UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

October 19, 2021

Ms. Cheryl A. Gayheart
Regulatory Affairs Director
Southern Nuclear Operating Company, Inc.
3535 Colonnade Parkway
Birmingham, AL 35243

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT – INTEGRATED INSPECTION REPORT 05000321/2021003 AND 05000366/2021003

Dear Ms. Gayheart:

On September 30, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Edwin I. Hatch Nuclear Plant. On October 19, 2021, the NRC inspectors discussed the results of this inspection with Sonny Dean and other members of your staff. The results of this inspection are documented in the enclosed report.

One finding of very low safety significance (Green) is documented in this report. This finding involved a violation of NRC requirements. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violation or the significance or severity of the violation 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 II; the Director, Office of Enforcement; and the NRC Resident Inspector at Edwin I. Hatch Nuclear Plant.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document

Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, “Public Inspections, Exemptions, Requests for Withholding.”

Sincerely,

/RA/

Alan J. Blamey, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos. 05000321 and 05000366
License Nos. DPR-57 and NPF-5

Enclosure: As stated

cc w/ encl: Distribution via LISTSERV®

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT – INTEGRATED INSPECTION REPORT 05000321/2021003 AND 05000366/2021003- DATED OCTOBER 19, 2021

DISTRIBUTION:
M. Kowal, RII
S. Price, RII
L. Gibson, RII
RidsNrrPMHatch Resource
RidsNrrDro Resource
PUBLIC

ADAMS ACCESSION NUMBER: **ML21292A342**

X SUNSI Review		X Non-Sensitive ☐ Sensitive		X Publicly Available ☐ Non-Publicly Available	
OFFICE	RII: DRP	RII: DRP	RII: DRP		
NAME	RSmith	JHickman	ABlamey		
DATE	10/07/2021	10/08/2021	10/19/2021		

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000321 and 05000366
License Numbers:	DPR-57 and NPF-5
Report Numbers:	05000321/2021003 and 05000366/2021003
Enterprise Identifier:	I-2021-003-0010
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Edwin I. Hatch Nuclear Plant
Location:	Baxley, GA
Inspection Dates:	July 01, 2021 to September 30, 2021
Inspectors:	J. Hickman, Resident Inspector R. Smith, Senior Resident Inspector
Approved By:	Alan J. Blamey, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Edwin I. Hatch Nuclear Plant, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to https://www.nrc.gov/reactors/operating/oversight.html for more information.

List of Findings and Violations

Inoperability of 2D Residual Heat Removal (RHR) Pump Due to Inadequate Maintenance Procedural Instructions for Recoupling Pump and Motor			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000366/2021003-01 Open/Closed	None (NPP)	71152
A self-revealing Green non-cited violation of Unit 2 Technical Specification (TS) 5.4.1(a) was identified for the licensee's failure to incorporate adequate maintenance procedural instructions for the recoupling of the residual heat removal (RHR) pump and motor as recommended by Regulatory Guide (RG) 1.33, section 9.a. Specifically, procedure 52PM-E11-003-2, "RHR Pump and Motor Maintenance," Version 9.4 did not contain instructions to verify the tightness of the motor coupling nut set screws in 2D RHR pump to prevent the pump shaft downward movement within the pump, thus causing pump failure and pump inoperability.			

Additional Tracking Items

None.

PLANT STATUS

Unit 1 began the inspection period completing a shutdown that was started on June 30, 2021. The shutdown was performed to repair turbine temperature switches that were erroneously causing half group one signals on the A2 channel due to instrument drift. On July 4, 2021, after repairs to the turbine temperature switches were made, the unit was restarted. The unit returned to 100 percent rated thermal power (RTP) on July 10, 2021. On July 15, 2021, the unit was down powered to 50 percent RTP to perform investigation and repairs due to a condenser tube leaks resulting in an increase in reactor coolant chlorides. After repairs were made by plugging leaking condenser tubes, the unit was returned to 100 percent RTP on July 19, 2021. On August 3, 2021, the unit scrammed on low reactor water level caused by loss of normal feedwater. The loss of feedwater was caused from a loss of power to the electrical bus powering feedwater pump controls. After repairs were made by restoring power to the electrical bus, the unit was restarted and returned to 100 percent RTP on August 9, 2021. On September 19, 2021, the unit was down powered to 70 percent RTP to perform a rod pattern adjustment and turbine valve testing, and the unit returned to 100 percent RTP on September 21, 2021, following completion of those activities. The unit operated there for the remainder of the inspection period.

Unit 2 began the inspection period at 100 percent RTP. On September 11, 2021, the unit was down powered to 70 percent RTP to perform a rod pattern adjustment and turbine valve testing, and the unit was returned to 100 percent RTP the same day. The unit operated there for the remainder of the inspection period.

INSPECTION SCOPES

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

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), resident and regional inspectors were directed to begin telework and to remotely access licensee information using available technology. During this time, the resident inspectors performed periodic site visits each week, increasing the amount of time on-site as local COVID-19 conditions permitted. As part of their on-site activities, resident inspectors conducted plant status activities as described in IMC 2515, Appendix D; conducted routine reviews using IP 71152, “Problem Identification and Resolution,” 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

71111.04 - Equipment Alignment

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

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

(1) Alignment of the Unit 2 residual heat removal (RHR) system following a pump operability test the previous day, using 34SO-E11-010-2, on July 21, 2021.
(2) Alignment of the Unit 1 plant service water (PSW) system following 1B PSW pump motor replacement, using 34SO-P41-001-1, on July 30, 2021.
(3) Alignment of the Unit 1 core spray (CS) system, 'A' Loop, during CS loop 'B' valve operability test, using 34SO-E21-001-1, on August 17, 2021.
(4) Alignment of the Unit 1 CS system, 'A' Loop, during loop 'B' pump operability test, using 34SO-E21-001-1, on August 18, 2021.

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (6 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 standby gas treatment system room on July 14, 2021.
(2) Unit 2 reactor core isolation cooling system room on July 15, 2021.
(3) Unit 2 reactor building 158'/164' elevation on July 20, 2021.
(4) Unit 1 and 2 intake structure on July 28, 2021.
(5) Unit 1 and 2 emergency diesel generator (EDG) building on August 19, 2021.
(6) Unit 1 and 2 control building 112' elevation, on August 20, 2021.

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 reactor building northwest control rod drive (CRD) compartment
- Unit 1 reactor building northeast residual heat removal (RHR) and core spray (CS) compartment
- Unit 1 reactor building southeast RHR and CS compartment
- Unit 1 reactor core isolation cooling (RCIC) southwest compartment
- Unit 1 high pressure core cooling (HPCI) compartment

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 plant startup, following the forced maintenance outage on July 6, 2021. The inspectors observed non-critical heat-up due to a positive moderator coefficient, rod pull to criticality and to the point of adding heat, and observed the operating crew establish a controlled heat-up rate within technical specification limits.

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

(1) The inspectors observed and evaluated "License Operator Just in Time Training" (JITT) H-LOCT 21-026 "U1 MOC Startup," for one team during simulator training on July 1, 2021.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (1 Sample)

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

(1) Review of the Unit 1 high pressure coolant injection (HPCI) system following failures of various HPCI components, on September 24, 2021.

71111.13 - Maintenance Risk Assessments and Emergent Work Control

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

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

(1) Unit 1 elevated risk due to the trip of the 1B PSW pump, from July 19 to July 30, 2021.
(2) Unit 1 elevated risk following reactor trip and being in shutdown cooling, 31GO-OPS-024-0, Outage Safety Assessment dated August 4, 2021.
(3) Unit 1 elevated risk due to unplanned inoperability of the 1C PSW pump, from August 26 to September 16, 2021.
(4) Unit 1 elevated risk due to unplanned inoperability of the HPCI system due to HPCI discharge valve failing to open, from September 8 to September 10, 2021.
(5) Unit 1 elevated risk due to limited condition of operation (LCO) extension for the 1C PSW pump, from 30 days to 45 days, September 21 to September 28, 2021.

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (7 Samples)

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

(1) Condition Report (CR) 10810391, Unit 1 "B" Recirculation Discharge Valve did not close on demand on July 3, 2021.

(2) CR 10812018, Unit 2 "A" Emergency Diesel Generator (EDG) Fuel Oil Transfer Pump seal leak of 0.5 to 1.0 GPM on July 12, 2021.
(3) CR 10813948, Unit 1 "B" plant service water (PSW) pump trip on July 19, 2021.
(4) CR 10817764, Unit 1 high pressure coolant injection (HPCI) main pump mechanical seal leak, inboard seal on August 3, 2021.
(5) CR 10822020, Unit 1 "B" HPCI pump room cooler leak on August 25, 2021.
(6) CR 10823851, Unit 1 "C" PSW pump foreign material analysis, effects on 1A and 1B PSW pumps on September 2, 2021.
(7) CR 10827289, Unit 2 "A" EDG battery with cell 27 jar cracked through the side wall on September 15, 2021.

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) Temporary modification to bypass air around solenoid valves 1N11-F036A and 1N11-F036B, as their failure would result in the loss of the steam jet air ejector on Unit 1 and result in a subsequent greater than 20 percent down power.
(2) Permanent modification to the upper and lower seismic restraints on 1C PSW pump due to excessive contact with the pump column preventing proper alignment of the pump.

71111.19 - Post-Maintenance Testing

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

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

(1) NMP-ES-017-020, "MOV Electrical Checkout and Adjustments for SMB/SB Actuators," Version 6.5, and 34SV-B31-001-1, "Recirculation System Valve Operability," Version 7.10, following motor replacement of the 1B recirculation discharge motor operated valve on July 4, 2021.
(2) 34SV-R43-002-1, "Diesel Generator 1B Monthly Test," Version 24.6, following the troubleshooting and replacement of the fuel oil filter differential pressure gage on July 14, 2021.
(3) 34SV-P41-001-1, "Plant Service Water Pump Operability," Version 15.2, following the replacement of 1B plant service water pump motor on July 30, 2021.
(4) 34SV-B31-001-1, "Recirculation System Valve Operability," Version 7.11, after replacement of fuse clips in the valve breaker for 1B31-F031B discharge valve for 'B' recirculation loop, on August 5, 2021.
(5) SNC1171149, Functional test of auto transfer time delay relay for turbine building switchgear 1R23S021, following relay replacement on August 6, 2021.
(6) 34SV-P41-001-1, "Plant Service Water (PSW) Pump Operability," Version 15.2, following the replacement of 1C PSW pump on September 28, 2021.

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (2 Samples)

(1) The inspectors evaluated forced outage activities on Unit 1, due to turbine building temperatures switches causing half group I signals on the A2 channel, from June 30, 2021 to July 6, 2021.
(2) The inspectors evaluated forced outage activities on Unit 1, caused by a reactor scram resulting from a loss of normal feed water, from August 3 to August 8, 2021.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

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

(1) 34SV-R43-012-2, "Diesel Generator 1B 24 Month Operability Test," Version 8.1, on August 11, 2021.

Inservice Testing (IP Section 03.01) (1 Sample)

(1) 34SV-E11-001-1, "Residual Heat Removal Pump Operability IST," Version 30.1, on July 15, 2021.

71114.06 - Drill Evaluation

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

The inspectors evaluated:

(1) Licensed reactor operators respond to a Reactor Scram with Anticipated Transient Without a Scram (ATWS) in the simulator and observed the crew make an emergency declaration and notification. This represented a drill and exercise performance opportunity on July 6, 2021.

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, 2020–June 30, 2021)
(2) Unit 2 (July 1, 2020–June 30, 2021)

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

(1) Unit 1 (July 1, 2020–June 30, 2021)
(2) Unit 2 (July 1, 2020–June 30, 2021)

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

(1) Unit 1 (July 1, 2020–June 30, 2021)
(2) Unit 2 (July 1, 2020–June 30, 2021)

71152 - Problem Identification and Resolution

Annual Follow-up of Selected Issues (IP Section 02.03) (2 Samples)

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

(1) The 1D residual heat removal service water pump (RHRSW) failure caused by the pump shaft seizing to the mechanical seal box in the discharge head.
(2) Inoperability of 2D residual heat removal (RHR) pump due to inadequate maintenance procedural instructions for recoupling pump and motor.

71153 - Follow Up of Events and Notices of Enforcement Discretion

Event Followup (IP Section 03.01) (2 Samples)

(1) The inspectors evaluated the Unit 1 reactor scram caused by loss of normal reactor feed water and licensee's response on August 3, 2021.
(2) The inspectors evaluated the unplanned inoperability of the 1C PSW pump caused by the shaft shearing, on August 26, 2021.

INSPECTION RESULTS

<table>
<tr><td colspan="4">Inoperability of 2D Residual Heat Removal (RHR) Pump Due to Inadequate Maintenance Procedural Instructions for Recoupling Pump and Motor</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 05000366/2021003-01
Open/Closed</td><td>None (NPP)</td><td>71152</td></tr>
<tr><td colspan="4">A self-revealing Green non-cited violation of Unit 2 Technical Specification (TS) 5.4.1(a) was identified for the licensee's failure to incorporate adequate maintenance procedural instructions for the recoupling of the residual heat removal (RHR) pump and motor as recommended by Regulatory Guide (RG) 1.33, section 9.a. Specifically, procedure 52PM-E11-003-2, "RHR Pump and Motor Maintenance," Version 9.4 did not contain instructions to verify the tightness of the motor coupling nut set screws in 2D RHR pump to prevent the pump shaft downward movement within the pump, thus causing pump failure and pump inoperability.</td></tr>
<tr><td colspan="4">Description: On April 16, 2021, the 2D RHR Pump was operating in torus cooling mode and after approximately 10 minutes of pump operation, an overcurrent annunciator OVLD/Lockout Relay trip was received. The annunciator response procedure was entered, the 2D RHR pump was manually secured, and TS LCO 3.5.1 A(1) was subsequently entered. After initial troubleshooting, another pump run was attempted that resulted in an automatic pump trip.

Following the second attempted pump run, the 2D RHR pump was disassembled, and the</td></tr>
</table>

first stage impeller was found bound to the suction head wear ring. During the pump repair, the mechanics working on the mechanical seal observed that the motor coupling nut set screws were loose. The design/intent of the set screws is to hold the motor coupling nut stationary. Due to these set screws being loose during each pump start, the combination of shaft loading/unloading on the nut caused significant torque leading to the coupling nut loosening. During the nut loosening process from each start, the pump shaft moved downward within the pump. This caused the first stage impeller to come in contact (rub) with the suction head wear ring and resulted in it grinding/cutting into the wear ring. The binding together of the impeller and wear ring caused the overcurrent in the motor that resulted in the overcurrent annunciator OVLD/Lockout Relay trip seen in the control room.

The motor for 2D RHR pump was replaced on March 4, 2019. At the time, the motor coupling was disconnected, and the licensee failed to ensure the set screws were tightened down as required. The cause of the improper maintenance was inadequate procedural guidance for the process of tightening the motor half coupling nut set screws. During the creation of the maintenance procedure 52PM-E11-003-2 in 1991, information from the vendor manual pertaining to a referenced General Electric (GE) Service Information Letter (SIL) #417, was not transferred from the RHR Pump maintenance vendor manual to the new pump maintenance procedure. GE SIL #417 was provided to Plant Hatch on January 14, 1985. The SIL was a warning to affected utilities that the motor half coupling nut could loosen and lead to pump failure if the set screws were not installed and tightened properly. The licensee responded to GE SIL #417 by revising the vendor manual SX27070 with an As Built Notice (ABN), however failed to transfer this information over to their revised procedure in 1991.

Corrective Actions: The licensee entered this pump failure event into their corrective action program. The licensee repaired 2D RHR pump by properly reinstalling/tightening the motor coupling set screws and by replacing the pump rotating assembly/suction head. Additionally, the licensee verified the clearance between the mechanical seal gland plate and collar on all remaining Ingersoll Rand Pumps met requirements and no movement of the coupling nuts had occurred to other similar pumps. The licensee also revised their procedure 52PM-E11-003-2, incorporating instructions to apply thread-locker to coupling nut set screws and to ensure they were properly tightened to reduce the likelihood of this type of event occurring again.

Corrective Action References: Condition reports (CRs) 10791097 and 10801317; technical evaluations (TE) 1090830, 1090831, 1090832, 1090833, 1090834 and 1090835 corrective action report (CAR) 279192.

Performance Assessment:

Performance Deficiency: The failure to provide appropriate procedures, instructions, or drawings for maintenance that could affect the performance of safety-related equipment per TS 5.4.1 and Regulatory Guide 1.33 was a performance deficiency. Specifically, there were no instructions or drawings to verify the tightness of the motor coupling nut set screws to prevent shaft downward movement within the pump.

Screening: The inspectors determined the performance deficiency was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the 2D RHR pump failed due to incorrect

maintenance by the licensee when they failed to tighten the motor half coupling nut with set screws, resulting in an out of service time for the pump greater than its normal TS outage limit.

Significance: The inspectors assessed the significance of the finding using Appendix A, "The Significance Determination Process (SDP) for Findings At-Power." The affected cornerstone was Mitigating Systems, as determined by Inspection Manual Chapter (IMC) 0609, Attachment 4, "Initial Characterization of Findings." Utilizing IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the performance deficiency required a detailed risk evaluation because the degraded condition represented a loss of the PRA function of one train of a multi-train TS system for greater than its TS allowed outage time.

A regional Senior Reactor Analyst (SRA) conducted a detailed risk evaluation using the guidance in IMC 0609 Appendix A and the Risk Assessment Standardization Project (RASP) Handbook. The SRA modelled the condition using the Hatch Unit 1&2 SPAR model version 8.58 dated February 28, 2017, and SAPHIRE 8 Version 8.2.3. The exposure period was divided into two periods. First, the 10-day period from the last run of the 2D RHR pump on April 13, 2021 until April 22, 2021, when the one-time emergency TS amendment was approved and the second from April 22, 2021, until the 2D RHR pump was declared operable on April 29, 2021. During the second period, the compensatory actions required by the emergency TS were credited. The issue was modelled as a failure to start of the 2D RHR pump, due to the failure mechanism failure to run was not considered. The dominant accident sequences included several fire scenarios and a loss of condenser heat sink event with a failure of RHR, late injection and containment venting functions. For the first 10-day period, risk was determined to be 5.042E-7 core damage events per year. For the final seven-day period, the risk was 4.482E-8 core damage events per year. Thus, total risk for the exposure period was 5.49E-7 core damage events per year, which makes this a finding of very low safety significance (Green).

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

Enforcement:

Violation: Hatch Unit 2 Technical Specification 5.4.1.(a) "Procedures," states, in part, that written procedures shall be implemented covering the applicable procedures recommended in Appendix 'A' of Regulatory Guide 1.33, February 1978. Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)", Appendix A, Paragraph 9.a, "Procedures for Performing Maintenance," requires that "maintenance that can affect the performance of safety-related equipment should be properly pre-planned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances."

Contrary to the above, on March 4, 2019, maintenance procedure 52PM-E11-003-2 did not provide procedures, instructions, or drawings regarding 2D RHR pump motor replacement that were appropriate to the circumstances. Specifically, there were no instructions or drawings to verify the tightness of the motor coupling nut set screws to prevent shaft downward movement within the pump.

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 October 19, 2021, the inspectors presented the integrated inspection results to Sonny Dean and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.04	Corrective Action Documents	10750927, 10805421		
	Drawings	H-16331	Unit 1 Core Spray P&ID	38.0
		H-26014	RHR System P&ID Sheet 1	65.0
		H-26015	RHR System P&ID Sheet 2	60.0
	Procedures	34SO-E11-010-2	Residual Heat Removal System	44.5
		34SO-E21-001-01	Core Spray System	24.8
		34SO-P41-001-1	Plant Service Water System	36.19
		34SV-E21-001-01	1E21C001B ISI Core Spray Pump Operability	24.1
		34SV-E21-002-1	1E21 B Loop Core Spray Valve Operability	12.5
	Work Orders	SNC1112235		
		SNC1112410		
71111.05	Corrective Action Documents Resulting from Inspection	CR10814348		07/20/2021
	Fire Plans	Drawing A-34965, Sheet 100	Unit 2 Reactor Core Isolation Cooling Pump and Turbine Room	3.0
		Drawing A-43965, Sheet 66	Unit 1 Standby Gas Treatment Room	4.0
		NMP-ES-035-019-GL01-F31	U2 Reactor Building EL 158/164	1.0
		NMP-ES-035-019-GL02-F06	Diesel Generator Building El. 130 Fire Plan	1.0
		NMP-ES-035-019-GL02-F07	Intake Structure	1.0
		NMP-ES-035-019-GL2-F01	Pre-Fire Plan for Control Building 112’ elevation	1.0
71111.06	Miscellaneous	HNP-1-FSAR	Sections 5.2.1, 5.6.1, 5.6.3, 6.4.1 and Figure 4.10-5	24/35/19
	Procedures	34AB-T22-003-1	Secondary Containment Control	5.18
		34AB-T23-001-1	Loss Of Primary Containment Control	1.3
		34AB-T23-004-1	Torus Water Level	1.2

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.12	Corrective Action Documents	CAR278906		
		Condition Reports	10729060, 10729502, 10733510, 10733807, 10749660, 10751450, 10760865, 10760867, 10761652, 10761654, 10761877, 10766527, 10766528, 10766900, 10771285, 10786252, 10786424, 10788442, 10797061, 10804276, 10804392, 10805177, 10805246, 10805833, 10805897, 10705977, 10805981, 10806069, 10806554, 10817164, 10817776, 10818273, 10818320, 10818432, 10822785, 10823876, 10825511, 10825758, 10825818, 10826236, 10826251, 10826278	
	Miscellaneous	E41- 01- High Pressure Coolant Injection	Provide Adequate Core Coolant for Small Pipe Breaks that do Not Rapidly Depressurize the Reactor During a Design Basis Accident	
		E41- 02- High Pressure Coolant Injection	Provide Alternate RPV Control Functions During EOP Implementation	
	Procedures	34SO-E41-001-1	High Pressure Coolant Injection (HPCI) System	30.4
	Work Orders	SNC1171081		
71111.13	Miscellaneous	NL-21-0852 Attachment 4	Evaluation of Risk Impact and Compensatory Measures	09/21/2021
		S-2021-06	Implementation of Compensatory and Risk Management Controls for Technical Specification 3.7.2, Regarding One-Time Extension of Completion Time for 1C PSW Pump	09/21/2021
	Procedures	31GO-OPS-024-0	Outage Safety Assessment	4.1
		NMP-OS-010-002	Hatch Protected Equipment Logs	11.1
71111.15	Corrective Action Documents	10817764		08/03/2021
		10818432		08/05/2021
		10822020		08/22/2021
	Corrective Action Documents Resulting from Inspection	10822886		08/25/2021
	Engineering Evaluations	#308164	Station battery Cell Cracked - Indian Point Unit 3	10/09/2013
		#318147	Black Start Peaker Battery Cell Case Cracked - Fermi	08/01/2015

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		#324296	Battery Failure Due to Crack Cell - Indian Point Unit 2	08/24/2016
		#413848	Maintenance Discovers Crack in Safety Related Battery - Grand Gulf	09/12/2017
	Miscellaneous	Email from Electrical Maintenance Supervisor	2A EDG Battery Jumper	09/22/2021
		Email from Engineering Supervisor	2A EDG Battery 2R42-S002A Cell Operability	09/22/2021
	Operability Evaluations	2-08-02	Unit 1 and Unit 2 HPCI Mechanical Seal Leak	
		NMP-AD-012-F01	Operability Determination Support Basis - 1B HPCI Room Cooler	08/25/2021
	Procedures	34SV-E41-002-1	HPCI Pump Operability	33.2
	Work Orders	SNC372604		
71111.18	Drawings	A11015, Sheet 1	Edwin I. Hatch Nuclear Plant Unit 1 Seismic Restraints Plant Service Water	5.0
		SNC1163136TCC1		2.0
		SNC1163136TCC2		2.0
		SNC1163136TCC3		2.0
		SNC1163136TCC4		2.0
		SNC1163136TCC5		2.0
	Engineering Changes	Design Equivalent Change Package SNC1176825	1P41C Upper Seismic Restraint Alignment	09/06/2021
		SNC11631136	TCC to Bypass Air Around Solenoid Valves on 1N11-F036A and 1N11-F036B	06/15/2021
		SNC1163136	TCC to Bypass Air Around Solenoid Valves on 1N11-F036A and 1N11-F036B	01
	Miscellaneous	IP-ENG-001	Nuclear Industry Standard Process Engineering - Standard Design Process (EB-17-06)	2
	NDE Reports	51GM-MNT-065-0	Weld Process Control Sheet-ASME Safety Class Welds	09/08/2021
	Procedures	52PM-P41-036-1	Unit 1 Plant Service Water Pump & Motor Major Inspection/Overhaul	9.6

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		NMP-AD-008-F01	Applicability Determination	07/01/2021
		NMP-AD-008-F01	Applicability Determination	06/15/2021
		NMP-AD-010-F01	10 CFR 50.59 Screening	06/15/2021
		NMP-AD-010-F01	10 CFR 50.59 Screening	07/01/2021
		NMP-ES-025-002	Quality Control Inspection Planning	2.0
		NMP-ES-035-006-F05	Fire Protection Program Impact Screen for SNC1163136	7.0
		NMP-OS-003-F01	Operational Decision-Making Issue Worksheet	07/09/2021
	Work Orders	SNC1177052	Perform Modification of 1P41C001C -Upper Pump seismic restraint	09/08/2021
71111.19	Corrective Action Documents	10818216		08/05/2021
		10878391		08/05/2021
	Corrective Action Documents Resulting from Inspection	CR10830501		
		CR10830511		
		CR10830519		
		CR10830530		
	Procedures	34SV-B31-001-1	Recirculation System Valve Operability (8/5/2021)	7.11
		52PM-P41-036-1	Unit 1 Plant Service Water Pump and Motor Major Inspection/Overhaul	9.5
		NMP-MA-014	Post Maintenance Testing/Post Modification Testing	2.3
		NMP-MA-014-001	Post Maintenance Testing Guidance	5.7
		NMP-MA-019	Bolting and Torque Guidelines	5.1
	Work Orders	SNC1166472		
		SNC844572	1B Plant Service Water Motor replacement	07/29/2021
71111.20	Miscellaneous		Unit 1 Forced Outage List	08/06/2021
		SRO Event Report 21-01	Unit 1 Low Reactor Water Level Automatic Scram Due to Dual Reactor Feed Pump Trip (8/3/2021)	
	Procedures	31-GO-OPS-010-0	Scram / Transient Analysis (8/3/2021 Scram)	7.6
		52PM-MEL-026-0	MICROVERSA Trip Plus (MVT+) Overcurrent Trip Units	9.4
		NMP-RE-008-F01	Detailed Reactivity Management Plan	08/04/2021
71114.06	Miscellaneous	LORP Scenario H-LT-AF-00116	Loss of Control Rod Drive flow, 2C Plant Service Water pump trip, Reactor Feed Pump High Vibrations, ATWS, and Recirculation Pump Seal Failure.	06/21/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152	Corrective Action Documents	10741430		
		10791097		04/16/2021
		CAR277097		
		CAR279192		07/15/2021
		CAR279412		
	Engineering Evaluations	TE 1090830		
		TE 1090831		
		TE 1090832		
		TE 1090833		
		TE1057091		
		TE1090049		
		TE1090900		
		TE1091056		
71153	Corrective Action Documents	10817773, 10818433, 10818435		
	Drawings	H-13367	Single Line Diagram 120/208V, Station Switchgear 1A Sheet 1 of 2	32
		H-13367	Single Line Diagram 120/208V, Station Switchgear 1A Sheet 2 of 2	20
		H-13384	Elementary Diagram 600V and 208V Station Service	24