Palisades – Quarterly Plant Inspection Findings

2Q/2017 – Plant Inspection Findings

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Initiating Events

Mitigating Systems

Significance: G Dec 31, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Have Appropriate Controls in Place for Combustible Materials
A 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) was identified by the inspectors for the licensee's failure to appropriately implement the requirements of procedure EN-DC-161, "Control of Combustibles." Specifically, between January 1, 2016 and October 22, 2016, the inspectors identified several examples of the licensee's failure to have appropriate controls in place for the storage of combustible materials in excess of the limits required for those respective areas without a completed transient combustible evaluation (TCE). Also, on several occasions from October 19, 2016 to October 22, 2016, the required compensatory actions for a TCE related to the dry fuel storage cask transporter vehicle were not appropriately implemented as required by procedure EN-DC-161. The licensee entered these issues in their corrective action program (CAP) as condition reports (CRs) CR-PLP-2016-03633, CR-PLP-2016-05148, and CR-PLP-2016-0564. Corrective actions for these issues included completing the required TCEs, ensuring the combustible materials in the areas were addressed by the combustible loading calculations, and ensuring appropriate compensatory measures were implemented.

The issue was determined to be more than minor in accordance with IMC 0612, Appendix B, "Issue Screening," because it was associated with the Protection Against External Factors attribute, in the area of Fire, 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). Specifically, transient combustible materials without required TCEs were stored in the charging pump cubicles and in the refueling and spent fuel pool areas. The finding screened as having very low safety significance (Green) in accordance with IMC 0609, Appendix F, "Fire Protection Significance Determination Process," since none of the

stored materials were self igniting, low flashpoint liquids, or heat sources and was therefore assigned a "Low" degradation rating. The finding had a cross cutting aspect of Training in the Human Performance cross cutting area due to the common element of a lack of knowledge of the individuals with the control of combustibles process and understanding their roles in that process

Inspection Report# : 2016004 *(pdf)*

Significance: G Dec 31, 2016
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Correct an Adverse Condition Associated with Diesel Generator Load Sequencer Module
A finding of very low safety significance and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion XVI, "Corrective Action," was self revealed for the licensee's failure to promptly correct a condition adverse to quality. Specifically, the licensee failed to correct an adverse condition associated with the emergency diesel generator (DG) load sequencer and power supply module as revealed when the electrolytic capacitor failed two days after installation. The 1-2 DG was declared inoperable, the licensee replaced the failed module, and an equipment apparent cause evaluation was completed for the equipment failure. An internal operating experience review revealed that a similar issue occurred in 2005 and corrective actions to address that failure, which included establishing shelf life and age requirements for electrolytic capacitors that were part of power supply modules, were not applied to this module. The licensee entered this issue into their Corrective Action ProgramCAP as CR-PLP-2016-03260.

The issue was determined to be more than minor in accordance with Inspection Manual Chapter (IMC) 0612, Appendix B, because the performance deficiency 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). Specifically, the licensee failed to correct a condition adverse to quality, which rendered the 1-2 DG inoperable. This condition would have prevented the DG from automatically starting and loading on the prescribed signal. The finding was screened in accordance with IMC 0609, Appendix A, and was determined to have very low safety significance (Green) based on answering "No" to all the screening questions under the Mitigating Structure, System and Components, and Functionality section. The inspectors concluded that the corrective actions for the adverse condition of the aging electrolytic capacitors should have been implemented greater than three years ago, so the finding was not reflective of current licensee performance. Therefore, no cross cutting aspect was identified.

Inspection Report# : 2016004 *(pdf)*

Significance: G Sep 30, 2016
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Appropriately Select and Review for Sutability of Application the Control Switch and Circuit Design of the Engineered Safeguards Room Cooler Fans
A self revealed finding of very low safety significance and an associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion III, "Design Control," was identified for the failure to appropriately select and review for suitability of application the control switch and circuit design of the engineered safeguards room cooler fans. Specifically, on July 27, 2016, when the licensee was conducting troubleshooting activities for the tripping of engineered safeguards room cooler fan V-27B, it was revealed that the control switch design was "break before make" and as the hand switch was transitioned from one position to the next, the supply voltage and the motor became "out of phase" and caused an overcurrent trip of the breaker. This resulted in an unplanned entry into a 72 hour limiting condition for operation (LCO) for the right train of the emergency core cooling

system (ECCS). In the apparent cause evaluation (ACE) for this issue, the licensee determined that the contributing cause had not previously addressed this particular failure mode (i.e. the control switch and circuit design) when similar overcurrent events occurred in the past. Prior corrective actions included adding guidance to system operating procedures to pause between hand switch movements and replacing other components within those systems. These actions were not successful in eliminating this failure mode. The licensee documented the issue in their CAP, planned to revise the control circuit and switch design, and added specific procedural steps on how to operate these fans until the design change was implemented.

The finding was more than minor in accordance with IMC 0612, Appendix B, because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Reliability and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, as a result of the overcurrent trip of its breaker, V-27B was declared non functional and unavailable and the equipment in the room it cooled was declared inoperable, which included the 'A' high pressure safety injection (HPSI) pump and the 'A' containment spray (CS) pump. This led to an unplanned entry into a 72 hour LCO for the right train of ECCS. The finding had a cross cutting aspect in the area of Problem Identification and Resolution and was related to the cross cutting component of Evaluation, which required that the licensee thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. As discussed above, in the ACE for this issue the licensee determined that the corrective actions associated with the identified contributing cause following similar overcurrent events that occurred in the past had not addressed or been successful in eliminating this failure mode

Inspection Report# : 2016003 *(pdf)*

Barrier Integrity

Significance: G Dec 31, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Translate Design Analysis Stack-up Configuration into Specifications, Drawings, Procedures, and Instructions
A finding of very low safety significance and an associated Non-Cited Violation (NCV) of 10 CFR, Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors for the licensee's failure to establish measures to assure that the applicable regulatory requirements and the design basis were correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to provide instructions in procedures to construct the spent fuel dry cask loading stack up, in the safety-related auxiliary building, in the configuration that had been analyzed for in the stack up seismic design basis calculation. In addition, the licensee failed to provide instructions in revised procedures to construct the stack up without certain gaps as specified in the stack up seismic design basis document. The licensee documented these issues in their Corrective Action Program (CAP) as Condition Report (CR) -PLP-2016-00646, CR-PLP-2016-01308, CR-PLP-2016-01558, CR-PLP-2016-04497, and CR-PLP-2016-04826; revised the stack up seismic analysis to address the identified issues; and translated the analyzed stack up design configuration into stack up installation procedures prior to performing stack up operations with spent nuclear fuel in the multi purpose canister.

The issue was determined to be more than minor in accordance with Inspection Manuarl Chapter (IMC) 0612, Appendix B, "Issue Screening," because it was associated with the Design Control attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the performance deficiency resulted in a stack up configuration that did not ensure stack up dynamic stability or Auxiliary Building structural integrity to maintain radiological barrier functionality during a design basis seismic event. The finding

screened as having very low safety significance (Green) because it did not result in the loss of operability or functionality of the Auxiliary Building. The finding had a cross cutting aspect of Field Presence in the Human Performance cross cutting area, because licensee senior managers failed to ensure effective supervisory and management oversight of contractor activities related to the seismic analysis and installation of the stack up configuration
Inspection Report# : 2016004 *(pdf)*

Significance: G Jul 15, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Document 50.59 Evaluation for Removal of Eight Hour Operator Rounds from the FSAR (Section 1R17.1.b)
The inspectors identified a Severity Level IV, Non-Cited Violation of Title 10 of the Code of Federal Regulations (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 records of a change in the facility which included a written evaluation that provided the bases for the determination that the change did not require a license amendment. Specifically, the licensee failed to have a written evaluation that provided the bases for why removal of the 8-hour operator rounds credited to detect a Spent Fuel Pool (SFP) dilution event from the Final Safety Analysis Report did not require a license amendment. The licensee entered this issue into their Corrective Action Program (CAP) as CR-PLP-2016-03055 and issued a standing order to log SFP level every eight hours as an immediate corrective action. The licensee's planned corrective actions include preparation of a 10 CFR 50.59 evaluation for the change.
The inspectors determined that the failure to perform a 10 CFR 50.59 evaluation for the change to the Final Safety Analysis Report which removed the eight hour operator rounds credited to detect a SFP dilution event was contrary to 10 CFR 50.59(d)(1), and was a performance deficiency. The inspectors determined the performance deficiency was more than minor, and a finding, because it was associated with the barrier integrity cornerstone attribute of Configuration Control and adversely affected the associated Cornerstone Objective of ensuring that physical design barriers protect the public from radionuclide releases caused by accidents or events. Specifically, the removal of the 8 hour operator rounds is associated with the boron concentration reactivity control in the SFP and could adversely affect the fuel cladding's function to protect the public from radionuclide releases. In addition, the associated 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 inspectors evaluated the finding using IMC 0609 Appendix A, "The Significance Determination Process (SDP) for Findings at Power," dated June 19, 2012, Exhibit 3, for the Barrier Integrity cornerstone and were directed to further evaluate the significance of the finding using IMC 0609 Appendix M, "Significance Determination Process Using Qualitative Criteria," dated April 12, 2012. The inspectors performed the qualitative evaluation described in IMC 0609, Appendix M, and determined the significance of the finding to be of very low safety significance (Green) by considering the availability of other measures the licensee had in place to detect a SFP dilution event. In accordance with Section 6.1.d of the NRC Enforcement Policy this violation is categorized as Severity Level IV because the resulting changes were evaluated by the SDP as having very low safety significance (i.e., Green finding). The inspectors determined the associated finding had a cross-cutting aspect in the area of Human Performance because the licensee did not ensure their staff were adequately trained in the implementation of the 10 CFR 50.59 rule. Specifically, the licensee staff did not realize that a change which fundamentally alters the existing means of performing or controlling design functions (removal of the 8-hour operator rounds for detecting a SFP dilution event in lieu of an automatic alarm) is adverse and requires an evaluation. (Section 1R17.1.b) [H.9]

Inspection Report# : 2016009 *(pdf)*

Emergency Preparedness
Occupational Radiation Safety

Public Radiation Safety

Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : September 05, 2017

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