



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION I
475 ALLENDALE RD, STE 102
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

February 5, 2025

Brad Berryman
Senior Vice President and Chief Nuclear Officer
Susquehanna Nuclear, LLC
769 Salem Blvd., NUCSB3
Berwick, PA 18603

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 –
INTEGRATED INSPECTION REPORT 05000387/2024004 AND
05000388/2024004

Dear Brad Berryman:

On December 31, 2024, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Susquehanna Steam Electric Station, Units 1 and 2. On January 30, 2025, the NRC inspectors discussed the results of this inspection with Edward Casulli, Site Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

No findings or violations of more than minor significance were identified during this inspection.

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* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Sarah H. Elkhiamy, Chief
Projects Branch 4
Division of Operating Reactor Safety

Docket Nos. 05000387 and 05000388
License Nos. NPF-14 and NPF-22

Enclosure:
As stated

cc w/ encl: Distribution via LISTSERV

SUBJECT: SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 –
 INTEGRATED INSPECTION REPORT 05000387/2024004 AND
 05000388/2024004 DATED FEBRUARY 5, 2025

DISTRIBUTION:

SEIkhiamy, DORS
 SHaney, DORS
 BFord, DORS
 JEngland, DORS, SRI
 EBrady, DORS, RI
 DHochmuth, DORS, AA
 AArias, RI, OEDO
 RidsNrrPMSusquehanna Resource
 RidsNrrDorlLp1 Resource

DOCUMENT NAME: [https://usnrc.sharepoint.com/teams/Region-I-Branch-4/Shared Documents/Inspection Reports/Susquehanna/2024/SQ IR 2024-004.docx](https://usnrc.sharepoint.com/teams/Region-I-Branch-4/Shared%20Documents/Inspection%20Reports/Susquehanna/2024/SQ%20IR%202024-004.docx)

ADAMS ACCESSION NUMBER: ML25036A052

<input checked="" type="checkbox"/> SUNSI Review		<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive		<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	
OFFICE	RI/DORS	RI/DORS	RI/DORS		
NAME	JEngland	SHaney	SEIkhiamy		
DATE	2/4/2025	2/4/2025	2/5/2025		

OFFICIAL RECORD COPY

**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Numbers: 05000387 and 05000388

License Numbers: NPF-14 and NPF-22

Report Numbers: 05000387/2024004 and 05000388/2024004

Enterprise Identifier: I-2024-004-0042

Licensee: Susquehanna Nuclear, LLC

Facility: Susquehanna Steam Electric Station, Units 1 and 2

Location: 769 Salem Blvd., Berwick PA

Inspection Dates: October 1, 2024 to December 31, 2024

Inspectors: J. England, Senior Resident Inspector
E. Brady, Resident Inspector
S. Flanagan, Resident Inspector
H. Anagnostopoulos, Senior Health Physicist
B. Dyke, Operations Engineer
S. Haney, Senior Project Engineer
S. McClay, Reactor Inspector
E. Miller, Senior Reactor Inspector
A. Turilin, Reactor Inspector

Approved By: Sarah H. Elkhiamy, Chief
Projects Branch 4
Division of Operating Reactor Safety

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Susquehanna Steam Electric Station, Units 1 and 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

No findings or violations of more than minor significance were identified.

Additional Tracking Items

None.

PLANT STATUS

Unit 1 began the inspection period at rated thermal power. On December 13, 2024, the unit was down powered to 73 percent for a rod sequence exchange and returned to rated thermal power on December 14, 2024. 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. On November 22, 2024, the unit was down powered to 62 percent for a rod sequence exchange and returned to rated thermal power on November 23, 2024. On November 26, 2024, the unit was down powered to 74 percent for a high condensate conductivity and returned to rated thermal power on November 29, 2024. On December 18, 2024, the unit was down powered to 73 percent for a rod pattern adjustment and returned to rated thermal power on December 20, 2024. 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 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors performed activities described in Inspection Manual Chapter 2515, Appendix D, "Plant Status," conducted routine reviews using IP 71152, "Problem Identification and Resolution," observed risk-significant activities, and completed on-site portions of IPs. 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

71111.01 - Adverse Weather Protection

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

- (1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of seasonal cold temperatures on December 20, 2024.

Impending Severe Weather (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated the adequacy of the overall preparations to protect risk-significant systems from impending severe weather for a winter storm on December 20, 2024.

71111.04 - Equipment Alignment

Partial Walkdown (IP Section 03.01) (2 Samples)

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

- (1) Unit 2 containment instrument gas system on November 13, 2024
- (2) Unit 1 reactor building component cooling water on December 10, 2024

71111.05 - Fire Protection

Fire Area Walkdown and Inspection (IP Section 03.01) (4 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 Common 'E' diesel building, fire area 0-41E, on October 2, 2024
- (2) Units 1 and 2 reactor building refueling bay, fire area 0-8A, on October 4, 2024
- (3) Unit 2 turbine building, fire area 2-33B, on October 31, 2024
- (4) Unit Common low level radiation waste building, fire areas 0-65A, 0-65B, 0-65C, 0-65D, and 0-65E, on November 4, 2024

Fire Brigade Drill Performance (IP Section 03.02) (1 Sample)

- (1) The inspectors evaluated the on-site fire brigade training and performance during an announced fire drill on November 23, 2024.

71111.06 - Flood Protection Measures

Flooding (IP Section 03.01) (1 Sample)

- (1) The inspectors evaluated internal flooding mitigation protections in the Unit Common engineered safeguard service water pumphouse on December 12, 2024.

71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

Requalification Examination Results (IP Section 03.03) (1 Sample)

- (1) The inspectors reviewed and evaluated the licensed operator examination failure rates for the requalification annual operating exam completed on November 1, 2024, and the biennial written examinations completed on October 10, 2024.

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

- (1) The inspectors observed and evaluated licensed operator performance in the Unit 2 control room during down power for a rod pattern adjustment on December 19, 2024.

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (1 Sample)

- (1) The inspectors observed a Unit 1 simulator evaluation for licensed operator requalification that included an anticipated transient without scram on October 8, 2024.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (2 Samples)

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

- (1) Units 1 and 2 residual heat removal service water pumps exceeded alert range on November 7, 2024
- (2) Unit 1 scram discharge volume 'A' drain valve (XV147F011) did not reposition during surveillance test on November 13, 2024

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management (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 2 elevated risk during planned maintenance of high-pressure coolant injection steam line drain valve on October 2, 2024
- (2) Unit 2 elevated risk during planned maintenance on 'B' control rod drive pump on October 7, 2024
- (3) Unit Common planned maintenance extension on T20 transformer system during the week of October 15, 2024
- (4) Unit 1 elevated risk during planned maintenance on emergency service water (ESW) system during the week of October 25, 2024
- (5) Unit 2 elevated risk during planned maintenance on division 1 residual heat removal system during the week of November 4, 2024

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (8 Samples)

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

- (1) Unit 1 reactor water cleanup room fire alarm due to a steam leak on October 9, 2024
- (2) Unit 1 fast acting solenoid for main turbine trip valve failed during SO-193-001 on October 28, 2024
- (3) Unit Common 'A' emergency diesel generator (EDG) jacket water sight glass leak on November 14, 2024
- (4) Review of Units 1 and 2 standby liquid control system hoses preventive maintenance (PM) and material condition on November 19, 2024
- (5) Unit Common 'A' EDG failed during surveillance on November 25, 2024
- (6) Unit Common ESW leak during 'E' EDG run on December 10, 2024
- (7) Unit 1 Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21 report due to CR 99 control blade depletion on December 18, 2024
- (8) Unit 1 standby liquid control tank level slowly rising on December 22, 2024

71111.18 - Plant Modifications

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

- (1) The inspectors evaluated a permanent modification for Unit 2 residual heat removal piping shielding TSR 03-2090.

71111.24 - Testing and Maintenance of Equipment Important to Risk

The inspectors evaluated the following testing and maintenance activities to verify system operability and/or functionality:

Post-Maintenance Testing (IP Section 03.01) (4 Samples)

- (1) Unit Common SO-024-014, "Monthly Diesel Generator 'E' Operability Test," following Agastat relay replacement on October 9, 2024
- (2) Unit 2 hydraulic control unit scram valve limit switch replacement on November 7, 2024
- (3) Unit 1 SO-116-A03, "Quarterly Residual Heat Removal Service Water (RHRSW) System Flow Verification Division I," following pump lift on November 15, 2024
- (4) Unit Common 'D' EDG following linear reactor replacements on December 17, 2024

Surveillance Testing (IP Section 03.01) (4 Samples)

- (1) Unit Common OP-032-003, "Exercising Security Diesel Generator Start on Simulated Loss of Offsite Power," on October 29, 2024
- (2) Unit 2 SO-252-006, "High-Pressure Coolant Injection Comprehensive Flow Verification," on December 11, 2024
- (3) Unit Common SO-030-A01, "Monthly Control Room Emergency Outside Air Supply System 'A' Operability Test," on December 26, 2024
- (4) Unit 2 SO-260-001, "Quarterly LOCA Test of Drywell Area Unit Coolers/Fans," on December 30, 2024

Inservice Testing (IST) (IP Section 03.01) (1 Sample)

- (1) Unit 2 SO-151-A05, "Core Spray Comprehensive Flow Verification Division 1," on October 3, 2024

71114.06 - Drill Evaluation

Additional Drill and/or Training Evolution (1 Sample)

- (1) The inspectors evaluated a simulator scenario that included a declaration of an alert due to a manual scram when subsequent actions were not successful in shutting down the reactor at Unit 1 on October 8, 2024.

RADIATION SAFETY

71124.06 - Radioactive Gaseous and Liquid Effluent Treatment

Walkdowns and Observations (IP Section 03.01) (4 Samples)

The inspectors evaluated the following radioactive effluent systems during walkdowns:

- (1) Liquid radwaste effluent radiation monitor
- (2) Liquid radwaste effluent automatic isolation valve HV-06432A1
- (3) Unit 1 reactor building high, medium, and low range radiation monitors
- (4) Auxiliary boiler system and associated release point

Sampling and Analysis (IP Section 03.02) (4 Samples)

The inspectors evaluated the following effluent samples, sampling processes, and compensatory samples:

- (1) Routine monthly grab sampling and analysis of tritium and noble gas from the Unit 2 turbine building vented effluence radiation monitoring system (VERMS)
- (2) Routine weekly particulate and iodine sampling and analysis from the Unit 1 turbine building VERMS
- (3) Routine weekly sampling from the standby gas treatment system VERMS
- (4) Routine process sampling of the 'E' and 'F' liquid radwaste collection tank

Dose Calculations (IP Section 03.03) (2 Samples)

The inspectors evaluated the following dose calculations:

- (1) Calculation for abnormal release from the 'B' auxiliary boiler on April 19, 2023 (tritium, see condition report (CR)-2023-07376)
- (2) Calculation for surveillance SC-069-001(2024001) liquid radwaste release from a condensate storage tank on January 4, 2024

Abnormal Discharges (IP Section 03.04) (2 Samples)

The inspectors evaluated the following abnormal discharges:

- (1) Abnormal release from the 'B' auxiliary boiler on April 19, 2023 (tritium, see CR-2023-07376)
- (2) Abnormal release from the 'B' auxiliary boiler on September 8, 2023 (tritium)

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

MS06: Emergency AC Power Systems (IP Section 02.05) (2 Samples)

- (1) Unit 1 July 1, 2023, through June 30, 2024
- (2) Unit 2 July 1, 2023, through June 30, 2024

MS07: High-Pressure Injection Systems (IP Section 02.06) (2 Samples)

- (1) Unit 1 July 1, 2023, through June 30, 2024
- (2) Unit 2 July 1, 2023, through June 30, 2024

MS08: Heat Removal Systems (IP Section 02.07) (2 Samples)

- (1) Unit 1 July 1, 2023, through June 30, 2024
- (2) Unit 2 July 1, 2023, through June 30, 2024

MS09: Residual Heat Removal Systems (IP Section 02.08) (2 Samples)

- (1) Unit 1 October 1, 2023, through September 30, 2024
- (2) Unit 2 October 1, 2023, through September 30, 2024

MS10: Cooling Water Support Systems (IP Section 02.09) (2 Samples)

- (1) Unit 1 October 1, 2023, through September 30, 2024
- (2) Unit 2 October 1, 2023, through September 30, 2024

OR01: Occupational Exposure Control Effectiveness (IP Section 02.15) (1 Sample)

- (1) September 15, 2023, through September 15, 2024

PR01: Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences (IP Section 02.16) (1 Sample)

- (1) September 15, 2023, through September 15, 2024

71152A - Annual Follow-up of Problem Identification and Resolution

Annual Follow-up of Selected Issues (Section 03.03) (4 Samples)

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

- (1) Unit Common ESW piping degradation
- (2) Unit 1 4 kilovolt (kV) 'D' core spray pump breaker charging motor failure

- (3) Unit Common motor operated valve (MOV) Long Life grease C/N927200 did not meet dedication requirements (CR-2024-02372)
- (4) Failure to adequately control transient combustibles in Units 1 and 2 turbine buildings

71152S - Semiannual Trend Problem Identification and Resolution

Semiannual Trend Review (Section 03.02) (1 Sample)

- (1) The inspectors reviewed the licensee’s corrective action program that might be indicative of a more significant safety issue and identified a potential trend in NRC-identified issues related to PM task detail and completion.

INSPECTION RESULTS

Minor Violation	71152A
<p>Failure to Perform Engineering Change Evaluation</p> <p>Minor Violation: In 2013, AREVA recommended and performed changes to the Cutler Hammer Type DHP-VR 4.16kV breakers that they provided to the licensee. However, the inspectors identified the licensee did not take subsequent actions required by their procedures. Specifically, the licensee failed to perform an engineering change evaluation in accordance with MFP-QA-1220, “Engineering Change Process Handbook,” to ensure that the design changes were acceptable for Susquehanna design requirements.</p> <p>The licensee documented the issue in CR-2024-14984 and initiated actions to perform an evaluation to validate that the changes to the DHP-VR 4.16kV breakers met the design requirements.</p> <p>Screening: The inspectors determined the performance deficiency was minor because it did not adversely affect the Mitigating Systems cornerstone objective. Specifically, the failure to evaluate changes to the design of Cutler Hammer Type DHP-VR 4.16kV circuit breakers had little or no safety impact, as the subsequently completed engineering change evaluation determined that the changes would meet design requirements.</p> <p>Enforcement: 10 CFR Part 50, Appendix B, Criterion III, requires that measures shall be established to assure that design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design unless the applicant designates another responsible organization.</p> <p>Contrary to this requirement, the licensee did not subject vendor design changes to design control measures commensurate with those applied to the original design. Specifically, the licensee failed to perform an engineering change evaluation in accordance with MFP-QA-1220, “Engineering Change Process Handbook,” to ensure that the design changes were acceptable for Susquehanna design requirements.</p> <p>The licensee has taken actions to restore compliance by performing the missed engineering change evaluation. This failure to comply with 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” constitutes a minor violation that is not subject to enforcement action in accordance with the NRC’s Enforcement Policy.</p>	

Observation: Emergency Service Water Piping Degradation	71152A
<p>The inspectors reviewed the licensee's evaluations and corrective actions associated with the ESW piping wall thinning and/or pinhole leaks to standards in their corrective action program procedures and American Society of Mechanical Engineers Code Case N-513 which was approved for use. On a sampling basis, the inspectors verified that the licensee measured piping wall thickness to ensure structural integrity of the pipe and performed additional exams at other susceptible locations as required by the code case. The inspectors verified corrective actions were completed to replace the pipe or continue monitoring. The inspectors did not identify any findings or violations of more than minor significance.</p>	

Observation: Motor Operated Valve Long Life Grease Did Not Meet Acceptance Criteria	71152A
<p>The inspectors reviewed the licensee's evaluation and corrective actions to address MOV Long Life grease that did not meet acceptance criteria during commercial grade dedication as documented in CR-2024-20372. The grease was found at the minimum specification for weld point. The inspectors found the licensee credited their MOV monitoring program to identify impacts. The program included grease sampling and analysis every 2 years on active safety-related MOVs. The inspectors found that the licensee also contacted the grease manufacturer to affirm product composition and revised their dedication process to include the acceptance criteria range. The inspectors further independently reviewed a sample of MOV test results and did not identify performance issues since grease application. The inspectors did not identify any findings or violations of more than minor significance.</p>	

Observation: Corrective Actions for Failure to Adequately Control Transient Combustibles in Units 1 and 2 Turbine Building	71152A
<p>The inspectors reviewed CRs that documented two separate occurrences in which combustible loading permit limits were exceeded. The permits allowed for a specific number of lube oil barrels to be stored in the Units 1 and 2 lube oil conditioner rooms. For each of these instances, the licensee immediately took action to reduce the amount of combustibles located within the rooms in order to comply with their long standing combustible loading permits. The inspectors noted that the licensee has developed an action request to add additional signage in each room to help make work groups aware of the limitations for storing transient combustibles in the area. The inspectors did not identify any findings or violations of more than minor significance.</p>	

Observation: Corrective Actions for 4 Kilovolt Breaker Charging Motor Failure	71152A
<p>The inspectors reviewed CR-2024-00769 which documented a 4kV breaker removed from 1A20405 that failed as found testing. On January 9, 2024, the licensee identified an issue with the charging motor associated with the Unit 1 'D' core spray pump breaker during a system outage window where the charging motor would function, but it was unable to properly charge the closing springs. Further investigation identified that a gear, noted as the ratchet wheel, was not making sufficient contact with its counterpart which resulted in the charging motor being unable to perform its intended function. The licensee replaced the breaker with a spare breaker and then shipped the defective breaker to the vendor (Framatome/AREVA) for overhaul and refurbishment.</p> <p>The inspectors reviewed the CR, actions created in response to the CR, the failure analysis, work orders associated with the failure analysis, and conducted interviews with site Engineering staff. The inspectors noted that the licensee has a replacement strategy in place to replace all the Cutler Hammer Type DHP-VR 4.16kV circuit breakers which will include</p>	

newer style ratchet wheels that will have improved engagement. The inspectors also noted that the licensee enhanced their maintenance procedures to inspect the ratchet wheels periodically. The inspectors did not identify any findings or violations of more than minor significance.

Observation: Semiannual Trend

71152S

The inspectors' semiannual trend review performed in accordance with IP 71152, "Problem Identification and Resolution," noted a trend in NRC-identified issues related to PM task detail and completion. The inspectors identified the following examples which illustrate vulnerabilities.

The inspectors identified that the Unit 1 containment instrument gas system nitrogen cylinders exceeded their hydrostatic testing requirement. The containment instrument gas nitrogen serves as the motive force to operate the automatic depressurization valves system in the event of a station blackout. Hydrostatic testing is required every 10 years. The PM task to replace the cylinders was scheduled for completion in August 2023. CR-2023-12374 was generated when the first set of replacement cylinders did not meet the purchasing specification. The purchasing specification requires that new cylinders must complete a hydrostatic test within 6 months of delivery. The bottles received in 2023 had been tested more than 6 months earlier. This CR was closed without replacement nitrogen cylinders being installed. A second replacement was attempted in March 2024, and the second set of replacement cylinders had dimensional differences from the installed cylinders requiring an engineering change to be implemented for installation. The station identified that the same condition was present in Unit 2. The station reduced the PM frequency to 9 years ensuring that the cylinders would be replaced prior to exceeding hydrostatic testing frequency. The inspectors noted the installed gas cylinders did not exhibit a degrading trend in gas pressure. This issue was captured in CR-2024-16145.

The inspectors identified that there were no PM tasks to verify the condition of staged hoses for the standby liquid control system. These hoses are used to inject a boron solution into the core using the steam driven reactor core isolation cooling pump during a station blackout to add negative reactivity to the core. PM Task S4003-51 requires a quarterly verification that the hose reel is available for deployment and the exposed hose is acceptable. These hoses are approximately 300 feet long and are wound around their holders multiple times. The visible, exposed hose is a fraction of the full hose. The hoses had last been unrolled in the early 2000s. The hoses for both units were subsequently unrolled, pressure tested, and found to be acceptable. The station is determining the appropriate long-term testing or replacement frequency and captured the issue in CR-2024-12099.

The inspectors identified permanent lead shielding blankets were inadequately secured to piping to the radiation waste system piping. The inspectors identified six blankets without adequate banding in November 2024. The suppression pool filter pump, suppression pool filter pump inboard, and outboard isolation valves were below three of the inadequately secured shielding blankets. These components could have been damaged if the shielding became dislodged during a seismic event. These blankets are verified annually per PM task L0000-21. This task requires compliance to be verified against NDAP-QA-0404, "Shielding Installation and Removal." NDAP-QA-0404, Attachment E, "Approved Banding Mechanisms

for Direct Shielding,” contains the required approved banding. This PM task was completed in September 2024. This issue was captured in CR-2024-15905 and the banding was corrected. The PM task was updated to include banding verification.

These examples share the common theme of PM task implementation. The examples cover a wide variety of PM issues including scheduling, implementation, and scope. The inspectors did not identify any findings or violations of more than minor significance.

EXIT MEETINGS AND DEBRIEFS

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

- On October 29, 2024, the inspectors presented the 4kV breaker charging motors inspection results to Chris Johnson, Design Engineering Manager, and other members of the licensee staff.
- On October 31, 2024, the inspectors presented the radioactive gaseous and liquid effluent treatment inspection results to Derek Jones, Plant Manager, and other members of the licensee staff.
- On November 7, 2024, the inspectors presented the MOV Long Life grease inspection results to Katie Brown, Nuclear Regulatory Affairs Supervisor, and other members of the licensee staff.
- On November 12, 2024, the inspectors presented the ESW pinhole leaks inspection results to Katie Brown, Nuclear Regulatory Affairs Supervisor, and other members of the licensee staff.
- On November 21, 2024, the inspectors presented the turbine building transient combustible loading inspection results to Lonnie Crawford, Assistant Operations Manager, and other members of the licensee staff.
- On January 30, 2025, the inspectors presented the integrated inspection results to Edward Casulli, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
Plant Status	Corrective Action Documents Resulting from Inspection	CR-2024-15748 CR-2024-17622		
71111.01	Corrective Action Documents	CR-2054-13002		
	Procedures	NDAP-00-1913	Seasonal Preparedness	Revision 18
	Work Orders	WO 2093364		
71111.04	Calculations	EC-025-0010	Capacity of Instrument Gas Bottles	Revision 2
	Corrective Action Documents Resulting from Inspection	CR-2024-16145 CR-2024-16230 CR-2024-17200		
	Drawings	M-113	Susquehanna S.E.S. Unit 1 P&ID Reactor Building Closed Cooling Water	Revision 53
		M-2126	Sheet 1 Susquehanna S.E.S. Unit 2 P&ID Containment Instrument Gas	Revision 35
		M-2126	Sheet 2 Susquehanna S.E.S. Unit 2 P&ID Containment Instrument Gas	Revision 23
	Miscellaneous	CL-114-0012	Unit 1 RBCCW	Revision 17
		CL-225-0012	Unit 2 Containment Instrument Gas	Revision 17
		M8477-51	Replace Unit 2 CIG Header Bottles 2T212A	
		M8477-52	Replace Unit 2 CIG Header Bottles 2T213A	
	Work Orders	RTPM 1763796 RTPM 2603620		
71111.05	Corrective Action Documents Resulting from Inspection	AR-2024-15005 CR-2024-15751 CR-2024-16104		
	Fire Plans	FP-1-E-DG-656	Prefire Plan Unit 1 E. Diesel EL. 656-6	Revision 0
		FP-1-E-DG-675	Prefire Plan Unit 1 E. Diesel EL. 675-6	Revision 0
		FP-1-E-DG-708	Prefire Plan Unit 1 E. Diesel EL. 708-0	Revision 0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		FP-1-RB-818	Susquehanna Prefire Plan	Revision 0
		FP-2-RB-818	Susquehanna Prefire Plan	Revision 0
		FP-2-TB-699	Prefire Plan Unit 2 699 EL. 699'-0" Isophase Area	Revision 0
	Procedures	EP-116	Susquehanna Fire Brigade Training Program	Revision 5
		FP-013-390	Low Level Radwaste Building Control and Electrical Equipment Room, Open East Area Truck Bay, Fire Zones 0-65A, 0-65B, 0-65C Elevation 726'8"	Revision 4
		FP-013-391	Low Level Radwaste Building East Vault, West Vault, Fire Zones 0-65D, 0-65E Elevation 726'8"	Revision 4
71111.06	Calculations	EC-054-0535	ESW Flow through a Moderate Energy Leakage Crack	Revision 1
	Engineering Evaluations	DBD010	Design Basis Document for HELB/MELC/Internal Flooding	Revision 3
	Procedures	NDAP-QA-0409	Door, Floor Plug, and Hatch Control	Revision 24
	Work Orders	RTPM 1992666		
71111.11Q	Procedures	OP-AD-338	Reactivity Manipulations Standards and Communication Requirements	Revision 38
71111.12	Corrective Action Documents	CR-2022-16158 CR-2024-10465 CR-2024-14267 CR-2024-14304 CR-2024-15898		
	Work Orders	PCWO 2441376-1 PCWO 276395-0		
71111.13	Corrective Action Documents Resulting from Inspection	CR 2024-14271 CR-2024-15240 CR-2024-15256 CR-2024-15281 CR-2024-15766 CR-2024-15767 CR-2024-15768		

	Miscellaneous	03-001-0A105	Tie Bus	10/14/2024
		52-001-2	HPCI STM LK Repair	10/02/2024
		55-001-2A	CRD Pump	10/07/2024
	Procedures	NDAP-QA-0340	Protected Equipment Program	Revision 46
71111.15	Calculations	EC-023-0005	Diesel Fuel Oil Storage Tanks	Revision 0
		EC-024-0503	Diesel Generator Load Calculation	Revision 36
		EC-024-1033	Establish a Maximum Allowable Jacket Leakage Rate for Diesel Generators A-D	Revision 0
	Corrective Action Documents	AR-2024-07790		
		AR-2024-11045		
		CR-2024-07335		
		CR-2024-07395		
		CR-2024-13026		
		CR-2024-13709		
		CR-2024-14601		
CR-2024-14610				
CR-2024-14840				
CR-2024-14983				
CR-2024-15400				
CR-2024-16564				
CR-2024-16582				
CR-2024-17173				
CR-2024-17658				
RTSV 2724861				
RTSV 2763683				
Corrective Action Documents Resulting from Inspection	CR-2024-14660			
	CR-2024-14675			
Drawings	FF10600	Sheet 1001 Turbine Control Diagram	Revision 16	
	M-148 SBLC	Storage Tank	Revision 7	
	M30-124	Sheet 13C DG Control Schematic Starting Sequence Control Panel 0C521D	Revision 6	

	Miscellaneous		PM task S4003-51	
			EC-Fuel-1971 Unit 1 Cycle 24 Cycle Step Out	Revision 0
			UFSAR Section 9.5.5/9.5.4	Revision 71
	Procedures	Reg Guide 1.137	Fuel Oil Systems for Standby Diesel Generators	Revision 1
		DBD 009	Design Basis Document for ESW, RHRSW, and Ultimate Heat Sink	Revision 4
		DBD013	Design Basis Document for Diesel Generators & Auxiliaries	Revision 5
		EP-RM-004	EAL Classification Basis	Revision 22
		M-144 Unit 1	P&ID Reactor Water Clean-Up, Sheet 2	Revision 20
	SO-100-007	Daily Surveillance Operating Log	Revision 92	
Work Orders	WO 2761835-0			
71111.18	Corrective Action Documents Resulting from Inspection	AR-2024-15762 CR-2024-11838 CR-2024-11889 CR-2024-11891 CR-2024-15905		
	Engineering Changes	EC-SHLD-1001	Seismic Qualification of Shadow Shielding for Use Inside Containment During Conditions 4 to 5	Revision 0
	Procedures	NDAP-QA-0404	Shielding Installation and Removal	Revision 3
TSR 03-2090		Shadow Shielding of U2 Common RHR Shutdown Cooling Line	Revision 1	
71111.24	Corrective Action Documents	CR-2024-15541 CR-2024-17391 CR-2024-17393 CR-2024-17417 CR-2024-17524		
	Procedures	OP-032-003	Security 480 VAC System	Revision 30
		SO-024-001D	Monthly Diesel Generator 'D' Operability Test	Revision 29
		SO-024-014	Monthly Diesel Generator 'E' Operability Test	Revision 54
		SO-030-A01	Monthly Control Room Emergency Outside Air Supply System 'A' Operability Test	Revision 6
		SO-116-A03	Quarterly Residual Heat Removal Service Water (RHRSW) System Flow Verification Division I	Revision 20
		SO-151-A05	Core Spray Comprehensive Flow Verification Division 1	Revision 15
SO-252-006	High-Pressure Coolant Injection Comprehensive Flow Verification	Revision 28		

		SO-260-001	Quarterly LOCA Test of Drywell Area Unit Coolers/Fans	Revision 20
	Work Orders	PCWO 2441376-1 PCWO 2614999-0 REWL 2745575 RTSV 2587915 RTSV 2737393 RTSV 2755917 RTSV 2760446 RTSV 2771991 WO 2773801		
71151	Miscellaneous	DI-2022-16669 DI-2022-16670 DI-2022-16671 DI-2022-16672 DI-2022-16673 DI-2023-17653 DI-2023-17656 DI-2023-17657 DI-2023-17659 DI-2023-17660		
	Procedures	PL-NF-06-002	SSES Mitigating System Performance Index Basis Document	Revision 11
71152A	Corrective Action Documents	AR-2024-02696 AR-2024-14775 CR-2014-34342 CR-2023-05773 CR-2023-10546 CR-2023-16982 CR-2024-00769 CR-2024-02372 CR-2024-03136 CR-2024-03552 CR-2024-07832 CR-2024-09068 CR-2024-09544 CR-2024-10224		

		CR-2024-10231 CR-2024-10500 CR-2024-11436 CR-2024-12630 CR-2024-14115		
	Corrective Action Documents Resulting from Inspection	CR-2024-14984		
	Engineering Evaluations	ACT-06-CR-2020-00954	Evaluation for CR-2020-00954 - Oil drum storage exceeds the fire hazard analysis and three-hour fire barrier in U1/U2 TB 656' E1"	Revision 1
	Miscellaneous		Operations Directive 20-02	07/01/2020
		51-9193861-001	Medium Voltage Breaker Evaluation for Bruce, DC Cook, and Susquehanna	
		ASME BPVC.CC. NC-2019	ASME Code Case N-513-5 Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 2 or 3 Piping and Gate Valves Section XI, Division 1	Revision 5
		ASTM Standard D2596	Standard Test Method for Measurement of Extreme-Pressure Properties of Lubricating Grease (Four-Ball Method)	2020
		LT-0199	Combustible Material Permit for fire zone I-31E	Revision 22
		LT-0200	Combustible Material Permit for Fire Zone 2-31E	Revision 16
	Procedures	LS-120	Issue Identification and Screening Process	Revision 15
		MPF-QA-1220	Engineering Change Process Handbook	Revision 18
		NDAP-QA-0440	Control of Transient Combustible/Hazardous Materials	Revision 29
PM M1338-81		Perform MOV Inspections, Grease Sampling, Stem Lube – Required By 89-10 Program		

	Work Orders	WO 1856854 WO 2082046 WO 2205775 WO 2217515 WO 2383497 WO 2471653 WO 2632833-1 WO 2676902 WO 2682230 WO 2734916 WO 2740459 WO 2746627		
--	-------------	--	--	--