UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
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LISLE, ILLINOIS 60532-4352

May 14, 2018

EA–17–115

Mr. Charles Arnone
Vice President, Operations
Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043–9530

SUBJECT: PALISADES NUCLEAR PLANT—NRC INTEGRATED INSPECTION REPORT AND EXERCISE OF ENFORCEMENT DISCRETION 05000255/2018001

Dear Mr. Arnone:

On March 31, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Palisades Nuclear Plant. On April 12, 2018, the NRC inspectors discussed the results of this inspection with yourself and other members of your staff. The results of this inspection are documented in the enclosed report.

A violation of the current site-specific licensing basis for tornado-generated missile protection was identified. Because this violation was identified during the discretion period covered by Enforcement Guidance Memorandum 15–002, "Enforcement Discretion for Tornado Missile Protection Noncompliance," Revision 1, and because interim compensatory measures were implemented with plans for final corrective actions, the NRC is exercising enforcement discretion by not issuing an enforcement action for the violation and allowing continued reactor operation.

Based on the results of this inspection, the NRC has identified an issue that was evaluated under the risk significance determination process as having very low safety significance (Green). The NRC has also determined that a violation is associated with this issue. Because this issue was entered into the corrective action program, this violation is being treated as a Non-Cited Violation (NCV), consistent with Section 2.3.2.a of the Enforcement Policy. This NCV is described in the subject inspection report. Further, a licensee-identified violation which was determined to be of very low safety significance is documented in this report. The NRC is treating this violation as a NCV consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555–0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement; and the NRC Resident Inspector at the Palisades Nuclear Plant.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555–0001; with copies to the Regional Administrator, Region III; and the NRC resident inspector at the Palisades Nuclear Plant.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with 10 CFR 2.390, “Public Inspections, Exemptions, Requests for Withholding.”

Sincerely,

/RA/

Eric R. Duncan, Chief
Branch 3
Division of Reactor Projects

Docket Nos. 50–255; 72–007
License No. DPR–20

Enclosure:
Inspection Report 05000255/2018001

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Letter to Charles Arnone from Eric Duncan dated May 14, 2018

SUBJECT: PALISADES NUCLEAR PLANT—NRC INTEGRATED INSPECTION REPORT AND EXERCISE OF ENFORCEMENT DISCRETION 05000255/2018001

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

REGION III

Docket Number:	05000255
License Number:	DPR–20
Report Number:	05000255/2018001
Enterprise Identifier:	I–2018–001–0039
Licensee:	Entergy Nuclear Operations, Inc.
Facility:	Palisades Nuclear Plant
Location:	Covert, MI
Dates:	January 1 through March 31, 2018
Inspectors:	A. Nguyen, Senior Resident Inspector J. Boettcher, Resident Inspector R. Baker, Senior Operations Engineer B. Bartlett, Project Engineer E. Fernandez, Reactor Inspector V. Myers, Senior Health Physicist J. Neurauter, Senior Reactor Engineer J. Park, Reactor Inspector D. Sargis, Reactor Engineer J. Seymour, Operations Engineer
Approved by:	E. Duncan, Chief Branch 3 Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated quarterly inspection at the Palisades Nuclear Plant in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to https://www.nrc.gov/reactors/operating/oversight.html for more information. The NRC and self-revealed findings, violations, and additional items are summarized in the table below. A Licensee-Identified Non-Cited Violation (NCV) is documented in report section 71111.15.

List of Findings and Violations

Failure to Maintain an Appropriate Documented Work Instruction for Reassembly of Primary Makeup Tank Makeup Control Valve CV–2008			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000255/2018001–01 Opened/Closed	[P.2] – Evaluation	71152
A self-revealed Green finding and an associated NCV of Technical Specification 5.4.1, "Procedures," was identified for the licensee's failure to have an adequate maintenance work instruction for the reassembly of Primary Makeup Tank Makeup Control Valve CV–2008. Specifically, because a previous CV–2008 maintenance activity failed to properly set the height of the CV–2008 jam nuts, the valve guide key fell out of place and in December 2017, CV–2008 was unable to be manually stroked during surveillance testing.			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
URI	05000255/2017003–02	Cause of 42–2/Reactor Protection System Breaker Failure to Open	71111.12	Closed
EA	EA–17–115	Licensee Implementation of Enforcement Guidance Memorandum 15–002, "Enforcement Discretion for Tornado-Generated Missile Protection Noncompliance"	71111.15	Discussed
LER	LER 05000255/2017001–01	Inadequate Protection from Tornado Missiles Identified Due to Non-Conforming Design Conditions	71111.15 71153	Closed

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PLANT STATUS

The unit began the inspection period at rated thermal power and remained at or near rated thermal power until March 26, 2018. On March 26, 2018, the unit was down powered and taken offline for a maintenance outage to replace a leaking seal on control rod drive (CRD) mechanism 28. On March 29, 2018, the unit was taken critical and the plant was synchronized to the grid. The unit achieved near rated thermal power on March 31, 2018.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed plant status activities described in IMC 2515 Appendix D, "Plant Status," and conducted routine reviews using IP 71152, "Problem Identification and Resolution." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.04—Equipment Alignment

Partial Walkdown (4 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

(1) Left train Control Room Heating, Ventilation, and Air Conditioning (CRHVAC);
(2) Left train Auxiliary Feedwater (AFW);
(3) 1–2 Diesel Generator (DG) during 1–1 DG Maintenance Window; and
(4) Instrument Air System.

Complete Walkdown (1 Sample)

The inspectors evaluated system configurations during a complete walkdown of the Low Pressure Safety Injection System during the week of March 5, 2018.

71111.05AQ—Fire Protection Annual/Quarterly

Quarterly Inspection (5 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

(1) Fire Area 2: Cable Spreading Room, Elevation 607';
(2) Fire Areas 4, 34, 35 & 36: 1–C Switchgear Room and Manhole 1, 2, & 3, Elevation 590';
(3) Fire Areas 5 & 7: DG 1–1 and Fuel Oil Day Tank Rooms, Elevation 590';

(4) Fire Areas 6 & 8: DG 1–2 and Fuel Oil Day Tank Rooms, Elevation 590'; and
(5) Fire Area 16: Component Cooling Pump Room, Elevations 590', 607', and 625'.

71111.06—Flood Protection Measures

Internal Flooding (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the Component Cooling Water Room.

71111.11—Licensed Operator Requalification Program and Licensed Operator Performance

Operator Requalification (1 Sample)

The inspectors observed and evaluated an evaluated simulator scenario on February 5, 2018.

Operator Performance (2 Samples)

The inspectors observed and evaluated performance of control room operators during the following activities:

(1) Reactor Shutdown and Cooldown for CRD–28 Seal Repairs on March 26, 2018; and
(2) Critical Approach and Power Ascension after CRD–28 Seal Repairs on March 29, 2018.

Operator Exams (1 Sample)

The inspectors reviewed and evaluated requalification examination results on March 28, 2018.

Operator Requalification Program (1 Sample)

The inspectors evaluated the operator requalification program from March 12, 2018 to March 23, 2018.

71111.12—Maintenance Effectiveness

Routine Maintenance Effectiveness (1 Sample)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the following equipment and/or safety significant functions:

(1) Control Room Chillers Multiple Failures to Start in Automatic and Resultant (a)(1) Action Plan.

Quality Control (1 Sample)

The inspectors evaluated maintenance and quality control activities associated with the following equipment performance issue:

(1) 42–2/Reactor Protection System Breaker Failure to Open on May 17, 2017.

71111.13—Maintenance Risk Assessments and Emergent Work Control (5 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

(1) DG Emergent Work Coincident with Gale Force Wind Warning, during the Week of January 2, 2018;
(2) 1–1 DG Maintenance Window, during the Week of February 5, 2018;
(3) P–8B AFW Pump Maintenance Window on February 13, 2018;
(4) Emergent Troubleshooting on 1–1 DG Secondary Fuel Oil System on March 8, 2018;
(5) Control Rod Drive (CRD) 28 Maintenance Shutdown Risk and Emergent Issues.

71111.15—Operability Determinations and Functionality Assessments (5 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

(1) Operability of CV–1358, Nitrogen Supply Containment Isolation Valve;
(2) 1–1 DG Fuel Oil Secondary Differential Pressure Increase During Surveillance Testing;
(3) Operability of CV–2008, Primary Makeup Storage Tank (T–81) Makeup Control Valve;
(4) Tornado Missile Vulnerability on Component Cooling Water System; and
(5) Component Cooling Water Heat Exchanger E–54A Through-Wall Leak.

71111.18—Plant Modifications (1 Sample)

The inspectors evaluated the following permanent modification:

(1) 125 Volt Direct Current (DC) Fuse Installation to Address Fuse Coordination Issue.

71111.19—Post Maintenance Testing (8 Samples)

The inspectors evaluated the following post maintenance tests:

(1) SOP–22 Testing after Fuel Oil Filter Change on 1–1 DG;
(2) MO–7A–2 and VT–2 Testing of 1–2 DG after Jacket Water Heat Exchanger Inspection and CV–0885 Diagnostic Testing;
(3) SOP–21 Testing after P–41, Diesel Driven Fire Pump Fuel System Inspection;
(4) SOP–22 and MO–7A–1 Testing after 1–1 DG Maintenance Window;
(5) QO–21 Testing after P–8B, AFW Pump Maintenance Window;
(6) RO–22 Testing after CRD–28 Seal Housing Replacement;
(7) QI–3 Testing after RPS–BW7 Pushbutton and Matrix Relay Trip Select Switch Replacement; and
(8) Removal of Temporary Modification on Shield Cooling System.

71111.20—Refueling and Other Outage Activities (1 Sample)

The inspectors evaluated a maintenance outage for CRD–28 seal repair activities from March 26 through March 29, 2018.

71111.22—Surveillance Testing

The inspectors evaluated the following surveillance tests:

Routine (4 Samples)

(1) QO–14A, P–7A Service Water Pump on February 22, 2018;
(2) QO–16A, P–54A Containment Spray Pump on March 1, 2018;
(3) QI–9, Reactor Protection System, on March 6 and 7, 2018; and
(4) PO–1, Pre-Startup Checks on March 27, 2018.

In-service (1 Sample)

(1) QO–21C, P–8C AFW Pump on January 23, 2018.

RADIATION SAFETY

71124.01—Radiological Hazard Assessment and Exposure Controls

Contamination and Radioactive Material Control (1 Sample)

The inspectors evaluated contamination and radioactive material controls.

71124.03—In-Plant Airborne Radioactivity Control and Mitigation

Self-Contained Breathing Apparatus for Emergency Use (1 Sample)

The inspectors evaluated the licensee's self-contained breathing apparatus program.

71124.04—Occupational Dose Assessment

Source Term Characterization (1 Sample)

The inspectors evaluated the licensee's source term characterization.

External Dosimetry (1 Sample)

The inspectors evaluated the licensee's external dosimetry program.

Internal Dosimetry (1 Sample)

The inspectors evaluated the licensee's internal dosimetry program.

Special Dosimetric Situations (1 Sample)

The inspectors evaluated the licensee's performance for special dosimetric situations.

OTHER ACTIVITIES – BASELINE

71151—Performance Indicator Verification (3 Samples)

The inspectors verified the licensee performance indicators submittals listed below:

(1) IE01: Unplanned Scrams Per 7000 Critical Hours: First Quarter 2017 – Fourth Quarter 2017 (1 Sample);
(2) IE04: Unplanned Scrams with Complications: First Quarter 2017 – Fourth Quarter 2017 (1 Sample); and
(3) MS08: Mitigating Systems Performance Index - Heat Removal Systems: First Quarter 2017 – Fourth Quarter 2017 (1 Sample).

71152—Problem Identification and Resolution

Annual Follow-Up of Selected Issues (1 Sample)

The inspectors reviewed the licensee's implementation of its corrective action program related to the follow issue:

(1) CV–2008, Primary Makeup Storage Tank (T–81) Makeup Control Valve Failure to Stroke during Quarterly Testing.

71153—Follow-Up of Events and Notices of Enforcement Discretion

Licensee Event Reports (1 Sample)

The inspectors evaluated the following licensee event report which can be accessed at https://lersearch.inl.gov/LERSearchCriteria.aspx:

(1) Licensee Event Report (LER) 05000255/2017001–01, "Inadequate Protection from Tornado Missiles Identified Due to Nonconforming Design Conditions."

INSPECTION RESULTS

71111.12—Maintenance Effectiveness

Unresolved Item (Closed)	Cause of 42–2/Reactor Protection System Breaker Failure to Open 05000255/2017003–02	71111.12

Description:

As discussed in NRC Inspection Report 05000255/2017003, the inspectors were concerned with the failure mechanism for control rod clutch breaker 42–2/RPS, after the breaker failed to open on May 17, 2017. To determine whether a performance deficiency or violation existed, the inspectors reviewed the licensee's equipment failure evaluation and breaker failure analysis.

The licensee determined that a design defect caused components within the 42–2/RPS undervoltage release mechanism to become misaligned, resulting in an insufficient force to fully depress the breaker's trip plunger to open the breaker. The licensee also determined that the 42–2/RPS breaker that was replaced following the May 17, 2017 failure as well as the

installed 42–1/RPS breaker had both been re-designed by the vendor and were no longer susceptible to the identified design defect.

Corrective Action Reference: The licensee entered this issue into their CAP as CR–PLP–2017–02587, 42–2/RPS Breaker Fail to Open.

Closure Basis: The inspectors reviewed the failure analysis report for the failed 42–2/RPS breaker, the updated equipment failure evaluation for the failed 42–2/RPS breaker, and reviewed operating experience associated with both the 42–1/RPS and 42–2/RPS control rod clutch breakers. The inspectors determined that no finding or violation existed.

This URI is closed.

71111.15—Operability Determinations and Functionality Assessments

Enforcement Discretion	Enforcement Action EA–17–115: Licensee Implementation of Enforcement Guidance Memorandum 15–002, "Enforcement Discretion for Tornado-Generated Missile Protection Noncompliance"	71111.15

Description:

On June 10, 2015, the NRC issued Regulatory Issue Summary (RIS) 2015–06, "Tornado Missile Protection" (ML15020A419), focusing on the requirements regarding tornado-generated missile protection and required compliance with the facility-specific licensing basis. The RIS also provided examples of noncompliances that had been identified through different mechanisms and referenced Enforcement Guidance Memorandum (EGM) 15–002, "Enforcement Discretion For Tornado Generated Missile Protection Non-Compliance," which was also issued on June 10, 2015 (ML15111A269) and revised on February 7, 2017 (ML16355A286). The EGM applies specifically to a structure, system, or component (SSC) that is determined to be inoperable for tornado-generated missile protection. The EGM stated that a bounding risk analysis performed for this issue concluded that tornado missile scenarios do not represent an immediate safety concern because their risk is within the LIC–504, "Integrated Risk-Informed Decision-Making Process for Emergent Issues," risk acceptance guidelines. In the case of Palisades, the EGM provided for enforcement discretion of up to 3 years from the original date of issuance of the EGM. On December 7, 2017, and as supplemented on January 18, 2018, Palisades submitted a request to the NRC to extend the enforcement discretion from June 10, 2018 to June 10, 2020 (ML17341A415 and ML18018A328, respectively). By letter dated February 16, 2018, the NRC granted the request to extend enforcement discretion until June 10, 2020 (ML18046A675).

The EGM permitted NRC staff to exercise this enforcement discretion only when a licensee implements, prior to the expiration of the time mandated by the LCO, initial compensatory measures that provide additional protection such that the likelihood of tornado missile effects were lessened. In addition, licensees were expected to follow these initial compensatory measures with more comprehensive compensatory measures within about 60 days of issue discovery. In accordance with the EGM, the comprehensive compensatory measures are to remain in place until permanent repairs are completed, or until the NRC dispositions the

non-compliance in accordance with a method acceptable to the NRC such that discretion is no longer needed.

Palisades was licensed prior to issuance of Appendix A to 10 CFR Part 50, "General Design Criteria for Nuclear Power Plants (GDC)." Specifically, GDC 2, "Design Bases for Protection Against Natural Phenomena," and GDC 4, "Environmental and Dynamic Effects Design Basis," discuss how SSCs important to safety shall be designed to protect against natural phenomena, such as tornadoes and shall be adequately protected against the dynamic effects of tornadoes, including protection against missiles. Palisades' site-specific licensing bases compliance with GDC 2 and GDC 4 are described in the Updated Final Safety Analysis Report (UFSAR) Sections 5.1.2.2 and 5.1.2.4. Palisades' protection of SSCs against tornado-generated missiles is also discussed in UFSAR Section 5.5, "Missile Protection."

On January 31, 2018, the licensee initiated condition report (CR) CR–PLP–2018–00556, which identified a nonconforming condition in the Palisades licensing basis. Specifically, the surge line from the component cooling water (CCW) surge tank to the CCW suction line was identified to be potentially vulnerable to a tornado missile through a doorway. The licensee previously identified a CCW system-related vulnerability on March 29, 2017. The March 29, 2017 CCW vulnerability and five additional vulnerabilities of other SSCs, which all received enforcement discretion, are documented in NRC Inspection Report 05000255/2017002 (ML17220A349). The licensee assessed this new vulnerability and concluded that previously established compensatory measures for the CCW system were adequate and no additional comprehensive compensatory actions were required. Therefore, the licensee declared the SSC "operable, but nonconforming" because no additional compensatory measures designed to reduce the likelihood of tornado-generated missile effects were required and the previously implemented compensatory measures were still in place.

Corrective Action: The licensee documented the condition of the SSC in the CAP and documented the SSC as "operable but nonconforming."

Corrective Action Reference: CR–PLP–2018–00556

Enforcement:

Violation: Enforcement discretion was applied to the required shutdown actions of the following Technical Specification (TS) Limiting Conditions for Operation (LCOs):

- TS 3.0.3, General Shutdown LCO (cascading or by reference from other LCOs); and
- TS 3.7.7, "Component Cooling Water (CCW) System."

Severity/Significance: The subject of this enforcement discretion associated with tornado missile protection deficiencies was determined to be less than red (i.e., high safety significance) based on a generic and bounding risk evaluation performed by the NRC in support of the resolution of tornado-generated missile non-compliances. The bounding risk evaluation is discussed in EGM 15–002, Revision 1, "Enforcement Discretion for Tornado-Generated Missile Protection Non-Compliance" (ML16355A286).

Basis for Discretion: The NRC exercised enforcement discretion in accordance with Section 2.3.9 of the Enforcement Policy and EGM 15–002 because the licensee initiated initial compensatory measures that provided additional protection such that the likelihood of tornado missile effects were lessened. The licensee implemented more comprehensive compensatory actions to resolve the nonconforming conditions within the required 60 days. These comprehensive measures were to remain in place until permanent repairs were completed, which for Palisades were required to be completed by June 10, 2020, or until the NRC dispositioned the non-compliance in accordance with a method acceptable to the NRC such that discretion was no longer needed.

The disposition of this enforcement discretion closes LER 05000255/2017001–01, "Inadequate Protection from Tornado Missiles Identified Due to Nonconforming Design Conditions."

Licensee Identified Non-Cited Violation	71111.15

A violation of very low safety significance (Green) was identified by the licensee, has been entered into the licensee's corrective action program, and is being treated as a Non-Cited Violation consistent with Section 2.3.2 of the Enforcement Policy.

Enforcement:

Violation: Technical Specification 3.7.6 requires that the combined useable volume of the Condensate Storage Tank (CST) and Primary Makeup Storage Tank (T–81) shall be greater or equal than 100,000 gallons. LCO 3.7.6, Condition A states that if the useable volume is not within this limit then A.1 – "Verify OPERABILITY of backup water supplies" in 4 hours and A.2 – "Restore condensate volume to within limit" in 7 days. Condition B states that if the Required Action and associated Completion Time is not met then B.1 – "Be in MODE 3" in 6 hours and B.2 – "Be in MODE 4 without reliance on steam generators for heat removal" in 30 hours.

Contrary to the above, on December 7, 2017 and March 3, 2016, the licensee failed to enter and comply with the actions required by LCO 3.7.6 Condition A and Condition B when Primary Makeup Tank Makeup Control Valve CV–2008 could not be fully opened, resulting in a combined useable volume of the CST and T–81 of less than 100,000 gallons.

Significance/Severity Level: The inspectors answered 'No' to all the questions in IMC 0609, Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," because even though the CST and T–81 volume were considered inoperable by the TS requirements, there was not a loss of safety function because credited backup water sources were available and operable. Therefore, the finding screened as Green.

Corrective Action References: The licensee entered these issues into their CAP as CR–PLP–2017–5589, CR–PLP–2017–5554, CR–PLP–2017–5551, and CR–PLP–2016–1116.

OTHER ACTIVITIES – BASELINE

71152—Problem Identification and Resolution

Failure to Maintain an Appropriate Documented Work Instruction for Reassembly of Primary Makeup Tank Makeup Control Valve CV–2008			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000255/2018001–01 Opened/Closed	[P.2] – Evaluation	71152

A self-revealed finding of very low safety significance (i.e., Green) and an associated NCV of Technical Specification (TS) 5.4.1, "Procedures," was identified for the licensee's failure to have an appropriate documented maintenance work instruction that specified how to properly reassemble Primary Makeup Tank Makeup Control Valve CV–2008. Specifically, in December 2017 when attempting to manually stroke CV–2008, it was identified that the guide key had fallen out of the valve's keyway, preventing valve movement. It was determined that due to an inadequate maintenance work instruction, previous maintenance on the valve did not properly set the height of the valve jam nuts, creating a pathway for the guide key to fall out of its keyway.

Description:

On December 7, 2017, during a quarterly stroke test, Primary Makeup Tank (T–81) Makeup Control Valve CV–2008 was only able to be manually opened about 25 percent. The licensee subsequently determined that the guide key had fallen out of its keyway. As discussed in Section 71111.15, "Operability Determinations and Functionality Assessments," of this report, the licensee initially failed to assess the impact of this failure on compliance with TS 3.7.6, which required that the useable water volume in the CST and T–81 be maintained greater or equal than 100,000 gallons. Valve CV–2008 is required to be manually operated to align T–81 to the CST and to ensure the minimum useable volume of water required by TSs is available since the volume in both tanks are typically required to meet the TS minimum of 100,000 gallons. After determining that T–81 was unavailable as a useable volume, LCO 3.7.6 was entered since the useable volume in the CST was less than 100,000 gallons.

The licensee performed an equipment failure evaluation and adverse condition analysis for the issue. The evaluation and analysis postulated that jam nuts on the valve were improperly set during valve repairs in 2016, causing the valve guide key to fall out of its keyway. It was also believed that the key had fallen out of its keyway during a previous quarterly valve stroke in September 2017, but that this was not identified until the December 7, 2017 quarterly valve stroke. During subsequent repairs to CV–2008, measurements were taken to ensure the proper spacing of the jam nuts and guide key. In their adverse condition analysis, the licensee also postulated that the valve may have been operated too quickly, resulting in the guide key falling out of its keyway.

On March 3, 2016, CV–2008 could not be manually stroked due to the guide key falling out of its keyway. As a corrective action, a preventative maintenance change request (PMCR) was generated to revise the existing work instructions to check for loose jam nuts during the quarterly valve stroke. However, this action was never implemented. Subsequent to the December 7, 2017 failure, this PMCR was integrated into the quarterly work order for stroking the valve.

Corrective Actions: The licensee immediately verified the valve could still perform all of its automatic safety functions and repaired the broken guide key. As part of those repairs, the jam nuts were properly adjusted and the work instructions for maintenance of the valve, including reassembly, were revised to add instructions for the proper setting of the jam nuts. In addition, the PMCR was integrated into the quarterly work order for stroking the valve. The quarterly valve stroke work instruction was also revised to direct operators to open the valve slowly to address the other potential cause.

Corrective Action References: The licensee entered this issue into their CAP as CR–PLP–2017–5551 and CR–PLP–2018–0469.

Performance Assessment:

Performance Deficiency: The licensee failed to have an appropriate documented maintenance work instruction that specified how to properly reassemble Primary Makeup Tank Makeup Control Valve CV–2008.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Procedures 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. Specifically, it was determined that previous maintenance on the valve did not properly set the height of the jam nuts, creating a pathway for the guide key to fall out of its keyway, which prevented CV–2008 from being able to be manually operated during its quarterly valve stroke. Valve CV–2008 is required to be manually operated to align T–81 to the CST to ensure the combined minimum useable volume required by TSs is available.

Significance: The inspectors assessed the significance of the finding using IMC 0609, Attachment 4, “Initial Characterization of Findings,” dated October 7, 2016, and IMC 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” dated June 19, 2012. The inspectors answered ‘No’ to all the questions in IMC 0609, Appendix A, Exhibit 2, “Mitigating Systems Screening Questions,” because even though the CST and T–81 volume were considered inoperable by the TS requirements, there was not a loss of safety function because credited backup water sources were available and operable. Therefore, the finding screened as having very low safety significance (i.e., Green).

Cross-Cutting Aspect: The inspectors determined that the finding had a cross-cutting aspect of Evaluation under the area of Problem Identification and Resolution, which required that the licensee thoroughly evaluates issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. In this finding, in 2016 the valve failure was considered a “broke/fix” issue, where the valve was repaired and the one proposed corrective action for checking the tightness of the jam nuts was never incorporated in the quarterly valve stroke work instruction. Additional evaluation of the issue or other corrective actions were also not taken at that time [P.2].

Enforcement:

Violation: Technical Specification 5.4, “Procedures”, Section 5.4.1.a requires that written procedures shall be established, implemented, and maintained covering the activities referenced in Regulatory Guide 1.33, Revision 2, Appendix A, dated February 1978. U.S. Nuclear Regulatory Commission Regulatory Guide 1.33, Appendix A, Section 9, addresses Procedures for Performing Maintenance and requires, in part, that maintenance that can affect the performance of safety-related equipment should be performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances.

Contrary to the above, between September 8, 2017 and December 7, 2017, Primary Makeup Storage Tank Makeup Control Valve CV–2008, which was a component subject to the requirements of Regulatory Guide 1.33, Revision 2, Appendix A, Section 9, could not be stroked manually due to an inadequate work order procedure for reassembling the valve. Specifically, the documented instructions were not adequate for properly setting the height of the jam nuts on the valve. This resulted in the valve guide key falling out of the valve keyway, which resulted in the inability to operate the valve.

Disposition: This violation is being treated as a NCV consistent with Section 2.3.2 of the Enforcement Policy.

Observations: CV–2008, Primary Makeup Storage Tank (T–81) Makeup Control Valve Failure to Stroke During Quarterly Testing	71152

On December 7, 2017, it was identified that CV–2008 was not able to be manually stroked for its quarterly valve stroke activity. Additional information on the failure can be found in Section 71152 of this inspection report.

This issue was documented accurately and in a timely manner in the corrective action program and an immediate operability determination was performed which determined that CV–2008 could not be relied upon for manual operation.

The inspectors reviewed the licensee’s equipment failure evaluation and adverse condition analysis to ensure that causes of the equipment failure were identified and appropriate corrective actions were assigned based on the safety significance of the issue. The licensee identified two possible causes of the failure: 1) the jam nuts were set too high during a valve repair in 2016, and/or 2) the valve was operated too quickly by the operators performing the valve stroke, which allowed the guide key to fall out of its keyway. Corrective actions were taken to address each of the possible causes, which included taking measurements and properly adjusting the jam nuts while reassembling the valve during repair and revising the model work order for the quarterly valve stroke to caution operators to not operate the valve too quickly. For more details on the equipment failure, causes of the failure, and corrective actions, a Green NCV is documented in Section 71152.

The inspectors also reviewed the licensee’s extent of condition and extent of cause evaluation, generic implications, and previous occurrences. During review of this documentation, the inspectors questioned the licensee on why this issue occurred on CV–2008 but not on CV–2010, a similar valve. The licensee determined that based on the

lack of failures of CV–2010 to stroke during its quarterly tests, even though it is a similar valve to CV–2008, the adjustment of the jam nuts was not in question and the valve was still considered fully capable of being manually stroked with no potential for the guide key to become displaced.

EXIT MEETINGS AND DEBRIEFS

The inspectors confirmed that proprietary information was controlled to protect it from public disclosure. No proprietary information was documented in this report.

- On April 12, 2018, the inspectors presented the inspection results to Mr. C. Arnone, Site Vice President, and other members of the licensee staff.

- On March 23, 2018, the inspectors presented the radiation protection program inspection results to Mr. C. Arnone, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

71111.04—Equipment Alignment

- 17-PAL-0029; Evaluation/Screening of Boric Acid Leakage; MO-3199
- 17-PAL-0031; Evaluation/Screening of Boric Acid Leakage; MO-3198
- 17-PAL-0047; Evaluation/Screening of Boric Acid Leakage; CV-3029
- 18-PAL-0001; Evaluation/Screening of Boric Acid Leakage; CV-3212
- CR-PLP-2017-01201; Found Boric Acid at T-Handle on MV-WS3200A, P-67B Discharge Pressure PI-0322 Isolation; 05/01/2017
- CR-PLP-2017-01769; Found Dried Boric Acid from Around Valve Stem on CV-3025, SDC Heat Exchangers E-60A/B Outlet; 04/25/0217
- CR-PLP-2017-01770; Found Dried Boric Acid from Around Valve Stem and at Bolted Flanges on CV-3006, SDC Heat Exchangers E-60A/B Bypass; 04/25l2017
- CR-PLP-2017-02963; CV-3223, SDC HX E-60A Inlet, Position Indication Does Not Make Contact in the Closed Direction; 06/16/2017
- CR-PLP-2017-03813; CV-3223, SDC HX E-60A Inlet, Position Indication Does Not Make Contact in the Closed Direction; 08/14/2017
- CR-PLP-2017-03929; Observed that CV-3027, SIRW Tank T-58 Recirc, has a Dry, White Colored Minor Packing Leak with Boric Acid Buildup Around the Valve Stem; 08/23/2017
- CR-PLP-2017-04751; The Instrument Air System Air Supply Line for CV-0602 is Fretting Against Conduit that it is Rubbing Against; 10/20/2017
- CR-PLP-2017-04754; The Instrument Air System Supply Line to CV-2164 is Fretting Against Conduit that it is Rubbing Against; 10/20/2017
- CR-PLP-2017-04755; An Instrument Air System Line Going to BTV-0602 is Missing a Support Clamp; 10/20/2017
- CR-PLP-2017-04837; Air Line Lubricator and Filter for VOP-3224, “Shutdown Cooling HT Exchanger E-60A Outlet” are Installed in Opposite Orientation of that Shown on M-225, Sheet 1; 10/24/2017
- CR-PLP-2017-05785; Observed that CV-3212, Shutdown Cooling Heat Exchanger E-60B Inlet, has a Boric Acid Leak; 12/19/2017
- CR-PLP-2018-00472; MV-FW646 Missing Red Seal, MV-FW852 Missing Valve Label; 01/26/2018

- CR-PLP-2018-00477; Piping Configuration Discrepancy, P&ID M-207, Sheet 2; 01/26/2018
- CR-PLP-2018-00576; ML-3029B, Air Lubricator CV-3029 Actuator has a Level 2 Air Leak Per EN-MA-121 Fluid Leak Prevention and Management Program; 02/01/2018
- CR-PLP-2018-00640; Review of the Diagnostic Test Performed on CV-3025, SDC Heat Exchangers E-60A/B Outlet Identified at a Control Signal of 20 mA, the Valve is Not yet in the Full Open Position; 02/05/2018
- CR-PLP-2018—00915; Discovered a Severity Level 5 Large Air Leak Downstream of MV-CA138 at the Threaded Pipe Union Just Before the Switching Unit on the Inlet of M-2; 02/21/2018
- CR-PLP-2018-00986; Engineering Discovered a Boric Acid Leak on CV-2019, Containment Sump Isolation to East Safeguards Pumps, Packing Gland; 02/26/2018
- CR-PLP-2018-00987; Engineering Discovered a Boric Acid leak on MO-3199, Low Pressure Safety Injection Pump P-67A Suction from PCS; 02/26/2018
- CR-PLP-2018-01284; During the Stoking of CV-3224, “SDC HX E60A Outlet,” the Lubricator was Spraying Oil from the Adjustment Nob; 03/15/2018
- DBD-2.01; Low Pressure Safety Injection System; Revision 12
- EC-51950; Procedurally Controlled Temporary Modification to Supply Service Air from Instrument Air Compressor C-2C with Service Air Header Isolation Valve CV-1212 Closed and/or Bypassed
- EN-DC-319; Boric Acid Corrosion Control Program; Revision 11
- M-203; Piping & Instrument Diagram, Safety Injection Containment Spray and Shutdown Cooling System; Sheet 2; Revision 28
- M-204; Piping & Instrument Diagram, Safety Injection Containment Spray and Shutdown Cooling System; Sheet 1A; Revision 44
- M-204; Piping & Instrument Diagram, Safety Injection Containment Spray; Sheet 1B; Revision 41
- M-204; Piping & Instrument Diagram, Safety Injection Containment Spray and Shutdown Cooling System; Sheet 1; Revision 88
- M-205; Piping & Instrumentation Diagram, Main Steam and Auxiliary Turbine Systems; Sheet 2; Revision 72
- M-207; Piping & Instrumentation Diagram, Auxiliary Feedwater System; Sheet 2; Revision 41
- M-208; Piping & Instrument Diagram, Service Water System; Sheet 1A; Revision 65
- M-212; Piping & Instrument Diagram, Instrument Air Walkdown; Sheet 3; Revision 41
- M-212; Piping & Instrument Diagram, Service & Instrument Air System; Sheet 1; Revision 86
- M-214; Piping & Instrument Diagram, Lube Oil, Fuel Oil & Diesel Generator Systems; Sheet 1; Revision 81
- M-218; Piping & Instrument Diagram; Heating, Ventilation and Air-Conditioning Control Room; Sheet 6; Revision 16
- M-218; Piping & Instrument Diagram; Heating, Ventilation and Air-Conditioning Control Room; Sheet 7; Revision 16
- QO-42 Basis; Inservice Testing of Shutdown Cooling Control Valves; Revision 7
- SOP-12; Feedwater System; Revision 77
- SOP-19; Instrument Air System, Revision 72
- SOP-22; Emergency Diesel Generators; Revision 74
- SOP-24; Ventilation and Air Conditioning System, Revision 75
- SOP-3; Safety Injection and Shutdown Cooling System; Revision 105
- WO 475095; POS-3223A/B, E-60A Inlet, Closed Indication Did Not Work; 08/15/2017
- WO 52776739; Cleaning and Inspection of Boric Acid Locations Outside of Containment
- WO 52794926; Cleaning and Inspection of Boric Acid Locations Outside of Containment
- WO 52809127; Cleaning and Inspection of Boric Acid Locations Outside of Containment

71111.05AQ—Fire Protection Annual/Quarterly

- CR-PLP-2018-00385; Transient Combustibles Left Unattended in Cable Spreading Room; 01/22/2018
- CR-PLP-2018-00738; Door Handle and Latch on Fire Door 71 is Sticking; 2/11/2018
- DBD-7.10; NFPA 805 Fire Protection Program; Revision 1
- EA-FPP-03-001; Analysis of Combustible Loading at Palisades Nuclear Plant; Revision 3
- EN-DC-161; Control of Combustibles; Revision 17
- EN-OP-139; Fire Watch Program; Revision 2
- Fire Tour/Fire Watch Log; Various Dates
- Pre Fire Plan 16; Component Cooling Pump Room Elevation 590', 607', & 625'
- Pre Fire Plan 2; Cable Spreading Room Elevation 607'
- Pre Fire Plans 4, 34, 35, & 36; 1-C Switchgear Room and Manholes 1, 2, & 3 Elevation 590'
- Pre Fire Plans 5 & 7; Diesel Generator 1-1 and Fuel Oil Tank Room Elevation 590'

71111.06—Flood Protection Measures

- MSM-M-16; Permanent Maintenance Procedure: Inspection of Watertight Barriers; Revision 19
- WO 52711812; Annual Inspection of Watertight Barriers

71111.11—Licensed Operator Requalification Program and Licensed Operator Performance

- 2017 Biennial Written Exam 2 SRO and Individual Grade Sheet; 03/09/2017
- 2017 Biennial Written Exam 4 SRO and Individual Grade Sheet; 03/21/2017
- 2017 RO and SRO Biennial Written Examinations; Exam 3; 03/15/2017
- Annual Operating Examination Crew Simulator Evaluation; Crew 3; 03/21/2018
- Annual Operating Examination Individual Simulator Evaluations; Crew 3; 03/21/2018
- CR–PLP–2015–06057; Simulator DRs were Listed Without Priorities Assigned; 12/07/2015
- CR-PLP-2016-03001; Loss of Control of Exam Material: No Exam Compromise Occurred; 06/29/2016
- CR-PLP-2017-00849; Exam Security Barrier Violation by Individual Not on Exam Security Agreement; 03/08/2017
- CR–PLP–2017–03600; An Operations Crew Failed an LOR Cycle 17B Evaluated Scenario; 7/31/2017
- CR-PLP-2017-04854; Loss of Control of Exam Material: No Exam Compromise Occurred; 10/25/2017
- CR–PLP–2017–05297; Discrepancies Identified with Crew Position Rotation Requirements During As-found Simulator Evaluations; 11/16/2017
- CR–PLP–2017–05442; During PI&R Self-Assessment, Discovered 56 Instances Where Initial Operability Review was Found to be Incorrect; 11/29/2017
- CR–PLP–2017–05449; Adverse Trend Identified for Near-Miss Exam Security Issues; 11/30/2017
- CR-PLP-2017-05449; NIOS Identified Cognitive Trend; 11/30/2017
- CR-PLP-2017-05661; Standards Performance Deficiency (SPD) During the Pre-71111.11 Focused Self-Inspection; 12/12/2017
- CR–PLP–2018–00929; LOR Annual Operating Exam Crew Failure; 02/21/2018
- CR–PLP–2018–01061; During LOR Evaluated Scenarios, 2 SROs Failed EP EAL Declarations, Resulting in Failed EP DEP PI Opportunities; 02/28/2018
- CR–PLP–2018–01147; During the LOR Annual Operating Exam, an EP DEP PI Failure

Occurred; 03/08/2018
- CR-PLP-2018-01440; While Transferring 4160V Bus EA-24, 4160 Volt Bus 1G, White Springs Charged Lamp did Not Illuminate; 03/26/2018
- CR-PLP-2018-01442; SPI Indication for Control Rods 27 (RSPT-27) is Indicating 32.9 Inches Withdrawn Following the Reactor Trip; 03/26/2018
- CR-PLP-2018-01443; SPI Indication for Control Rods 6 (RSPT-6) is Indicating 26.4 Inches Withdrawn Following the Reactor Trip; 03/26/2018
- CR-PLP-2018-01444; CRD-13 (Control Rod Drive) Green Rod Bottom Light Did Not Illuminate on the Reactor Trip; 03/26/2018
- CR-PLP-2018-01445; CV-0730 (Condensate Pumps P-2A/B Recirc) Failed to Open; 03/26/2018
- CR-PLP-2018-01462; Pressurizer Spray Temperature and Pressurizer Vapor Temperature Delta T is Greater than 200°F; 03/26/2018
- CR-PLP-2018-01512; Actual Cooldown Rates were Significantly Less than Target Cooldown Rates; 03/27/2018
- CR-PLP-2018-01560; Received Alarm EK-0948, Dropped Rod Alarm, Along with EK-0603C, Channel Deviation level 1.5% and EK-0607C, Dropped Rod, Due to a Spike on NI-7, Power Range Safety Channel; 03/29/2018
- CR-PLP-2018-01563; During Rod Withdrawal to Criticality, the Secondary Rod Position Indication for CRD-21, Control Rod Drive Mechanism, Consistently Lagged Behind the Primary Rod Position Indication; 03/292018
- CR-PLP-2018-01567; After Transitioning from Auxiliary Feedwater to Main Feedwater During Plant Startup, the ‘A’ Steam Generator level Continued to Rise with CV-0701, E-50A Feed Reg Valve, and CV-0735, E-50A Feed Reg Bypass Valve, Indicating Closed; 03/292018
- CR-PLP-2018-01568; During the Transfer from Auxiliary Feedwater to Main Feed Bypass Valves, a Momentary ‘B’ S/G Hi Level Alarm was Received and Cleared Almost Immediately; 03/29/2018
- CR-PLP-2018-01588; Utilize Both Chambers of CV-0575A, #4 Main Steam Stop Valve CV-0575 B/P and Regulate it to Under 60 psi to Benefit Operation, Increase Efficiency and Limit Wear and Tear on Equipment; 03/292018
- EN-RE-327; PWR Startup Critical Predictions and Evaluation Process; Revision 4
- EN-TQ-114; Licensed Operator Requalification Training Program Description; Revision 11
- EN–TQ–202; Simulator Configuration Control; Revision 10
- EN-TQ-210; Conduct of Simulator Training; Revision 12
- EN-TQ-217; Examination Security; Revision 6
- EOP Supplement 1; Pressure and Temperature Limit Curves; Revision 6
- GOP-2; Mode 5 to Mode 3 ≥ 525°F; Revision 39
- GOP-3; Mode 3 ≥ 525°F to Mode 2; Revision 32
- GOP-4; Mode 2 to Mode 1; Revision 24
- GOP-5; Power Escalation in Mode 1; Revision 45
- GOP-8; Power Reduction and Plant Shutdown to Mode 2 or Mode 3 ≥ 525°F; Revision 38
- GOP-9; Mode 3 ≥ 525°F to Mode 4 or Mode 5; Revision 37
- In-Plant JPM PLJPM-LOR-AFW-03; Revision 6; 07/27/2017
- In-Plant JPM PLJPM-LOR-EOP-13; Revision 4; 07/27/2017
- In-Plant JPM PLJPM-LOR-EOP-21; Revision 9; 07/27/2017
- In-Plant JPM PLJPM-LOR-EOP-44; Revision 3; 07/27/2017
- List of Open Simulator Deficiency Reports; 03/19/2018
- List of Simulator Deficiency Reports Closed in the Last 24 Months; 03/19/2018
- List of Simulator Deficiency Reports Opened Since March 2016; 03/19/2018
- List of Simulator Plant Modifications in the Last 24 Months; 03/19/2018

- LO-PLPLO-2016-00074; Pre-71111.11 Inspection Focused Self-Assessment 2017; 12/12/2017
- PL-TRN17-0446; 2017 Biennial Written Exam Remediation Record; 03/17/2017
- PL-TRN18-0382; Remedial Training Plan; 03/21/2018
- PNT 18.0; Palisades Simulator Configuration Management; Revision 5
- PO-2; PCS Heatup/Cooldown Operations, Revision 7
- Procedure No. 4.48; Time Critical Action/Time Sensitive Action Program Standard; Revision 6
- Procedure No. EOP TCA; EOP Time Critical/Time Sensitive Operator Action Basis; Revision 2
- SES-260; Simulator Exam Scenario; Revision 2
- Simulator Cycle 26 Core Test Records; 05/09/2017
- Simulator Exam Scenario SES-245; Revision 0
- Simulator Exam Scenario SES-246; Revision 0
- Simulator Exam Scenario SES-247; Revision 0
- Simulator Exam Scenario SES-248; Revision 0
- Simulator JPM PLJPM-LOR-DG-01; Revision 7; 07/27/2017
- Simulator JPM PLJPM-LOR-ELEC-13; Revision 3; 07/27/2017
- Simulator JPM PLJPM-LOR-EOP-16; Revision 9; 07/27/2017
- Simulator JPM PLJPM-LOR-ESS-03; Revision 4; 01/27/2018
- Simulator JPM PLJPM-LOR-SI-10; Revision 3; 07/27/2017
- Simulator JPM PLJPM-LOR-SI-18; Revision 4; 01/17/2017
- Simulator Steady State Testing Records for 30%, 60%, and 100%; 09/21/2017
- Simulator Transient Testing Records for Manual Reactor Trip (Test Number T-01); 09/11/2017
- Simulator Transient Testing Records for Maximum Size Unisolable Main Steam Line Rupture (Test Number T-09); 09/11/2017
- Simulator Transient Testing Records for Trip of Any Single Reactor Coolant Pump (Test Number T-05); 09/11/2017
- SOP-1B; Primary Coolant System – Cooldown; Revision 21
- SOP-1C; Primary Coolant System – Heatup; Revision 24
- SOP-6; Reactor Control System; Revision 35
- TQF-210-DD03-GRADE; LOR Simulator Crew Performance Evaluation Grading Criteria; Revision 4
- TQF-210-DD04-GRADE; RO/SRO Performance Evaluation Grading Criteria; Revision 1
- TQF-210-DD05-GRADE; STA/SE Performance Evaluation Grading Criteria; Revision 1
- TQ-JA-150-20; Attachment 4 – Category Distribution; 03/22/2018

71111.12—Maintenance Effectiveness

- CR-PLP-1996-00488; 42-2/RPS Failed to Operate Properly; 12/06/2996
- CR-PLP-1998-01677; 42-1/RPS Breaker Did Not Trip; 05/12/1998
- CR-PLP-2004-06816; 42-2/RPS Does Not Seem to Function Correctly; 10/11/2004
- CR-PLP-2009-01237; RPS Breaker 42-2 Failed to Trip; 03/23/2009
- CR-PLP-2009-03955; Evaluate if CR-PLP-2009-1237 Received Adequate Causal Evaluation Through the Work Management Process; 08/18/2009
- CR-PLP-2016-03353; Control Room Low Pressure Alarm Received due to Damper D-12; 07/21/2016
- CR-PLP-2017-00257; Control Room Chiller VC-11 Failure to Start While in Auto; 01/21/2017
- CR-PLP-2017-00634; Control Room Chiller VC-11 Failure to Start While in Auto; 02/22/2017
- CR-PLP-2017-02587; RPS Breaker 42-2 Failed to Open when RPS-PB2, Reactor Trip Pushbutton at C-06 was Pressed; 05/17/2017
- CR-PLP-2017-03429; Reactor Protection System (RPS) has Exceeded Maintenance Rule

Performance Criteria; 07/19/2017
- CR-PLP-2017-04553; Installed Control Rod Clutch Breakers are Not the Same as Breakers that were Replaced; 10/06/2017
- CR-PLP-2017-05188; Control Room Chiller VC-11 Failure to Start While in Auto; 11/09/2017
- CR-PLP-2017-05299; Control Room Chiller VC-11 Failure to Start While in Auto; 11/17/2017
- CR-PLP-2017-05399; Control Room Chiller VC-11 Failure to Start While in Auto is a Maintenance Rule Functional Failure (MRFF); 11/28/2017
- CR-PLP-2017-05933; VC-10 Negative Trend in Temperature; 12/30/2017
- CR-PLP-2018-00121; Maintenance Rule Functional Failure Determination Not Completed for Control Room Chiller VC-10 failure of 11/17/2017
- CR-PLP-2018-00702; Simulator Setup Issue Found During Initial Panel Walkdown; 2/8/2018
- CR-PLP-2018-01483; When Replacing Matrix Relay Trip Select Switch a Broken Wire was Found; 03/26/2018
- DBD-2.05; Reactor Protective System Safety Injection Signal Anticipated Transient Without Scram; Revision 7
- Design Change Evaluation for MCCB; P/N KD2200Z01U18; 10/20/2017
- EC 74426; 42-1/RPS; 42-2/RPS; Internal Component Changes Including Undervoltage Release Mechanism; Revision 0
- EN-DC-205; Maintenance Rule Monitoring; Revision 6
- EN-DC-206; Maintenance Rule (a)(1) Process; Revision 32
- Failure Analysis Report: 8210-1; Revision 0
- IL 29C166D; Installation Instructions for Undervoltage Release Mechanism (Handle Reset) for DK, KDB, KD, HKD, KDC, KW, HKW, KWC Circuit Breakers, Molded Case Switches, and Motor Circuit Protectors; Supercedes IL 29C166C dated 02/2017
- Maintenance Rule (a)(1) Action Plan for Control Room HVAC Condensing Units VC-10 and VC-11
- PLP-RPT-12-00026; EGAD-EP-10 Palisades Maintenance Rule Scoping Document; Revision 2
- System Health Report; Q4-2017; 03/15/2018
- VEN-M1-O; Block Diagram Reactor Protective System, Sheet 114; Revision 13
- WO 188138; 42-2/RPS Failed to Tripped from EC-06 Panel
- WO 24422837;42-2/RPS: Replace Breaker
- WO 486752; EC-06 Perform Additional Testing for Abnormalities in RPS

<u>71111.13—Maintenance Risk Assessments and Emergent Work Control</u>

- Admin 4.02; Control of Equipment; Revision 79
- AOP-29; Primary Coolant Pump Abnormal Conditions; Revision 5
- ARP-5; Primary Coolant Pump Steam Generator and Rod Drives Scheme EK-09 (C-12); Revision 108
- CR-PLP-2017-00764; Work Order to Grease CV-0522B, Not Performed as Scheduled; 2/13/2018
- CR-PLP-2017-05482; During Performance of Annual Sensitive Equipment Verification, Noted the Following Discrepancies, 12/3/2017
- CR-PLP-2018-00476; While Operating the Spent Fuel Pool Crane, Debris; 01/26/2018
- CR-PLP-2018-00551; During Execution Week Surveillance Test RI-1A had to be Switched With RI-1B; 01/31/2018
- CR-PLP-2018-00551; Foreign Material Found Under the Fly Wheel of EDC 1-1; 02/7/2018
- CR-PLP-2018-00626; NRC Identified Incorrect Revision of Attachment 8 of Admin 4.02, Control of Equipment was Used; 02/5/2018

- CR-PLP-2018-00691; While Performing Tagging on the 1-1 Diesel Generator, Operators were Preparing to Remove the Incorrect Plugs on the Heat Exchangers; 02/5/2018
- CR-PLP-2018-00694; During the Recent Station Limiting Condition for Operation Associated with the 1-1 Diesel Generator, There were Several Deficiencies Noted; 02/8/2018
- CR-PLP-2018-00773; P-8B Auxiliary Feed Pump Inboard Bearing Bubbler was Found to be Slightly Un-level and Loose on Pipe Nipple; 2/13/2018
- CR-PLP-2018-00778; While Performing a Post-Maintenance Inspection of ST-0522B, a Delay was Experienced; 02/13/2018
- CR-PLP-2018-00788; P-7A Service Water Pump is Out of Packing Adjustment; 02/13/2018
- CR-PLP-2018-00789; NRC Identified: FI-0736A (Auxiliary Feedwater Flow to Steam Generator 'B' (E-50B)) High Side Isolation Valve Missing a Component Identification Tag; 02/13/2018
- CR-PLP-2018-00791; NRC Identified: 4" Sill Angle at the Doorway to the Room Appears to Have Chipping in the RTV Seal; 02/13/2018
- CR-PLP-2018-00792; NRC Identified: Tubing Run to the LT-920 Level Transmitter Manifold that Appears to be an Excessive Span; 02/13/2018
- CR-PLP-2018-00795; Oil Pressure on P-55B Charging Pump Rose Over 4 Hours; 02/14/2018
- CR-PLP-2018-01523; P-80A, AC Primary Coolant Pump Oil Lift Pump Tripping; 03/27/2018
- CR-PLP-2018-01539; P-84A Failed to Clear Low Backstop Flow Alarm EK-0937 While Investing the Primary Coolant Pump P-51A Lift Pump Issue; 03/28/2018
- CR-PLP-2018-01542; When Starting the DC Oil Lift Pump as Part of the Primary Coolant Pump Start Sequence, the Associated Backstop Oil Low Flow Alarms Did Not Clear and the Pump Start Permissive Lights did Not Light; 03/28/2018
- CR-PLP-2018-01545; Received EK-0913, Primary Coolant Pump Vibration Alert/Mon Trouble, Alarm Immediately After Starting P-50D, "D" Primary Coolant Pump; 03/28/2018
- EN-OP-116; Infrequently Performed Tests or Evolutions; Revision 13
- EN-OP-119; Protected Equipment Postings; Revision 9
- EN-WM-104; Online Risk Assessment, Revision 16
- GOP-14; Shutdown Cooling Operations; Revision 51
- Operators Risk Report, 02/5/2018 – 02/8/2018
- Palisades Daily Plant Status Report; Tuesday, 2/13/2018
- SOP-22; Emergency Diesel Generators; Revision 75
- WO 491692-12; DPI-1476; Reading is Out of Specifications, Investigate; F-89; Check for Air In-Leakage
- WO 491692-15; DPI-1476; Reading is Out of Specifications, Investigate; DPI-1476; Connect Monitoring Device to Continue Troubleshoot
- WO 498116; 52-313, Primary Coolant Pump Bearing Lift Pump P-80A Tripping

<u>71111.15—Operability Determinations and Functionality Assessments</u>

- AOP-10; Loss of Bus 1E; Revision 2
- AOP-36; Loss of Component Cooling Basis; Revision 2
- AOP-36; Loss of Component Cooling; Revision 2
- AOP-37; Loss of Instrument Air; Revision 3
- AOP-38; Acts of Nature Basis; Revision 11
- AOP-38; Acts of Nature; Revision 14
- ARP-7; Auxiliary Systems Scheme EK-11 (C-13); Revision 102
- CR-PLP-2016-01116; CV-2008 PMU Tank T-81 M/U was Not Able to be Manually Stroked Because the Key that Aligns and Locks the ACME Screw into Place had Fallen Out and was Found on the Floor; 03/03/2016

- CR-PLP-2017-01248; Service Water System is Nonconforming to the Current Licensing Basis; 03/29/2017
- CR-PLP-2017-04487; When DPI-1476, K-6A Fuel Oil Differential Pressure Indicator was Valved in to the Inlet Side, Readings Varied; 10/03/2017
- CR-PLP-2017-05551; CV-2008 PMU Tank T-81 M/U was Not Able to be Manually Stroked Because the Key that Aligns and Locks the ACME Screw into Place had Fallen Out of its Keyway; 12/07/2017
- CR-PLP-2017-05554; To Address the Operability of T-81, PMU Storage Tank with Regards to CV-2008, PMU Tank T-81 M/U being Declared Non-Functional; 12/07/2017
- CR-PLP-2017-05558; Differential Pressure Across K-6A Fuel Oil Differential Pressure Indicator; 12/17/2017
- CR-PLP-2017-05589; Documenting that the Condition Discovered and Documented in CR-PLP-2017-5551/5554 was Originally Declared Operable with Respect to Technical Specification 3.7.6 (Condensate Storage and Supply) when it Should have Resulted in an Inoperable Declaration due to Gravity Feed being Unavailable; 12/07/2017
- CR-PLP-2017-05812; The Functional Failure Determination Performed Under CR-PLP-2017-05551 for CV-2008 Unable to Manually Stroke was Determined to be a Maintenance Rule Functional Failure; 12/20/2017
- CR-PLP-2017-05936; PPC Trend for PT0116 Quench Tank Pressure; 12/31/2017
- CR-PLP-2018-00028; Fuel Oil Secondary D/P for F-89BH, Fuel Oil Booster Pump P-29A Discharge Filter was Recorded as 11 psid; 01/02/2018
- CR-PLP-2018-00064; DPI-1476, K-6A Fuel Oil Differential Pressure Indicator was Reading 11#, 01/04/ 2018
- CR-PLP-2018-00074, The Immediate Operability Determination for CR-PLP-2018-00028 Does Not Address the Mission Time; 01/04/ 2018
- CR-PLP-2018-00281; NRC Residents Identified a Potentially Missed Reportable Condition Required by 10 CFR 50.73, Licensee Event Report (LER), Related to the Failure of Control Valve CV-2008; 01/15/2018
- CR-PLP-2018-00469; Determine Why the Preventative Maintenance Change Request 251063 Wasn't Implemented After it was Approved and Routed; 1/26/2018
- CR-PLP-2018-00556; Additional Tornado Missile Vulnerability for the Component Cooling Water System, 01/31/2018
- CR-PLP-2018-00556; Tornado Missile Vulnerability for the Component Cooling Water System; 01/31/2018
- CR-PLP-2018-00569; Quench T-73 Nitrogen Pressure Slowly Rises; 02/01/2018
- CR-PLP-2018-00704; Recurring Condition of High Differential Pressure Across F-89, Emergency Diesel Generator 1-1 Secondary Fuel Oil Filter; 02/08/2018
- CR-PLP-2018-00826; Nuclear Independent Oversight Identified Problem; Required Mission Time Statements are Missing from Two Immediate Operability Determinations; 02/15/2018
- CR-PLP-2018-00827; EN-MA-125 Requires and ODMI; 02/15/2018
- CR-PLP-2018-00829; CR-PLP-201800028 CA#5 was Issued with a CA Type General Action; 02/15/2018
- CR-PLP-2018-01375; NRC Identified Rust Nodule on North End of "A" Component Cooling Water Heat Exchanger End Bell; 03/21/2018
- CR-PLP-2018-05117; Fuel Oil Secondary Filter D/P was Logged Out of Specification; 11/07/2017
- DBD-5.01; Diesel Engineered Auxiliary Systems, Revision 7
- EA-GOTHIC-CST-01; Determination of Initial Condensate Storage Tank (T-2) Indicated Level to Ensure 100,000 Gallons of Available Inventory; Revision 2
- EC 75187; Assessment of the Manual Actuator for CV-2008 (PMU Tank T-81 Makeup Valve)

with Respect to the Guide Key Subcomponent and Valve Operation; Revision 0
- EC 75503; Operator was Unable to Fully Stroke CV-2008
- EC-001; CV-1358, Nitrogen Supply to Containment Isolation Valve Operability Inputs, Revision 0
- EC-70797; Tornado Missile Vulnerability Immediate Compensatory Measure Recommendations; Revision 0
- EN-FAP-EP-010; Severe Weather Response; Revision 6
- EN-FAP-EP-012; Severe Weather Recovery; Revision 12
- EN-OP-104; Operability Determination Process; Revision 14
- Night & Standing Order Log; 02/01/2018
- EOP-3.0; Station Blackout Recovery; Revision 18
- M0012-SH-0043; Alco Instruction Manual; Revision 95
- M-209; Piping & Instrument Diagram Component Cooling System, Sheet 3; Revision 60
- M-214; Piping & Instrument Diagram, Lube Oil, Fuel Oil & Diesel Generator Systems, Sheet 1; Revision 81
- M-220; Piping & Instrument Diagram Make-Up Domestic Water & Chemical Injection Systems; Sheet 1; Revision 103
- MO-7A-1 and MO-7A-2 Basis; Emergency Diesel Generators 1-1 and 1-2; Revision 12
- NDE Report BOP-UT-18-006; UT Erosion/Corrosion Examination: CCW Heat Exchanger E-54A North End Bell; 03/26/2018
- Operability Evaluation CR-PLP-2018-01375; Operability Evaluation for Component Cooling Water Heat Exchanger E-54A through Wall Leak; 03/27/2018
- Operations Log, Component (Train): T-81, Primary System Makeup Storage Tank; 12/07/2017
- Operations Log, Component (Train): T-81, Primary System Makeup Storage Tank; 03/09/2016
- PLP-RPT-18-00004; ASME Code Case N-705 Evaluation of Leaking E-54A CCW Heat Exchanger; Revision 0
- RO-32; Technical Specification Surveillance & Procedure Basis Document for RO-32 Containment Building Penetrations Local Leak Rate Test, Revision 15
- RO-32-36; Technical Specification Surveillance Procedure, LLRT-Local Leak Rate Test Procedure for Penetration MZ-26; Revision 27
- SHO-1; Operator's Shift Items Modes 1, 2, 3, and 4; Revision 38
- SOP-12; Feedwater System; Revision 77
- Wm. W. Nugent & Company Document, 7086740379
- WO 439871; CV-2008; Replace the Broken Key Guide in the Handwheel Housing

71111.18—Plant Modifications

- CR-PLP-2013-04817; Operating Experience Review of ICES-305419-20130810, "Un-Fused Remote DC Ammeter Circuits Could Result in Secondary Fires Due to Multiple Fire Induced Faults"; 11/07/2013
- EC 74581; Install Fuses for Station Battery Ameters EAI-45, EAI-54, #AI-67 and EAI-68 in Station Battery Rooms 225A and 225; Revision 0
- EC 74582; Install Fuses for Station Battery Ammeters EAI-45 in Station Battery Room 225A; Revision 0
- EC 74583; Install Fuses for Station Battery Ammeter EAI-54 in Station Battery Room 225; Revision 0
- EC 74584; Install Fuses for Station Battery Ammeter EAI-67 in Station Battery Room 225A; Revision 0

- EC 74585; Install Fuses for Station Battery Ammetere EAI-68 in Station Battery Room 225; Revision 0

71111.19—Post Maintenance Testing

- CR-PLP-2017-00837; AD Matrix that Relay 3 had a Slow Response Time; 03/08/2017
- CR-PLP-2017-03179; Drawings Do Not Match the Physical Configuration in the Field; 06/30/2017
- CR-PLP-2017-03331; Severity Level 2 Oil Leak from P-905A, Diesel Generator 1-1 Pre Lube Oil Pump; 07/13/2017
- CR-PLP-2017-04598; Generator Work Order to Troubleshoot RPS Matrix Relay Test Circuit; 10/11/2017
- CR-PLP-2017-05383: Control Rod Seal Leakoff Temperature Rise Noted; 11/28/2017
- CR-PLP-2018-00384; While Bench Testing New G1-1/VSL Found the New Switch Sticking; 01/22/2018
- CR-PLP-2018-00400; Feedwater Nuclear Plant Operator Found Alarm Tile 21 Illuminated Solid on the EG-20A; 01/23/2018
- CR-PLP-2018-00410; Electrical Maintenance was Unable to Perform Scheduled Bench Testing of EWT-20, LX-V Transducer Associated with EDG 1-1; 01/23/2018
- CR-PLP-2018-00434; Alarm Panel Tile 21 on EG-20A was Illuminated; 01/24/2018
- CR-PLP-2018-00528; Severity level 2 Leak from MV-DE645, T-25A LVL LG-1416 Upper Glass Lower Isolation; 01/30;2018
- CR-PLP-2018-00615; Gasket on the Transition Piece from the Top of the Turbine Charger to the Exhaust Elbow was Found to be Degraded; 02/05/2018
- CR-PLP-2018-00615; Gasket on the Transition Piece from the Top of the Turbo Charger to the Exhaust Elbow; 02/05/2018
- CR-PLP-2018-00630; Nuclear Independent Oversight Identified a Small Box Wrench had Become Attached to a Foreign Material Exclusion Cover Magnet; 02/05/2018
- CR-PLP-2018-00649; Hanger on 1-1 Emergency Diesel Generator was Found with Loose and Missing Nuts; 02/06/2018
- CR-PLP-2018-00652; PS-1498 was Discovered Out of as Found Tolerance; 02/07/2018
- CR-PLP-2018-00664; While Performing Repairs on Hanger JF22-H1.15 Found Bolting in Hanger to be ½ Inch; 02/07/2018
- CR-PLP-2018-00693; Two Cylinder Test Valves had the Valve Body Turn Out Instead of the Valve Stem; 02/08/2018
- CR-PLP-2018-00762; MV-FW775, Auxiliary Feedwater Pumps P-8A/B Suction from FPS, Operated with a High Level of Resistance; 02/12/2018
- CR-PLP-2018-00778; MV-FW712, ST-0522B Wye Strainer YS-0521 Drain (MZ-2), Interferes with a Pipe Support; 02/13/2018
- CR-PLP-2018-00800; As-Left Parameters (in the Close Direction) for the Valve was Outside the Acceptable Limit; 02/14/2018
- CR-PLP-2018-00819; K-10 Fire Pump P-41 Diesel Drive, was Leaking Near CK-FP490; 02/10/2018
- CR-PLP-2018-00821; Severity Level 2 Oil leak on P-905A (EDG – Diesel/Generator 1-1 Pre-Lube Oil Pump) NRC Identified; 02/15/2018
- CR-PLP-2018-00832; K-10 Fire Pump P-41 Driver is Leaking; 02/15/2018
- CR-PLP-2018-00919; CRD-28 Temperature Rose from 145° to 166° and Stabilized; 02/22/2018
- CR-PLP-2018-01027; While Performing Refurbishment under WO 494549-01 the Seal Package Failed Pressure Testing; 02/27/2018

- CR-PLP-2018-01128; CRDM Seal Leakage was Measured at 350 ml Per Minute; 03/07/2018
- CR-PLP-2018-01483; When Replacing Matrix Relay Trip Select Switch a Broken Wire was Found; 03/26/2918
- CR-PLP-2018-01513; To Track the Removed CRD 28 Serial #231; 03/27/2018
- CR-PLP-2018-01596; Reactor Protection System Matrix Relay Trip Select Switch was Installed 90 Degrees Off; 03/26/2018
- EPS M-14A; Diesel Generator Every Cycle Maintenance; Revision 6
- FPIP-4; Fire Protection Systems and Fire Protection Equipment; Revision 39
- MO-7A-1; Emergency Diesel Generator 101; Revision 98
- QI-3; Reactor Protection Matrix Logic Tests; Revision 7
- QO-21; Inservice Test Procedure – Auxiliary Feedwater Pumps; Revision 49
- RE-131; Diesel Generator 1-1 Load Reject, Revision 10
- RO-22; Control Rod Drop Times; Revision 21
- SOP-21; Fire Protection System; Revision 35
- WO 477687; Shield Cooling “B” Leak T-62, SV-0927
- WO 486752; EC-06 Perform Additional Testing for Abnormalities in Reactor Protection System
- WO 489473; CRD-28; Rebuild CRD Seal/CR-PLP-2018-01592; While Working on Removed CRD #28, Found Damage to the Internal Cavity of the Drive Shaft/Seal Area
- WO 4899473; CRD-28; Rebuild CRD Seal
- WO 492563; K-10 (P-41); Perform Dye Testing of Fuel Injection System
- WO 52709790; Re-31 Diesel Generator 1-1 Load Reject
- WO 52713048; K-6A; 24 Month (1 Cycle) Post-Maintenance Test of 1-1 Diesel Generator
- WO 52714262; CK-FW419; Inspection PM
- WO 52716174; ST-0522B, Inspect and Repair Post-Maintenance
- WO 52716580; P-8B Steam Supply Valve Calibration
- WO 52717884; POC-0522B; Rebuild/Replace Positioner (Contingency)
- WO 52744190; K-8, Lubricate Governor Linkage
- WO 52744193; P-8B, K-8; “B” Auxiliary Feedwater Pump & turbine Oil Change (OPS320)
- WO 52782969; MO-7A-1X –D/G 1-1 Emergency Diesel Generator Fuel Oil Trans Test

71111.20—Refueling and Other Outage Activities

- Admin 4.02; Control of Equipment; Revision 80
- CR-PLP-2018-01453; CV-1059, Pressurizer Spray Valve from Loop 2A has a Buildup of Boric Acid Reside on the Valve; 3/26/2018
- CR-PLP-2018-01455; During Mode 3 Walkdown, Oil was Noted to have Built Up on the P-50B Primary Coolant Pump Motor; 03/26/2018
- CR-PLP-2018-01459; CRD-1 had a Noisy Signal and Rose About 15 Degrees F when the Reactor was Tripped; 03/26/2018
- CR-PLP-2018-01463; During Engineering Mode 3 Walkdown it was Observed that RIA-2316, Fuel Handling Area Monitor #1, was Beeping Intermittently; 03/26/2018
- CR-PLP-2018-01464; During the Mode 3 Walkdown, Boric Acid was Noted to have Built Up Around the Packing of MV-CVC2298; 03/26/2018
- CR-PLP-2018-01465; During Engineering Mode 3 Walkdown it was Observed that MV-PC1085B, P-50D Middle Seal PT-0142B has a Boric Acid Buildup on the Body-to-Bonnet Flange of the Valve, 03/26/2018
- CR-PLP-2018-01466; During Mode 3 Walkdown, Boric Acid was Noted to have Built Up Around the Packing of MV-CVC2297; 03/26/2018
- CR-PLP-2018-01467; During Engineering Mode 3 Walkdown it was Observed that CV-3039,

SIT T-82A Fill and Drain, has a Boric Acid Leak on the Valve Pipe Plug Near the Body-to-Bonnet Flange; 03/26/2018
- CR-PLP-2018-01468; During the Mode 3 Walkdown, Boric Acid was Noted to Have Built Up Around the Packing of MV-PC1068; 03/26/2018
- CR-PLP-2018-01469; During Mode 3 Engineering Walkdown it was Observed that CV-2117, Pressurizer Auxiliary Spray Valve has a Buildup of Discolored Boric Acid on the Packing Gland of the Valve; 03/26/2018
- CR-PLP-2018-01470; During Engineering Mode 3 Walkdown it was Observed that CV-2003, Letdown Orifice Stop Valve, has a Buildup of Discolored Boric Acid Residue on the Valve Packing Area, 03/26/2018
- CR-PLP-2018-01471; During the Mode 3 Walkdown, the NRC Discovered a Loose Nut Underneath Level Transmitter LT-1012; 03/26/2018
- CR-PLP-2018-01472; During the Engineering Mode 3 Walkdown it was Observed that MV-ES3109A, Loop 1A HPSI Flow WMTR FT-0308 Hi Side Isolation has a Buildup of White, Dry Boric Acid Residue; 03/26/2018
- CR-PLP-2018-01473; During the Mode 3 Walkdown the NRC Heard what Sounded Like a Small Air Leak in the Vicinity of Flow Transmitter FT-0311; 03/26/2018
- CR-PLP-2018-01474; During the Engineering Mode 3 Walkdown it was Discovered that MV-PC1016A, PCS flow DPT-0112D/AD Hi Side Root has a Buildup of Dry Discolored Boric Acid Reside Originating from the Valve Packing Area; 03/26/2018
- CR-PLP-2018-01475; During the Engineering Mode 3 Walkdown it was Discovered that MV-P16B, PCS Flow DPT-0112BD/AD Hi Side Isolation has a Buildup of Dry, Discolored Boric Acid Residue Originating from the Valve Packing Area; 03/26/2018
- CR-PLP-2018-01553; After Establishing Normal Steam Generator Blowdown, it was Noticed that RV-6003, Flash Tank T-29A Safety Relief Valve was Lifting at or Before 105 psi on PI-0771, Flash TK Press; 3/28/2018
- CR-PLP-2018-01559; NRC Identified Foreign Material Exclusion Logging Discrepancies: OPS, RP, and EM Failed to Log Out Materials that were Taken into Containment; 3/28/2018
- CR-PLP-2018-01561; Performed Packing Adjustment on CV-1059, Pressurizer Spray Valve from Loop 2A, Packing Consolidated and Slowed Leak by, but Complete Stoppage was not Achievable at Maximum Allowable Torque Setting; 3/29/2018
- CR-PLP-2018-01562; CV-0605 did Not Fully Seat Until 2.7 psi Output from Controller; 3/29/2018
- CR-PLP-2018-01608; While Valving in MV-MS127, T-4B Level Control to E-6B CV-0554 Inlet, Per SOP-8, Water Hammer was Experienced and the Associated Pipe Slid Off Pedestal; 3/31/2018
- CR-PLP-2018-01618; CV-0730, Condensate Recirculation Valve, Needs to Have its Closed Limit Switch Adjustedck4/1/2018
- EN-OM-123; Fatigue Management Program; Revision 13
- GOP-14; Shutdown Cooling Operations; Revision 51
- SOP-1A; Primary Coolant System; Revision 33
- SOP-3; Safety Injection and Shutdown Cooling System; Revision 105
- WI-PCS-M-06; NSSS Walkdown; Revision 5

<u>71111.22—Surveillance Testing</u>

- CR-PLP-2017-04750; 2 of the 4 Desired Calibration Points were Found to be Out of as Found Tolerances; 10/20/2017
- CR-PLP-2018-01101; PIC0752A as Found “Trip Light” Voltage was Not Within Tolerances; 03/06/2018

- CR-PLP-2018-01117; The Bistable for Low Level SG1 Channel Trip was Out of Tolerance; 03/07/2018
- CR-PLP-2018-01533; Green Closed Light for CV-0594, Main Steam to E-9A did Not Extinguish as Expected in Step 5.4.9 e with the Valve Full Open; 03/28/2018
- CR-PLP-2018-01534; Green Closed Light for CV-0595, Main Steam to E-9A did Not Extinguish as Expected in Step 5.4.9 e with the Valve Full Open; 03/28/2018
- QO-16 Basis; Inservice Test Procedure – Containment Spray Pumps; Revision 16
- PO-1; Operations Pre-Startup Tests; Revision 17
- QI-9; Reactor Protective Trip Units; Revision 21
- QO-14; Inservice Test Procedure – Service Water Pumps; Revision 42
- QO-16; Inservice Test Procedure – Containment Spray Pumps; Revision 40
- RI-5A; Steam Generator Pressure Channel A Calibration; Revision 5
- WO 488706; DPI-0319A Will Not Calibrate Within Final Tolerance, Replace
- WO 496561; PIC-0752A; Adjust/Replace, Trip Light Voltage Not in Tolerance; 03/06/2018
- WO 496623; LA-0751D, Replace Trip Points Out of Tolerance Per QI-9
- WO 5279868-01; QO-16A–P-54A, IST Containment Spray Pump

71124.01—Radiological Hazard Assessment and Exposure Controls

- EN-RP-143; Source Control; Revision 13
- WO 52738305; Perform Annual Rad Source Inventory

71124.03—In-Plant Airborne Radioactivity Control and Mitigation

- CR-PLP-2017-02324; CBI individuals Donned Respiratory Protection Without Current Qualifications; 05/09/2017
- CR-PLP-2018-00830; Face Fit Completed Using Wrong Practical Factor; 02/15/2018
- CR-PLP-2018-00908; Pre-NRC Inspection Focused Self-Assessment; 02/20/2018
- CR-PLP-2018-01393; NRC Inspector Identified the Following Issues during Performance of Ongoing NRC Inspection Procedure 71124.03, In-Plant Airborne Radioactivity Control and Mitigation; 03/22/2018
- EN-RP-502 Attachment 9.2; SCBA Inspection Log; Various Dates
- EN-RP-502; Inspection and Maintenance of Respiratory Protection Equipment; Revision 10
- Posi3 USB Test Results; Various Dates
- Vendor Manual; SCOTT Air-Pak and Air-Pak 75 Models 2.2 / 4.5 / 5.5 Pressure-Demand Self-Contained Breathing Apparatus (SCBA) NFPA-1981 (2013 Edition) Compliant; Revision B, 05/2014
- WO 52789690; Analysis of SCOTT Liberty One Breathing Air Systems

71124.04—Occupational Dose Assessment

- CR-PLP-2017-02374; Technicians Still had their Normal Dosimeter after Being Issued a Multipack; 05/10/201771151—Performance Indicator Verification
- EN-LI-114; Regulatory Performance Indicator Process; Revision 10
- EN-LI-114; Regulatory Performance Indicator Process; Revision 8
- EN-RP-203; Dose Assessment; Revision 10
- EN-RP-204; Special Monitoring Requirements; Revision 11
- EN-RP-204-01; Effective Dose Equivalent (EDEX) Monitoring; Revision 3
- EN-RP-205; Prenatal Monitoring; Revision 3
- EN-RP-206; Dosimeter of Legal Record Quality Assurance; Revision 6
- EN-RP-208; Whole Body Counting/In-Vitro Bioassay; Revision 7

- Internal Dose Assessment Packages; Various Individuals
- NRC Form 5; Occupational Dose Record for a Monitoring Period; Various Individuals

71151—Performance Indicator Verification

- NRC Performance Indicator Data Sheet, Mitigating Systems Performance Indicator, Auxiliary Feedwater (MS08); First Quarter through Fourth Quarter, 2017
- NRC Performance Indicator Technique/Data Sheet for IE01 and IE04; First Quarter through Fourth Quarter, 2017
- Palisades Nuclear Plant Mitigating System Performance Index Basis Document; 07/12/2017
- Sentinel Reports for Multipack TLD Assignment; Various Individuals
- TID 2015-008; Palisades Dosimetry Background Performance; 06/26/2017
- TID 2016-021; Palisades 2015 Effective Alpha Derived Air Concentration (DAC) Determination; 08/30/2016

71152—Problem Identification and Resolution

- CR-PLP-2016-01116; CV-2008 PMU Tank T-81 M/U was Not Able to be Manually Stroked Because the Key that Aligns and Locks the ACME Screw into Place had Fallen Out and was Found on the Floor; 03/03/2016
- CR-PLP-2017-05551; CV-2008 PMU Tank T-81 M/U was Not Able to be Manually Stroked Because the Key that Aligns and Locks the ACME Screw into Place had Fallen Out of its Keyway; 12/07/2017
- CR-PLP-2017-05812; The Functional Failure Determination Performed Under CR-PLP-2017-05551 for CV-2008 Unable to Manually Stroke was Determined to be a Maintenance Rule Functional Failure; 12/20/2017
- CR-PLP-2018-00469; Determine Why the Preventative Maintenance Change Request 251063 Wasn't Implemented After it was Approved and Routed; 1/26/2018
- EC 75187; Assessment of the Manual Actuator for CV-2008 (PMU Tank T-81 Makeup Valve) with Respect to the Guide Key Subcomponent and Valve Operation; Revision 0
- EC 75503; Operator was Unable to Fully Stroke CV-2008
- M-220; Piping & Instrument Diagram Make-Up Domestic Water & Chemical Injection Systems; Sheet 1; Revision 103
- Operations Log; Component (Train): T-81, Primary System Makeup Storage Tank; 12/07/2017
- Operations Log; Component (Train): T-81, Primary System Makeup Storage Tank; 03/09/2016
- WO 439871; CV-2008; Replace the Broken Key Guide in the Handwheel Housing
- WO 490707; CV-2008 Manual Operator Key Broken
- WO 50083974; Manual Stroke of CV-2008 & CV-2010
- WO 52779313; Manual Stroke of CV-2008/2010

71153—Follow-Up of Events and Notices of Enforcement Discretion

- CR-PLP-2017-01248; Service Water System is Nonconforming to the Current Licensing Basis; 03/29/2017
- CR-PLP-2018-00556; Tornado Missile Vulnerability for the Component Cooling Water System; 01/31/2018
- EC-70797; Tornado Missile Vulnerability Immediate Compensatory Measure Recommendations; Revision 0