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

November 5, 2019

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

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000321/2019013 AND 05000366/2019013

Dear Ms. Gayheart:

On September 27, 2019, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Hatch Nuclear Plant, Units 1 and 2. On September 26, 2019 the NRC inspectors discussed the results of this inspection with Mr. Edwin D. (Sonny) Dean Site Vice President and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the plant's corrective action program and the plant's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the plant 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 plant's processes for use of industry and NRC operating experience information and the effectiveness of the plant'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 plant's programs to establish and maintain a safety-conscious work environment and interviewed plant 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.

The NRC inspectors did not identify any finding or violation of more than minor significance.

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 10 CFR 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 – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000321/2019013 AND 05000366/2019013 Dated November 5, 2019

DISTRIBUTION:
S. Price, RII
M. Kowal, RII
L. Gibson, RII
OE Mail
PUBLIC
RidsNrrPMHatchResource

ADAMS ACCESSION NUMBER: ML19309C978

X SUNSI Review		X Non-Sensitive ☐ Sensitive		X Publicly Available ☐ Non-Publicly Available	
OFFICE	RII/DRP	RII/DFFI	RII/DRP	RII/DRS	RII/DRP
NAME	DMas	CStancil	JHickman	TSU	ABlamey
DATE	10/28/19	10/28/19 **/RA/ ABlamey**	10/28/19	10/28/19	11/05/19

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000321 and 05000366
License Numbers:	DPR-57 and NPF-5
Report Numbers:	05000321/2019013 and 05000366/2019013
Enterprise Identifier:	I-2019-013-0002
Licensee:	Southern Nuclear Operating Co., Inc.
Facility:	Edwin I. Hatch Nuclear Plant
Location:	Baxley, GA
Inspection Dates:	September 08, 2019 to September 26, 2019
Inspectors:	J. Hickman, Resident Inspector D. Mas-Penaranda, Project Engineer C. Stancil, Senior Fuel Facility Inspector T. Su, Reactor 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 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.

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.

- Corrective Action Program Effectiveness: The inspectors assessed the corrective action program's effectiveness in identifying, prioritizing, evaluating, and correcting problems.

- Operating Experience, Self-Assessments and Audits: The inspectors assessed the effectiveness of the plant's processes for use of operating experience, audits and self-assessments.

- Safety Conscious Work Environment: The inspectors assessed the effectiveness of the plant's programs to establish and maintain a safety-conscious work environment.

INSPECTION RESULTS

Assessment	71152B
1. Corrective Action Program Effectiveness Problem Identification: The inspectors determined that the licensee was effective in identifying problems and entering them into the corrective action program and 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 procedure NMP-GM-002, "Corrective Action Program," 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.	

Problem Prioritization and Evaluation: Based on the review of condition reports, the inspectors concluded that problems were prioritized and evaluated in accordance with the condition report significance determination guidance in procedure NMP-GM-002. The inspectors determined that adequate consideration was given to system or component operability and associated plant risk. The inspectors determined that plant personnel had conducted cause evaluations in compliance with the licensee's corrective action program procedures and cause determinations were appropriate, and considered the significance of the issues being evaluated.

Corrective Actions: Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors determined that corrective actions were 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 effectively prevented recurrence. The inspectors reviewed condition reports and effectiveness reviews to verify that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to preclude repetition (CAPRs) were sufficient to ensure corrective actions were properly implemented and were effective.

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.

2. Operating Experience

The inspectors 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 inspectors concluded that operating experience was adequately evaluated for applicability and that appropriate actions were implemented to address lessons learned as needed. The inspectors determined that the licensee was effective at performing self-assessments and audits to identify issues at a low level, properly evaluated those issues, and resolved them commensurate with their safety significance.

3. Self-Assessments and Audits

The inspectors determined that the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical. The inspectors 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 inspectors 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.

Minor Violation	71152B

Minor Violation: The team identified one minor violation of 10 CFR 54.29 (a)(1), Standards for issuance of a renewed license, which states that "managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under § 54.21(a)(1)" is a requirement. Updated Final Safety Analysis Report (FSAR) chapter 18 discusses how the licensee will meet this requirement. Specifically, section 18.2.16(B), Wetted Cable Activities, discusses the commitment to "maintain the water level below the routed cable." The licensee's failure to maintain water level below the routed cables as described in FSAR was a performance deficiency (PD).

Contrary to this requirement, multiple condition reports (CR) have identified pull boxes, with safety related cables that were submerged. Pull-boxes PB1-AA, PB1-W, PB1-AE, PB1-AM, PB1-AB and PB1-AJ had high water levels that submerged the cables several times during the time frame from 2012 to 2019. Specially, Plant Service Water cable 1P41C001A and 1P41C001C, which routed through pull box PB1-AA, exhibited cable degradation as indicated by the licensee's tan delta (TD) test results.

Screening: The inspectors determined the performance deficiency was minor. The PD was determined to be minor because although the cables were known to be repeatedly submerged, the licensee has implemented a PM program that performs TD test on the cables, to monitor degradation and replace the cable to ensure continued operability and functionality of the cable. Also, the team determine that the performance deficiency would not reasonably be viewed as a precursor to a significant event, if left uncorrected, the performance deficiency would not have the potential to lead to a more significant safety concern, the performance deficiency does not relate to a performance indicator that would not have caused the performance indicator to exceed a threshold, and the performance deficiency would not adversely affect the associated cornerstone objective.

Enforcement: This failure to comply with 10 CFR 54.29 (a)(1) constitutes a minor violation that is not subject to enforcement action in accordance with the NRC's Enforcement Policy. The licensee initiated CR 10649708 to document the condition.

Observation: Corrective Action Program Effectiveness	71152B

Operator Burdens, Workarounds, and Control Room Deficiencies

The inspectors performed a review of Operator Burdens, Workarounds, and Control Room Deficiencies. The inspectors observed that the Operations Performance Indicators for Control Room deficiencies were not meeting the goal of less than or equal to eight deficiencies 97% of the time over the past year. The inspectors observed that there continued to be material problems resulting in compensatory actions affecting Operators, as documented in CRs during this period. Although there were no defined workarounds, there

were numerous compensatory action requirements due to plant and control room deficiencies (Unit 1 with 15 and Unit 2 with 16) which created a cumulative impact to the operators. In October of 2018 the Corporate Functional Area Manager identified that Hatch did not perform the quarterly Aggregate Operator Impact review (CR 10546353), which would assess these cumulative impacts. The inspectors reviewed the 2018 fourth quarter Aggregate Operator Impact review and found the assessment conclusions did not detail the nature of the impact, the expected actions that would reduce the impact, or whether the work order priority was raised for four assessment areas rated as “Yellow”, as required by NMP-OS-006-002, Aggregate Operator Impact Review Instruction Version 2.2. The inspectors review of the 2019 second quarter Aggregate Operator Impact Review identified the licensee’s review, again did not detail the nature of the impact and actions to reduce the impact for five “Yellow” and one “Red” rated assessment areas (CR 10649106). Additionally, a “Red” rated assessment area also requires a condition report, which was not generated (CR 10647593). These issues were captured in the licensee’s corrective action program under the condition reports (CR) listed above.

The inspectors reviewed a cause determination report summary for a Nuclear Safety Review Board area for improvement that created a corrective action to review the Aggregate Operator Impact assessment with the operators monthly (CAR 276602), which should assist in establishing a detailed impact to operators and work order priorities.

EXIT MEETINGS AND DEBRIEFS

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

- On September 26, 2019, the inspectors presented the biennial problem identification and resolution inspection results to Mr. Edwin D. (Sonny) Dean Site Vice President and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Corrective Action Documents	Condition Report (CR) 10322670, 1035672, 10376061, 10382838, 10382949, 10384058, 10394854, 10398751, 10423345, 10436191, 10439652, 10439685, 10440145, 10441129, 10443004, 10445377, 10446627, 10452310, 10455235, 10458608, 10458693, 10460506, 10460865, 10461039, 10462099, 10463114, 10463685, 10471189, 10482986, 10483331, 10490316, 10490318, 10491460, 10494315, 10497330, 10503641, 10504996, 10506730, 10508514, 10509191, 10509236, 10509253, 10509935, 10512351, 10524244, 10525213,		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		10525233, 10525236, 10525887, 10526197, 10539657, 10540144, 10546353, 10548933, 10574618, 10574782, 10577264, 10579200, 10579232, 10579960, 10580065, 10582456, 10583074, 10585063, 10585867, 10585783, 10585867, 10586270, 10588709, 10591143, 10591504, 10592769, 10594302, 10594633, 10594635, 10599418, 10594968, 10601829, 10603492, 10603955, 10604132, 10607734, 10610185, 10610186, 10610196, 10611235, 10612038, 10616583, 10617753, 10619230, 10619830, 10620210, 10620226, 10620227, 10625975,		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		10627164, 10627536, 10628350, 10634922, 10635643, 10635649, 10635842, 10638972, 10639059, 10641139, 10645239, 10848082 Corrective Action Reports (CAR) 268718, 272275, 273910, 275619, 275824, 275864, 275939, 275982, 276602		
		CR 10582457, 10556842 CAR 275228 TE 1030941	Licensee Identified Violation (LIV) from 4Q18 Integrated Inspection	
		CRs: 10443379, WOs: SNC 896726 Tan Delta Plots: NMP-ES-051-002, 1C PSW Pump - 1P41C001C New, 1D PSW Pump - 1P41C001D new, 1E11C001A - R22-S005-ES1-M01, 1E11C001A 2017--08-30, 1E11C001B, 1E11C001B - R22-S0007-ES2-M01, 1E11C001C, 1E11C001C 2019-05-09, 1E11C001D, 1E11C001D Withstand, 1E11C002A - R22-S005-ES1-M05, 1E11C002A 2018-	Pull boxes discovered with higher than acceptable water levels during weekly inspection	12/28/2017

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		01-31, 1E11C002B - R22-S007-ES2-M05, 1E11C002B 2018-02-14, 1E11C002C - R22-S006-ES2-M07, 1E11C002C 2018-02-01, 1E11C002D - R22-S006-ES1-M05, 1E11C002D 2018-02-14, 1E21C001A - R22-S005-ES1-M07, 1E21C001A 2018-01-28, 1E21C001B - R22-S007-ES-M006, 1P41C001A - R22-S005-ES1-M02, 1P41C001A 2018-04-10, 1P41C001A 2018-04-10 Tan Delta, 1P41C001A Withstand Test, 1P41C001B - R22-S007-ES2-M03, 1P41C001B - R22-S007-ES2-M03, 1P41C001C, 1P41C001D, 1E11C001D Phase B 2018-08-17, 2E11C001A, 2E11C001C, 2E11C002A - EAE187M01, 2E11C002A 2019-01-28, 2E11C002B, 2E11C002BC002B 2019-02-01, 2E11C002C, 2E11C002C 2019-01-30, 2E11C002D, 2E11C002D 2019-		

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		02-17, 2E21C001A, 2E21C001A 2019-01-31, 2E21C001B, 2E21C001B 2019-02-19, 2P41C001A 2010-11-29, 2P41C001A 2018-03-25, 2P41C001C - PUE137M02, 2P41C001C short, R22-S007-ES-M02 Phase B,		
	Corrective Action Documents Resulting from Inspection	10649708	Cables Submergence in Various Pull Box	09/26/2019
		Condition Report (CR) 10645352, 10645692, 10647593, 10649106, 10649651		
	Drawings	B-28015	Unit 1 and 2 Isometric Drain Lines for Att 5 Racks	Revision 0
		B-45555	Seismic Configuration Control Requirements	Version 3.0
		H-16062	Nuclear Boiler System P&ID	Version 57.0
		H-16332	Unit No. 1 HPCI System P&ID	Version 67.0
		H-23352	Single Line Drawing Emergency Station Service	Ver. 24.0
		H-23358	Single Line Diagram 4160 V Bus 2 G	Revision 21.0
		H-23362	Single Line Diagram 600 V Bus 2C & 2D	Version 39.0
		H-26020	Unit No. 2 HPCI System P&ID	Version 62.0
		H26015	RHR System P&ID	Version 60.0
	Engineering Changes	C102092301E001	Secondary Containment Airlock R311A Door Strike Minor Modification	Version 1.0
		NMP-ES-084-001-F20	Configuration Change Evaluation: LED Lighting Project RX Bldg U1	Version 2.0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Diagonals, 130', 228'	
		TE 1042135, TE 1042136, TE 1042137, TE 1042138, TE 1042139, TE 1042141, TE 1045856, TE 1048493 (CAR) 275842 Work Orders, SNC 1000764, SNC 1000804, SNC 1000857, SNC 1000858, SBC 1000859, SNC 1000860, SNC 1000861, SNC 1000862, SNC 1---880, SNC 1001043, SNC 1001132, SNC 1001133	Various TE, CAR and WOs associated with 2R23-S004 '2D' Bus Tripped	
	Engineering Evaluations	TE 1025851, TE 1040661, TE 1039100, TE 1043387, TE 1042852, TE 1044112, TE 1044113, TE 1044114, TE 1044115, TE 1044116, TE 1044118, TE 1044119, TE 1044129, TE 1044131, TE 1044131,		
	Miscellaneous		Lighting Plan Maintenance Update	08/20/2019
			Maintenance Rule Expert Panel Meeting Agenda	09/17/2019
			CRD Daily Counts	09/24/2019
			HPCI System Health Report	Current
		LER 2018-03	SRV As Found Testing Results Out of Tolerance	Revision 00

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		NL-17-0328	Application to Revise Technical Specifications to Adopt TSTIF-542, Reactor Pressure Vessel Water Inventory Control	04/20/2017
		PMCR 88060	Create storage PM for item 642239	05/25/2017
		TE 1042135	Fatigue Management Program Review	5/6/2019
	Operability Evaluations	PDO 1-10-02	Wetted Cables	Revision 3
		PDO 1-17-003/2-17-004	Prompt Determination of Operability for 23 Safety Related Breakers failed to close on demand	10/24/2018
		PDO 1-18-006	Prompt Determination of Operability for Steam Leak on 1E41-F003, HPCI Steam Supply Outboard PCIV	Rev. 0
		PDO 2-18-002	Prompt Determination of Operability of Unit 2 RHR. while performing 34SV-E11-001-2, when RHR pump was started the min flow valve went closed an then back open.	02/01/2018
	Procedures	31GO-OPS-025	Reactor Pressure Vessel Water Inventory Control	Version 3.3
		34AR-603-902-1	ARP's For Control Panel 1H11-P603	Version No: 20.1
		34SO-B21-001-1	Automatic Depressurization System (ADS)	Version 12.12
		52CM-MNT-033-0	BETTIS 522C-SR Actuator Corrective Maintenance	Version 4.3
		52PM-L48-001-1	Unit 1 Secondary Containment Doors Preventive Maintenance	Version 9.2
		52PM-R24-004-2	Pan Assembly Cleaning and Inspection	Version 8.5
		57CP-C51-001-0	SRM Detector Testing	Version 5.0
		57CP-C51-001-0	SRM Detector Testing	Version %.0
		57CP-C51-002-0	IRM Detectpr Testing	Version 3.3
		57CP-C51-002-0	IRM Detector Testing	Version 3.3
		AG-MGR-01-0783	Processing Administrative Guidelines and Departmental Instructions	Version 6.2
		AG-MGR-68-0200N	Climbing On Plant Equipment	Revision 2

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		NEI 99-02	Regulatory Assessment Performance Indicator Guideline	Revision 7
		NMP -AD-006	Infrequently Performed Tests and Evolutions	Version 12.8
		NMP-ES-006	Preventive Maintenance Implementation and Continuing Equipment Reliability Improvement	Version 10.1
		NMP-ES-027	Maintenance Rule Program	Version 10.0
		NMP-ES-051	Cable Monitoring Program	Version 9.1
		NMP-ES-051-004	Pull Box Inspection Procedure	Version 5.2
		NMP-GM-002	Corrective Action Program	Version 15.1
		NMP-GM-002-001	Corrective Action Program Instructions	Version 38.1
		NMP-GM-002-002	Effectiveness Review Instructions	Version 5.2
		NMP-GM-002-GL03	Cause Analysis and Corrective Actions Guideline	Version 30.0
		NMP-OS-006-002	Aggregate Operator Impact Review Instruction	Version 2.2
		NUMARC 93-01	Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants	Revision 4A
		OS-BP-001	Operations Performance Indicators	Version 4.6
	Self-Assessments		HNP Aggregate Impact Review for 4th Quarter 2018	Version 0
			HNP Aggregate Impact Review for 2nd Quarter 2019	Version 0
	Work Orders	SNC1024503	Repair leak on HPCI Room cooler	06/03/2019
		SNC440323	Secondary Containment Airlock R311A Door Strike Modification	10/28/2019
		SNC841609	Secondary Containment Airlock R311A Horn and MCR Alarm	08/03/2017
		SNC880463	Secondary Containment Airlock R311A Lights	01/25/2019

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			Malfunctioning	
		SNC891848	Tech Spec 3.3.5.1-1(3d) has been identified as non-conservative, CST Level Switch (Swapover)	08/28/2017
		SNC922120	Investigate Unit 2 "A" RHR Minimum Flow Valve	09/27/2018
		SNC926414	Secondary Containment Airlock R311A Door Won't Stay Closed, Failed Interlock	07/21/2018
		SNC947221	Repair Concrete Removed for UT Inspection around U1 Core Spray Suction Line at CST	5/22/2018
		SNC955966	Repair of Insulation near 1E41F3025	