



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

November 4, 2021

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

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT – BIENNIAL PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000321/2021010 AND
05000366/2021010

Dear Ms. Gayheart:

On October 1, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Edwin I. Hatch Nuclear Plant. On September 30, 2021, the NRC inspectors discussed the results of this inspection with Mr. Sonny Dean and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for corrective action programs. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally, the team reviewed the station's programs to establish and maintain a safety-conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews the team found no evidence of challenges to your organization's safety-conscious work environment. Your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

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,

/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

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers: 05000321 and 05000366

License Numbers: DPR-57 and NPF-5

Report Numbers: 05000321/2021010 and 05000366/2021010

Enterprise Identifier: I-2021-010-0006

Licensee: Southern Nuclear Company

Facility: Edwin I. Hatch Nuclear Plant

Location: Baxley, GA

Inspection Dates: September 13, 2021 to October 01, 2021

Inspectors: T. Beck, General Engineer NRCAN
D. Hardage, Senior Resident Inspector
S. Mendez-Gonzalez, Allegations Specialist
R. Smith, Senior Resident Inspector
N. Staples, Senior Project Engineer

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 a biennial problem identification and resolution 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

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

Additional Tracking Items

None.

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), inspectors were directed to begin telework. In addition, 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.

OTHER ACTIVITIES – BASELINE

71152B - Problem Identification and Resolution

Biennial Team Inspection (IP Section 02.04) (1 Sample)

- (1) The inspectors performed a biennial assessment of the licensee's corrective action program, use of operating experience, self-assessments and audits, and safety conscious work environment (SCWE).
 - Corrective Action Program Effectiveness: The inspectors assessed the corrective action program's effectiveness in identifying, prioritizing, evaluating, and correcting problems. The inspectors also conducted an in-depth Corrective Action Program (CAP) review of the 600V Switchgear, 4160VAC/250DC Switchgear, and Reactor Pressure Vessel Isolation system.
 - Operating Experience: The inspectors assessed the effectiveness of the station's processes for use of operating experience.
 - Self-Assessments and Audits: The inspectors assessed the effectiveness of the licensee's self-assessments and audits.
 - Safety Conscious Work Environment: The inspectors assessed the effectiveness of the station's programs to establish and maintain a safety-conscious work environment.

INSPECTION RESULTS

Assessment	71152B
<p>1. Corrective Action Program Effectiveness</p> <p><u>Problem Identification:</u> The team determined that the licensee was effective in identifying problems and entering them into the corrective action program and that there was a low threshold for entering issues into the corrective action program. This conclusion was based on a review of the requirements for initiating condition reports as described in licensee procedures NMP-GM-002, "Corrective Action Program," NMP-GM-002-001, "Corrective Action Program Instructions," NMP-GM-002-002, "Effectiveness Review Instructions," and management's expectation that employees were encouraged to initiate condition reports. Additionally, site management was actively involved in the corrective action program and focused appropriate attention on significant plant issues.</p> <p><u>Problem Prioritization and Evaluation:</u> Based on the review of condition reports, the team concluded that problems were prioritized and evaluated in accordance with the condition report significance determination guidance in procedure NMP-GM-002. The team determined that adequate consideration was given to system or component operability and associated plant risk. The team determined that plant personnel had conducted cause evaluations in compliance with the licensee's corrective action program procedures and that cause determinations were appropriate, and considered the significance of the issues being evaluated.</p> <p><u>Corrective Actions:</u> Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the team determined that corrective actions were mostly timely, commensurate with the safety significance of the issues, and effective, in that conditions adverse to quality were corrected. For significant conditions adverse to quality, the corrective actions directly addressed the cause and generally prevented recurrence. The team reviewed condition reports and effectiveness reviews to verify that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to prevent recurrence were mostly sufficient to ensure corrective actions were properly implemented and were effective.</p> <p>Based on the samples reviewed, the team determined that the licensee's corrective action program complied with regulatory requirements and self-imposed standards. The licensee's implementation of the corrective action program adequately supported nuclear safety.</p> <p>2. Operating Experience</p> <p>The team determined that the station's processes for the use of industry and NRC operating experience information and for the performance of audits and self-assessments were effective and complied with all regulatory requirements and licensee standards. The implementation of these programs adequately supported nuclear safety. The team concluded that operating experience was adequately evaluated for applicability and that appropriate actions were implemented to address lessons learned as needed.</p> <p>3. Self-Assessments and Audits</p>	

The team determined that the licensee effectively performed self-assessments and audits to identify issues at a low level, properly evaluated those issues, and resolved them commensurate with their safety significance.

Self-assessments were generally detailed and critical. The team verified that condition reports (CRs) were created to document areas for improvement and findings resulting from self-assessments and verified that actions had been completed consistent with those recommendations. Audits of the quality assurance program appropriately assessed performance and identified areas for improvement. Generally, the licensee performed evaluations that were technically accurate.

4. Safety Conscious Work Environment

Based on interviews with plant staff and reviews of the latest safety culture survey results to assess the safety conscious work environment on site, the team found no evidence of challenges to the safety conscious work environment. Employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

EXIT MEETINGS AND DEBRIEFS

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

- On September 30, 2021, the inspectors presented the biennial problem identification and resolution inspection results to Mr. Sonny Dean and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Calculations	BPCCALC-385,V-1,B-9	Station Battery Room Hydrogen Calculation Unit 1 and 2	11/27/1992
71152B	Calibration Records	10640117		
71152B	Corrective Action Documents	Condition Reports	10810374, 10814269, 10815991, 10665395, 10758146, 10773773, 10784790, 10806706, 10774904, 10675289, 10651020, 10585063, 10604899, 10610185, 10579200, 10610186, 10708251, 10752156, 10755002, 10767351, 10767819, 10772386, 10772719, 10774323, 10788352, 10788453, 10807557, 10814865, 10710583, 10712793, 10714056, 10715356, 10719817, 10120249, 10704520, 10577066, 10577173, 10727122, 10727016, 10725720, 10724743, 10718509, 10706650, 10706493, 10750150, 10748800, 10743790, 10743498, 10740766, 10736020, 10789579, 10823230, 10791253, 10822020, 10823556, 10824457, 10825262, 10825340, 10816320, 10819300, 10819907, 10820706, 10821025, 10821850, 10821902, 10822259, 10823561, 10823876, 10823892, 10823905, 10823950, 10824756, 10825313, 10825533, 10662187, 10662149, 10661604, 10650975, 10783840, 10778355, 10776562, 10772704, 10772155, 10769827, 10766134, 10750052, 10745551, 10741526, 10735005, 10718778, 10718442, 10708040, 10690497, 10683741, 10678493, 10669275, 10644531, 10614864, 10699432, 10699998, 10678493, 10703997, 10708040, 10718778, 10735005, 10660835, 10592769, 10602071, 10609381, 10622405, 10626003, 10626004,	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			10660686, 10699432, 10722398, 10707710, 10731466, 10751877, 10781504, 10650975, 10661604, 10712920, 10762384, 10599312, 10606612, 10611235, 10615416, 10619875, 10627164, 10664027, 10664660, 10670443, 10670472, 10671911, 10673941, 10692481, 10692486, 10692644, 10694510, 10696523, 10694529, 10700491, 10702773, 10702784, 10708690, 10709123, 10711792, 10711926, 10715734, 10774818, 10815641, 10649708, 10705382, 10656334, 10660375, 10611579, 10664675, 10666810, 10683569, 10784272, 10800630, 10709279, 10766856, 10821874, 10827881, 10684253, 10738488, 10700491, 10712920, 10762384, 10610185, 10610186, 10650074, 10314651, 10327810, 103333178, 10731466, 10657734, 10675186, 10675289, 2011105213	
71152B	Corrective Action Documents	Corrective Action Report	276803, 277887, 275939, 276390, 277167, 277141, 276935, 276662, 276592, 275824, 275682, 275830, 278964, 277846, 275622, 277352, 277272, 277071, 276673, 276512, 276237, 279006, 276984, 276764, 275924, 278645, 277272, 278323, 278800, 275924, 277004, 277097, 277887, 275824, 279170, 275824, 276828, 277277, 276237, 276512, 276803, 276475, 276564,	
71152B	Corrective Action Documents Resulting from Inspection	Condition Reports	10827368, 10827438, 10827440, 10827441, 10827444, 10827456, 10827458, 10827459, 10829100, 10829169, 10831467, 10831471, 10831472	
71152B	Drawings	H-10018	Edwin I. Hatch Nuclear Power Plant Unit 1 & 2, File System Sheet 1	25.0
71152B	Drawings	H-10196	Edwin I. Hatch Nuclear Power Plant Unit 1 & 2,	24.0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			File System Sheet 2	
71152B	Engineering Evaluations	Technical Evaluation	1050145, 1060113, 1060093, 1060092, 1044116, 1043387, 1044112, 1044113, 1044114, 1044115, 1044117, 1044118, 1062788, 1047506, 1064163, 1064164, 1064165, 1050457, 1042139, 1048493, 1037636, 1040410, 1064324, 1064331, 1064327, 1064324, 1064728, 1052900, 1044918, 1044830, 1044832, 1044909, 1064902, 1038548, 1063781, 1059476, 1059928, 1059927, 1051712, 278055, 1061968, 1083801, 1083802, 1083803, 1088275, 1054714, 1057814, 1050305, 1042135, 1042136, 1042137, 1042138, 1042139, 1042140, 1042141, 1074890, 1086458, 1089215, 1098216, 1098217	
71152B	Miscellaneous	Action Tracking Number: 1050145	Assess Cognitive Trend Among System Operators Including Tagging Events and Determine if Training is a Solution	01/21/2020
71152B	Miscellaneous	Annunciator and Plant Component (APC) Sheet	2-13-028P, 1-21-049, 1-21-051 & 1-21-030	
71152B	Miscellaneous	BOS Training 19-06	Initial Lessons Learned from U2 SJAE Event	0.0
71152B	Miscellaneous	C & D Technologies	VLA Cell Cover Crack Impact to Safety-Related Function; Hydrogen Out Gassing	03/07/2016
71152B	Miscellaneous	Case Study: CR10685808/TE1063781	Dose Rate Alarm Received in Unposted High Radiation Area and Training Attendance Sheets	09/04,08,16/2020
71152B	Miscellaneous	H-EC-PP-19104	Hatch 2R25 Lessons Learned	1.0
71152B	Miscellaneous	H-LOCT-19-105	HIT - Command and Control, Decision-Making, Anticipate ED	06/25/2019
71152B	Miscellaneous	H-NL-PP-SOCT-DLA-12007B	Clearance and Tagging Tagout Review DLA	07/20/2020
71152B	Miscellaneous	LR-PG-00763	Plant Hatch Operating Philosophy	3.0
71152B	Miscellaneous	LR-PG-00763	Plant Hatch Operating Philosophy	05/20/2019
71152B	Miscellaneous	MR SSC Function Consolidation and Performance Criteria Selection Form	H-1(2) - B21 - Nuclear Boiler - B21-01 Pressure Control and B21-03 Rod Worth Minimizer	11/12/2019

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Miscellaneous	MRFF Assessment	Function: 2T23-01: Primary Containment	
71152B	Miscellaneous	NMP-GM-024-F04	Nuclear Safety Culture Leadership Team Report Template	05/19/2021 & 01/14/2021
71152B	Miscellaneous	Plant Hatch Long Range Buried Piping Replacement Plan	Unit 1 & 2, PSW & RHRSW	1.0
71152B	Miscellaneous	Plant Health Report	Unit 1 and 2 B21 Systems	08/01/2021
71152B	Miscellaneous	PMCR 95795, 95796		
71152B	Miscellaneous	S-2019-04	Standing Order - Actions To Improve Operations Performance (Interim Actions)	1.0
71152B	Miscellaneous	SOCT 20-2	Training Report for System Operator Continuing Training	
71152B	Miscellaneous	Standing Order	S-2021-4 - Calculating SBLC Storage Tanks Level	06/25/2021
71152B	Procedures	34AB-B21-003-1	Failure of Safety/Relief Valves	10.1
71152B	Procedures	34AR-652-207-2	Diesel GEN B Loading Timer Failure	3.3
71152B	Procedures	34AR-R43-218-1	Diesel GEN 1B Loading Timer Failure	2.2
71152B	Procedures	34GO-OPS-003-1	Startup System Status Checklist	14.8
71152B	Procedures	34GO-OPS-003-2	Startup System Status Checklist	15.4
71152B	Procedures	34SO-G11-013-1	Drywell & Reactor Building Sumps System	15
71152B	Procedures	34SO-G11-013-2	Drywell and Reactor Building Sumps Systems	2.1
71152B	Procedures	34SO-T48-002-2	Containment Atmospheric Control and Dilution Systems	02/12/2021
71152B	Procedures	51GM-TOL-002-0	Control of I&C Measuring and Test Equipment	6.6
71152B	Procedures	52GM-MME-015-1	Reactor Vessel Disassembly	22.5
71152B	Procedures	64CI-OCB-001-0	Main Stack Radiation Monitoring	13.6
71152B	Procedures	NMP-AD-012	Operability Determination	14.0
71152B	Procedures	NMP-GM-002	Corrective Action Program	16.0
71152B	Procedures	NMP-GM-002-001	Corrective Action Program Instructions	41.0
71152B	Procedures	NMP-GM-002-002	Effectiveness Review Instructions	5.3
71152B	Procedures	NMP-GM-002-GL03	Cause Analysis and Corrective Actions Guideline	30.2
71152B	Procedures	NMP-GM-016-002	Non-Corrective Action Program (CAP) Business Item Instructions	6.0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Procedures	NMP-GM-024	Nuclear Safety Culture Program	9.1
71152B	Procedures	NMP-GM-024-001	Nuclear Safety Culture Monitoring and Review Process	11.0
71152B	Procedures	NMP-MA-053	SNC Maintenance Department Measuring and Test Equipment Program (M&TE)	2.3
71152B	Procedures	NMP-OS-003-F01	Operational Decision-Making Worksheets - 1-20-006, 1-21-002, 1-21-003, and 2-21-002	
71152B	Procedures	NMP-OS-006-002	Aggregate Operator Impact Review Instruction	4.0
71152B	Procedures	NMP-OS-006-002	Attachment 1 Plant Hatch - Issue Challenging Operation of the Unit 1 and 2	09/29/2021
71152B	Procedures	NMP-OS-007-001	Conduct of Operations Standards and Expectations	18.1
71152B	Procedures	NMP-OS-026	License Administration	2.1
71152B	Procedures	NMP-OS-026	License Administration	2.1
71152B	Procedures	NMP-OS-026-F02	Senior Reactor Operator Reactivation for Core Alterations	1.0
71152B	Procedures	NMP-OS-028	Adverse Condition Monitoring Plans - 2B CBP Seal Leakage, 1A SJAE, and Unit 1 TB Chilled water System 1P63 & Leakage Detection system 1U61	
71152B	Procedures	NMP-OS-26-F02	Senior Reactor Operator Reactivation for Core Alterations	1.0
71152B	Procedures	NMP-SE-021	Security Search Processes	9.0
71152B	Procedures	NMP-TR-210-F01	Performance Analysis Worksheet - 1043387	07/30/2019
71152B	Procedures	SCM-PSC-002	Control of Supply Chain Department Measuring and Test Equipment	10.0
71152B	Self-Assessments	Fleet-MNT-2019	Nuclear Oversight Audit of Maintenance	01/11/2019
71152B	Self-Assessments	NMP-GM-003-F19	Pre--NRC 71111.11 Inspection	07/02/2020
71152B	Work Orders	SNC27631, SNC1064135, SNC1060123, SNC1061680,		

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		SNC1104277, SNC1166158, SNC1168821, SNC1168823, SNC1170060, SNC1178535, SNC1141325, SNC865287, SNC1119363, SNC1094683, SNC1104709, SNC1125938, SNC641095, SNC624498, SNC1145010, SNC1144098, SNC1141706, SNC1141472, SNC1071304, SNC1064135, SNC1060123, SNC1099581, SNC942938, SNC99646, SNC1141706, SNC1145010, SNC534219, SNC613456, SNC1057178, SNC1069622, SNC1058876, SNC1069175, SNC632608, SNC579408		

