentations as required. The finding was not associated with violation of regulatory requirements.

The finding was determined to be more than minor because, if left uncorrected, the finding would become a more safety-significant concern. The failure to perform a visual inspection of the subject connections did not assure that the intended functions of these connections would be maintained consistent with the current licensing basis through the extended period of operation. The finding was of very low safety-significance based on a Phase 1 screening in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." This finding has a cross-cutting aspect in the area of Human Performance for the resources component because implementing procedures did not include sufficient guidance defining the parameters of the program.

Inspection Report# : [2009007](#) (pdf)

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## **Barrier Integrity**

**Significance:**  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

### **Installation of Nonconforming Material into a Safety Related System**

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50,

Appendix B, Criterion XV, "Nonconforming Materials, Parts, or Components" for the installation of a commercially dedicated part for use in a safety-related system which failed testing acceptance criteria on October 6, 2008. The licensee's corrective actions included replacing the nonconforming material on November 11, 2009. The licensee made procedure changes to clarify the requirements for documentation of the technical justification of accepting discrepancies. The licensee entered this finding into the corrective action program as issue report (IR) 1068559. The finding was determined to be more than minor because the finding was similar to IMC 0612, Appendix E, Example 5c (dated August 11, 2009). The inspectors determined the finding could be evaluated using IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Barrier Integrity Cornerstone. The inspectors answered all four questions in Table 4a, "No," therefore, the inspection finding screened as having very low safety significance. This finding has a cross-cutting aspect in the area of Human Performance - Decision Making. Specifically, there was a systematic process to ensure that discrepancies identified in the commercial grade dedication process were properly resolved, which was not followed. H.1(a)

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

**Significance:**  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Follow Technical Specification 5.5.4 Implementing Procedure**

- The inspectors identified a finding of very low safety significance and associated Non Cited Violation of Technical Specification 5.5.4 for the licensee failing to follow Step I.2.a and b of Procedure DOS 1500 08, "Discharge of Containment Cooling Service Water (CCSW) From Low Pressure Coolant Injection (LPCI) Heat Exchanger (Hx) During CCSW Pump Operations," Revision 16. Specifically, the licensee failed to perform a tube leak test as required by DOS 1500 08 when activity exceeded 1.5E 6 microcuries/milliliter. The licensee's corrective actions included a change to DOS 1500 08 to ensure personnel do not waive performance of the test procedure until tube leak checks are considered during non routine samples of CCSW and revising the chemistry sampling procedure CY DR 110 220, "LPCI Service Water (CCSW) and Torus Water Sampling," to notify operations to evaluate performance of a tube leak check if activity exceeds 1.5E 6 microcuries/milliliter.

The inspectors determined that the failure to perform a tube leak test or perform Calculated CCSW Sample Activity Limit and Canal Activity Calculations was contrary to DOS 1500 08, and was a performance deficiency. The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Specifically, had there been an actual LPCI Hx tube leak radioactivity could have been released. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 Initial Screening and Characterization of Findings," Table 4a for the Containment Barrier Cornerstone. All four questions on this table were answered "no." There was no actual degradation of the containment barrier. Therefore, the issue screened as having very low safety significance. This finding had a cross cutting aspect in the area of Human Performance, Decision Making because the licensee did not demonstrate that the proposed action was safe in order to proceed rather than a requirement to demonstrate that it was unsafe in order to disapprove the action. Specifically, the licensee assumed the activity in the sample was coming from the floor drain system with no valid proof that was the case.

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

**Significance:**  Dec 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **Failure to Follow the master Refueling Procedure During Movement of Fuel Assembly JLU569**

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, was self-revealed for the failure to properly move a fuel assembly to its specified location, in accordance with DFP 0800-01, "Master Refueling Procedure." Specifically, on November 5, 2004, fuel assembly JLU569 was placed in position C4-E5, instead of C4-F5, as required by the procedure. The violation was placed into the licensee's CAP in IR 990180. As corrective action, the licensee temporarily suspended all fuel handling activities, conducted a piece count of the spent fuel and stationed a second Senior Reactor Operator on the refueling bridge as additional oversight for follow-on fuel movements. Additionally the fuel handling crew associated with the event was suspended from future fuel moves, pending remedial training.

Using the guidance contained in IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Disposition



Screening,” dated December 4, 2008, the inspectors determined that the finding was more than minor because the finding was associated with the configuration control and human performance attributes of the Barrier Integrity Cornerstone and impacted the Barrier Integrity Cornerstone objective to provide reasonable assurance that physical design barriers (i.e., fuel cladding) protect the public from radionuclide releases caused by an accident or event. Specifically, the shutdown margin and thermal management of the spent fuel pool(s) is affected by fuel assembly placement inside the pool(s). The inspectors determined the finding could be evaluated using the significance determination process in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Phase 1 - Initial Screening and Characterization of Findings,” Table 3b, question 6, which directed the inspectors to Appendix M, “Significance Determination Process Using Qualitative Criteria.” Because probabilistic risk assessment tools were not well suited for this finding, the criteria for using IMC 0609, Appendix M, were met. In determining the significance of this finding, regional management reviewed the licensee's bounding analysis in the UFSAR, which demonstrated that regardless of the incorrect bundle position in the fuel pool, the design of the pool still maintained pool Keff less than .95. Based on the additional qualitative circumstances associated with this finding, regional management concluded the finding was of very low safety significance (Green). This finding has a cross-cutting aspect in the area of Human Performance, Work Practices. Specifically, neither the Senior Reactor Operator (SRO), nor either of the two members of the fuel handling crew, adequately performed independent verification techniques that ensured the fuel assembly move was made in accordance with the Nuclear Component Transfer List, as required by DFP 0800-01. H.4(a) (Section 1R20)  
Inspection Report# : [2009005](#) (pdf)

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## Emergency Preparedness

**Significance:**  Mar 31, 2010

Identified By: NRC

Item Type: FIN Finding

### **Failure to Meet Regulatory Commitment to Maintain Contingency Plans for Post-Accident Sampling**

The inspectors identified a finding of very low safety significance for the failure to meet a regulatory commitment to maintain a contingency plan for obtaining highly radioactive samples of reactor coolant, the suppression pool, and drywell atmosphere for post accident plant recovery planning. Specifically, the licensee's contingency plan was not adequately maintained to ensure the High Radiation Sampling System (HRSS) functioned adequately or otherwise was demonstrated to be in a state of readiness to allow samples to be obtained within a two week window. No violations of regulatory requirements were identified related to this finding. Corrective actions were being developed to ensure the licensee's contingency plan commitments would be met. Those actions included a means to improve system ownership and establishment of an effective process for HRSS equipment maintenance and repair at a priority consistent with its intended use.

The finding was more than minor because it impacted the facilities and equipment attribute of the Emergency Preparedness Cornerstone and adversely affected the cornerstone objective of ensuring capability to implement adequate measures to protect health and safety of the public in the event of a radiological emergency. Specifically, equipment intended to obtain highly radioactive samples that are used to assess reactor core condition as part of post accident recovery activities was not demonstrated to be in a readiness condition consistent with the licensee's contingency plan. The finding was determined to be of very low safety significance because it involved equipment, which supplements the licensee's emergency plan for reentry and recovery activities as provided in the planning standard of 10 CFR 50.47(b)(8), and represented a planning standard problem associated with demonstrating functional readiness of that equipment. The finding was determined to be associated with a cross cutting aspect in the area of human performance in the resources component, in that, the licensee failed to ensure that equipment to support its emergency plan was functional or otherwise was demonstrated to meet a defined status of operational readiness.

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## Occupational 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

**Significance:** SL-IV Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Record the Identity of Personnel Performing Post Maintenance Tests affecting NRC's regulatory process.**

An issue affecting the NRC's regulatory process and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," was identified by the inspectors for the licensee's failure to record the identity of various personnel who performed seven post-maintenance tests (PMTs) related to Unit 3 EDG maintenance. Despite the PMTs being related to work on safety related components, an activity affecting quality, neither the licensee's procedure MA AA 716 012, "Post-Maintenance Testing," nor DAP 15 10, "Post-Maintenance Testing Program," required the identity of the inspector or tester to be recorded. Completed corrective actions included adding PMT documentation requirements to DAP 15 10 and briefing individuals who perform PMTs.

The Enforcement Policy was used to screen the severity. From the Enforcement Policy, the finding affected the "Miscellaneous Matters" activity and involved noncompliance with NRC requirements that were not considered significant based on risk. Further, Supplement VII of the Enforcement Policy screened the severity of the violation as Severity Level IV because the violation was similar to the Severity Level IV example D.2: "Information that the NRC requires be kept by a licensee and that is incomplete and of more than minor significance."

The performance deficiency portion of this issue is tracked as item 2010-002-06.

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

**Significance:**  Mar 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Record the Identity of Personnel Performing Post-Maintenance Tests - performance deficiency portion.**

A finding of very low safety significance (green0 and associated NCV of 10 CFR Part 50, Appendix B, Criterion XVII, "Quality Assurance Records," was identified by the inspectors for the licensee's failure to record the identity of various personnel who performed seven post-maintenance tests (PMTs) related to Unit 3 EDG maintenance. Despite the PMTs being related to work on safety related components, an activity affecting quality, neither the licensee's procedure MA AA 716 012, "Post-Maintenance Testing," nor DAP 15 10, "Post-Maintenance Testing Program," required the identity of the inspector or tester to be recorded. Completed corrective actions included adding PMT documentation requirements to DAP 15 10 and briefing individuals who perform PMTs.

This finding was determined to be more than minor because the finding was similar to IMC 0612, Appendix E examples 1b since a portion of required records were irretrievably lost, and 2h since multiple examples were identified as failures to properly implement the same regulatory requirement. Since MA AA 716 012, "Post-Maintenance Testing," did not properly implement regulatory requirements, this finding has a cross-cutting aspect in the area of Human Performance, Resources because the licensee did not provide complete, accurate, and up-to-date procedures to plant personnel. H.2(c) (Section 1R19)

The traditional enforcement portion of this is tracked as item 2010-002-01.

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

Last modified : November 29, 2010