



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

February 13, 2019

Mr. Tom Vehec
Vice President
Southern Nuclear Operating Company, Inc.
Edwin I. Hatch Nuclear Plant
11028 Hatch Parkway North
Baxley, GA 31513

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT – NUCLEAR REGULATORY COMMISSION
INTEGRATED INSPECTION REPORT 05000321/2018004 AND
05000366/2018004

Dear Mr. Vehec:

On December 31, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Edwin I. Hatch Nuclear Plant Units 1 and 2. On January 31, 2019, the NRC inspectors discussed the results of this inspection with you 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. However, inspectors also documented a licensee-identified violation which was determined to be of very low safety significance in this report. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violations or significance of these NCVs, 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 the Edwin I. Hatch Nuclear Plant 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 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

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

Docket Nos.: 50-321, 50-366
License Nos.: DPR-57 and NPF-5

Enclosure:
IR 05000321/2018004, 05000366/2018004
w/Attachment: Supplemental Information

cc Distribution via ListServ

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INTEGRATED INSPECTION REPORT 05000321/2018004 AND
05000366/2018004 February 13, 2019

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NAME	ABlamey						
DATE	2/13/2019						

U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number(s): 50-321, 50-366

License Number(s): DPR-57, NPF-5

Report Number(s): 05000321/2018004; and 05000366/2018004

Enterprise Identifier: 2018-004-0040

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Edwin I. Hatch Nuclear Plant

Location: Baxley, Georgia

Inspection Dates: October 1, 2018 to December 31, 2018

Inspectors: C. Jones, Senior Resident Inspector
J. Hickman, Resident Inspector
B. Caballero, Senior Operations Engineer
S. Sanchez, Senior Emergency Preparedness (EP) Inspector
C. Fontana, EP Inspector
J. Walker, EP Inspector (trainee)

Approved By: A. Blamey, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring licensee's performance by conducting baseline inspections at Edwin I. Hatch, 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. NRC and self-revealed findings, violations, and additional items are summarized in the table below. Licensee-identified non-cited violations are documented in the Inspection Results section of the Report.

List of Findings and Violations

Safety Relief Valves' As Found Settings Resulted in Not Meeting Tech Spec Surveillance Criteria			
Cornerstone	Significance	Cross-cutting Aspect	Report Section
Mitigating Systems	Self-Revealing Green NCV 05000321/2018004-001 Closed	Not Applicable	71153
The inspectors documented a Green, self-revealing, non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control" for the licensee's failure to evaluate for installation differences between the eleven safety relief valves (SRVs) when implementing design change package (DCP) 1072724201. Specifically, the licensee failed to identify ventilation ductwork that directed cooling flow over SRVs 1B21-F013D and 1B21-F013E, two of the eleven SRVs, causing setpoint drift. These two valves experienced setpoint drift for a second time following "as-found" testing. The SRVs are tested on a biennial schedule following the refueling of the unit.			

Additional Tracking Items

Type	Issue number	Title	Report Section	Status
Licensee Event Report (LER)	05000321/2018003-00	Safety Relief Valves' As Found Settings Resulted in Not Meeting Tech Spec Surveillance Criteria	71153	Closed

PLANT STATUS

Unit 1 began the inspection period at 59 percent rated thermal power (RTP) due to a reactor feed pump bearing failure. On October 7, 2018, the unit was returned to 100 percent RTP and operated there for the remainder of the inspection period.

Unit 2 began the inspection period at 100 percent RTP. On December 18, 2018, the unit reached maximum core flow and began the coastdown in power for the 2019, spring refueling outage.

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."

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather (1 Sample)

The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of hurricane Michael.

71111.04 - Equipment Alignment

Partial Walkdown (3 Samples)

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

- (1) Unit 1 – 120 VAC reactor protection system (RPS) supply system while the motor-generator (MG) units were out of service for maintenance on October 19, 2018.
- (2) Unit 2 – 'B' train of residual heat removal (RHR) system while the redundant train was out of service for maintenance on October 24, 2018.
- (3) Unit 2 – 'C' emergency diesel generator (EDG) air starting system following air compressor and relief valve replacement on December 26, 2018.

Complete Walkdown (1 Sample)

The inspectors evaluated system configurations during a complete walkdown of the Unit 1B emergency diesel generator standby alternating current (AC) system on November 23, 2018.

71111.05AQ - Fire Protection Annual/Quarterly

Quarterly Inspection (5 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

- (1) Unit 1, Reactor Water Cleanup (RWCU) room, Fire Zone 1205T.
- (2) Unit 1, 'A', 'B', & 'C' EDG areas, Fire Zones 1401, 1402, 1403, 1406, 1407, 1409, and 1410.
- (3) Unit 2, 'A' & 'C', EDG areas, Fire Zones 2401, 2402, 2403, 2404, 2405, 2406, 2407.
- (4) Unit 2, Standby Gas Filter Room, Fire Zones 2205Q, U, and T.
- (5) Unit 1 and 2, Diesel fuel oil storage tanks, Fire Zones 1610, 2610, 1611, 1612, and 2612.

71111.06 - Flood Protection Measures

Internal Flooding (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the Unit 2 northeast (NE) and southeast (SE) diagonals on December 18, 2018.

71111.11 - Licensed Operator Requalification Program and Licensed Operator Performance

Operator Requalification (1 Sample)

The inspectors observed and evaluated a crew of licensed operators in the plant's simulator during licensed operator requalification training on November 19, 2018.

Operator Performance (1 Sample)

The inspectors observed and evaluated Unit 1 Reactor Operator performance during RPS power supply changes, core spray (CS) and RHR keep fill surveillances, CS pump and valve operability, and local power range monitoring (LPRM) calibration on October 4, November 21 & 27, and December 11, 2018.

Operator Exams (1 Sample)

The inspectors reviewed and evaluated requalification examination results on December 18, 2018.

71111.12 - Maintenance Effectiveness

Routine Maintenance Effectiveness (2 Samples)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the following equipment and/or safety significant functions:

- (1) Unit 1, Alarm drywell cooling unit B009 differential pressure low on November 30, 2018.

- (2) Unit 1, High Pressure Coolant Injection (HPCI) system nearing (a) (1) status on December 20, 2018.

71111.13 - Maintenance Risk Assessments and Emergent Work Control (4 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

- (1) Unit 1 risk while 1A Reactor Feed Pump Turbine (RFPT) is out of service for emergent repairs and RPS MG set is swapped to alternate supply on October 4, 2018.
- (2) Unit 1 and Unit 2 risk during preparations for Hurricane Michael on October 11, 2018.
- (3) Unit 2 risk during the 2B RHR outage and fill and vent line weld repair on October 24, 2018.
- (4) Unit 2 risk during control rod switch matrix replacement on October 25, 2018.

71111.15 - Operability Determinations and Functionality Assessments (6 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) Unit 2, Drywell cooler backdraft damper not completely closing on October 11, 2018.
- (2) Unit 1, 1B EDG past operability determination on October 26, 2018.
- (3) Unit 2, Test relay switch on RPS channel A1 not functioning per procedure on October 29, 2018.
- (4) Unit 2, 2A EDG silencer degraded on November 7, 2018.
- (5) Unit 1, Secondary isolation and a partial group 2 isolation due to a failed relay on November 13, 2018.
- (6) Unit 1, HPCI Steam Supply isolation motor operated valve (MOV) packing leak on November 20, 2018.

71111.18 - Plant Modifications (2 Samples)

The inspectors evaluated the following temporary or permanent modifications:

- (1) Unit 2 Global Nuclear Fuels core reload evaluation for the H2R26 cycle.
- (2) Unit 1 Station Auxiliary Transformer (SAT) 1E Open Phase Protection.

71111.19 - Post Maintenance Testing (4 Samples)

The inspectors evaluated the following post maintenance tests:

- (1) 57SV-C71-005-2, RPS Power Monitors, Ver. 14.6 and 34SO-C71-001-2, 120 VAC RPS Supply System, Ver. 15.3 after the 2B RPS MG Outage on October 19, 2018.
- (2) 34SV-E11-001-2, Residual Heat Removal Pump Operability, Ver. 19.3 after the 2B RHR Outage and Fill and Vent Line weld repair on October 23, 2018.
- (3) 52SV-R43-001-0, Diesel. Alternator, and Accessories Inspection, Ver. 31.0 after the 2A EDG failed maintenance run on November 2, 2018.
- (4) 34SV-E51-002-2, Reactor Core Isolation Cooling (RCIC) Pump Operability, Ver. 26.0 after the Unit 2 RCIC outage on November 19, 2018.

71111.20 - Refueling and Other Outage Activities (1 Sample)

The inspectors evaluated the Unit 2 fuel handling activities from November 7, 2018 to December 14, 2018.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Routine (1 Sample)

(1) 34SV-X43-001-1, Fire Pump Test, Ver. 3.5 on December 11, 2018.

EMERGENCY PREPAREDNESS

71114.02 - Alert and Notification System Testing (1 Sample)

The inspectors evaluated the maintenance and testing of the alert and notification system during the week of December 10, 2018.

71114.03 - Emergency Response Organization Staffing and Augmentation System (1 Sample)

The inspectors evaluated the readiness of the Emergency Response Organization during the week of December 10, 2018.

71114.04 - Emergency Action Level and Emergency Plan Changes (1 Sample)

The inspectors evaluated submitted Emergency Action Level, Emergency Plan, and Emergency Plan Implementing Procedure changes during the week of December 10, 2018. This evaluation does not constitute NRC approval.

71114.05 - Maintenance of Emergency Preparedness (1 Sample)

The inspectors evaluated the maintenance of the emergency preparedness program during the week of December 10, 2018.

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification

The inspectors verified licensee performance indicators submittals listed below for the period from January 2017, through September 2018 (6 Samples)

- (1) Safety system functional failures, MS05, both units
- (2) Heat removal systems, MS08, both units
- (3) Cooling Water Systems, MS10, both units

The inspectors verified the licensee's performance indicator submittals listed below for the period October 1, 2017 through September 30, 2018. (3 Samples)

- (1) EP01: Drill & Exercise Performance (1 Sample)
- (2) EP02: Emergency Response Organization Drill Participation (1Sample)
- (3) EP03: Alert & Notification System Reliability (1Sample)

71152 - Problem Identification and Resolution

Semiannual Trend Review (1 Sample)

The inspectors reviewed the licensee's corrective action program for trends that might be indicative of a more significant safety issue.

- (1) 2A EDG lube oil leaks (CRs 10487375, 10489893, 10492830, 10499483, 10499976, 10503860, 10524422, 10526800, 10541864, and 10547193)

71153 - Follow-up of Events and Notices of Enforcement Discretion

Licensee Event Reports (LER) (1 Sample)

The inspectors evaluated the following licensee event reports which can be accessed at <https://lersearch.inl.gov/LERSearchCriteria.aspx>:

LER 05000321/2018003-00, Safety Relief Valves' As Found Settings Resulted in Not Meeting Tech Spec Surveillance Criteria, on November 28, 2018.

OTHER ACTIVITIES – TEMPORARY INSTRUCTIONS, INFREQUENT AND ABNORMAL

60855.1 - Operation of an Independent Spent Fuel Storage Installation

The inspectors evaluated the licensee's independent spent fuel storage installation cask storage area and casks on October 25, 2018.

INSPECTION RESULTS

Licensee Identified Non-Cited Violation			
This violation of very low safety significant was identified by the licensee and has been entered into the licensee corrective action program and is being treated as a Non-Cited Violation, consistent with Section 2.3.2(a) of the Enforcement Policy.			
<p>Violation: Unit 1 Technical Specifications (TS) section 5.4.1(d), states in part, "Written procedures shall be established, implemented, and maintained covering Fire Protection Program implementation."</p> <p>Contrary to the above, on November 21, 2018, the licensee's failure to follow Southern Company procedure "Diesel Generator Room Ventilation Fan Surveillance," 34SV-X41-001-0, Ver. 1.1, step 4.2.9, by not placing the 1B EDG room louver switch in "Auto", rendered the carbon dioxide fire protection system nonfunctional. Hatch's Fire Hazards Analysis Appendix B, section 1.5.1 requires in part, "The low pressure CO₂ storage system shall be FUNCTIONAL," and that "With a CO₂ system nonfunctional, within 1 hour: Establish a continuous fire watch or alternative compensatory measures for the unprotected area." This condition existed until the 1B EDG room louver switch was placed in "Auto" on November 23, 2018, to restore compliance.</p> <p>Significance/Severity Level: The inspectors assessed the significance of this finding using IMC 0609, Appendix F, Attachment 1, dated 05/2/2018. Inspectors concluded that this violation affected the "Fixed Fire Protection Systems" category in section 1.2. The finding screened to green using section 1.4.1-A Question: "Could the fire finding increase the likelihood of a fire, delay detection for a fire, or result in a more significant fire than previously analyzed such that the credited safe shutdown strategy could be adversely impacted?" Question 1.4.1-A was answered "NO" because the alternate train of safe shutdown remained operable.</p> <p>Corrective Action Reference(s): Condition reports (CRs) 10556842 and 10562603.</p>			

Safety Relief Valves' As Found Settings Resulted in Not Meeting Tech Spec Surveillance Criteria			
Cornerstone	Significance	Cross-cutting Aspect	Report Section
Mitigating Systems	Green NCV 05000321/2018004-001 Closed	N/A	71153
<p><u>Introduction:</u> The inspectors documented a Green, self-revealing, non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to evaluate for installation differences between the eleven Safety Relief Valves (SRVs) when implementing design change package (DCP) 1072724201. Specifically, the licensee failed to identify ventilation ductwork that directed cooling flow over SRVs 1B21-F013D and 1B21-F013E, two of the eleven SRVs, causing setpoint drift. These two valves experienced setpoint drift for a second time following "as-found" testing. The SRVs are tested on a biennial schedule following the refueling of the unit.</p>			
<p><u>Description:</u> During the Unit 1 refueling outage in March, 2014, DCP 1072724201 was implemented to replace all eleven of the two-stage SRVs with three-stage SRVs. This change was performed to alleviate long standing "corrosion-induced bonding" issues</p>			

occurring in these valves. On March 30, 2016, the licensee received “as-found” testing results for all eleven SRVs from the vendor. Of the eleven total SRVs, two of them (1B21-F013D and 1B21-F013E), showed a drift below the allowable TS surveillance requirement (SR) 3.4.3.1 limit of 1150 +/- 34.5 (+/- 3%) psig by greater than 3%. The actual values were 1113 psig or -3.2% for 1B21-F013D and 1106 psig or -3.8% for 1B21-F013E. The licensee issued a LER 05000321/2016-004-00. The licensee performed an apparent cause determination that concluded the setpoint drift was a result of premature abutment gap closure due to manufacturing tolerances. Installation location differences were not considered during the causal determination. On June 20, 2018, the “as-found” testing results for SRVs, 1B21-F013D and 1B21-F013E, again showed a drift below the allowable TS SR limits. The actual values of the testing were 1095 psig or -4.78% for 1B21-F013D and 1107 psig or -3.74% for 1B21-F013E. The licensee determined the cause of the setpoint drift to be drywell ventilation ductwork with a flowpath directed only across these SRVs.

Corrective Action(s): The licensee entered this issue in their corrective action program and plan to correct the ventilation flowpath at the next available opportunity.

Corrective Action Reference(s): Condition report (CR) 10506730 and licensee event report LER 05000-321/2018-003-00.

Performance Assessment:

Performance Deficiency (PD): The failure to properly evaluate installation location differences between the SRVs was a performance deficiency that was within the licensee’s ability to foresee and correct. Specifically, during the design change process, the licensee did not look at ventilation routing or potential thermal cycling stress differences when changing valve types. This lead to repetitive setpoint drift in SRVs 1B21-F013D and 1B21-F013E.

Screening: The PD was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, the SRVs 1B21-F013D and 1B21-F013E, will open below the TS SR setpoint of less than 3% tolerance. Based on the operability determination, the SRVs are still considered operable due the drift occurring in the conservative direction (opening at a lower pressure).

Significance: The inspectors assessed the significance of the finding using Exhibit 2, “Mitigating Systems Screening Questions,” of Inspection Manual Chapter (IMC) 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At- Power,” issued June 19, 2012. The finding was of very low safety significance (i.e. Green) because the performance deficiency affects the design or qualification of a mitigating structure, system, or component (SSC) and the SSC maintains its operability or functionality.

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

Enforcement:

Violation: 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” requires in part that “Measures shall provide for verifying or checking the adequacy of design, such as by performance of design reviews.”

Contrary to the above, prior to DCP 1072724201 being implemented during the 2014 refueling outage, the licensee failed to properly evaluate installation location differences between the SRVs, resulting in setpoint drift on SRVs 1B21-F013D and 1B21-F013E.

Disposition: 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.

The inspectors confirmed that proprietary information was controlled to protect from public disclosure.

- On January 31, 2019, the inspectors presented the quarterly baseline inspection results to Tom Vehec, and other members of the licensee staff.

DOCUMENTS REVIEWED

71111.01: Adverse Weather Protection

Procedures:

NMP-OS-017, Severe Weather, Ver. 1.1

34AB-Y22-002-0, Naturally Occurring Phenomena, Ver. 18.0

Condition Reports:

10555241

71111.04: Equipment Alignment

Procedures:

34SO-C71-001-1, 120 VAC RPS Supply System, Attachments 1 and 2, Ver. 12.0

34SO-E11-010-2, Residual Heat Removal System, Attachment 3, Ver. 42.11

34SO-R43-001-2, Diesel Generator Standby AC System, Attachment 3 Ver. 30.0

34SO-R43-001-1, Diesel Generator Standby AC System, Attachments 5 and 6, Ver. 29.0

Drawings:

H-21074, Diesel Engine & Fuel Oil System, Ver. 55.0

H-13413, Elementary Diagram Diesel Generator, Ver. 45.0

H-26014, RHR System P & ID, Ver. 65.0

H-17792, Reactor Protection System Elementary Diagram, Ver. 12.0

Documents:

Unit 1 Technical Specifications, Amendment 288

Unit 2 Technical Specifications, Amendment 234

Condition Reports:

10563515 10565471 10565485 10565494

71111.05AQ: Fire Protection Annual/Quarterly

Drawings:

A-43965 Sh. 69A/B, RWCU Equipment Room, Ver. 4.0, Fire Zone 1205T

A-43966 Sh.(s) 018B- 024B, Unit 2 A and C Diesel area, Ver. 5.0, Fire Zones 2401-2407

A-43966 Sh. (s) 006B-015B, Unit 1 A, B, and C Diesel area, Ver. 3.0, Fire Zones 1401-1409

A-43965 Sh.(s) 115, 118, and 119, Unit 2 Standby Gas Filter Room, Ver. 0, Fire Zone 2205Q-T

A-43966 Sh. 73B, Diesel Fuel Oil Tanks, Ver. 0, Fire Zones 1610-1612, 2610, and 2612

Documents:

Fire Protection Fire Hazards Analysis (FHA), Rev. 36.0

Condition Reports:

10556323 10556842 10562603

71111.06: Flood Protection Measures

Documents:

Updated Final Safety Analysis Report

E.I. Hatch Individual Plant Examination dated December 1992

Mechanical Calculations, BH2-M-387, dated July 14, 1983

71111.11: Licensed Operator Regualification Program

Documents:

LORP Scenario H-LT-SG-51070, Ver. 6.0, dated 11-08-2018

Procedures:

34SO-C71-001-1, 120 VAC RPS Supply System, Ver. 12.0
34SV-SUV-017-1, Core Spray and RHR Keep fill Surveillance, Ver. 10.6
34SV-E21-001-2, Core Spray Pump Operability, Ver. 23.4
34SV-E21-002-2, Core Spay Valve Operability, Ver.9.4
34SO-C51-001-0, TIP System Operation and LRPM Calibration, Ver. 19.3

71111.12: Maintenance Effectiveness

Procedures:

NEI 99-02, Regulatory Assessment Performance Indicator Guideline. Rev. 7
NMP-ES-027, Maintenance Rule Program, Ver. 6.0
NMP-ES-027, Maintenance Rule Program, Ver. 7.0
NMP-ES-074-006, Fleet Lubrication Instruction, Ver. 3.1
NUMARC 93-01, Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, Rev. 4A
50AC-MNT-001-0, Maintenance Program, Ver. 34.1

Work Orders:

SNC938905, Repair HPCI Valve 1E41F001 Packing Leak

Condition Reports:

10537513	10554007	10556380	10560225	10561971	10562323
10562927	10563250				

71111.13: Maintenance Risk Assessments and Emergent Work Evaluation

Procedures:

NMP-DP-001, Operational Risk Awareness, Ver. 15.0
NMP-OS-010-002, Hatch Protected Equipment Logs, Ver. 11.0

Condition Reports:

105477338	10556679	10558042	10559574	10562471
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Documents:

Equipment Out of Service Calculations 10/4/2018
Equipment Out of Service Calculations 10/11/2018
Equipment Out of Service Calculations 10/24/2018
Equipment Out of Service Calculations 10/25/2018

71111.15: Operability Determinations and Functionality Assessments

Documents:

2A EDG Past Operability Review
Prompt Determination of Operability (PDO) 1-18-006, Rev. 0, HPCI steam supply outboard primary containment isolation valve leak, dated 11-21-2018
LLRT Test Description Sheet, 1E41-F003, dated 11-19-2018
CAR 274674, 1B EDG Exhaust Differential Temperature greater than 250 degrees Fahrenheit, dated 10-8-2018

Procedures:

NMP-AD-012, Operability Determinations and Functional Assessments, Ver. 13.3
42SV-TET-001-1, Primary Containment Type B and Type C Leak Rate Testing, Ver. 30.0,
Attachment 3

Drawings:

S54538, 107E5901AW, Rev. 1

Condition Reports:

10498152	10527716	10528715	10539067	10549470	10551001
10551589	10552476	10553943	10554407	10554586	10554942
10555368	10555717	10555769	10556407	10560683	10560739
10561203	10561221	10563737	10564764		

Work Orders:

SNC980176

71111.18: Plant Modifications

Documents:

Design Change Package (DCP) SNC873725, SAT 1E Open Phase Protection, dated 9-27-2018
10 CFR 50.59 evaluation for DCP SNC873725, dated 8-2-2018
Fuel Design Change Package Number FDC-H-17-009, GNF3 Reloads for Hatch-1 and Hatch-2
Dated 8-16-2018
HNP-ISI-RR-05-02, Relief Request Reactor Pressure Vessel Stud, dated 10-26-2018

Procedures:

NMP-ES-054, Temporary Modifications, Ver. 3.1
NMP-ES-054-001, Temporary Modification Processing, Ver. 3.2

Condition Reports:

10556568 10557605 10559877

71111.19: Post Maintenance Testing

Procedures:

57SV-C71-005-2, RPS Power Monitors, Ver. 14.6
34SO-C71-001-2, 120 VAC RPS Supply System, Ver. 15.3
34SV-E11-001-2, Residual Heat Removal Pump Operability, Ver. 19.3
52SV-R43-001-0, Diesel. Alternator, and Accessories Inspection, Ver. 31.
34SV-E51-002-2, RCIC Pump Operability, Ver. 26.0
NMP-MA-014-001, Post Maintenance Testing Guidance, Ver. 5.1

Drawings:

H27601, Reactor Protection System – MG Set Control System, Ver. 19

Work Orders:

SNC779591, RPS Power Monitor FT&C
SNC976030, 2B Test Globe Valve Leak Repair

Condition Reports (*NRC Identified):

10547338 10550494 10551502 *10554350 *10555237 *10562652

71111.20: Refueling and Other Outage Activities

Procedures:

QCII-00032-100, Customer New Fuel Receipt – Site Handling and Inspection of GNF New Fuel Bundles, Rev. 1

34SV-F15-001-2, Refueling Interlocks & Hoist Limit Checks, Ver. 20.1

71111.22: Surveillance Testing

Procedures:

34SV-X43-001-1, Fire Pump Test, Ver. 3.5

Condition Reports:

10557714 10558382 10559958 10559999 10560619 10561814

71114.02: Alert and Notification System Evaluation

Procedures

SNC Standard Emergency Plan Annex for Hatch Nuclear Plant (HNP) Units 1 and 2, Ver. 2

NMP-EP-308, SNC Emergency Alert Siren Operation, Testing and Maintenance, Ver. 3.1

Records and Data

Weekly siren test results, January 1, 2017 – September 31, 2018

2017 annual siren test results

2017 and 2018 Hatch Nuclear Plant Emergency Planning Calendar mailer to members of the public in the 10-mile EPZ

Reverse 911/2018 Code Red testing results

Edwin I. Hatch Nuclear Plant Alert and Notification System Design Report, dated March 2013

Plant Hatch Emergency Outdoor Warning System Operator Guide, dated 3/28/12

WPS-2900 Series High Power Voice & Siren System Operational Troubleshooting Manual, Whelen, Engineering, Company

FEMA, Edwin I. Hatch Nuclear Plant Alert and Notification System (ANS) Design Report, March, 2013

FEMA, Edwin I. Hatch Nuclear Plant Alert and Notification System (ANS) approval letter, March 5, 2013

Corrective Action Documents (Condition Reports)

CR 10307925, Summary of ANS PI submission

CR 10308573, Siren 28 activation failure on silent test

CR 10342268, Deficiencies found during 2016 Annual Emergency outdoor warning siren planned maintenance

CR 10351776, Emergency Outdoor Warning Siren Station of GEMA not working

CR 10386041, Appling County 911 failed to respond during monthly communication test

CR 10391381, Siren #41 partial activation

CR 10393888, Failure of UHF communication on siren #49

CR 10393998, Partial activation of siren #42

CR 10398089, GEMA (Atlanta) not able to activate siren test, Appling County activated siren test

CR 10407374, Hatch sirens of AC power

CR 10506973, The communication link between GEMA (Atlanta) and the Emergency Outdoor Warning Siren has been lost

CR 10544540, Hatch siren test results (post hurricane Michael)

71114.03: Emergency Response Organization Staffing and Augmentation System

Procedures

NMP-EP-146, Emergency Response Organization, Ver. 2.0
NMP-EP-301, Emergency Response Staff Training, Ver. 11.1
NMP-EP-301-F04-bb, Familiarization Guide for 10 CFR 50.54(q) Evaluator Training, Ver. 1.0
NMP-EP-303, Drills and Exercise Standards, Ver. 20.0
NMP-TR-480, Emergency Response Organization (ERO) and EP Staff Training, Ver. 3.0
NMP-EP-312-F02, EP Technical Product Development checklist, Ver. 2.0
NMP-EP-313, Emergency Preparedness Policies and Interpretations, Ver. 1.0
NMP-EP-147, Offsite Dose Assessment, Ver. 1.0
NMP-EP-147-001 F01, SNC Field Monitoring Teams Mobilization Checklist, Ver. 2.0
NMP-EP-147-001 F04, SNC Field Monitoring Teams Dose Tracking Record Log, Ver. 2.0
NMP-EP-147-001 F05, SNC Field Monitoring Teams Field Data Survey Log, Ver. 2.0
NMP-EP-147-001 F06, SNC Field Monitoring Teams Deactivation Checklist, Ver. 2.0
NMP-EP-147-008, SNC Field monitoring Teams Environmental Sampling, Ver. 6.0

Records and Data

Hatch Units 1 and 2 MIDAS- NU Dose Projections, Ver. 2.0
Standard Emergency Plan, Ver. 2.0, On-shift Staffing Analysis, 4/10/18
SNC Standard Emergency Plan Annex for Hatch Nuclear Plant (HNP) Units 1 and 2, Table 2.2.A, HNP On-Shift Staffing, Ver. 2
HNP Unit 1 and Unit 2 Emergency Response Organization Staffing Detailed Description and Technical Evaluation
ERO augmentation drill records for 2017 & 2018
Emergency Response Organization current duty roster
Selected employee training records
Georgia Emergency Management Agency Homeland Security Certification letter to FEMA, 1/2018 with supporting information
2017 Annual Letter of Certification, State of Georgia

Corrective Action Documents

CR 10303927, OPS minimum staffing issue
CR 10307482, ERO Pro page
CR 10348661, Microphone in OSC not working during drill
CR 10371371, 17 EX 02 Drill Performance on SAE
CR 10382654, Need to consider modifying requirement to be present at weekly ERO muster meeting
CR 10432628, Still no coverage for Team 5 TSC chemistry support
CR 10503446, Near miss during ERO muster Table Top EP exercise
CR 10522680, ERO Notifications not received for multiple weeks

71114.04: Emergency Action Level and Emergency Plan Changes

Procedures

SNC Standard Emergency Plan (SEP) Annex for Hatch Nuclear Plant (HNP) Units 1 & 2, Ver. 2
NMP-EP-141-002, Hatch Emergency Action Levels & Basis, Ver. 1.0 & 2.0
NMP-EP-141-002-F01, EAL Classification Matrix (Hot Conditions), Ver. 1.1
NMP-EP-141-002-F02, EAL Classification Matrix (Cold Conditions), Ver. 1.1
NMP-EP-142, Emergency Notification, Ver. 2.0 & 2.1
NMP-EP-144, Protective Actions, Ver. 3.0 & 4.0
NMP-EP-147, Dose Assessment, Ver. 1.0, 2.0, & 3.0
NMP-EP-312, Development of Emergency Preparedness Technical Products, Ver. 1.0

Change Packages

FLT-17-010, 10 CFR 50.54(q) Screening for multiple procedures, dated 6/27/17
FLT-17-017-01, 10 CFR 50.54(q) Screening for NMP-147, Ver. 2.0 dated 7/14/17
FLT-17-025-01, 10 CFR 50.54(q) Screening for SNC SEP Ver. 2.0, dated 12/15/17
FLT-17-025-01, 10 CFR 50.54(q) Evaluation for SNC SEP Ver. 2.0, dated 12/18/17
FLT-18-016-00, 10 CFR 50.54(q) Screening for NMP-EP-141 Ver. 2.0 & NMP-EP-141-F01 Ver. 2.0, dated 7/17/18
FLT-18-024-01, 10 CFR 50.54(q) Screening for NMP-147, Ver. 2.1 dated 7/19/18
FLT-18-036-01, 10 CFR 50.54(q) Screening for NMP-EP-144 Ver. 4.0, dated 8/21/18
FLT-18-037-01, 10 CFR 50.54(q) Screening for NMP-EP-142 Ver. 2.1, dated 8/21/18
FLT-18-041-01, 10 CFR 50.54(q) Screening for NMP-EP-147 Ver. 3.0, dated 11/2/18
HNP-17-009-01, 10 CFR 50.54(q) Screening for SNC SEP Annex for Hatch Nuclear Plant (HNP) Units 1 & 2 Ver. 2.0, dated 12/14/17
HNP-17-009-01, 10 CFR 50.54(q) Evaluation for SNC SEP Annex for HNP Units 1 & 2 Ver. 2.0, dated 12/15/17

Corrective Action Program Documents

CR 10303136, 50.54(q) screening not documented
CR 10340703, Hatch EAL review
CR 10421212, EAL (NEI 99-01 Rev. 4) submittal issue
CR 10424161, Potential EAL discrepancy
CR 10433097, Green SL-IV violation – failure to receive NRC approval to change EAL threshold values
CR 10530247, EAL charts update associated with degraded grid design change package
CR 10562549, Revise 50.54(q) screening for NMP-EP-147 to add detail on analysis of changes (NRC-identified)
CR 10562551, 50.54(q) training needs analysis (NRC-identified)

71114.05: Maintenance of Emergency Preparedness

Procedures

NMP-EP-142, Emergency Notification, Ver. 2.1
NMP-EP-142-F09, ALERT Public Address Announcement Script, Ver. 1.0
NMP-EP-143, Facility Activation, Ver. 3.0
NMP-EP-143-001, Alternative Facility Operation, Ver. 1.0
NMP-EP-144, Protective Actions, Ver. 4.0
NMP-EP-135, Alternative Facility Setup & Operation, Ver. 2.0
NMP-EP-300, SNC Emergency Preparedness Conduct of Operations, Ver. 26.1
NMP-EP-305, Equipment Important to Emergency Response (EITER), Ver. 3.2
NMP-EP-305-GL02, HNP Equipment Important to the EP Function, Ver. 4.1
NMP-EP-310, Maintaining the Emergency Plan, Ver. 7.0
NMP-EP-310-F01, 10 CFR 50.54(q) Screening / Evaluation, Ver. 5.0
NMP-GM-002, Corrective Action Program, Ver. 15.0
NMP-GM-002-001, Corrective Action Program Instructions, Ver. 37.0
NMP-GM-003, Self-Assessment and Benchmark Procedure, Ver. 26.1
NOS-104-001-F05, EP Audit Planning Guide, Ver. 1.1
SNC Standard Emergency Plan, Ver. 2.0
SNC Standard Emergency Plan – Hatch Annex, Ver. 2.0

Records and Data

8 Year Matrix
2017 EP Drill/Exercise 01, 02, 03, and 04 Reports

2018 EP Drill/Exercise 02 and 03 Reports
NOUE on 02/01/2017, Hatch Emergency Preparedness Event Report, dated 2/24/17
Check-In Self-Assessment Plan & Report, dated 8/29/18
73EP-ADM-001-0, Letters of Agreement, dated 04/21/15
2018 Letters to Appling County Sheriff's Office, Toombs County Sheriff's Office, and GA State Patrol for HAB Support
Edwin I. Hatch Nuclear Plant Annual Population Update – 2017, dated 12/5/17
NOS Audit of EP, Logs: Fleet-EP-2017, dated 2/9/17
NOS Audit of EP, Logs: Fleet-EP-2018, dated 2/15/18
Grant Agreement between SNC and GEMA, dated 7/1/15
Work Order SNC248337, Seismic Equipment specs on lower end

Corrective Action Documents

CR 10358647, Jeff Davis EMA was not timely in their response during the 17EX02 exercise
CR 10371375, 17EX02 Drill Performance on GE
CR 10385381, NMP-EP-403, FIGURE 1, Emergency Management Guideline, references multiple deleted procedures
CR 10387634, Toombs County ENN inoperable
CR 10401341, Unable to contact GEMA on ENN
CR 10402509, Loss of NRC phone line in the Control Room
CR 10408585, Emergency Outdoor Warning Siren 37 solar panel needs to be replaced
CR 10420842, Hatch Exercise 17EX04 – regulatory timeliness of PAR
CR 10420844, Hatch Exercise 17EX04 – PAR accuracy failure
CR 10420847, Hatch Exercise 17EX04 – alternate ENN notification
CR 10420851, Hatch Exercise 17EX04 – ENN communication transfer
CR 10437314, Emergency Preparedness procedure NMP-EP-142, Emergency Notification, needs to be modified
CR 10486000, 4/24/18 EP Exercise: Objective A1 not successfully demonstrated
CR 10495360, 4/24/18 EP Exercise: Objective C2 not successfully demonstrated
CR 10495361, 4/24/18 EP Exercise: Objective C6 not successfully demonstrated
CR 10495362, 4/24/18 EP Exercise: Objective D2 not successfully demonstrated
CR 10498863, GEMA ENN communication issue
CR 10509236, 6/19/18 EP Drill: Unexpected Event Escalation
CR 10509277, Inconsistencies noted in expectations for muster meeting attendance for EP
CR 10509934, ERO call-out drill
CR 10514650, Incorrect EP PI date First Quarter 2018
CR 10542518, Procedure conflict
CR 10544275, Conflicting instruction in NMP-EP-142-F09
CR 10562850, Corroded Batteries in Field Monitoring Team Kit (NRC-identified)

71151: Performance Indicator Verification

Procedures:

NMP-AD-029, Preparation and Reporting of Regulatory Assessment Performance Indicator Data and the Monthly Operating Report, Ver. 1.1
NMP-EP-311, SNC Emergency Preparedness Tier 4 Performance Indicators, Ver. 4.0

Documents:

NEI 99-02, Regulatory Assessment Performance Indicator Guideline. Rev. 7

Records and Data

Hatch Key Performance Indicators, July 2017 through June 2018

DEP opportunities documentation for 4th quarter 2017; 1st, 2nd, & 3rd quarters 2018
Siren test data for 4th quarter 2017; 1st, 2nd, & 3rd quarters 2018
Drill and exercise participation records of ERO personnel for 4th quarter 2017; 1st, 2nd, & 3rd quarters 2018

Corrective Action Documents

CR 10414984, ERO key personnel participation KPI metric is not excellent
CR 10429035, Change to key ERO drill participation KPI
CR 10485997, Tracking CR for 2 missed DEP opportunities
CR 10536831, EP Drill learnings

71152: Problem Identification and Resolution

Condition Reports:

10487375	10489893	10492830	10499483	10499976	10503860
10524422	10526800	10541864	10547193		

71153: Event Followup

Documents:

Apparent Cause Determination Report 264544, Reliability issues of the safety relief valves, dated 7-5-2016
DCP SNC98746, Unit #1 Main Steam SRV Replacement, Ver. 4.0

Condition Reports:

10204045	10506730	10561537
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