

# Palisades

## 2Q/2011 Plant Inspection Findings

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### Initiating Events

**Significance:**  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Evaluate Corrosion During Reactor Vessel Visual Examination**

A finding of very low safety significance and associated NCV of 10 CFR Part 50.55a(g)(6)(ii)(D)(1), “Reactor Vessel Head Inspections,” was identified by the inspectors for the licensee’s failure to evaluate corrosion present on the reactor vessel head during a Code Case (CC) N-729-1 VE visual examination. The licensee entered the condition into the corrective action program. As a corrective action the licensee compared pictures taken during the 2010 head visual examination with video records from a 2003 visual head examination. Based upon this comparison, the licensee determined that no indication of significant wall loss or structural degradation had occurred. Further, the licensee determined that the surface irregularities observed were caused by a combination of scaling (e.g., rusting) due to high humidity and a rough surface condition caused by the original head forging process and were not the result of boric acid induced corrosion or wastage. Additionally, the licensee determined that the “white spots” on the head were the result of boron staining, white mastic residue used to attach insulation to the head, or chromate water deposits from a previous component cooling water leak. The licensee did not identify any evidence of leakage of boron or boric acid on the head since the 2003 visual head examination. Based upon these observations and conclusions, the licensee determined that the reactor vessel head was operable and acceptable for continued service. The licensee also assigned a corrective action to ensure that an appropriate evaluation of relevant indications was incorporated into the vessel head VE examination procedure.

The finding was determined to be more than minor because the finding was associated with the Initiating Events Cornerstone attribute of Equipment Performance and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions. Absent NRC identification, the failure to evaluate head corrosion could have allowed unacceptable wastage to be returned to service. If areas of corrosion reduced vessel head strength, it could place the reactor coolant system at increased risk for through-wall leakage and/or failure. The licensee completed actions to assess the corrosion and surface irregularities observed and determined that no indication of significant wall loss or structural degradation had occurred. The inspectors answered “No” to the SDP Phase I screening question “Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any reactor coolant system leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation?” Therefore, the finding 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 staff failed to make conservative assumptions in decisions affecting the integrity of the reactor vessel head. Specifically, the decision to not evaluate areas of corrosion present on the vessel head was not based sufficient information to demonstrate that the proposed action/decision was safe (H.1(b)).

Inspection Report# : [2011003](#) (*pdf*)

**Significance:**  Mar 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

#### **Failure to Maintain Switchgear Weather Proof**

A finding of very low safety significance without an associated NCV was self-revealed when a loss of the rear bus and loss of one cooling tower occurred. The licensee failed to maintain the enclosure for F and G busses weatherproof as stipulated in the design basis documents for the 4160V electrical system. In addition, the licensee cancelled a preventive maintenance task to inspect the enclosure’s caulking. Due to degradation of the seals, water intruded into the F bus switchgear and caused a short and explosion resulting in loss of one qualified circuit of offsite power. This resulted in entry into an Emergency Action Level (EAL) of an Usual Event (the lowest emergency classification). As

an immediate action, the licensee reduced power to about 55 percent. The licensee entered the finding into their corrective action program (CAP).

The finding was more than minor because it impacted the initiating event cornerstone objective of limiting the likelihood of those events that upset plant stability and is associated with the attribute of equipment performance. Using IMC 0609 Appendix A the inspectors determined the finding was of very low safety significance because even though the issue impacted the transient initiating event frequency, it did not impact the mitigating system availability. The inspectors determined there was no cross-cutting aspect because the causes of the failure to maintain the switchgear enclosure are not reflective of current performance. There was no violation of NRC requirements.

Inspection Report# : [2011002](#) (*pdf*)

**Significance:**  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inadequate Examination of Head Penetration Nozzles Nos. 1 and 3**

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," were identified by the inspectors for the licensee's failure to follow Procedure CEP-NDE-0955, "Visual Examination of Bare-Metal Surfaces," and perform a bare metal visual examination of vessel head penetration nozzles Nos. 1 and 3 within 4 feet. Instead, the licensee performed the examination at approximately 5 feet and the illumination level at this distance had not been demonstrated as adequate to detect primary coolant system leakage. As a corrective action, the licensee's examiner repeated the bare metal visual examination of nozzles Nos. 1 and 3 and surrounding head surfaces at a distance of less than 4 feet. The violation was entered into the licensee's corrective action program as condition report (CR) PLP-2010-05188.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Absent NRC identification, the licensee would have continued to perform inadequate examinations of the surfaces of the vessel head near nozzles Nos. 1 and 3, which could allow through-wall nozzle cracks to go undetected. Undetected cracks returned to service would place the vessel head at increased risk for leakage and/or nozzle failure, which affected the Initiating Events Cornerstone attribute of Equipment Performance (barrier integrity). The licensee promptly corrected this issue by repeating the examination of nozzles Nos. 1 and 3 in accordance with the procedure to confirm that no evidence of nozzle leakage existed. The inspectors answered "No" to the Significance Determination Process Phase I screening question "Assuming worst case degradation, would the finding result in exceeding the Technical Specification (TS) limit for any Primary Coolant System (PCS) leakage or could the finding have likely affected other mitigation systems resulting in a total loss of their safety function assuming the worst case degradation"? Therefore, the finding screened as having very low safety significance. This finding has a cross-cutting aspect in the area of Human Performance, Work Practices because the licensee did not effectively communicate expectations regarding procedural compliance and personnel following procedures. Specifically, the failure to perform a bare metal visual examination of vessel head penetration nozzles Nos. 1 and 3 within four feet occurred because the licensee's management staff did not adequately stress or enforce procedure adherence for this activity. In particular, procedure CEP-NDE-0955 was issued as an "Informational Use" type procedure that was not required to be present at the worksite and thus allowed licensee staff to rely on memory to perform the procedural steps.

Inspection Report# : [2010005](#) (*pdf*)

**Significance:**  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Low Pressure Alarms During Reduced Inventory Operations**

A finding of very low safety significance and associated NCV of 10 CFR 50.65a(4) was self-revealed for the failure to properly assess and manage risk when service water low pressure alarms were received during orange risk reduced inventory operations. The work control center authorized a non-critical service water valve to be stroked with the belief that the system was filled and vented thus precluding an impact on the service water system. However, that portion of the system had not been filled yet. As a result, opening the valve caused a pressure drop in the system. The licensee started a standby service water pump to restore pressure. The issue was also entered into the corrective action

program.

The inspectors determined the finding was more than minor based in-part on example 7g of IMC 0612, Appendix E, which describes a condition where a safety function is significantly degraded without sufficient compensation. Additionally, as described in IMC 0612 Appendix B, the issue is associated with the configuration control attribute and impacted the Initiating Events Cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions in that proper configuration control was not maintained over the shutdown equipment lineup. Utilizing IMC 0609 Appendix G, Shutdown Operations Significance Determination Process, the inspectors determined the issue was Green in Phase I screening since there was adequate mitigation capability and there was no loss of control. The finding had a cross cutting aspect in the area of Human Performance, Work Control, because the licensee did not appropriately coordinate work activities by incorporating actions to address the impact of work on different job activities to assure plant performance. Specifically, the licensee failed to determine the current status of the service water system and did not evaluate potential impacts during a period of elevated plant risk.

Inspection Report# : [2010005](#) (*pdf*)

**Significance:**  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Perform Daily Crane Checks**

The inspectors identified a NCV of TS 5.4 for the licensee's failure to implement procedures specified by Regulatory Guide 1.33. Specifically, the licensee failed to perform a check of the main hook in preparations for the head lift. The procedure used to perform checks lacked details regarding the polar crane for features to be tested on a daily basis. The individual who performed the initial daily check was not familiar with the features to be checked. After the inspectors brought this condition to the attention of the licensee, the licensee delayed the head lift and performed the daily check on the main hook. The licensee has entered this condition into their corrective action program.

The inspectors concluded that the finding was more than minor, because it revealed programmatic weaknesses that could lead to more significant safety concerns if left uncorrected. Daily crane checks provide assurance that the probability of a heavy load drop is extremely small as discussed in Generic Letter 85-11, the Operating Requirements Manual, and NUREG-0612. The issue impacts the Initiating Event Cornerstone in that load drops could result in a failure of the primary coolant system boundary. Since no load drop occurred and no significant issues were identified with the polar crane, the inspectors concluded the finding was of very low safety significance in accordance with Appendix M. Since the failure to perform the daily check on the main hook resulted, in part, from ineffective coordination between personnel performing load moves, the inspectors concluded that there is an associated cross-cutting aspect in human performance, work control, appropriate coordination of work activities. (H.3(b))The inspectors identified a NCV of TS 5.4 for the licensee's failure to implement procedures specified by Regulatory Guide 1.33. Specifically, the licensee failed to perform a check of the main hook in preparations for the head lift. The procedure used to perform checks lacked details regarding the polar crane for features to be tested on a daily basis. The individual who performed the initial daily check was not familiar with the features to be checked. After the inspectors brought this condition to the attention of the licensee, the licensee delayed the head lift and performed the daily check on the main hook. The licensee has entered this condition into their corrective action program.

The inspectors concluded that the finding was more than minor, because it revealed programmatic weaknesses that could lead to more significant safety concerns if left uncorrected. Daily crane checks provide assurance that the probability of a heavy load drop is extremely small as discussed in Generic Letter 85-11, the Operating Requirements Manual, and NUREG-0612. The issue impacts the Initiating Event Cornerstone in that load drops could result in a failure of the primary coolant system boundary. Since no load drop occurred and no significant issues were identified with the polar crane, the inspectors concluded the finding was of very low safety significance in accordance with Appendix M. Since the failure to perform the daily check on the main hook resulted, in part, from ineffective coordination between personnel performing load moves, the inspectors concluded that there is an associated cross-cutting aspect in human performance, work control, appropriate coordination of work activities.

Inspection Report# : [2010005](#) (*pdf*)

**Significance:**  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Ensure Code Requirements Met When Performing VT-2 Exams**

The inspectors identified a finding of very low safety significance (Green) and associated NCV of Technical Specification (TS) 5.4.1, Procedures, for the failure to ensure that American Society of Mechanical Engineers (ASME) Code and site procedural requirements were understood and incorporated during the performance of VT 2 in service inspections. Specifically, the illumination requirements specified in the Code had not been properly incorporated into all site examination procedures, nor were Operations personnel aware of the specific requirements. The licensee disseminated guidance clarifying the requirements and entered the issue into corrective action program (CAP) as CR PLP 2010 03756.

The issue was more than minor because it adversely affected the Equipment Performance attribute of the Initiating Events cornerstone, whose objective is to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, VT 2 exams performed without fundamental knowledge of Code and procedural requirements could lead to erroneous examination results. The finding screened as Green because no known actual component degradation went undetected as a result of improperly performed exams. The finding had an associated cross cutting aspect in the area of Human Performance (Procedures), in that the licensee failed to have complete, accurate, and up to date procedures and work packages for the VT 2 examinations.

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

**Significance:**  Sep 17, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

### **Corrective Action to Prevent Recurrence Failed to Address Root Causes**

The inspectors identified a finding of very low safety significance with an associated Non-Cited Violation of Palisades Technical Specification 5.4.1, "Procedures." Specifically, the licensee's procedure for the performance of root cause analysis required the issuance of a Corrective Action to Prevent Recurrence (CAPR) to address each identified root cause and the licensee's only CAPR failed to address the root causes identified by the licensee. This issue was entered into the licensee's corrective action program as CR-PLP-2010-03976.

The inspectors concluded the finding was more than minor because, if left uncorrected, it would become a more significant safety concern; specifically, the finding impacted the adequate corrective action to prevent recurrence of an event that impacted the Initiating Event Cornerstone objective of limiting events that challenge safety functions; for example, preventing criticality in an area not designed for criticality. Because probabilistic risk assessment tools were not suited for the original White finding, the inspectors had evaluated the White finding using IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on the degradation that resulted in a significant loss of margin to criticality, NRC management concluded the original finding was of low to moderate safety significance (White). This violation is of very low safety-significance because other corrective actions taken by the licensee in response to additional NRC findings have been adequate to prevent recurrence. Because this violation was of very low safety-significance, neither was it repetitive nor willful, and was entered into the licensee's corrective action program the violation is being treated as an NCV, consistent with the NRC Enforcement Policy. The inspectors determined that the finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution under the Corrective Action Program Component because the corrective actions issued for the identified root causes failed to address the identified root causes. Specifically, the licensee did not have a CAPR that addressed each of the identified root causes. (P.1(c))

Inspection Report# : [2010009](#) (pdf)

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## **Mitigating Systems**

**Significance:**  Jun 30, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Failure to Inspect ASME Class 2 Piping**

A self-revealed finding of very-low safety significance with an associated NCV of TS 5.4.1, Procedures, occurred for the licensee's failure to properly implement the procedure for inspection of American Society of Mechanical Engineers (ASME) Class 2 piping associated with the Safety Injection and Refueling Water tank. Specifically, while investigating roof leakage into the control room and auxiliary building, boric acid deposits and an active flange leak discovered on piping under the tank roof indicated that this ASME Class 2 piping had not been inspected per the site procedure for approximately 20 years. Upon discovery, this leak would require ASME Code Section XI corrective actions to confirm the structural integrity of the connection. Although the licensee considered the area with the piping inaccessible, while investigating the roof leakage issue, the licensee was able to construct a scaffold and reach the area of concern. The licensee initiated condition reports, cleaned off all of the deposits and completed VT-2 inspections of piping in the area.

The issue was more than minor because it impacted the equipment performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, boric acid accumulations and leakage impacting a Class 2 system requiring ASME Code Section XI corrective actions could go undetected during further code inspection intervals. Inspection Manual Chapter 0609, Appendix E, example 2c, helped inform that determination because the example states that a finding would be more than minor if degradation existed following periods of missed testing. The finding screened as very low safety significance (Green) by answering 'no' to questions in the Mitigating Systems column of IMC 0609, Attachment 4, Table 4a, since the boric acid accumulations did not result in a loss of function for the impacted components. The inspectors determined that there was no associated cross-cutting aspect due to the age of the issue.

Inspection Report# : [2011003](#) (pdf)

**Significance:**  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Account for Potential Age-Related Degradation in EDG Governors**

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 50, Appendix B, Criterion III, Design Control, for the failure to recognize and account for potential age-related degradation of capacitors in the emergency diesel generator (EDG) digital reference units design controls. Specifically, the installed capacitors were found beyond industry and vendor recommended useful life and if they were to degrade, could impact safety-related functions of the EDGs. The licensee entered the issue into their Corrective Action Program and replaced the digital reference units.

The issue was more than minor because if left uncorrected, it could become a more significant safety concern because the capacitors would continue to degrade. The finding affected the Mitigating Systems Cornerstone and screened as very low safety significance (Green) based on the assessment that the operability of the EDG was maintained, and answering 'no' to all questions for that cornerstone in IMC 0609 Attachment 4, table 4a. The finding had an associated cross-cutting aspect in the area of Problem Identification and Resolution. Specifically, the licensee did not use operating experience information, including vendor recommendations, to support plant safety in that relevant information was not collected, evaluated, and communicated in a timely manner. Although the part 21 was issued in 2001, the licensee had the opportunity to identify the condition in March 2011 when evaluating the acceptability for continued use of EDG governor components that were also impacted by the 2001 part 21.

Inspection Report# : [2011002](#) (pdf)

**Significance:**  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Assure Adequate Resolution for Remote Visual Examinations**

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure of a licensee non-destructive examination examiner to accomplish activities affecting quality in accordance with procedures. The licensee entered this issue into their corrective action program.

The finding was determined to be more than minor, because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to perform an adequate visual testing examination on liquid Freon piping of refrigeration condensing unit VC 10 did not assure that the intended function of the unit would be maintained consistent with the current licensing basis through the period of ended operation. The finding was of very low safety significance based on a Phase I screening in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase I - Initial Screening and Characterization of Findings," Table 4a because the licensee's re-examination confirmed operability and no loss of safety function. The finding has a cross-cutting aspect in the area of human performance, work practices because the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported.

Inspection Report# : [2011008](#) (pdf)

**Significance:**  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Test Results for Diesel Fuel Oil Tanks Not Evaluated**

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," was identified by the inspectors for the failure to evaluate test results for tank wall thickness under the scope of the Diesel Fuel Quality and Storage Monitoring Program. Specifically, the licensee did not evaluate the test results associated with the ultrasonic measurement of thickness of the bottom of the 'A' emergency diesel generator day tank and both diesel fire pump day tanks. In addition, the licensee had not developed acceptance criteria for this activity. The licensee entered this issue into their corrective action program. The corrective actions that were been considered at the time of this inspection were the development of an acceptance criteria for tank wall thickness and performing an apparent cause evaluation.

The finding was determined to be more than minor because it 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 screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a loss of operability or functionality. Specifically, the ultrasonic examination results showed that the wall thicknesses of the inspected tanks were close to the nominal thickness or greater. The finding had a cross-cutting aspect in the area of human performance because the licensee did not have complete design documentation, procedures, and work packages for performing non-destructive examinations of the bottom walls of the tanks under the scope of the Diesel Fuel Monitoring and Storage Aging Management Program.

Inspection Report# : [2011008](#) (pdf)

**Significance:**  Mar 22, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Tank T-10A Not Age Managed for Effect of Identified Water**

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to promptly correct a condition adverse to quality associated with the emergency diesel generator fuel oil storage tank, T-10A. Specifically, the licensee did not follow Procedure No 3.26 when addressing the accumulated water in between the partial double wall and on the exterior wall of T-10A. The associated aging effects of the water were not properly managed because these conditions were not evaluated. The licensee entered this issue into the corrective action program. The corrective actions that were been considered at the time of this inspection were to perform an assessment of methods used to integrate operating experiences to their aging management programs, evaluate the cause of not evaluating the potential effects of the water on tank T-10A, and remove the accumulated water.

The finding was determined to be more than minor because it 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 screened as of very low safety significance because the finding involved a design or qualification deficiency that did not result in a

loss of operability or functionality. Specifically, the accumulated water in the annulus and on the exterior wall of T-10A had not resulted in the loss of functionality of the tank because there is no indication that either water is leaking from the annulus to the tank interior or fuel oil is leaking into the annulus. The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because the licensee did not identify issues completely because the associated corrective actions focused on the removal of the water and did not consider potential age management of the component.

Inspection Report# : [2011008](#) (pdf)

**Significance:**  Mar 22, 2011

Identified By: NRC

Item Type: FIN Finding

**Flow Accelerated Corrosion Program Acceptance Limits Not in Accordance with Design Standard**

A finding of very low safety significance was identified by the inspectors for the failure to assure an engineering evaluation was initiated if pipe wall thickness measurements fall below 87.5 percent of nominal pipe wall thickness. Specifically, computer software utilized by the flow accelerated corrosion program was not modified to initiate an engineering evaluation if degraded pipe wall thickness measurements were less than 87.5 percent of nominal pipe wall thickness. The licensee entered this issue into their corrective action program.

The finding was determined to be more than minor because if left uncorrected, the finding would become a more safety significant concern. The inspectors determined that the finding was of very low safety significance because the finding did not involve a design or qualification deficiency; there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specifications allowed outage time, and no risk due to external events. No violation of regulatory requirements occurred because the affected piping was non-safety-related. The finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee failed to provide effective supervisory oversight of work activities such that nuclear safety is supported.

Inspection Report# : [2011008](#) (pdf)

**Significance:**  Mar 22, 2011

Identified By: NRC

Item Type: FIN Finding

**Failure to Implement Adequate Oil Sampling and Analysis Aging Management Program**

A finding of very low safety significance was identified by the inspectors for the failure to: (1) develop and implement an oil sampling and analysis aging management program with specific acceptance criteria and trending requirements; and (2) age manage plant equipment with internal oil coolers for potential pressure boundary and/or heat transfer degradation. The licensee entered these issues into their corrective action program.

The finding was determined to be more than minor because if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to: (1) provide specific acceptance criteria and trending requirements; and (2) age manage plant equipment with internal oil coolers for potential pressure boundary and/or heat transfer degradation did not assure that plant equipment within the scope of the oil sampling and analysis aging management program would be maintained consistent with the current design basis through the extended period of operation. The inspectors screened the finding using 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 determined that the finding was of very low safety significance because the finding did not involve a design or qualification deficiency; there was no actual loss of safety function, no single train loss of safety function for greater than the Technical Specifications allowed outage time, and no risk due to external events. No violation of regulatory requirements occurred. The finding has a cross-cutting aspect in the area of Human Performance for the resources component because the implementing procedures did not include guidance defining parameters of the program.

Inspection Report# : [2011008](#) (pdf)

**Significance:**  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

### **Pipe Welds Not Incorporated into the ISI Program**

A finding of very low safety significance and associated NCV of 10 CFR 50.55a(g)4 was identified by the inspectors for the licensee's failure to establish a weld reference system for 11 welds in the cross-tie line between the chemical and volume control system and the containment spray system. Consequently, these welds had not been entered into the inservice inspection weld database used to schedule followup surface or volumetric examinations. To correct this issue, the licensee implemented changes to the applicable Inservice Inspection isometric drawings and entered these welds into the Inservice Inspection database. The violation was entered into the licensee's corrective action program as CR PLP-2010-05229.

The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern. Absent NRC identification, the licensee would not have examined a sample of these welds, which could have allowed service induced cracks to go undetected. Undetected cracks would place the cross-tie pipe segment at increased risk for through-wall leakage and/or failure, which affected the Mitigating System Cornerstone attribute of Equipment Performance (reliability). The licensee promptly corrected this issue and scheduled weld examinations to ensure cracks would be detected. The inspectors answered "Yes" to the Significance Determination Process Phase I screening question; "Is the finding a design or qualification deficiency confirmed not to result in loss of operability or functionality"? Therefore, the finding screened as having very low safety significance. This finding had a cross-cutting aspect in the area of Human Performance, Resources because the licensee did not provide complete, accurate, and up-to-date procedures, or work packages for the correct labeling of components. Specifically, the licensee staff failed to establish a weld reference system because up-to-date procedures were not developed to ensure identification and labeling of new welds installed in safety-related systems.

Inspection Report# : [2010005](#) (pdf)

**Significance:**  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Perform Required Quality Control Inspections**

Inspectors identified an NCV of 10 CFR 50, Appendix B, Criterion X, "Inspection," for the failure to ensure that Quality Control (QC) verification inspections were consistently included and correctly specified in quality-affecting procedures and work instructions for construction-like work activities as required by the Quality Assurance Program. The licensee performed extensive reviews, and inspectors performed independent reviews of the licensee's conclusions as well as independent sampling, to confirm that improper or missed inspections did not actually affect the operability of plant equipment. Entergy initiated prompt fleet-wide corrective actions to ensure proper work order evaluation and proper inclusion of QC verification inspections. This issue was entered into the corrective action program under CRs CR-HQN 2009-01184 and CR-HQN-2010-0013.

The failure to ensure that adequate Quality Control verification inspections were included in quality-affecting procedures and work instructions as required by the Quality Assurance Program was a performance deficiency. This programmatic deficiency was more than minor because, if left uncorrected, it could lead to a more significant safety concern in that the failure to check quality attributes could involve an actual impact to plant equipment. This issue affected the Design Control attribute of the Mitigating Systems Cornerstone because missed or improper quality control inspections during plant modifications could impact the availability, reliability, and capability of systems needed to respond to initiating events. This performance deficiency was determined to have very low safety significance in Phase 1 of the SDP, since it was confirmed to involve a qualification deficiency that did not result in a loss of operability or functionality. The inspectors determined that this performance deficiency involved a cross-cutting aspect related to the human performance in decision-making because the licensee did not have an effective systematic process for obtaining interdisciplinary reviews of proposed work instructions to determine whether QC verification inspections were appropriate.

Inspection Report# : [2010005](#) (pdf)

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

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to provide Complete and Accurate Information**

The inspectors identified a Severity Level IV NCV of 10 CFR 50.9 for the licensee's failure to provide information to the NRC that was complete and accurate in all material respects. Specifically, in a letter on dated October 5, 2009, the licensee inaccurately stated new couplings for a service water pump were independently tested prior to installation. The licensee provided this information as part of a request for a Notice of Enforcement Discretion (NOED). The licensee requested the NOED due to a failure of a service water pump coupling that had not been properly heat treated. The licensee subsequently informed the NRC that the tests had not been performed and entered the condition into the corrective action program.

The inspectors concluded that the licensee had reasonable opportunity to foresee and correct the inaccurate/incomplete information prior to the information being submitted to the NRC. As a result, this issue was considered a performance deficiency. Using the information provided in IMC 0612, Appendix B, "Issue Screening," the inspectors determined that traditional enforcement was warranted, because violations of 10 CFR 50.9 are considered to potentially impede or impact the regulatory process. Specifically, in order to determine the acceptability of granting discretion, the NRC needed assurance that the replacement couplings met hardness requirements. Using the information provided in the Enforcement Policy, Section 6.9, this issue was determined to be a Severity Level (SL) IV NCV, as it did not meet the definition for a Severity Level I, II, or III Violation. Specifically the violation was not greater than SL IV, because the inspectors concluded that the lack of hardness testing did not impact the NRC's conclusion since the licensee did not enter the period of enforcement discretion. The inspectors also evaluated the underlying performance deficiency under the ROP. Since the licensee did not enter the period of enforcement discretion and all the questions for more than minor in Appendix B were answered no, the inspectors concluded that there was no ROP finding and therefore no cross-cutting aspect.

Inspection Report# : [2010005](#) (pdf)

**Significance:**  Oct 22, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Perform Ultrasonic Examination on Primary System Makeup Storage Tank in Accordance with Procedures.**

A finding of very low safety-significance (Green) and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified by the inspectors for the failure to accomplish activities affecting quality in accordance with procedures. Specifically, the licensee's vendor examiner for Non-Destructive Examination (NDE) failed to perform an ultrasonic (UT) wall thickness (one-time inspection) examination in accordance with procedures on the T-81, Primary System Makeup Storage Tank. The licensee initiated corrective action document CR-PLP-2010-04653 to address the issue.

The finding was determined to be more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. The failure to perform an adequate UT examination did not assure that the intended function of the tank would be maintained consistent with the current licensing basis through the extended period of operation. This finding is of very low safety-significance (Green) because the inspectors answered no to all of the characterizations worksheet questions in Table 4a of IMC 0609.04. This finding has a cross-cutting aspect in the area of Human Performance for the Work Practices component because the licensee did not effectively communicate expectations regarding procedural compliance and the examiner failed to follow procedures [H.4 (b)]. (Section 4OA5.1.b (1))

Inspection Report# : [2010010](#) (pdf)

**Significance:**  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Perform an Adequate Risk Assessment for Maintenance Activities**

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50.65 a(4) for failing to properly assess and manage the risk associated with the removal of the auxiliary feedwater (AFW) pump room floor plug during emergent maintenance activities. Specifically, the impact of the floor plug was not considered

in the risk assessment and licensee personnel were unaware of resources needed to restore configuration. The performance deficiency was identified after the floor plug had been reinstalled. Prior to the next maintenance activity involving floor plugs, the licensee ensured appropriate actions were taken in accordance with their procedures. The issue was entered into the licensee's CAP as CR PLP 2010 03434.

The issue was more than minor because it adversely affected the Protection from External Factors attribute of the Mitigating Systems cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events. Additionally, the inspectors compared the issue to examples in IMC 0612 Appendix E, and concluded it was similar to example 7.e. for more than minor in that the risk assessment was not adequate for a situation where licensee procedures required risk management actions to be taken to address plant configuration. Specifically, the licensee did not perform a risk assessment for removal of the AFW pump room floor plug and did not establish adequate risk management actions to reinstall it in the event of flooding. The finding screened as Green based on an evaluation performed by a Senior Risk Analyst (SRA) using IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," with a bounding risk evaluation which estimated a relatively low increase in risk for the given configuration. The finding had an associated cross cutting aspect in the area of Human Performance (Resources) in that the licensee failed to provide complete, accurate, and up to date procedures that are adequate to ensure nuclear safety.

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

**Significance:**  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Complete Actions Required by LCO 3.0.3 and 3.3.1**

The inspectors identified a finding of very low safety significance (Green) and associated NCV of TS 3.3.1 and 3.0.3 for failure to comply with required TS actions. Specifically, on August 23, the licensee lost the automatic Loss of Load Trip but neither placed a trip unit in trip nor placed the plant in Mode 3 as required by TS 3.3.1 and TS 3.0.3 respectively. The licensee has restored the Loss of Load trip to operable status and entered the issue into the CAP as CR PLP 2010 03579.

The inspectors concluded that this issue was more than minor because it adversely affected the Mitigating System Cornerstone objective of ensuring the availability of systems that respond to initiating events. In addition, the inspectors reviewed IMC 0612 Appendix E and determined the issue was not similar to those items listed. The inspectors used IMC 0609 Attachment 4, Phase 1 screening, and discussed the issue with the regional SRA. The inspectors determined that the finding was of very low safety significance, Green, since the Reactor Protection System Safety Function was not lost. The finding had an associated cross cutting aspect in the area of Human Performance (Decision Making) in that the licensee failed to verify the validity of underlying assumptions.

This is related to traditional enforcement item 2010-004-03.

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

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

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Make an 8 Hour Report Pursuant to 10 CFR 50.72**

The inspectors identified an NCV for failure to make an 8 hour report as required by 10 CFR 50.72. On August 23, the licensee lost the trip function associated with the Loss of Turbine Load but did not recognize that this condition was a loss of a safety function and reportable within 8 hours as required by 10 CFR 50.72. After discussions with the residents, the licensee reported the condition pursuant to 10 CFR 50.72. The licensee entered this condition into the CAP as CR PLP 2010 3752.

The inspectors concluded that the issue was more than minor because the failure to make the required report impacted the regulatory process. The finding affected the Mitigating System Cornerstone because the intent of the reporting is to capture events where there would have been failure of a safety system to properly operate. The Finding was processed through the traditional enforcement process. The inspectors concluded that the finding was of SL IV because failure to make a required 10 CFR 50.72 report is an example of a SL IV violation in the Enforcement Policy. The underlying cause of this issue is the same as the Green NCV listed in 1R15 so no additional cross-cutting aspect

was assigned.

This is related to performance deficiency 2010-004-02.

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

**Significance:**  Sep 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

### **Ground on Preferred AC Bus Due to Improperly Installed electrical Bushing**

The inspectors identified a finding of very low safety significance (Green) and associated NCV of 10 CFR 50 Appendix B, Criterion V for failure to accomplish activities affecting quality as prescribed by the documented instructions, procedures, or drawings. Specifically, the licensee replaced a solenoid valve on a safety related chiller in a manner that permitted a ground to develop on a preferred electrical bus after two years of operations. The licensee repaired the solenoid valve and entered the issue into the CAP as CR PLP 2010 03234.

The issue was more than minor because it adversely affected the Equipment Performance attribute of the Mitigating Systems Cornerstone, whose objective is to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the ground reduced the reliability of the associated safety related electrical bus. Further, correction of the ground rendered the control room Heating, Ventilation and Air Conditioning (HVAC) chiller inoperable. The finding screened as Green because there was no loss of system safety function. The licensee determined the cause to be an improperly tightened electrical bushing, and that the proper tightening of bushings was part of electrical maintenance training. Therefore, human error prevention techniques used by the craft during assembly were not sufficient to preclude the bushing from being improperly tightened.

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

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## **Barrier Integrity**

**Significance:**  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

### **Violation of Fatigue Rule Requirements**

The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR 26.205(d) for the failure to control the work hours of covered workers. Specifically, contract workers violated the minimum days off requirements during the October 2010 refueling outage and were not being tracked and controlled in accordance with licensee procedures. The licensee entered the issue into their Corrective Action Program and reviewed the hours worked and jobs performed by the contract workers.

The issue affected the Barrier Cornerstone because the work being performed involved reactor fuel and was more than minor because if left uncorrected, it could become a more significant safety concern. The finding screened as very low safety significance (Green) based on no known effects to the plant caused by possible worker fatigue. The finding had an associated cross-cutting aspect in the human performance area. Specifically, the licensee failed to ensure supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported. Specifically, the licensee did not ensure work hours were tracked appropriately for personnel doing covered work.

Inspection Report# : [2011002](#) (*pdf*)

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## **Emergency Preparedness**

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# Occupational Radiation Safety

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## Public Radiation Safety

**Significance:**  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Establish a Back-up Radiation Monitor**

The inspectors identified a finding of very low safety significance and associated NCV of TS 5.5.1 for failure to establish, implement and maintain the Offsite Dose Calculation Manual (ODCM). Specifically, the licensee failed to establish a backup radiation monitor capable of performing monitoring consistent with the primary radiation monitors and ODCM requirements. Over several months, the licensee experienced multiple failures of the steam line and stack radiation monitors. The ODCM provides direction to point a backup monitor at the effected effluent path should the primary monitor fail. The backup radiation monitor could not perform its intended function due to physical obstructions and geometry. The licensee instituted alternate means of monitoring releases when the primary monitor does not work and has entered the condition into the corrective action program.

The inspectors concluded that the failure to establish RIA 2328 to be an effective backup for the stack and steam line radiation monitors was a performance deficiency that warranted a significance determination. Since RIA-2328 potentially impacts both Public Radiation Safety and Emergency Planning Cornerstones, the inspectors reviewed the significance under both cornerstones. For radiation protection, the inspectors compared the issue to the examples in Appendix E, and concluded that example 6.b applied. Example 6.b states that a radiation monitor that cannot perform its safety function with a reasonable level of safety margin is an example of a more than minor issue. Further, the inspectors determined the finding was more than minor because it impacted the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation and is associated with the program and process attribute. This finding was assessed using IMC 0609, Attachment D for the Public Radiation Safety SDP and determined to be of very low-safety-significance (Green) because this was not a failure to implement the effluent program and public dose remained less than 10 CFR Part 50, Appendix I, limits. In addition, the radiation monitor is used in the emergency plan for determining an emergency action level. The issue screened out as minor in this cornerstone, because there are other EALs that would be available to ensure the correct classification could be met within required times. There was no cross cutting aspect in that the procedures and radiation monitor have been in place for several years and do not reflect current plant performance.

Inspection Report# : [2011003](#) (*pdf*)

**Significance:**  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Include The Steam Generator Mausoleum in the Groundwater Protection Risk Ranking Program**

The inspectors identified a finding of very low-safety-significance and an associated NCV of TS 5.4.1, Procedures, for the failure to implement procedures and include the steam generator mausoleum in the groundwater risk-ranking program for structures, systems, or components after a small amount of water was identified on the floor that contained Cs-137 and tritium with a credible mechanism to reach groundwater. Specifically, the licensee did not implement Station Procedure EN-CY-111, 'Radiological Groundwater Monitoring Program' to evaluate and document this structure after it was determined to contain radioactive liquids with a single barrier before reaching groundwater. Completion of the groundwater risk-ranking process may have prescribed additional measures to enhance or reinstate leak detection methods for this structure that contains licensed material and for which there is a credible mechanism for licensed material to reach groundwater. The licensee entered the condition into the corrective action program. Corrective actions included creating a recurring action item AR 00107492 to inspect the mausoleum

every 6 months and clean up any water.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect and correct leaks of radioactive material before there is an impact on public dose. It is associated with program and process attribute of this cornerstone. Using IMC 0609, Attachment D, for the Public Radiation Safety SDP, the inspectors determined the finding to be of very low-safety significance because there is no indication of a spill or release of radioactive material on site or to the offsite environs from this structure and therefore, this finding was not a failure to implement the effluent program and public dose remained less than 10 CFR Part 50, Appendix I, limits. The finding was previously entered in the licensee's corrective action program. However, the licensee failed to take appropriate corrective actions to address issues. Consequently, this deficiency has a cross-cutting aspect in Problem Identification and Resolution (Corrective Action Program) (P.1(d)).

Inspection Report# : [2011003](#) (pdf)

**Significance:**  Jun 30, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Adequately Manage Changes to the Offsite Dose Calculation Manual**

The inspectors identified a finding of very low-safety significance and associated NCV of TS 5.5.1.c, for a change that was made to the ODCM in 2004 to eliminate drinking water well sampling with an inaccurate evaluation for the change. This evaluation failed to address community wells that provide drinking water to homes immediately adjacent to plant property to the south. These community wells are between the plant site and the Covert Township Park. These locations were drinking water wells that were historically sampled until the 2004 ODCM change. This issue was entered into the licensee corrective action program as CR-PLP-2010-1013. The licensee revised the ODCM to add the sampling and analysis of the Palisades Park drinking water well.

The finding was more than minor because it affected the Public Radiation Safety Cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain, in that these conditions could result in reduced capability to detect potential impacts associated with this pathway. It is associated with program and process attribute of this cornerstone. Using IMC 0609, Attachment D, for the Public Radiation Safety SDP, the inspectors determined that the finding was of very low-safety significance because it involved the environmental monitoring program. The finding was previously entered in the licensee's corrective action program. However, the licensee failed to thoroughly evaluate the problem and did not ensure that the problem was resolved. Consequently, this deficiency has a cross-cutting aspect in Problem Identification and Resolution (Corrective Action Program). (P.1(c)).

Inspection Report# : [2011003](#) (pdf)

**Significance:**  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Procedural Controls for Liquid Radioactive Waste**

The inspectors identified a finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4 for failure to establish and implement procedures recommended by Regulatory guide 1.33. Specifically, the licensee failed to establish procedures for liquid radioactive waste and emergency procedures for abnormal releases of radioactivity related to tank T-90 and 91. The licensee has revised procedures to control concentrations of tritium in tanks T-90 and 91 and entered the condition into the Corrective Action Program (CAP).

The inspectors concluded that the failure to maintain procedures as required by TS 5.4 was a performance deficiency that warranted a significance determination. The inspectors determined the finding was more than minor because it impacted the public radiation safety cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation, in that, the licensee failed to meet the program and process attribute of procedures. Since the finding

resulted in less than .005 rem exposure to members of the public, the inspectors concluded the finding was of very low safety significance (green) in accordance with IMC 0609, Appendix D. There was no cross-cutting aspect in that the procedures and Updated Final Safety Analysis Review (UFSAR) content have been in place for several years and do not reflect current plant performance.

Inspection Report# : [2011002](#) (*pdf*)

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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

Last modified : October 14, 2011