UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

August 18, 2021

Mr. Eric Carr
President and Chief Nuclear Officer
PSEG Nuclear, LLC
P.O. Box 236
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2 – REISSUED INTEGRATED INSPECTION REPORT 05000272/2021002 AND 05000311/2021002

Dear Mr. Carr:

The U.S. Nuclear Regulatory Commission (NRC) identified an omitted inspection sample and a finding characterization error in NRC Integrated Inspection Report 05000272/2021002 and 05000311/2021002, dated August 11, 2021 (ADAMS Accession No. ML21222A140). In the Other Activities – Baseline section, the semi-annual trend sample was omitted and has been added. In the Inspection Results section, the finding was incorrectly characterized as a Non-Cited Violation in the header and has been changed to reflect its status as a Finding (FIN). Additional minor editorial corrections were also made. As a result, the NRC has reissued the report in its entirety to correct the errors.

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 Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Brice A. Bickett

Digitally signed by Brice A. Bickett
Date: 2021.08.18 11:07:53 -04'00'

Brice A. Bickett, Chief
Reactor Projects Branch 3
Division of Operating Reactor Safety

Docket Nos. 05000272 and 05000311
License Nos. DPR-70 and DPR-75

Enclosure:
Reissued Inspection Report 05000272/2021002 and 05000311/2021002

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SUBJECT: SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2 – REISSUED INTEGRATED INSPECTION REPORT 05000272/2021002 AND 05000311/2021002 DATED AUGUST 18, 2021

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000272 and 05000311
License Numbers:	DPR-70 and DPR-75
Report Numbers:	05000272/2021002 and 05000311/2021002
Enterprise Identifier:	I-2021-002-0004
Licensee:	PSEG Nuclear, LLC
Facility:	Salem Nuclear Generating Station, Unit 1 & 2
Location:	Hancock's Bridge, NJ
Inspection Dates:	April 01, 2021 to June 30, 2021
Inspectors:	J. Hawkins, Senior Resident Inspector M. Hardgrove, Senior Resident Inspector K. Mangan, Senior Reactor Inspector M. McLaughlin, Senior Enforcement Specialist N. Mentzer, Reactor Inspector G. Walbert, Reactor Engineer
Approved By:	Brice A. Bickett, Chief Reactor Projects Branch 3 Division of Operating Reactor Safety

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Salem Nuclear Generating Station, Unit 1 & 2, 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.

List of Findings and Violations

Inadequate Preventive Maintenance for Service Water Bay Ventilation Dampers			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green FIN 05000311,05000272/2021002-01 Open/Closed	None (NPP)	71111.15
A self-revealed Green finding was identified when PSEG did not properly implement the requirements of ER-AA-210-1004, "First Call Preventive Maintenance (PM) Strategy," and ER-AA-210-1005, "Predefine Change Processing," to ensure proper PMs were implemented for service water ventilation (SWV) dampers. Specifically, PSEG did not consider practical station concerns or schedule appropriate PM dates for the SWV dampers given the failure history and the potential for age-related, degraded damper swivels observed in 2015. Consequently, on January 25, 2021, the service water (SW) pump bay ventilation exhaust fan #23 inlet damper (2SWV9) failed to operate resulting in potential service water ventilation inoperability.			

Additional Tracking Items

None.

PLANT STATUS

Unit 1 began the inspection period at rated thermal power. The Unit remained at or near rated thermal power for the remainder of the inspection period.

Unit 2 began the inspection period at rated thermal power. The Unit remained at or near rated thermal power for the remainder of the inspection period.

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 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. Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), resident and regional inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time, the resident inspectors performed periodic site visits each week, increasing the amount of time on site as local COVID-19 conditions permitted. As part of their onsite activities, resident inspectors conducted plant status activities as described in IMC 2515, Appendix D; observed risk significant activities; and completed on site portions of IPs. In addition, resident and regional baseline inspections were evaluated to determine if all or a portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

(1) Unit 1 and 2, walked down circulating water bay on June 1 and evaluated readiness for seasonal extreme weather conditions prior to the onset of summer readiness on June 7

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (4 Samples)

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

(1) Unit 1, 'B' emergency diesel generator lube oil system following a leak from the temperature regulating valve during the week of April 15

(2) Unit 1, 11 service water accumulator following an increase in the frequency of nitrogen additions during the week of April 15
(3) Unit 2, 125V batteries following notification 20875467 for degraded batteries on the 2C train of 125V batteries on April 21
(4) Unit 2, 22 containment spray pump prior to an in-service test of the 21 containment spray pump on June 3

Complete Walkdown Sample (IP Section 03.02) (1 Sample)

(1) Unit 1, Auxiliary Feedwater System on May 4

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

(1) Unit 1, 'B' emergency diesel generator room fire area FP-SA-1555 during the week of April 15
(2) Unit 2, Charging pump and spray additive tank fire area FP-SA-2544 on April 20
(3) Unit 1, Fire in a(4) areas 1-FA-AB-84A, 1-FA-AB-84B, and 1-FA-AB-84C during 1A EDG surveillance test on June 1
(4) Unit 2, 'C' emergency diesel generator room fire area FP-SA-2555 and diesel fuel oil storage fire area FP-SA-2545 on June 16
(5) Unit 2, Auxiliary feedwater pump fire area FP-SA-2543 on June 29

71111.06 - Flood Protection Measures

Inspection Activities - Internal Flooding (IP Section 03.01) (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the:

(1) Unit 2, 78' Mechanical penetration room with service water piping bays #1 and #2 on June 15

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (2 Samples)

(1) The inspectors observed and evaluated licensed operator performance in the Control Room during Unit 1 Turbine Valve Testing on June 4
(2) The inspectors observed and evaluated licensed operator requalification training on June 8

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (3 Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

(1) Unit 2, adverse trend in Struthers-Dunn relay failures as a result of the Unit 2 emergency bearing lube oil pump relay failure during the week of April 21
(2) Unit 2, adverse trend in service water chiller condenser recirculation pump discharge check valves (22SW99 and 23SW99) exceeding surveillance requirements for leak-by on April 21
(3) Unit 1, 11 reactor coolant pump loop flow channel indicator failing low due to an out-of-calibration isolator during the week of May 2

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (5 Samples)

The inspectors evaluated the accuracy and completeness of risk assessments for the following planned and emergent work activities to ensure configuration changes and appropriate work controls were addressed:

(1) Unit 1, elevated risk due main turbine DC lube oil pump relay failure and troubleshooting during the week of April 9
(2) Unit 1, elevated risk due emergency diesel generator carbon dioxide system operability testing during the week of April 9
(3) Unit 1, elevated risk due 12 residual heat removal pump room cooler scheduled maintenance for temperature switch calibration on May 12
(4) Unit 1, review of risk associated with work planning and the control of work associated with switchyard inspections of the 500 KV disconnects and breaker positions during the week on June 2 and June 16
(5) Unit 2, review of risk associated with work planning and the control of work associated with switchyard inspections of the 500 KV disconnects and breaker positions during the week on June 2 and June 16

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (5 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

(1) Unit 1 and 2, review of operability evaluation for emergency diesel generator control area supply fan cooling capacity during the week of April 9
(2) Unit 2, review of operability evaluation for the chill water pump room cooler service water control valve (2SW213) valve after it failed to open during the week of April 21
(3) Unit 2, review of operability evaluation for the 2PR1 and 2PR2 valve limit switches exceeding qualified life during the week of May 10

(4) Unit 1, review of operability evaluations for main steam isolation valve closure times due to potential bypass valve leak-by during the week of June 21
(5) Unit 2, review of operability evaluations for main steam isolation valve closure times due to potential bypass valve leak-by during the week of June 21

71111.17T - Evaluations of Changes, Tests, and Experiments

Sample Selection (IP Section 02.01) (24 Samples)

The inspectors reviewed the following evaluations, screenings, and/or applicability determinations for 10 CFR 50.59 from June 14 through the end of the quarter. NRC inspection continues related to the licensee's evaluation of the Wind Port Facility.

(1) S2018-107 - TCCP 2ST18-008, EPRI Temporary RCS Online Monitoring Skid
(2) S2020-040 - Adoption of Tornado Missile Risk Evaluator (TMRE) Methodology
(3) S2018-092 - DS1.8-0104, NEXUS/ANC9 & BEACON7 Implementation (fuel methodology)
(4) S2020-005 - Implement Tavg (EOC) at Coastdown for Salem 1 and 2
(5) S2019-029 - ARPI System Scaling Calculation (SC-RCS005-01) Tolerance Change
(6) S2015-333 - U1 Side Stream Demineralizer and a Surge Tank Recirculation Line for Safety-Related Chillers
(7) S2016-007 - U2 Nuclear Instrumentation Upgrade
(8) S2017-203 - S1TAC-1TC59- Converter Replacement due to Obsolescence
(9) S2012-122 - Replace NAMCO Switches on Component Cooling System Valves with Proximity Switches
(10) S2013-190 - Non-Safety-Related Auxiliary Feedwater Pump for MSPI Recovery
(11) S2014-009 - Fukushima Flood Protection Features Documentation Update
(12) S2015-489 - Unit 1 Nuclear Instrumentation Upgrade
(13) S2018-063 - Remove Automatic Rod Control
(14) S2018-099 - Revise RCS Leakage Calculation
(15) S2016-237 - SACS Trip Setpoint Time Delay Change
(16) S2020-117 - Revise Component Cooling System Thermal-Hydraulic Analysis
(17) S2021-030 - Procedures S1.OP-AB.CC-0001 and S2.OP-AB.PZR-0001
(18) S2017-191 - PORV Accumulator Capacity Analysis
(19) S2020-085 - Component Cooling Technical Specification Bases Change
(20) S2016-070 - AVR/MPT STV Relay Removal/Replacement with Sel Digital Relays
(21) S2020-050 - Salem Unit 2 Cycle 25 Core Reload Design Fuel Change Package
(22) S2021-049 - Salem Unit 1 Steam Line Break Outside Containment Analysis
(23) S017-0122 - Revise Component Cooling Technical Specification Bases
(24) S2021-003/H2021-004, Rev 0 Artificial Island Wind Port Facility - NRC inspection continues for this sample.

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (1 Sample)

The inspectors evaluated the following temporary or permanent modifications:

(1) Unit 1, Plant computer and safety parameter display system (SPDS) upgrade the weeks of June 14 and June 28

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (6 Samples)

The inspectors evaluated the following post-maintenance test activities to verify system operability and functionality:

(1) Unit 2, 2A1 28 VDC battery charger capacitor and circuit card replacement during the week of April 9
(2) Unit 2, repair of the chill water pump room cooler service water control valve (2SW213) after it failed to open during the week of April 21
(3) Unit 1, repair of the 13 moisture separator reheater drain tank level controller following a trip of the reheater during the week of April 27
(4) Unit 1, 13 charging recirculation pump suction stabilizer (1CVE44) bladder replacement following flow oscillations on May 5
(5) Unit 1, planned repair of the 12 RHR pump room cooler for temperature switch calibration during the week of May 10
(6) Unit 2, 2C 125V battery annual preventative maintenance window for battery cell conditions on May 17

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Surveillance Tests (other) (IP Section 03.01) (4 Samples)

(1) Unit 1, Pressurizer power operated relief valve (PORV) block valves in-service testing on April 27
(2) Unit 2, quarterly pressurizer pressure operated relief valve in-service testing during the week of April 27
(3) Unit 1, 11 Safety Injection Pump in-service test on May 6
(4) Unit 2, quarterly surveillance testing of 2C 125V batteries on May 7

71114.06 - Drill Evaluation

Select Emergency Preparedness Drills and/or Training for Observation (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated the conduct of a routine, full participation emergency planning drill on April 28

Drill/Training Evolution Observation (IP Section 03.02) (1 Sample)

The inspectors evaluated:

(1) The emergency planning aspects of a licensed-operator simulator evaluation was conducted in the plant-reference simulator on May 11. This evaluation included the initiating conditions that resulted in associated emergency classification and notifications in accordance with PSEG's emergency plan.

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

IE01: Unplanned Scrams per 7000 Critical Hours Sample (IP Section 02.01) (2 Samples)

(1) Unit 1, April 1, 2020 – March 31, 2021 on May 13
(2) Unit 2, April 1, 2020 – March 31, 2021 on May 13

IE03: Unplanned Power Changes per 7000 Critical Hours Sample (IP Section 02.02) (2 Samples)

(1) Unit 1, April 1, 2020 – March 31, 2021 on May 13
(2) Unit 2, April 1, 2020 – March 31, 2021 on May 13

IE04: Unplanned Scrams with Complications (USwC) Sample (IP Section 02.03) (2 Samples)

(1) Unit 1, April 1, 2020 – March 31, 2021 on May 18
(2) Unit 2, April 1, 2020 – March 31, 2021 on May 18

71152 - Problem Identification and Resolution

Semiannual Trend Review (IP Section 02.02) (1 Sample)

(1) The inspectors reviewed PSEG's corrective action program for trends that might be indicative of a more significant safety issue on June 30

Annual Follow-up of Selected Issues (IP Section 02.03) (1 Sample)

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

(1) PSEG Oil Analysis Program and Recent Equipment Challenges Associated with Unit 1 and 2 electrohydraulic control (EHC) systems

INSPECTION RESULTS

Inadequate Preventive Maintenance for Service Water Bay Ventilation Dampers			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green FIN 05000311,05000272/2021002-01 Open/Closed	None (NPP)	71111.15
A self-revealed Green finding was identified when PSEG did not properly implement the requirements of ER-AA-210-1004, "First Call Preventive Maintenance (PM) Strategy," and ER-AA-210-1005, "Predefine Change Processing," to ensure proper PMs were implemented for service water ventilation (SWV) dampers. Specifically, PSEG did not consider practical station concerns or schedule appropriate PM dates for the SWV dampers given the failure history and the potential for age-related, degraded damper swivels observed in			

2015. Consequently, on January 25, 2021, the service water (SW) pump bay ventilation exhaust fan #23 inlet damper (2SWV9) failed to operate resulting in potential service water ventilation inoperability.

Description: Each of the SW pump bays is equipped with its own once-through ventilation system. The system is designed to start automatically and limit the maximum room temperature when the SW pumps are operating and is designed to limit the room temperature to 110F when ambient conditions are 95F with all equipment operating. The small exhaust fan (12000 CFM capacity) auto starts when SW pump bay temperature reaches 70F and increasing. The large exhaust fan (32000 CFM capacity) will automatically start when the SW Pump Bay temperature reaches 80F and increasing. When each fan starts, its associated inlet damper will open. The control room will alarm if temperature in a pump room or control area reaches 110F. The components in the SW bays, including the dampers, are exposed to harsh conditions (temperature swings and humidity from brackish water).

During a six year inspection of the 2SWV9 (30276511) on January 25, 2021, operators found the damper failed in the closed position with a broken main bracket, several bent linkages, and all of the linkage pivot pins or swivels seized or corroded. PSEG documented this condition in their corrective action program (CAP) under NOTF 20868781. PSEG designated this NOTF as a condition adverse to regulatory compliance (CARC), repaired the damper (60148696), and documented a technical evaluation (TE 70216465) on March 4, 2021, for a past operability and reportability review which determined that there were no past operability or reportability concerns associated with the failure of this damper.

The inspectors reviewed PSEG's NOTF, repair activities, PM procedures, and evaluation, and questioned whether a potential adverse trend existed due to recent dampers failures. The inspectors also questioned PSEG about previous actions taken to address repetitive failures (70172691 and 70173741) of these dampers due to age-related cyclic fatigue of the damper swivels in 2015. Specifically, the inspectors noted two missed opportunities for PSEG to have corrected the damper PMs to adequately address the swivel failure mechanism:

• On April 13, 2015, PSEG PM Change Request (PCR 70170037) did not update all of the SWV damper PMs and WOs to include replacement of the damper swivels.

• On July 9, 2015, SWV maintenance rule (a)(1) action plan (70173741) did not create earlier initial corrective maintenance work orders for each of the SWV dampers that still required swivel replacement.

The inspectors noted that PSEG's procedure for "First Call PM Strategy," ER-AA-210-1004, prescribes the strategy for scheduling new or revised PM strategies, directing that the PM be performed at the scheduling limit of the PM. However, Section 4.3 states that components with a degraded material condition and a failure history receive earlier (appropriate) initial schedule dates.

In addition to this, PSEG's procedure for revising PM strategies, ER-AA-210-1005, Attachment 3, Section 8, directs the consideration of practical station concerns when revising PM activities, which includes the need to prevent the failure mechanism that the PM aims to manage. The procedure also allows practical station concerns to override equipment reliability issues provided the basis for that decision is documented.

Contrary to the requirements of these procedures, PSEG did not schedule appropriate initial dates for the revised PM activities intended to manage the age-related failures, and PSEG did not document why practical station concerns overrode equipment reliability demands. In addition, when revising the existing PM activities to include swivel replacement, PSEG did not update all of the maintenance plans for SWV dampers.

Corrective Actions: PSEG's corrective actions included repairing the failed dampers, initiating actions to review and revise the maintenance strategies for the SW ventilation dampers, and evaluating the maintenance rule status of the SW ventilation system for additional monitoring.

Corrective Action References: 20868781, 20872467, 70216465 and 70217403

Performance Assessment:

Performance Deficiency: The inspectors determined that PSEG had not properly implemented the requirements of their PM procedures. Specifically, PSEG did not schedule appropriate initial dates for the revised PM activities intended to manage the age-related failures of the SWV dampers and did not adequately update the necessary SWV damper maintenance plans. The inspectors determined this was a performance deficiency within their ability to foresee and correct and should have been prevented.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, PSEG not establishing and performing appropriate PMs on the SWV dampers led to in-service component deterioration and failures of the 2SWV9 resulting in potential SWV inoperability and a maintenance rule conditioning monitoring event.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." Using Exhibit 2, "Mitigating Systems Screening Questions," of IMC 0609, Appendix A, they determined this finding was of very low safety significance (Green) because "Yes" was not answered to any of the screening questions.

Cross-Cutting Aspect: Not Present Performance. No cross cutting aspect was assigned to this finding because the inspectors determined the finding did not reflect present licensee performance.

Enforcement: Inspectors did not identify a violation of regulatory requirements associated with this finding.

Observation: Semi-Annual Trend	71152

Due to recent equipment failures, the inspectors reviewed several issues associated with PSEG's preventive maintenance change and optimization process governed by ER-AA-210-1005. The inspectors determined, that in most cases, issues and potential adverse trends were appropriately identified, evaluated, and resolved by PSEG. However, the inspectors did note the following examples of equipment issues that occurred due to less than adequate adherence to the PM change process.

Salem initiated NOTF 20871682 with actions to review the failure trend of the chiller service water condenser recirculation pump discharge check valves and review the associated PM frequencies. The inspectors noted that the PM on these valves was previously extended in 2018 from every year to every 2 years (70191216-0370), and then again, prior to performing the PM, it was extended to every 4 years in 2019 (80124896-0350). Since this most recent extension of the PM, four of these valves have failed to meet their surveillance requirements, and as of April 7, 2021, a PM change request (PCR 80111049) was completed to change the PM frequency back to every 2 years. The inspectors noted that the PCR completed in 2019, was done as part of the Salem PM optimization program, when PM frequencies were being extended. The inspectors also noted that PSEG's evaluation products (70217042 and 70216919), which identified this gap, did not address the gap with corrective actions or potential extent of condition concerns to other safety-related PMs that may have been inappropriately extended.

Salem initiated NOTF 20874578 with actions to review the PM frequency on SW223 service water valves which was changed in 2019 from every 4 years to every 6 years and experienced multiple valve failures since the PM extension. While PSEG's review determined that no PM change was required and that these valves will be replaced in 2022 (70217185), the inspectors noted that this PM change did not meet the justification requirements per ER-AA-210-1005, which requires use of previous IST data and equipment history.

Salem initiated NOTF 20868000 and 70217581 for a review of the 13 moisture separator reheater trip that occurred on April 26, 2021, due to a failed level controller from age-related degradation. The main steam coil drain tank level controller PMs were changed in 2007 from every 36 months to every 54 months (70067605-0010) without adequate justification.

Salem initiated NOTF 20849512 and PCR 70212644 for service water component cooling heat exchanger outlet air-operated valves (SW127s). The inspectors noted that the vendor had previously recommended the valve actuator PM be performed every 2 years and not every 6 years as PSEG had been performing it, and that this vendor recommendation had not been evaluated or dispositioned.

Salem initiated NOTF 20875704 and PCR 70216965 for service water intake structure damper inspections from every 6 years to every 4.5 years and ensuring the replacement of the damper swivels due to multiple recent damper failures. (See FIN 2021002-01)

The inspectors evaluated these issues IAW IMC 0612, Appendix B, "Issue Screening," and Appendix E, "Examples of Minor Issues," and determined the issues did not constitute performance deficiencies or were of minor significance. Consequently, these issues were not subject to enforcement action in accordance with the NRC's enforcement policy.

Observation: Annual Sample: Review of PSEG Oil Analysis Program and Recent Equipment Issues Associated with Unit 1 and 2 EHC Systems	71152

The inspectors reviewed PSEG's causal evaluations, procedures, and the Unit 1 and 2 EHC fluid sample analysis results from January 2017 to February 2021. The inspectors confirmed that historically, EHC fluid quality, wear particulate count (WPC), has been out of specification on both Units. More specifically, Unit 1 EHC fluid quality since 2017 routinely exceeded the industry ISO code limits of */12/8 (averaging in 2017 and 2018 */15/11; 2019 */12/8; 2020 */17/11). Based on PSEG's procedure ER-AA-230-1001, Oil Analysis Interpretation, which provides guidance for the common equipment types and common lubricating oil and EHC

fluid used at PSEG, Section 4.2.4 Particle Count Analysis Guidelines for EHC and Attachment 12 for the EHC Reservoir, a EHC fluid particulate fault limit of */14/12 required the generation of a NOTF to condition the oil to less than the trend limit, and an emergency limit of greater than four times the baseline value requiring fluid replacement. The inspectors confirmed that these limits were routinely exceeded during this timeframe and although NOTFs were documented for the condition, actions to condition or replace the fluid were ineffective or were not timely and resulted in numerous equipment challenges during the last two operating cycles of both Units.

PSEG's corrective actions included replacing the 12MS29 valve, flushing the EHC system orifices, replacing system filters, performing an extent of condition for all Unit 1 and 2 governor, stop, reheat intercept and reheat stop valves, and implementing an equipment reliability strategy (S-20-0118) for Salem Unit 1 and 2 EHC Fluid Quality and Filters. PSEG also drained the EHC reservoir, cleaned the reservoir, and enhanced the work instructions for flushing the system. Work instructions for managing EHC Fluid quality have also been revised to include guidance regarding filter operation, and feed and bleed fluid replacement [70215972 and 70216103]. The inspectors determined that the untimely CAP actions discussed above were evaluated to be minor violations in accordance with IMC 0612, Appendix B and Appendix E. Consequently, these issues were not subject to enforcement action in accordance with the NRC's enforcement policy.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On July 8, 2021, the inspectors presented the integrated inspection results to Mr. David Sharbaugh, Site Vice President and other members of the licensee staff.
- On June 21, 2021, the inspectors presented the 10 CFR 50.59 Team inspection results to David Sharbaugh, Vice President, Salem and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.17T	Corrective Action Documents Resulting from Inspection	20878651		
		20879053		
		20879108		
		20880503		
	Engineering Changes	80106921	Replace NAMCO Switches on Component Cooling System Valves with Proximity Switches	Rev. 0
		80109704	S1TAC-1TC59- Converter Replacement due to Obsolescence	Rev. 0
		80109909	Fukushima Flood Protection Features Documentation Update	Rev. 0
		80109929	Non-Safety-Related Auxiliary Feedwater Pump for MSPI Recovery	Rev. 1
		80111452	U2 Nuclear Instrumentation Upgrade	Rev. 0
		80112300	Unit 1 Nuclear Instrumentation Upgrade	9/25/2020
		80114075	U1 Side Stream Demineralizer and a Surge Tank Recirculation Line for Safety-Related Chillers	Rev. 2
		80116848	AVR/MPT STV Relay Removal/Replacement With Sel Digital Relays	Rev. 0
		80118531	SACS Trip Setpoint Time Delay Change	Rev. 0
		80119978	Adoption of TMRE Methodology	3/19/2020
		80120385	Revise Component Cooling Technical Specification Bases	Rev. 1
		80120919	PORV Accumulator Capacity Analysis	Rev. 0
		80122162	Remove Automatic Rod Control	Rev. 0
		80122489	Revise RCS Leakage Calculation	Rev. 0
		80122525	TCCP 2ST18-008, EPRI Temporary RCS Online Monitoring Skid	6/07/2018
		80123789	Salem Unit 2 Cycle 25 Core Reload Design Fuel Change Package	Rev. 0
		80124401	ARPI System Scaling Calculation (SC-RCS005-01) Tolerance Change	Rev. 0
		80125006	Salem Unit 1 Cycle 27 Cycle Management Fuel Change Package (Revised Beacon Model)	Rev. 0
		80125095	Implement Tavg (EOC) at Coastdown for Salem 1 and 2	3/02/2020

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		80127450	Component Cooling Technical Specification Bases Change	07/27/2020
		80127556	Revise Component Cooling System Thermal-Hydraulic Analysis	05/05/2021
		80128807	SALEM Unit 1 Steam Line Break Outside Containment Analysis	Rev. 0
		DS1.8-0104	NEXUS/ANC9 & BEACON7 Implementation	6/21/2018
		S2021-030	Procedures S1.OP-AB.CC-0001 and S2.OP-AB.PZR-0001	03/16/2021
	Engineering Evaluations	TE 70191327	Salem Generating Station Component Cooling Water Pump Operability	06/07/2017
		TE 80127354-0030	CC System Crosstie MOV Technical Specification Requirement	Rev. 0
	Miscellaneous	LR-N19-0045	Report of Changes, Tests, and Experiments	04/03/19
	Procedures	1-EOP-APPX-1	Component Cooling Water Restoration	Rev. 26
		2-EOP-APPX-1	Component Cooling Water Restoration	Rev. 27
		S1.OP-SO.CC-0002(Q)	11 & 12 Component Cooling Heat Exchanger Operation	Rev. 33
		S1.OP-SO.CC-0002(Q),	21 & 22 Component Cooling Heat Exchanger Operation	Rev. 28