UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
1600 EAST LAMAR BOULEVARD
ARLINGTON, TEXAS 76011-4511

May 09, 2022

Mr. G. T. Powell, President and CEO
STP Nuclear Operating Company
P.O. Box 289
Wadsworth, TX 77483

SUBJECT: SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNITS 1 AND 2 – INTEGRATED INSPECTION REPORT 05000498/2022001 AND 05000499/2022001

Dear Mr. Powell:

On March 31, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at South Texas Project Electric Generating Station, Units 1 and 2. On April 7, 2022, the NRC inspectors discussed the results of this inspection with Kym Harshaw, Executive Vice President and Chief Nuclear Office, and other members of your staff. The results of this inspection are documented in the enclosed report.

Two findings of very low safety significance (Green) are documented in this report. Both of these findings involved violations of NRC requirements. We are treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violations or the significance or severity of the violations documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement; and the NRC Resident Inspector at South Texas Project Electric Generating Station, Units 1 and 2.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region IV; and the NRC Resident Inspector at South Texas Project Electric Generating Station, Units 1 and 2.

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,

Signed by Kozal, Jason
on 05/09/22

Jason W. Kozal, Chief
Projects Branch A
Division of Operating Reactor Safety

Docket Nos. 05000498 and 05000499
License Nos. NPF-76 and NPF-80

Enclosure:
As stated

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SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNITS 1 AND 2 – INTEGRATED INSPECTION REPORT 05000498/2022001 AND 05000499/2022001 – DATED MAY 09, 2022

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000498 and 05000499
License Numbers:	NPF-76 and NPF-80
Report Numbers:	05000498/2022001 and 05000499/2022001
Enterprise Identifier:	I-2022-001-0015
Licensee:	STP Nuclear Operating Company
Facility:	South Texas Project Electric Generating Station, Units 1 and 2
Location:	Wadsworth, TX 77483
Inspection Dates:	January 1, 2022, to March 31, 2022
Inspectors:	G. Kolcum, Senior Resident Inspector S. Lichvar, Acting Resident Inspector C. Stott, Acting Senior Resident Inspector
Approved By:	Jason W. Kozal, Chief Projects Branch A 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 South Texas Project Electric Generating 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

Failure to Provide 8-hour Appendix R Emergency Lighting			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000498,05000499/2022001-01 Open/Closed	[P.1] - Identification	71111.05
The inspectors identified a Green, non-cited violation of License Condition 2.E for the failure to provide 8-hour emergency lighting in all areas where operators perform manual actions required during an alternative shutdown.			

Essential Cooling Water Motor Trip			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000498,05000499/2022001-02 Open/Closed	[H.12] - Avoid Complacency	71152A
The inspectors reviewed a self-revealed Green, non-cited violation of Technical Specification 6.8.1.a, "Procedures," which requires, in part, that written procedures will be established, implemented, and maintained for procedures in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Specifically, the licensee failed to provide adequate instructions for staking the threads on the support rods for the Essential Cooling Water Self-Cleaning Strainer 1B, which resulted in the Essential Cooling Water Motor 1B being automatically tripped.			

Additional Tracking Items

None.

PLANT STATUS

Unit 1 and Unit 2 began the inspection period at rated thermal power and remained there for 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," 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.

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

Impending Severe Weather Sample (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 due to a freezing rainstorm from February 2-4, 2022.

External Flooding Sample (IP Section 03.03) (1 Sample)

(1) The inspectors evaluated that flood protection barriers, mitigation plans, procedures, and equipment are consistent with the licensee's design requirements and risk analysis assumptions for coping with external flooding in Unit 1, emergency diesel generator building the week of February 28, 2022.

71111.04 - Equipment Alignment

Partial Walkdown Sample (IP Section 03.01) (2 Samples)

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

(1) Unit 1, train A emergency diesel generator on January 12, 2022
(2) Unit 1, train B essential cooling water strainer maintenance on January 31, 2022

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

(1) Unit 1, train A 125 VDC on March 30, 2022

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (7 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, turbine building 31' elevation on February 25, 2022
(2) Unit 2, turbine building 31' elevation on February 25, 2022
(3) Unit 1, turbine building 83' elevation on March 14, 2022
(4) Unit 2, turbine building 83' elevation on March 14, 2022
(5) Unit 1, fuel handling building on March 14, 2022
(6) Unit 2, fuel handling building on March 14, 2022
(7) Emergency lighting Appendix R areas on March 30, 2022

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 1 mechanical auxiliary building the week of January 31, 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 a surveillance test on risk significant equipment in Unit 1, on March 2, 2022, and Unit 2, on March 3, 2022.

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

(1) The inspectors observed and evaluated an operations crew’s response to various plant alarm scenarios on February 14, 2022.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (4 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) Loss of switchyard south bus on January 6, 2022
(2) Unit 1, train C essential chiller maintenance during the week of January 17, 2022
(3) Unit 1, essential chiller 12C trip due to low oil pressure on January 21, 2022
(4) Unit 1, train B essential cooling water strainer maintenance on January 31, 2022

Quality Control (IP Section 03.02) (1 Sample)

The inspectors evaluated the effectiveness of maintenance and quality control activities to ensure the following SSC remains capable of performing its intended function:

(1) Unit 1, train B essential cooling water strainer maintenance on January 31, 2022

71111.13 - Maintenance Risk Assessments and Emergent Work Control

Risk Assessment and Management Sample (IP Section 03.01) (7 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, white risk due to maintenance performed on train A emergency core cooling system during the week of January 3, 2022
(2) Switchyard south bus maintenance on January 7, 2022
(3) Unit 1, white risk due to maintenance performed on train B component cooling water system during the week of January 10, 2022
(4) Switchyard north bus maintenance on January 13, 2022
(5) Unit 1, white risk due to maintenance performed on train B component cooling water system during the week of January 24, 2022
(6) Unit 2, white risk due to maintenance performed on train C emergency diesel generator during the week of January 31, 2022
(7) Unit 2, white risk due to maintenance performed on train A emergency diesel generator during the week of March 7, 2022

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (10 Samples)

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

(1) Unit 1, train A main feedwater outside containment isolation valve leakage past abandoned packing leakoff line plug found on January 7, 2022
(2) Unit 1, train C emergency diesel generator sequencer auto test function failed on January 9, 2022

(3) Unit 1, train C essential cooling water pump degraded seismic supports found during the week of January 17, 2022
(4) Essential cooling water throttle control valves for the emergency diesel generators found with flow past closed configurations during the week of January 20, 2022
(5) Unit 1, essential chiller 12C trip due to low oil pressure on January 21, 2022
(6) Unit 1, train B essential cooling water strainer failure the week of January 24, 2022
(7) Unit 1, train B essential cooling water strainer foreign material the week of January 24, 2022
(8) Unit 1, train D isolation valve cubicle HVAC ductwork corrosion on March 1, 2022
(9) Unit 1, component cooling water surge tank level indication and normal demineralizer makeup valve on March 1, 2022
(10) Fire pump No. 3 leak on bypass strainer inlet isolation valve on March 7, 2022

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, train A main feedwater outside containment isolation valve temporary modification of seal weld over abandoned plug on January 7, 2022

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (9 Samples)

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

(1) Unit 1, train B essential cooling water following emergent maintenance on the self -cleaning strainer on January 27, 2022
(2) Unit 1, condenser vacuum pump 13 following maintenance on February 21, 2022
(3) Unit 1, condensate pump 12 following maintenance on February 22, 2022
(4) Unit 2, emergency diesel generator 23 following maintenance on February 23, 2022
(5) Unit 1, train D auxiliary feedwater pump following maintenance on February 28, 2022
(6) Unit 1, condensate pump 11 following maintenance on March 2, 2022
(7) Unit 1, startup feed pump 14 following maintenance on March 2, 2022
(8) Unit 1, circulating water pump 11 following maintenance on March 2, 2022
(9) Fire pump No. 3 following maintenance on March 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) (3 Samples)

(1) Unit 1, rod control on January 16, 2022
(2) Unit 2, rod control on January 16, 2022
(3) Unit 2, train D auxiliary feedwater pump on March 3, 2022

Inservice Testing (IP Section 03.01) (1 Sample)

(1) Unit 1, train D auxiliary feedwater pump following maintenance on February 28, 2022

71114.06 - Drill Evaluation

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

(1) The inspectors evaluated the licensee's simulator-based licensed operator training evolution that involved a steam generator tube leak, reactor coolant leak, and Alert notification on February 9, 2022

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicator submittals listed below:

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

(1) Unit 1 (January 1, 2021, through December 31, 2021)
(2) Unit 2 (January 1, 2021, through December 31, 2021)

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

(1) Unit 1 (January 1, 2021, through December 31, 2021)
(2) Unit 2 (January 1, 2021, through December 31, 2021)

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

(1) Unit 1 (January 1, 2021, through December 31, 2021)
(2) Unit 2 (January 1, 2021, through December 31, 2021)

71152A - Annual Follow-up 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 1, train A main feedwater outside containment isolation valve leakage past seal weld over abandoned packing leakoff line plug found on January 7, 2022
(2) Unit 1, essential chiller 12C trip due to oil pressure on January 21, 2022
(3) Unit 1, train B essential cooling water strainer foreign material the week of January 24, 2022
(4) Unit 1, train B essential cooling water strainer failure the week of January 24, 2022

INSPECTION RESULTS

<table>
<tr><td colspan="4">Failure to Provide 8-hour Appendix R Emergency Lighting</td></tr>
<tr><td>Cornerstone</td><td>Significance</td><td>Cross-Cutting Aspect</td><td>Report Section</td></tr>
<tr><td>Mitigating Systems</td><td>Green
NCV 05000498,05000499/2022001-01
Open/Closed</td><td>[P.1] - Identification</td><td>71111.05</td></tr>
<tr><td colspan="4">The inspectors identified a Green, non-cited violation of License Condition 2.E for the failure to provide 8-hour emergency lighting in all areas where operators perform manual actions required during an alternative shutdown.</td></tr>
<tr><td colspan="4">Description: During a review of the station’s 8-hour emergency lighting, the inspectors identified multiple areas where the 8-hour emergency lighting was not sufficient for operators to perform manual actions required during an alternative shutdown. The multiple areas and associated reactor units are provided below.

Area (Unit Number)
· Turbine Generator Building (Unit 1 and Unit 2)
· Essential Cooling Water Intake Structure (Unit 1)
· Electrical Auxiliary Building (Unit 1 and Unit 2)
· Fuel Handling Building (Unit 1 and Unit 2)
· Isolation Valve Cubical (Unit 2)
· Mechanical Auxiliary Building (Unit 1 and Unit 2)
· Diesel Generator Building (Unit 1 and Unit 2)

The inspectors conducted a review of the 8-hour emergency lighting in the areas listed above. In total, 63 out of 82, 8-hour emergency lights failed their discharge tests from December 6, 2017, to February 17, 2022. At the time of the test failures, licensee personnel followed the discharge test procedure, which instructed operators to replace failed emergency lighting batteries. However, in each case, these failed tests were never entered into the license’s corrective action program to record the abnormal trend, which could have led to an increased monitoring with more frequent tests. Additionally, in many cases the test failures revealed that several plant areas had been provided with insufficient emergency lighting at the same time, which could have more broadly impacted the plant if emergency lighting was needed during an alternative shutdown scenario. The inspectors determined that operators were required to carry flashlights while on shift.

Corrective Actions: The licensee entered this issue into their corrective action program to determine why the trend was missed and change the lights to LEDs.

Corrective Action References: Condition Report 2022-1622</td></tr>
<tr><td colspan="4">Performance Assessment:

Performance Deficiency: The licensee’s failure to provide 8-hour emergency lighting in all areas where operators perform manual actions required during an alternative shutdown was a performance deficiency.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Protection Against External Factors attribute of the</td></tr>
</table>

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, the failure to provide 8-hour emergency lighting in a broad range of areas that could adversely affect the ability of operators to perform the manual actions required for an alternative shutdown.

Significance: The inspectors assessed the significance of the finding using Inspection Manual Chapter 0609, Appendix F, "Fire Protection and Post - Fire Safe Shutdown SDP." The inspectors assigned the finding a low degradation rating since the ability to reach and maintain safe shutdown conditions in the event of a control room fire would be minimally impacted by the failure to provide 8-hour emergency lighting in the affected areas. Specifically, the failure to provide 8-hour emergency lighting could adversely affect the ability of operators to perform the manual actions required for an alternative shutdown. Because this finding had a low degradation rating, it screened as having very low safety significance.

Cross-Cutting Aspect: P.1 - Identification: The organization implements a corrective action program with a low threshold for identifying issues. Individuals identify issues completely, accurately, and in a timely manner in accordance with the program. Specifically, licensee personnel did not generate condition reports for multiple failed 8-hour emergency lighting discharge tests.

Enforcement:

Violation: License Condition 2.E states, in part, that the licensee shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report, Revision 20, and the Fire Hazards Analysis Report, Amendment Number 26. Section 4.1 of the Fire Hazards Analysis Report contains a comparison of the licensee's fire protection program to the requirements in 10 CFR Part 50, Appendix R. The Fire Hazards Analysis Report states, in part, that fixed self-contained emergency lighting, consisting of sealed-beam units with individual 8-hour minimum battery supply, will be provided in areas needed for operation of hot standby/hot shutdown equipment, and in access and egress routes thereto.

Contrary to the above, from December 6, 2017, to February 17, 2022, the licensee failed to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the licensee failed to provide 8-hour emergency lighting, which could adversely affect the ability of operators to perform the manual actions required for an alternative shutdown.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Essential Cooling Water Motor Trip			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000498,05000499/2022001-02 Open/Closed	[H.12] - Avoid Complacency	71152A
The inspectors reviewed a self-revealed Green, non-cited violation (NCV) of Technical Specification 6.8.1.a, "Procedures," which requires, in part, that written procedures will be established, implemented, and maintained for procedures in Appendix A of Regulatory Guide			

1.33, Revision 2, February 1978. Specifically, the licensee failed to provide adequate instructions for staking the threads on the support rods for the Essential Cooling Water Self-Cleaning Strainer 1B, which resulted in the Essential Cooling Water Strainer Motor 1B being automatically tripped.

Description: On January 25, 2022, operations personnel observed several trouble alarms for the Essential Cooling Water Self-Cleaning Strainer 1B motor. Operators were dispatched to the essential cooling water (ECW) intake structure and found the self-cleaning strainer not rotating.

Section 9.2.1.2 of the UFSAR, "Essential Cooling Water System," states that the safety function of the essential cooling pond and the ECW system is to provide cooling water from the ultimate heat sink for up to 30 days following a design basis event. Section 9.2.1.2.1 specifically states, in part, "The ECWS is designed to perform its cooling function following a design basis accident (DBA) with either offsite or onsite power available, automatically and without operator action, assuming a single failure." Each unit has three trains that include the pump, strainer, piping, and controls.

The licensee found that the self-cleaning strainer was having difficulty rotating during uncoupled runs. The motor was found to be functional and not the cause of the self-cleaning strainer trip. The self-cleaning strainer was then opened for further investigation. The licensee identified that one out of the three stainless steel support rods on the self-cleaning strainer basket was missing while another was halfway out of its position. The misposition of the support rods was causing the backwash to be misaligned during rotation, causing the motor to trip.

The licensee determined that the missing support rod would likely be found downstream of the self-cleaning strainer in the underground ECW discharge piping. This was determined by the process of elimination of not finding the support rod in the barrel of the basket and not upstream of the strainer. The support rod had adequate clearance between the strainer drum and the inner diameter of the strainer vessel as the rod location positioned in the direction of the strainer discharge piping. The second support rod that was found partially withdrawn from the basket did not have the clearance to completely dislodge; the strainer vessel wall precluding further movement. The licensee obtained vendor support to insert a robot into the underground discharge piping to search and retrieve the support rod. The support rod was found and recovered on January 29, 2022. The overhaul preventive maintenance activity was performed in parallel with the foreign material retrieval activity.

The licensee reviewed the three support rods and the self-cleaning strainer basket; it was found that the cause of the two support rods coming out of the basket was due to the lack of adequate staking done to the rods and the basket. It was clear during the inspection of the components that the remaining support rod that stayed secured in its position had more staking done than the other two dislodged support rods. During the ECW self-cleaning strainer overhauls, the maintenance procedure gave mechanical maintenance personnel the option to the stake the rods and the basket when these support rods are adjusted or to tighten the rods with a washer and a nut on the outside of the basket structure if the rod length is long enough. The inspectors determined that the licensee had failed to provide adequate instructions for staking the threads on the support rods for Essential Cooling Water Self-Cleaning Strainer 1B. Specifically, the procedure did not include sufficient instructions, stipulations, and limitations for the staking method.

Corrective Actions: The licensee entered this issue into their corrective action program as Condition Report 22-799 and preformed an overhaul of the Essential Cooling Water Self-Cleaning Strainer 1B. The licensee review of all the past work orders of the self-cleaning strainer overhaul preventive maintenance activities for all the other five ECW trains, it was identified that ECW 2B self-cleaning strainer had its support rods tighten by staking. The overhaul of ECW 2B self-cleaning strainer will be performed during the week of May 9, 2022, under work authorization No. 635546 to have the support rods tighten by washers and nuts.

Corrective Action References: Condition Report 2022-799

Performance Assessment:

Performance Deficiency: The failure to provide an adequate procedure for maintenance on safety-related equipment was a performance deficiency. Specifically, the licensee failed to provide adequate instructions for staking the threads on the support rods for the Essential Cooling Water Self-Cleaning Strainer 1B which resulted in the Essential Cooling Water Motor Strainer 1B being automatically tripped.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Procedure Quality 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, the licensee failed to provide adequate instructions for staking the threads on the support rods for the Essential Cooling Water Self-Cleaning Strainer 1B, which resulted in the Essential Cooling Water Strainer Motor 1B being automatically tripped.

Significance: The inspectors assessed the significance of the finding using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power.” The inspectors determined that the finding had very low safety significance (Green) because they answered no to all the questions in IMC 0609, Appendix A, Exhibit 2, Mitigating Systems Screening Questions.

Cross-Cutting Aspect: H.12 - Avoid Complacency: Individuals recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Individuals implement appropriate error reduction tools. Specifically, the insufficient detail in the procedure was unrecognized and the appropriate error reduction tools were not implemented.

Enforcement:

Violation: Technical Specification 6.8.1.a requires, in part, that written procedures shall be established, implemented, and maintained in accordance with Appendix A of Regulatory Guide 1.33, Revision 2, February 1978, including Section 9.a, which states, maintenance that can affect the performance of safety-related equipment should be properly pre-planned. The licensee established procedure, 0PMP04-EW-0003, “Essential Cooling Water Self-Cleaning Strainer Maintenance,” Revision 22. Step 5.4.5.3.h states, in part, that if the threaded end of the rod allows installation, then install washers and locknuts on the outside of the strainer drum. Step 5.4.5.3.i states, in part, to tighten locknuts wrench tight or stake housing support rod threads to drum.

Contrary to the above, on March 6, 2019, the licensee failed to establish an adequate maintenance procedure, 0PMP04-EW-0003, “Essential Cooling Water Self-Cleaning Strainer Maintenance,” Revision 22, for preforming staking to the rods and the basket during

Steps 5.4.5.3.h and 5.4.5.3.i. Specifically, the procedure did not include sufficient instructions, stipulations, and limitations for the staking method. This caused of the two support rods in the strainer to fail resulting in the Essential Cooling Water Strainer Motor 1B trip.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

EXIT MEETINGS AND DEBRIEFS

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

- On April 7, 2022, the inspectors presented the integrated inspection results to Kym Harshaw, Executive Vice President, Chief Nuclear Office, and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Corrective Action Documents	CR-YYYY-NNNN	2022-799, 2022-910	
	Corrective Action Documents Resulting from Inspection	CR-YYYY-NNNN	2022-451, 2022-452, 2022-453, 2022-454, 2022-498, 2022-499	
	Procedures	0POP02-DG-0001	Emergency Diesel Generator 11(12)	71
		STP FSAR	Sections 8.3.2.1.1, 8.3.2.1.2, 8.3.2.1.3, Class 1E Batteries	
	Drawings 71111.04	9-E-DJAA-01, #1, #2	Single Line Diagram, 125V DC Class 1E Distributions Switchboard, E1A11 (Channel I)	
		9-E-DJAB-01, #1, #2	Single Line Diagram, 125V DC Class 1E Distribution Switchboard, E1D11 (Channel II)	
		9-E-DJAC-01, #1, #2	Single Line Diagram, 125V DC Class 1E Distribution Switchboard, E1B11 (Channel III)	
		9-E-DJAD-01, #1, #2	Single Line Diagram, 125V DC Class 1E Distribution Switchboard, E1C11, (Channel IV)	
		0-E-AAAA-01#1, #2	Main One Line Diagram	
		9-E-DJAE-01, #1, #2	Single Line Diagram 125V DC Class 1E Distribution Panels	
		9-E-DJAF-01, #1, #2	Single Line Diagram 125V DC Class 1E Distribution Panels	
	Design Criteria	4E520EQ1006	Class 1E 125V DC Control Power System	
	Design Basis Document	5N049EB111	Station Blackout	
	Calculations	EC6066	Class 1E 125 VDC Battery Float & Equalize Voltage	
71111.05	Procedures	0FHB35-FP-0306	Fire Preplan Fuel Handling Building Train B SI/CSS Cubical	3
		0TGB78-FP-0703	BOP Diesel Generator Building Elevation 31'	4
		0TGB90-FP-0714	83' Elevation and Stairwells	4
71111.06	Work Orders	Work Authorization	619991	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		Number		
71111.12	Corrective Action Documents	CR-YYYY-NNNN	2022-235, 2022-616, 2022-672, 2022-799, 2022-910, 2022-721	
	Work Orders	Work Authorization Number	617593	
71111.15	Corrective Action Documents	CR-YYYY-NNNN	2022-269, 2022-327, 2022-621, 2022-573, 2022-799, 2022-721, 2022-1953, 2022-1942, 2022-2113	
71111.18	Corrective Action Documents	CR-YYYY-NNNN	2022-650	
71111.19	Corrective Action Documents	CR-YYYY-NNNN	2022-799	
	Procedures	0PSP03-AF-0010	Auxiliary Feedwater System Valve Operability	30
	Work Orders	Work Authorization Number	610936, 616527, 639722, 656266, 634921, 632005, 636169, 606128	
71111.22	Procedures	0PSP03-AF-0007	Auxiliary Feedwater Pump 14(24)	60
		0PSP03-RS-0001	Control Rod Operability	39
	Work Orders	Work Authorization Number	62479, 596366	
71114.06	Procedures	0ERP01-ZV-IN01	Emergency Classification	11
		0ERP01-ZV-IN01	Emergency Classification	11
		0ERP01-ZV-IN02	Notifications to Offsite Agencies	35
		0POP05-EO-EO00	Reactor Trip or Safety Injection	26
		0POP05-EO-EO00	Reactor Trip or Safety Injection	26
71152A	Corrective Action Documents	CR-YYYY-NNNN	2022-650, 2022-910, 2022-799, 2022-721	