

## Palisades

### 2Q/2016 Plant Inspection Findings

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#### Initiating Events

**Significance:**  Aug 19, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

##### **Operability Evaluation Not Performed in Accordance with Station Procedure (Section 1R15)**

Green. An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified for the licensee's failure to adhere to the site procedure for performing operability determinations during the evaluation of a nonconforming condition associated with nine primary coolant system (PCS) welds susceptible to primary water stress corrosion cracking (PWSCC). The licensee's corrective actions for this finding included completion of an operability determination in accordance with the site operability procedure to include a new analysis which demonstrated the AMSE Code acceptance criteria would continue to be met for the affected welds during the remainder of the operating cycle. The licensee entered the failure to comply with the operability procedure into the CAP (CR PLP-2015-03434).

This finding was determined to be more than minor because it was similar to the "not minor if" aspect of Example 3j in IMC 0612, Appendix E, "Example of Minor Issues," because the errors in operability evaluation CA-1 of CR-PLP-2015-01239 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the "minor because" aspect of this example since the impact of the errors on the operability evaluation was not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 3, for the Initiating Events Cornerstone and IMC 0609, Appendix A, "The SDP for Findings At-Power." Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered "No" to questions A.1 and A.2, of Exhibit 1, "Initiating Events Screening Questions," identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). This finding has a cross-cutting aspect in Evaluation for the Problem Identification and Resolution cross-cutting area since the licensee failed to thoroughly evaluate the impact on operability of a nonconforming condition associated with nine PCS welds susceptible to PWSCC [IMC 310, Item P.2]. (Section 1R15)

Inspection Report# : [2015012](#) (*pdf*)

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#### Mitigating Systems

**Significance:**  Apr 08, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

##### **Failure to Correct Containment Spray Pump Non-conformance**

The team identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to correct a non-conforming condition for containment spray pump P-54A, which was discovered in October 2014, during an NRC component design bases inspection (CDBI). The licensee entered this issue into their CAP as CR-PLP-2016-01646 with an assigned action to resolve the non-conforming condition of the containment spray pump.

The team determined that the performance deficiency was more than minor because it was associated with the Mitigating Systems cornerstone attribute of Design Control and adversely affected the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the performance deficiency identified that the licensee failed to correct a non-conformance between their current as-built configuration, the current licensing bases (i.e., Final Safety Analysis Report (FSAR) Section 6.2.3.1), and the design basis (i.e., Design Bases Calculation EA-ELEC-LDTAB-005) which was identified by the NRC in the 2014 CDBI. In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04 "Initial Characterization of Findings," issued June 19, 2012, and Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," issued June 19, 2012, the team answered "No" to all of the questions. Therefore, this finding was of very low safety significance (Green). The team identified a cross-cutting aspect in the Evaluation component of the Problem Identification and Resolution cross-cutting area because the licensee failed to fully evaluate the original issue identified in the 2014 CDBI to ensure that the corrective actions performed adequately addressed the non-conformance between the licensing basis, the as-built configuration, and the design basis.

Inspection Report# : [2016007](#) (*pdf*)

**Significance:**  Mar 31, 2016

Identified By: NRC

Item Type: NCV Non-Cited Violation

#### **Failure to Meet the Minimum Staffing Requirements of the Fire Brigade**

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 48(c) and the National Fire Protection Association (NFPA) Standard 805 Section 3.4.1 was identified for the failure to meet the minimum staffing requirements for the Fire Brigade on January 4 and 5, 2016. Specifically, two nuclear plant operators (NPOs) who had their Fire Brigade qualifications suspended, stood watch as Fire Brigade members during day shift on January 4, 2016 and approximately one half of day shift on January 5, 2016. The licensee entered this issue into their Corrective Action Program (CAP) as CR PLP 2016 00198, performed an apparent cause evaluation, successfully performed a fire drill to requalify the Fire Brigade members with suspended qualifications on January 6, 2016, and planned to update the tracking method used to validate drill completion for Fire Brigade qualifications.

The performance deficiency was determined to be more than minor because it was associated with the Protection Against External Factors attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding screened as having very low safety significance based on using qualitative criteria located in IMC 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." The finding had a cross cutting aspect of Documentation in the Human Performance cross cutting area because the licensee informally tracked drill completion and this information was not accessible to each individual Fire Brigade member to validate their qualifications

Inspection Report# : [2016001](#) (*pdf*)

**Significance:**  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Inadequate PT Examination of Pipe Lug Welds**

The inspectors identified a finding of very-low safety significance (Green), and an associated NCV of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion IX, "Control of Special Processes," for the licensee's failure to perform a dye penetrant (PT) examination of the Safety Injection System (SIS) pipe lug welds in accordance with the American Society of Mechanical Engineers (ASME) Code Section XI requirements. The licensee entered this issue into the Corrective Action Program (CAP) as CR-PLP-2015-04191, repeated the PT examination of the affected SIS lug welds to meet the full extent of coverage required by the ASME Code, repeated examinations of other welds conducted by the PT examiner during the outage, and removed the PT examiner from further weld examination activities.

This performance deficiency was determined to be more than minor because, if left uncorrected, the failure to perform a PT examination in accordance with the ASME Code requirements could result in acceptance and return to service of a component with an undetected crack that would increase the possibility of pipe leakage or failure. In addition, the failure to perform a PT examination in accordance with the ASME Code adversely affected the Mitigating System Cornerstone attribute of Equipment Performance, because it could result in failure to detect cracks in pipe welds, which would reduce the availability and reliability of the SIS mitigating system. The inspectors evaluated the finding in accordance with IMC 0609, Appendix A, "The SDP for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," and answered "yes" to screening question number 1. Although this finding adversely affected the design or qualification of the SIS pipe lugs, the finding screened as very-low safety significance (Green), because it did not result in the loss of operability or functionality of the affected SIS pipe segment. This finding had a cross-cutting aspect in the Field Presence component of the Human Performance cross-cutting area. Specifically, licensee leaders were not observed in the work areas of the plant to coach and reinforce standards or expectations for the licensee's vendor staff to ensure deviation from standards and expectations were promptly corrected.

Inspection Report# : [2015004](#) (*pdf*)

**Significance:**  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure to Identify Components Required to be Covered by the Quality Assurance Program**

The inspectors identified a finding of very-low safety significance, and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion II, "Quality Assurance Program," for the licensee's failure to identify all component cooling water (CCW) structures, systems, and components (SSC), which were required to be covered by the Quality Assurance Program (i.e., be safety-related). As a result, the licensee incorrectly credited nonsafety-related CCW components to remain functional during and following a design basis event (DBE). The licensee entered this finding into their CAP and, after performing operability determinations, concluded the system would still be capable of performing its function.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance, and adversely 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 having very-low safety significance (Green) because, although it was a deficiency affecting the design or qualification of a mitigating SSC, the SSC maintained its operability. The inspectors did not identify a cross-cutting aspect associated with this finding because it was determined not to be representative of current performance.

Inspection Report# : [2015004](#) (*pdf*)

**Significance:**  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Failure to Perform a Required 50.59 Evaluation for Declassification of the CVCS**

The inspectors identified a SL IV, NCV of 10 CFR, Part 50.59, “Changes, Tests, and Experiments,” and an associated finding of very-low safety significance (Green) for the licensee’s failure to maintain a record of the declassification of the Chemical Volume and Control System (CVCS) from safety-related to nonsafety-related, which includes a written evaluation that provides the bases for the determination that the change did not require a license amendment. The licensee entered this issue into their CAP, and after a review of the system, determined there was reasonable assurance that it could perform its function.

The inspectors determined the underlying technical concern was a performance deficiency associated with the Mitigating Systems cornerstone that was more than minor because, if left uncorrected, would become a more significant safety concern. The underlying technical concern screened as a finding with very-low safety significance (Green) because, although it affected the design or qualification of the CVCS, it did not result in the loss of functionality of the CVCS. The violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The violation was categorized as a SL IV in accordance with Section 6.1.d.2 of the NRC Enforcement Policy because the changes were evaluated by the SDP, described above, as having very-low safety significance (i.e., Green finding). The inspectors did not identify a cross-cutting aspect associated with the finding because the finding was not representative of current performance.

Inspection Report# : [2015004](#) (*pdf*)

**Significance:**  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Failure to Justify Continued Service of Safety-Related Electrolytic Capacitors Installed Beyond Their Service Life**

An NRC identified finding of very low safety significance and an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, “Design Control,” was identified for the failure to justify continued service of safety related electrolytic capacitors that were installed beyond their recommended service life associated with the safety related containment floor level indicating transmitters (LITs). Specifically, on June 21, 2015, containment floor LIT LIT-0446B and LIT-0446A did not satisfy the acceptance criteria of the technical specification surveillance monthly channel checks and LIT-0446B was declared inoperable. Further troubleshooting identified a failure of the electrolytic capacitor within the transmitter’s converter module and that this failure was most likely due to age since the transmitter had been in service for greater than its recommended service life. In addition to entering this issue into their Corrective Action Program (CAP) as CR-PLP-2015-04972, the licensee replaced the failed components and planned to develop a replacement schedule for non critical, safety related electrolytic capacitors.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding screened as having very low safety significance based on answering “No” to all of the screening questions in the Mitigating Structures, Systems, and Components (SSCs) and Functionality section of IMC 0609, Appendix A, “The Significance Determination Process for Findings At Power,” Exhibit 1, “Mitigating Systems Screening Questions.” The finding had a cross cutting aspect of Operating Experience in the Problem Identification and Resolution cross cutting area because the licensee did not effectively and thoroughly

evaluate and implement relevant industry operating experience and guidance for age related electrolytic capacitor degradation

Inspection Report# : [2015003](#) (pdf)

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## Barrier Integrity

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## Emergency Preparedness

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## Occupational Radiation Safety

**Significance:**  Mar 31, 2016

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

### **Movement of Radioactive Material Results in an Unposted and Un-Barricaded High-Radiation Area**

A self revealed finding of very low safety significance and an associated Non-Cited Violation of Technical Specification 5.7.1 was identified when movement of a bag of radioactive material caused an area to become a high radiation area without the proper posting and barricades. The licensee immediately moved this bag of radioactive material to a posted locked high radiation area and entered this issue into their Corrective Action Program as CR-PLP-2015-05019.

The performance deficiency was determined to be more than minor because it was associated with the Program and Process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, the movement of the bag from an area that was a high radiation area to an area that was not posted and barricaded as a high radiation area removed a barrier that was intended to prevent workers from receiving unexpected dose. The finding was determined to be of very low safety significance in accordance with Inspection Manual Chapter 0609 Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008. The violation was of very low safety significance because: (1) it did not involve as low as reasonably achievable planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding had a cross cutting aspect of Teamwork in the Human Performance cross cutting area because the individuals and work groups involved did not communicate or coordinate their activities within and across organizational boundaries to ensure nuclear safety was maintained

Inspection Report# : [2016001](#) (pdf)

**Significance:**  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure To Establish, Implement, and Maintain the Offsite Dose Calculation Manual**

A finding of very low safety significance and an associated NCV of Technical Specification (TS) 5.5.1, "Offsite Dose Calculation Manual," was identified for the failure to establish, implement, and maintain the Offsite Dose Calculation Manual (ODCM) relative to dose calculation parameters. Specifically, the licensee failed to modify the parameters

used in public radiation calculations when changes in the use of unrestricted areas were identified. As a result, the quarterly and annual doses that were calculated every 31 days, as required by the ODCM, were incorrect and non conservative. In addition to entering this issue into their Corrective Action program (CAP) as CR-PLP-2015-2972, the licensee recalculated the dose using the correct calculation parameters.

The performance deficiency was determined to be more than minor because it was associated with the Program and Process attribute of the Public Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring the 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. The finding was determined to be of very low safety significance in accordance with IMC 0609, Appendix D, "Public Radiation Safety Significance Determination Process," because the issue did not represent a significant deficiency in evaluating a planned or unplanned effluent release since the resulting dose was not grossly underestimated. The finding had a cross cutting aspect of Training in the Human Performance cross cutting area because the licensee did not ensure adequate knowledge transfer to maintain a knowledgeable, technically competent workforce.

Inspection Report# : [2015003](#) (*pdf*)

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## Public Radiation Safety

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## Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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## Miscellaneous

**Significance:** N/A Aug 19, 2015

Identified By: NRC

Item Type: VIO Violation

### **Innaccurate/Incomplete Information Submitted for Relief Request 4-18 (Section 1R15)**

• TBD. An apparent violation (AV) of Title 10 of the Code of Federal Regulations (CFR) 50.9 was identified by the licensee, related to a failure to provide information that was complete and accurate in all material respects to the NRC in letter PNP 2014-015, "Relief Request (RR) Number 4-18 - Proposed Alternative Use of Alternate ASME [American Society of Mechanical Engineers] Code Case N-770-1 Baseline Examination." Specifically, in this document the licensee stated, "In the unlikely case that crack initiation were to occur, crack growth calculations considering primary water stress corrosion cracking (PWSCC) as the failure mechanism demonstrate that the hot leg drain nozzle weldment satisfies ASME Code acceptance criteria for 60 effective full power years [EFPY] for a circumferential flaw, and more than 34 years for an axial flaw." However, this statement was not correct or accurate in that, the ASME Code acceptance criteria were not satisfied for 60 EFPY for a circumferential flaw and 34 years for an axial flaw, where correct information was 20 EFPY for a circumferential flaw, and 11.3 years for an axial flaw. This

AV was not an immediate safety concern because the licensee demonstrated an adequate basis for continued operability of the nine affected primary coolant system (PCS) welds. The licensee corrective actions for this AV included completion of an operability evaluation, submittal of a corrected analysis to the NRC, and entering this issue into the Corrective Action Program (CAP) (CR-PLP-2015-03441).

If the NRC was provided with the correct information in letter PNP 2014-015, where the affected welds satisfied ASME Code acceptance criteria (i.e., 75 percent through-wall) for only 20 effective full power years for a circumferential flaw, and 11.3 years for an axial flaw, the NRC would not likely have approved RR 4-18 and, as a minimum, would have requested additional supporting analysis (e.g., required substantial further inquiry). Further, the need for substantial further inquiry was illustrated by the licensee's subsequent decision in RR 4 21 to abandon the prior analytical approach used in RR 4 18. The inspectors evaluated the underlying technical issue in accordance with the SDP to determine the risk significance of this AV. The issue of concern was of more than minor significance because it was similar to the "not minor if" aspect of Example 3j in IMC 0612, Appendix E, "Example of Minor Issues." Specifically, the erroneous information provided in letter PNP 2014-015 resulted in a condition in which there was a reasonable doubt on the operability of the systems and components that were the subject of the evaluation and dissimilar from the "minor because" aspect of this example since the impact of the error for the operability of nine PCS welds was not minimal. In addition, the performance deficiency was determined to be more than minor because it was associated with the Initiating Event Cornerstone attribute of Equipment Performance and adversely affected the Cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions. The inspectors evaluated the finding in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," Table 3, for the Initiating Events Cornerstone, and IMC 0609, Appendix A, "The SDP for Findings At-Power." Because the licensee was able to demonstrate operability of the nine PCS welds susceptible to PWSCC, the inspectors answered "No" to questions A.1 and A.2, of Exhibit 1, "Initiating Events Screening Questions," identified in Appendix A of IMC 609 and, as a result, the finding screened as having very low safety significance (Green). No cross-cutting aspect was assigned because this Green finding was identified by the licensee. (Section 1R15)

- A final significance determination letter, SL III, Notice of Violation for EA-15-171 was issued on November 24, 2015. ADAMS Accession Number ML15328A534.

The failure to provide complete and accurate information is of significant safety concern to the NRC because the inaccurate information impacted the NRC's ability to perform its regulatory function. The NRC relied on the inaccurate information to make a licensing decision approving Relief Request 4-18. If the information had been correct the NRC would have undertaken substantial further inquiry and reconsidered its regulatory position. Therefore, this violation has been categorized in accordance with the NRC Enforcement Policy at Severity Level III.

Inspection Report# : [2015012](#) (*pdf*)

Inspection Report# : [2016002](#) (*pdf*)

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