UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE RD, STE 102
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

February 8, 2023

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 05000387/2022004 AND 05000388/2022004

Dear Brad Berryman:

On December 31, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Susquehanna Steam Electric Station, Units 1 and 2. On January 26, 2023, the NRC inspectors discussed the results of this inspection with Derek Jones, Acting 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* 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Jonathan E. Greives

Digitally signed by Jonathan E. Greives
Date: 2023.02.08 14:34:52 -05'00'

Jonathan E. Greives, 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 05000387/2022004 AND 05000388/2022004 DATED FEBRUARY 8, 2023

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000387 and 05000388
License Numbers:	NPF-14 and NPF-22
Report Numbers:	05000387/2022004 and 05000388/2022004
Enterprise Identifier:	I-2022-004-0040
Licensee:	Susquehanna Nuclear, LLC
Facility:	Susquehanna Steam Electric Station, Units 1 and 2
Location:	Berwick, PA
Inspection Dates:	October 1, 2022, to December 31, 2022
Inspectors:	C. Highley, Senior Resident Inspector J. Bresson, Acting Resident Inspector M. Rossi, Resident Inspector H. Anagnostopoulos, Senior Health Physicist P. Cataldo, Senior Reactor Inspector C. Hargest, Health Physicist K. Mangan, Senior Reactor Inspector P. Ott, Operations Engineer
Approved By:	Jonathan E. Greives, 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

Type	Issue Number	Title	Report Section	Status
LER	05000388/2021-004-01	LER 2021-004-01 for Susquehanna Steam Electric Station, Unit 2 Main Turbine Pressure Regulator Inoperable for Longer Than Allowed by Technical Specifications Due to Inadequate Valve Modification	71153	Closed

PLANT STATUS

Unit 1 began the inspection period at or near rated thermal power. On October 10, 2022, the unit was down powered to 67 percent for a rod sequence exchange. The unit was returned to rated thermal power on October 23, 2022. On December 27, 2022, the unit was down powered to 62 percent due to a reactor feed pump trip. The unit was returned to rated thermal power on December 28, 2022, and remained at or near rated thermal power for the remainder of the inspection period.

Unit 2 began the inspection period shut down. The unit was returned to rated thermal power on October 6, 2022. On October 10, 2022, the unit was down powered to 71 percent for a rod pattern adjustment. The unit was returned to rated thermal power on October 11, 2022. On October 28, 2022, the unit was down powered to 78 percent for control rod friction testing and rod pattern adjustments. The unit was returned to rated thermal power on October 28, 2022. On December 3, 2022, the unit was down powered to 62 percent for a rod pattern adjustment and maintenance. The unit was returned to rated thermal power on December 4, 2022. On December 29, 2022, the unit was down powered to 82 percent for a rod pattern adjustment and control rod friction testing. The unit was returned to rated thermal power on December 29, 2022, and 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 performed activities described in IMC 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 for the following systems: emergency service water (ESW) pump house, condensate tank, Blue Max diesel generator, and control structure cooling coils on December 19, 2022.

71111.04 - Equipment Alignment

Partial Walkdown (IP Section 03.01) (5 Samples)

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

(1) Unit Common, emergency diesel generator walkdowns during yellow risk window for the T20 startup transformer outage on October 11, 2022
(2) Unit Common, 'A' control structure chiller during emergent 'B' control structure chiller outage on October 17, 2022
(3) Unit 2, reactor core isolation cooling (RCIC) on November 3, 2022
(4) Unit 2, ESW system walkdown during the 'E' emergency diesel generator endurance run on November 9, 2022
(5) Unit 1, standby liquid control system on December 1, 2022

Complete Walkdown (IP Section 03.02) (1 Sample)

(1) The inspectors evaluated system configurations during a complete walkdown of the Unit 1 residual heat removal service water system on December 28, 2022.

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 2, main steam pipe way, FZ 2-4G, 719-foot and 749-foot elevations, on October 1, 2022
(2) Unit Common, diesel fire pump and motor driven fire pump, FZ 0-72B and 0-72C, 676-foot elevation, during a monthly operability run and operational test on October 9, 2022
(3) Unit Common, 'A' and 'B' emergency diesel generator bays, FZ 0-41A and 0-41B, 677-foot and 710-foot elevations, on October 11, 2022
(4) Unit Common, standby gas treatment fans and charcoal beds, FZ 0-30A, 806-foot elevation, on October 17, 2022

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

(1) The inspectors evaluated the onsite fire brigade training and performance during an unannounced fire drill in the Unit 2 reactor building scenario 77B 2d residual heat removal pump fire on November 10, 2022

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 requalification exam results for the annual operating exam and biennial written exam completed on October 28, 2022.

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 control room during RE-0TP-203, “Channel Distortion Testing,” and SO-256-007, “Control Rod Coupling Full-in Indicator Checks,” on November 17, 2022.

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

(1) The inspectors observed and evaluated operator biennial exams in the simulator on October 4, 2022, and operator performance of emergency operating procedures in the simulator on October 17, 2022.

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) Unit 1, 'A' essential services supply busses switchgear and electrical system tie into 'A' emergency diesel generator failure to trip the output breaker on trip of the emergency diesel generator on December 20, 2022
(2) Unit 2, motor generator set (2A10210) 'B' drive motor breaker tripped due to recirculation bypass valve (HV-243-F023B) limit switched contact ZS-13 wired incorrectly on December 21, 2022

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management (IP Section 03.01) (3 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 Common, elevated yellow risk due to the offsite power source through T-20 transformer outage on October 11, 2022
(2) Unit 2, elevated risk during high-pressure coolant injection system outage window on December 5, 2022
(3) Unit Common, elevated risk during the system outage windows for the Unit 2 high-pressure coolant injection and 'B' control structure chiller on December 12, 2022

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (3 Samples)

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

(1) Unit 2, increased unidentified drywell leakage, CR-2022-17781, on December 8, 2022
(2) Unit Common, 0V116B battery room exhaust fan belt on December 16, 2022
(3) Unit 2, turbine building component cooling water to ESW discharge isolation valve leaking, CR-2022-12883, on December 21, 2022

71111.18 - Plant Modifications

Temporary Modifications and/or Permanent Modifications (IP Section 03.01 and/or 03.02) (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

(1) Unit 1, permanent modification of reactor building elevator shaft ventilation causing issues with controlling differential pressure within the building between floors on December 12, 2022
(2) Unit 1, residual heat removal swing bus transfer switch, 1ATS229, permanent modification under design change 1863105 on December 23, 2022

Severe Accident Management Guidelines Update (IP Section 03.03) (1 Sample)

(1) The inspectors verified the site Severe Accident Management Guidelines were updated in accordance with the boiling-water reactor generic severe accident technical guidelines and validated in accordance with NEI 14-01, “Emergency Response Procedures and Guidelines for Beyond Design Basis Events and Severe Accidents,” Revision 1.

71111.19 - Post-Maintenance Testing

Post-Maintenance Test (IP Section 03.01) (3 Samples)

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

(1) Unit 2, RCIC system outage window for preventative maintenance on breakers 2D254072 and 2D254042 and RCIC control system static inverter on October 24, 2022
(2) Unit 2, off gas recombiner hydrogen cell and valve replacement on October 24, 2022
(3) Unit 2, high-pressure coolant injection and RCIC test line to condensate storage tank isolation valve (HV255F001) on December 8, 2022

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated a Unit 2 planned maintenance outage to address drywell leakage from September 28 to October 3, 2022.

71111.22 - Surveillance Testing

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

Surveillance Tests (other) (IP Section 03.01) (1 Sample)

(1) Unit Common, 'E' emergency diesel generator integrated surveillance test, SO-024-E01, Revision 3, (24-hour endurance run) performed on November 9, 2022.

Inservice Testing (IP Section 03.01) (1 Sample)

(1) Unit 1, RCIC comprehensive flow verification, SO-150-006, on October 27, 2022

RCS Leakage Detection Testing (IP Section 03.01) (1 Sample)

(1) Units 1 and 2, reactor coolant leakage detection test surveillance on December 14, 2022

71114.06 - Drill Evaluation

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

The inspectors evaluated:

(1) Simulated emergency action level declarations during licensed operator biennial exams on October 4, 2022

RADIATION SAFETY

71124.04 - Occupational Dose Assessment

Source Term Characterization (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated licensee performance as it pertains to radioactive source term characterization.

External Dosimetry (IP Section 03.02) (1 Sample)

(1) The inspectors evaluated how the licensee processes, stores, and uses external dosimetry.

Internal Dosimetry (IP Section 03.03) (2 Samples)

The inspectors evaluated the following internal dose assessments:

(1) Whole body counts and evaluation related to CR-2022-05616
(2) Whole body counts related to CR-2021-15456

Special Dosimetric Situations (IP Section 03.04) (2 Samples)

The inspectors evaluated the following special dosimetric situations:

(1) Reviewed a listing of declared pregnant workers and all briefing materials that are supplied to the declared worker
(2) Reviewed shallow dose equivalent evaluation 2021-04882

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below:

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

(1) Unit 1 (July 1, 2021, through June 30, 2022)
(2) Unit 2 (July 1, 2021, through June 30, 2022)

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

(1) Unit 1 (July 1, 2021, through June 30, 2022)
(2) Unit 2 (July 1, 2021, through June 30, 2022)

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

(1) Unit 1 (October 1, 2021, through September 30, 2022)
(2) Unit 2 (October 1, 2021, through September 30, 2022)

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

(1) Unit 1 (October 1, 2021, through September 30, 2022)
(2) Unit 2 (October 1, 2021, through September 30, 2022)

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

(1) October 1, 2021, to December 1, 2022

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

(1) October 1, 2021, to December 1, 2022

71152A - Annual Follow-up Problem Identification and Resolution

Annual Follow-up of Selected Issues (Section 03.03) (5 Samples)

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

(1) Repetitive issues in the licensee's implementation of their protected equipment process
(2) Valve failures associated with the scram discharge volume vent and drain system (CR-2022-01261)
(3) ESW piping corrosion
(4) Preventative maintenance frequency change process
(5) Repetitive issues related to preparation for maintenance, with a specific focus on parts and paperwork availability

71152S - Semiannual Trend Problem Identification and Resolution

Semiannual Trend Review (Section 03.02) (1 Sample)

(1) The inspectors reviewed the licensee's CAP for potential adverse trends in operator workarounds, control room deficiencies, and burdens that might be indicative of a more significant safety issue.

71153 - Follow Up of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (1 Sample)

The inspectors evaluated the following licensee event reports (LERs):

(1) LER 05000388/2021-004-01, Unit 2 Main Turbine Pressure Regulator Inoperable for Longer Than Allowed by Technical Specifications Due to Inadequate Valve Modification (Agencywide Documents Access and Management System (ADAMS) Accession No. ML22307A260): The inspectors reviewed the updated LER submittal. The previous LER submittal was reviewed in Susquehanna Steam Electric Station, Units 1 and 2 – Integrated Inspection Report 05000387/2022003 and 05000388/2022003 where inspection conclusions associated with this LER are documented under the Inspection Results Section, NCV 05000388/2022003-01.

OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

Impact of Financial Conditions on Continued Safe Performance

In that the licensee, Susquehanna Nuclear, LLC, and the licensee's parent company, Talen Energy Supply, was under bankruptcy protection/reorganization during the inspection period, NRC Region I conducted reviews of processes at Susquehanna. Using the flexibilities in the baseline inspection program, the inspectors evaluated several aspects of the licensee's operations to assess whether any identified plant performance issues could be related to the station's financial condition. The factors reviewed included: (1) impact on regulatory required plant staffing, (2) corrective maintenance backlog, (3) changes to the planned maintenance schedule, (4) corrective action program implementation, and

(5) reduction in outage scope, including risk-significant modifications. In particular, the inspectors verified that licensee personnel continued to identify problems at an appropriate threshold and enter these problems into the corrective action program for resolution. The inspectors also verified that the licensee continued to develop and implement corrective actions commensurate with the safety significance of the problems identified.

The review of processes at Susquehanna included continuous reviews by the resident inspectors, as well as the specialist-led baseline inspections completed during the inspection period: 71111.11A – Requalification Examination Results, 71124.04 – Occupational Dose Assessment, 71151 (OR01) – Performance Indicator Verification for Occupational Exposure Control Effectiveness, 71151 (PR01) – Performance Indicator Verification for Radiological Effluent Technical Specifications/Offsite Dose Calculation Manual Radiological Effluent Occurrences, 71152A – Performance Indicator and Resolution of Valve Failures Associated with the Scram Discharge Volume Vent and Drain System, and 71152A – Performance Indicator and Resolution of Emergency Service Water Piping Leakage that are previously documented in this report; Independent Spent Fuel Storage Installation (ISFSI) NRC Inspection Report No. 0700028/2022001 (ML22307A243); Security Baseline Inspection Report 05000387/2022403 and 05000388/2022403 (ML22332A222); Cyber Security Inspection Report 05000387/2022404 and 05000388/2022404 (ML22313A106); and Emergency Preparedness Biennial Exercise Inspection Report 05000387/2022501 and 05000388/2022501 (ML22332A022).

INSPECTION RESULTS

Observation: Valve Failures Associated with the Scram Discharge Volume Vent and Drain System (CR-2022-01261)	71152A
The inspectors reviewed the licensee's actions to identify and correct the causes of valve failures in the scram discharge volume vent and drain system associated with age-related degradation problems in elastomer parts installed on solenoid operated valves 247F009A and 247F009B. Additionally the inspectors reviewed corrective actions associated with technical specification surveillance test and American Society of Mechanical Engineers (ASME) inservice test stroke time failures of several system air operated vent and drain valves (247F-010a, 010b, 011a, and 011b). Regarding the solenoid operated valves, the inspectors found the vendor manually identified that the "shelf life" of the O-rings installed in the valve was 5 years and required a preventative maintenance replacement interval of 5 years in order to maintain equipment qualifications due to thermal degradation of the elastomers. The licensee's preventative maintenance replacement interval was 6 years based on the valves not being in the equipment qualification program and acceptable performance of the four valves installed in the plant (no failures noted prior to 2021 due to age-related degradation). The inspectors noted that condition reports and action requests were generated following the problems to assess the preventative maintenance frequency and changes to the valve design to address age-related thermal degradation (CR-2021-13114 and AR-2022-03809). Regarding the air operated valves, the inspectors found the licensee had identified decreasing trends (longer valve stroke times) for the valves and had taken actions to restore margin to the valves. Specifically, in April 2021, the licensee replaced the packing of the valves to reduce friction during valve stem movement. The inspectors found that this corrective action reduced valve travel time and restored margin to the technical specification	

surveillance requirements. The inspectors found that since the replacement of the packing, air operated valves testing has shown consistent results.

The inspectors noted that over the past 4-year period, the licensee had made multiple adjustments to control valves for the system and replaced the solenoid operated valves. This resulted in changes to the air operated valve stroke time. The inspectors found that after stroke time adjustments were completed, testing was performed to establish new reference values as described in ASME Code Section ISTC-3310. However, the inspectors identified that the licensee did not consistently ensure new reference values were updated in the test procedure prior to the next test performance, and as a result subsequent ASME testing results were compared to the wrong reference value. The inspectors reviewed the test results and verified that the valves test results were within the new acceptance criteria acceptance bands; therefore, no ASME Code corrective actions were required. The inspectors considered this performance deficiency to be minor (CR-2022-15896).

Observation: Emergency Service Water Piping Corrosion	71152A

The inspectors reviewed a sample of condition reports and action requests documenting recurring pipe corrosion in the safety-related ESW system. The inspectors reviewed documents related to evaluations, mitigative and corrective actions, and maintenance performed on piping and components that experienced corrosion-related issues between 2020 and 2022. The inspectors evaluated the appropriateness and timeliness of corrosion-related corrective actions consistent with applicable performance attributes described in NRC IP 71152, Section 02.02, and established in the licensee's CAP procedures.

The inspectors reviewed several piping and component through-wall leaks associated with the ESW system and verified that (1) the leaks were evaluated within the CAP consistent with regulatory required industry codes and site procedures, (2) operability impacts and associated margins were appropriately addressed, (3) in some circumstances, the applicable piping section and components were subsequently replaced, such as a design change performed under engineering change EC2386715, "Repair/Replacement of Unit 2B (Div. 2) ESW Supply and Return Header." The inspectors noted for this design change, the licensee utilized austenitic stainless-steel alloy, AL-6XN, which operating experience has shown to have improved, corrosion-resistant performance compared to the existing carbon steel pipe in raw water piping systems, such as the Susquehanna ESW system. Additionally, the inspectors noted the licensee appropriately provided for an epoxy coating to address the potential corrosion from a galvanic cell between the bi-metallic weld formed by the union of carbon steel piping and AL-6XN piping.

The inspectors also noted that periodic inspection of the ESW system piping was being performed consistent with attributes contained in NRC Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment," instituted under Specification H1019, "The Inspection Program for Pipe Corrosion and Degradation," Revision 5, and implemented under NEIM-QA-1185, "Pipe Corrosion Program Implementation," Revision 1. The inspectors verified on a sampling basis that these site programs and procedures also contained applicable commitments and attributes required for the license renewal process. The inspectors noted that the licensee is currently establishing a risk-informed piping replacement program, to address long-term sustainability and reliability of the safety-related ESW system resulting from the recurrent corrosion events and is currently being tracked in the CAP under DI-2022-00509 and planned for completion in January 2023.

The inspectors determined, on a sampling basis, that the licensee appropriately utilized their CAP to address identified piping leaks in the ESW system, consistent with NRC requirements, industry standards, and station procedures. In addition, the evaluated leaks were appropriately characterized, and either had mitigative actions planned or completed in a timely manner. The corrective actions regarding recurrent ESW piping leaks, including the risk-informed replacement of ESW piping with corrosion-resistant AL-6XN, were considered reasonable and appropriate. The inspectors did not identify any violations or performance deficiencies during the review.

Observation: Preventative Maintenance Frequency Change Process	71152A
The inspectors completed a review of condition reports and corrective actions associated with the licensee's preventative maintenance frequency control process. Specifically, multiple instances were noted where equipment failed, in which inappropriate extension of preventative maintenance frequency was determined to be causal to the failure. The inspectors reviewed an additional sample of 15 condition reports that contained changes to preventative maintenance frequencies, to include the corrective actions taken, and also reviewed more current changes to preventative maintenance frequencies to evaluate the effectiveness of those corrective actions. The inspectors did not identify any performance deficiencies or violations.	

Observation: Repetitive Issues Related to Preparation for Maintenance with a Specific Focus on Parts and Paperwork Availability	71152A
The inspectors completed an in-depth review of the CAP on items specifically related to maintenance preparedness for work with a focus on parts availability and work readiness to assess an apparent adverse trend. Specifically, the inspectors noted numerous examples where the licensee did not have appropriate parts or paperwork to complete repairs or maintenance on equipment, which lead to an increase in system unavailability. The inspectors reviewed a sampling of approximately 95 condition reports that documented inadequate preparation for a maintenance item. The licensee's corrective actions taken in response to the reviewed condition reports associated with both parts availability and paperwork preparedness being incomplete appeared reasonable and in accordance with the licensee's procedures. Additionally, the inspectors noted improved adherence to the daily and weekly maintenance schedules likely, in part, as a result of the corrective actions taken. The inspectors did not identify any violations or performance deficiencies.	

Observation: Repetitive Issues in the Licensee's Implementation of Their Protected Equipment Process	71152A
The inspectors performed a review of the CAP concerning items associated with an inadequate implementation of the protected equipment program as a result of the inspectors identifying a potential adverse trend in this area. The inspectors reviewed a sample of 33 condition reports and action requests related to protected equipment. Seventeen of the condition reports and action requests concerned the implementation of the protected equipment process. The review of the corrective actions taken appeared appropriate. The inspectors did not identify any violations or performance deficiencies. Separately during the review, the inspectors identified an increasing trend in the second half of 2022 of protected equipment delaying or preventing the performance of work as scheduled. The condition reports sampled that are associated with this trend are: CR-2022-10078, CR-2022-11067, CR-2022-11857, CR-2022-15344, and CR-2022-17659.	

Observation: Semiannual Trend on Operator Workarounds, Control Room Deficiencies, and Burdens	71152S
The inspectors performed a semiannual review of site issues to identify trends that might indicate the existence of more significant safety concerns. As part of this review, the inspectors included repetitive or closely related issues documented by the licensee in the CAP database, trend reports, site performance indicators, major equipment problem lists, system health reports, maintenance rule assessments, and maintenance or CAP backlogs. The inspectors also reviewed how the licensee's CAP evaluated and responded to individual issues identified by the NRC inspectors during routine plant walkdowns and daily condition report reviews. The inspectors performed a review of the licensee's CAP condition reports, action reports, and the associated corrective actions associated with operator workarounds, control room deficiencies, and burdens. The review consisted of a sampling of 25 condition reports during the calendar year 2022. The inspectors identified that the station had trended an operator workaround associated with condition reports CR-2022-05269, CR-2022-11009, and CR-2022-03419 and have developed an engineering change to correct the cause of the operator workaround. The inspectors did not identify any violations or performance deficiencies during the review.	

EXIT MEETINGS AND DEBRIEFS

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

- On October 27, 2022, the inspectors presented the problem identification and resolution for scram discharge volume valve failures inspection results to Jason Hartzell, Acting General Manager of Engineering, and other members of the licensee staff.
- On November 23, 2022, the inspectors presented the problem identification and resolution for ESW piping corrosion inspection results to David Ambrose, General Manager of Engineering, and other members of the licensee staff.
- On December 15, 2022, the inspectors presented the occupational radiation exposure inspection results to Derek Jones, Plant Manager, and other members of the licensee staff.
- On January 26, 2023, the inspectors presented the integrated inspection results to Derek Jones, Acting Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Corrective Action Documents		AR-2022-02091, CR-1677914, CR-1729020, CR-2015-10281, CR-2022-14186, CR-2022-14271	
	Corrective Action Documents Resulting from Inspection		CR-2022-16356, CR-2022-16360, CR-2022-17566	
	Drawings	E106217, M-112 SH 1& 2	Unit 1 P&ID RHR Service Water	Revision 55
71111.12	Corrective Action Documents		CR-2022-13993, CR-2022-14032, CR-2022-14126, CR-2022-14552, CR-2022-14950	
	Drawings	D107254, E-105	U1 4.16 KV Bus 1A D/G Generator Breaker Control, Sheet 1	Revision 26
	Work Orders		2588246-0	
71111.15	Corrective Action Documents		CR-2022-15444, CR-2021-00407, CR-2022-13405, CR-2021-07877	
	Miscellaneous		Adverse Condition Monitoring and Contingency Plan for Unit 2 Unidentified Leakage	12/13/2022
71111.18	Engineering Changes	2590060	Remove Penetration Seal from Penetration X-28-5-39	11/16/2022
71111.19	Corrective Action Documents		CR-2022-15822	
	Work Orders		2044451, ERPM 2203452, ERPM 2381044, ERPM 2491534, PCWO 2560994-0, PCWO 2593106-0, RTPM 2305642, RTPM 2473029,	
71111.22	Corrective Action Documents		CR-2022-15964	
71152A	Corrective Action Documents		AR-2021-13319, AR-2022-00377, AR-2022-00802, AR-2022-01758, AR-2022-02033, AR-2022-02040, AR-2022-02260, AR-2022-02715, AR-2022-03501, AR-2022-03716, AR-2022-03809, AR-2022-04121, AR-2022-04514, AR-2022-04615, AR-2022-09215, AR-2022-09963, AR-2022-11524, AR-2022-11891, AR-2022-12086, AR-2022-12127, AR-2022-12134, AR-2022-12149, AR-2022-12509, AR-2022-12621, AR-2022-	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			13586, AR-2022-14260, AR-2022-14510, AR-2022-15825, AR-2022-16050, AR-2022-16225, AR-2022-16428, AR-2022-16982, AR-2022-17920, CR-2021-05933, CR-2021-12719, CR-2021-13144, CR-2022-01261, CR-2022-03415, CR-2022-03416, CR-2022-03590, CR-2022-08757	
	Corrective Action Documents Resulting from Inspection		CR-2022-15896, CR-2022-15852	
	Miscellaneous	IOM 684	OMM Valcor Engineering TP 70900-45	Revision C
	Procedures	NDAP-QA-0340	Protected Equipment Program	Revision 40
		SO-255-002	92DY-SDV Vent & DRN VLV OP CK	Revision 22, 23, 24, 25, 26, and 27
	Work Orders		RTSV 2447081, RTSV 2459385	
71152S	Corrective Action Documents		CR-2018-15672, CR-2020-06287, CR-2022-00914, CR-2022-02937, CR-2022-03419, CR-2022-03958, CR-2022-03967, CR-2022-04172, CR-2022-04329, CR-2022-04399, CR-2022-05269, CR-2022-08369, CR-2022-08498, CR-2022-10338, CR-2022-10661, CR-2022-11009, CR-2022-11432, CR-2022-11999, CR-2022-14032, CR-2022-14141, CR-2022-14881, CR-2022-15167, CR-2022-15307, CR-2022-15350, CR-2022-15393, CR-2022-16838, CR-2022-17146	
	Procedures	OI-AD-096	Operator Challenges	Revision 23