



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

April 18, 2014

EA-2014-061

Mr. David R. Vineyard
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 - NRC INTEGRATED INSPECTION REPORT
05000321/2014002 AND 05000366/2014002 AND EXERCISE OF
ENFORCEMENT DISCRETION**

Dear Mr. Vineyard:

On March 31, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Edwin I. Hatch Nuclear Plant Units 1 and 2. On April 18, 2014, the NRC inspectors discussed the results of this inspection with you and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented three findings of very low safety significance (Green) in this report. Each of these findings involved violations of NRC requirements. Further, inspectors 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.

The enclosed report also documents one noncompliance for which the NRC is exercising enforcement discretion in accordance with Section 9.1 of the NRC Enforcement Policy, "Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48)." The non-compliance is associated with your implementation of the requirements and standards of 10 CFR 50, Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979." This non-compliance is described in Section 1R05 of this report for the failure to institute pre-fire plans for the Units 1 and 2 drywell and torus areas in accordance with the Hatch updated fire hazards analysis. The non-compliance was identified by the NRC, and is a violation of NRC requirements. The inspectors have screened the violation and determined that it warranted enforcement discretion per the Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues, and Section 11.05(b) of Inspection Manual Chapter 0305 "Operating Reactor Assessment Program."

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, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC resident inspector at the Hatch plant.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II; and the NRC resident inspector at the Hatch plant.

Additionally, as we informed you in the most recent NRC integrated inspection report, cross-cutting aspects identified in the last six months of 2013 using the previous terminology were being converted in accordance with the cross-reference in Inspection Manual Chapter 0310. Section 4OA5 of the enclosed report documents the conversion of these cross-cutting aspects which will be evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review. If you disagree with the cross-cutting aspect assigned, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector at the Hatch Plant.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Richard P. Croteau, Director
Division of Reactor Projects

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

Enclosures: Inspection Report 05000321/2014002,
05000366/2014002
w/Attachment: Supplemental Information

cc distribution via ListServ

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☒ PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE ☒ NON-SENSITIVE
ADAMS: ☒ Yes ☐ No ACCESSION NUMBER: ☒ SUNSI REVIEW COMPLETE ☐ FORM 665 ATTACHED

OFFICE	RII:DRP	RII:DRP	RII:DRS	RII:DRS	RII:DRS	RII:DRS	RII:DRP
SIGNATURE	Via email	Via email	Via email	Via email	Via email	Via email	Via email
NAME	EMorris	DHardage	BCollins	CDykes	RKellner	WPursley	RHamilton
DATE	04/17/2014	04/15/2014	04/16/2014	04/11/2014	04/14/2014	04/14/2014	04/11/2014
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
OFFICE	RII:DRS	RII: DRS	RII:DRP	RII:DRP	RII:DRP		
SIGNATURE	Via email	Via email	AXA /RA/	JGW /RA/	JGW /RA for/		
NAME	PBraxton	GOTTENBERG	AAlen	JWorosilo	FEhrhardt		
DATE	04/15/2014	04/14/2014	04/17/2014	04/14/2014	04/17/2014		
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D. Vineyard

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Letter to David R. Vineyard from Richard P. Croteau dated April 18, 2014

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT
05000321/2014002 AND 05000366/2014002 AND EXERCISE OF
ENFORCEMENT DISCRETION

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-321, 50-366

License Nos.: DPR-57 and NPF-5

Report Nos.: 05000321/2014002 and 05000366/2014002

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Edwin I. Hatch Nuclear Plant

Location: Baxley, Georgia 31513

Dates: January 1 – March 31, 2014

Inspectors: E. Morris, Senior Resident Inspector
D. Hardage, Resident Inspector
A. Alen, Project Engineer (4OA2)
B. Collins, Reactor Inspector (1R08)
C. Dykes, Health Physicist (2RS1, 4OA1)
R. Kellner, Health Physicist (2RS6)
W. Pursley, Health Physicist (2RS7)
R. Hamilton, Senior Health Physicist (2RS8, 4OA1)
P. Braxton, Reactor Inspector (4OA3.4)
G. Ottenberg, Senior Reactor Inspector (4OA3.4)

Approved by: Frank Ehrhardt, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000321/2014002, 05000366/2014002; 01/01/2014-03/31/2014; Edwin I. Hatch Nuclear Plant, Units 1 and 2, Operability Evaluations and Functionality Assessments, Problem Identification and Resolution, Follow-up of Events and Notices of Enforcement Discretion

The report covered a 3-month period of inspection by resident inspectors and regional inspectors. There were two NRC identified findings and one self-revealing finding identified and documented in this report. The significance of inspection findings are indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP) dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within The Cross-Cutting Areas" dated January 1, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated July 9, 2013. The NRC's program for overseeing the safe operations of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

Cornerstone: Initiating Events

- Green. A self-revealing Green non-cited violation (NCV) of Technical Specification 5.4, "Procedures," was identified when an automatic recirculation pump runback occurred after improper operations of the Unit 2 master feedwater controller "PF" push button. The licensee restored compliance when the crew responded to the runback using approved procedures, and restored reactor water level to the correct setpoint. The violation was entered into the licensee's corrective action program as condition report (CR) 759497.

Failure to operate the Unit 2 master feedwater controller, 2C32-R600, in accordance with plant procedures on January 17, 2014, was a performance deficiency. This performance deficiency was more than minor because it is associated with the human performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability during power operations. Specifically, the performance deficiency directly resulted in an unplanned transient when plant systems automatically reduced reactor power. The inspectors screened this finding using IMC 0609, Appendix A, "The Significant Determination Process (SDP) For Findings At-Power", dated June 19, 2012. The finding screened as Green per Section B. of Exhibit 1, "Initiating Events Screening Questions," because the finding did not cause a reactor trip and the loss of mitigation equipment, a high energy line-break, internal flooding, or a fire. Inspectors determined the finding had a cross-cutting aspect of "avoid complacency" of the human performance area because the operator did not implement the error reduction tool (reading the placard below the controller) prior to performing an action. [H.12] (Section 4OA3.1)

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Cornerstone: Mitigating Systems

- Green. The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," when the licensee failed to prescribe in documented instructions, procedures, or drawings appropriate to the circumstances the inspection of the Unit 2 loss of coolant accident (LOCA)/loss of offsite power (LOSP) emergency diesel generator loading timers. The licensee restored compliance by adding a step within the operator rounds to confirm the LOCA/LOSP emergency diesel generator loading timer cabinet door fasteners are reengaged and tightened. This violation has been entered into the licensee's corrective action program as CR 793669.

Failure to engage and tighten the Unit 2 LOCA/LOSP emergency diesel generator loading timer cabinet doors following inspection on January 2, 2014, was a performance deficiency. The performance deficiency was more than minor, because it is associated with the mitigating systems cornerstone protection against external factors attribute and adversely affected the corner objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, with none of the latches engaged the reliability of circuitry within the cabinet following a seismic event was adversely affected. The inspectors screened this finding using IMC 0609, Appendix A, "The Significant Determination Process (SDP) For Findings At-Power", dated June 19, 2012. The finding screened as Green per Section A. of Exhibit 2, "Mitigating Systems Screening Questions," because each of the four screening questions were answered "no." The inspectors determined the finding had a cross-cutting aspect of "resources" in the human performance area because the licensee did not ensure that procedures were available and adequate for performing the nightly inspection of the Unit 2 LOCA/LOSP emergency diesel generator loading timers. [H.1] (Section 1R15)

- Green. The inspectors identified a Green NCV of 10 CFR 50.55a, "Codes and Standards," for the licensee's failure to establish a periodic verification program for the core spray, high pressure core injection, and reactor core injection cooling systems pump outboard discharge motor-operated valves (MOVs) to ensure their long-term capability to perform their design bases safety functions. The licensee provided operators with interim instructions to declare the affected systems inoperable until permanent corrective actions are implemented. This violation has been entered into the licensee's corrective action program as CR 799261.

Failure to establish a periodic verification program for the core spray, high pressure core injection, and reactor core injection cooling systems pump outboard discharge MOVs to ensure their long-term capability to perform their design basis safety functions was a performance deficiency. The performance deficiency was more than minor because it adversely affected the equipment performance attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to ensure the long-term capability of the valves to perform their design basis safety functions overestimated the availability and reliability of the core spray, high pressure core injection, and reactor core injection

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cooling systems during testing or other activities that would place the valves in their non-safety position. The inspectors screened this finding using IMC 0609, Appendix A, "The Significant Determination Process (SDP) For Findings At-Power", dated June 19, 2012. The finding screened as Green per Section A of Exhibit 2, "Mitigating Systems Screening Questions," because each of the four screening questions were answered "no." The inspectors determined the finding had a cross-cutting aspect of "evaluation" in the problem identification and resolution area because in 2013 the licensee had corrective actions in the corrective action program to evaluate the adequacy of the MOV periodic verification program scope and failed to identify that reliance on the valves to reposition when in the closed position required the valves to be in the program. [P.2] (Section 4OA2.2)

A violation of very low safety significance or severity level IV that was identified by the licensee has been reviewed by the NRC. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and corrective action tracking numbers are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at 97 percent rated thermal power (RTP) in the end of cycle coastdown period. On January 18, 2014, a power reduction from 92 percent RTP to 75 percent RTP occurred due to a recirculation pump runback. The unit was returned to approximately 93 percent RTP (maximum coastdown power) on January 19, 2014. On February 3, 2014, operators shut down the unit for a scheduled refueling outage. The unit was restarted on March 3, 2014, and the unit returned to 100 percent RTP on March 12, 2014. The unit operated at or near 100 percent RTP for the remainder of the inspection period.

Unit 2 began the inspection period at or near 100 percent RTP. On January 17, 2014, a power reduction to 82 percent RTP occurred due to a recirculation pump runback. The unit was returned to 100 percent RTP on January 17, 2014. The unit operated throughout the remainder of the inspection period at or near 100 percent RTP.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

Impending Adverse Weather Conditions

The inspectors reviewed the licensee's preparations to protect risk-significant systems from cold weather expected during January 3 – 8. The inspectors evaluated the licensee's implementation of adverse weather preparation procedures and compensatory measures, including operator staffing, before the onset of and during the adverse weather conditions. The inspectors reviewed the licensee's plans to address the ramifications of potentially lasting effects that may result from freezing weather. The inspectors verified that operator actions specified in the licensee's adverse weather procedure maintain readiness of essential systems. The inspectors verified that required surveillances were current, or were scheduled and completed, if practical, before the onset of anticipated adverse weather conditions. The inspectors also verified the licensee implemented periodic equipment walkdowns or other measures to ensure that the condition of plant equipment met operability requirements. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

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1R04 Equipment Alignment (71111.04)

a. Inspection Scope

Partial Walkdowns

The inspectors verified that critical portions of the selected systems were correctly aligned by performing partial walkdowns. The inspectors selected systems for assessment because they were a redundant or backup system/train, were important for mitigating risk for the current plant conditions, had been recently realigned, or were a single-train system. The inspectors determined the correct system lineup by reviewing plant procedures and drawings. Documents reviewed are listed in the attachment.

The inspectors selected the following three systems/trains to inspect:

- Unit 1 "B" train of standby gas system while "A" train was out of service for maintenance, January 14
- Unit 1 "B" train of the residual heat removal system while "C" residual heat removal pump was out of service for maintenance, January 24
- Unit 2 reactor core isolation cooling system while the high pressure coolant injection system was out of service for maintenance, March 20

Complete Walkdown

The inspectors verified the alignment of the Unit 2 emergency diesel generators. The inspectors selected this system for assessment because it is a risk-significant mitigating system. The inspectors determined the correct system lineup by reviewing plant procedures, drawings, the updated final safety analysis report, and other documents. In order to identify any deficiencies that could affect the ability of the system to perform its function(s), the inspectors reviewed records related to outstanding design issues and maintenance work requests. The inspectors verified that the selected system was correctly aligned by performing a complete walkdown of accessible components.

To verify the licensee was identifying and resolving equipment alignment discrepancies, the inspectors reviewed corrective action documents, including condition reports and outstanding work orders. The inspectors also reviewed periodic reports containing information on the status of risk-significant systems, including maintenance rule reports and system health reports. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

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1R05 Fire Protection (71111.05AQ)a. Inspection ScopeQuarterly Inspection

The inspectors evaluated the adequacy of selected fire plans by comparing the fire plans to the defined hazards and defense-in-depth features specified in the fire protection program. In evaluating the fire plans, the inspectors assessed the following items:

- control of transient combustibles and ignition sources
- fire detection systems
- water-based fire suppression systems
- gaseous fire suppression systems
- manual firefighting equipment and capability
- passive fire protection features
- compensatory measures and fire watches
- issues related to fire protection contained in the licensee's corrective action program

The inspectors toured the following five fire areas to assess material condition and operational status of fire protection equipment. Documents reviewed are listed in the attachment.

- Unit 1 & 2, station battery rooms, fire zones 1004, 1005, 2004, and 2005
- Unit 1 & 2, water analysis rooms, fire zones 1006 and 2006
- Unit 1, drywell and torus, fire zone 1201
- Unit 1 & 2, reactor protection system and cable tray rooms, fire zones 0040, 1013, 2013
- Unit 1 & 2, annunciator rooms, fire zones 1015 and 2015

b. Findings

Introduction: The inspectors identified a non-compliance of Hatch Unit 1 and Unit 2 Renewed Operating License Conditions 2.C.(3) and 2.C.(3)(a), "Fire Protection Program," for the licensee's failure to institute pre-fire plans for the Units 1 and 2 drywell and torus areas in accordance with the Hatch updated fire hazards analysis.

Description: Pre-fire plans describe the actions to be taken by firefighting personnel during a fire and enhance the manual fire suppression capability of the fire brigade. Hatch's updated Fire Hazards Analysis Section 9.1, "Appendix A – Fire Protection Program Plan," Subpart 6.2, "Pre-Fire Planning," states that pre-fire plans for fighting fires in all safety-related areas have been instituted at Hatch Nuclear Plant. The inspectors identified that pre-fire plans for the Hatch safety-related areas 1201, "Unit 1 Drywell and Torus" and 2201, "Unit 2 Drywell and Torus," had not been instituted by the licensee.

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Analysis: The licensee's failure to institute pre-fire plans for the Unit 1 and 2 drywell and torus areas in accordance with the Hatch updated fire hazards analysis was a performance deficiency. The performance deficiency was more than minor because it was associated with the mitigating systems cornerstone protection against external events (fire) attribute and adversely affected the cornerstone objective to ensure the capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the performance deficiency degraded manual fire suppression (i.e. fire brigade) capability. The inspectors evaluated the finding using IMC 0609, Appendix F, "Fire Protection Significance Determination Process Phase 1 Worksheet," dated September 20, 2013. The finding screened as Green in question 1.4.6.B, because the finding was associated with pre-fire plans. The inspectors determined the finding did not have a cross-cutting aspect because it was not indicative of current licensee performance.

Enforcement: Hatch Unit 1 License Condition 2.C.(3) and Hatch Unit 2 License Condition 2.C.(3)(a) state in part, that Southern Nuclear shall implement and maintain in effect all provisions of the fire protection program, which is referenced in the updated final safety analysis report for the facility, as contained in the updated fire hazards analysis and fire protection program for the Edwin I. Hatch Nuclear Plant, Units 1 and 2, which was originally submitted by letter dated July 22, 1986. Hatch updated Fire Hazards Analysis Section 9.1, "Appendix A – Fire Protection Program Plan," Subpart 6.2, "Pre-Fire Planning," states in part, that pre-fire plans for fighting fires in all safety-related areas have been instituted at Hatch Nuclear Plant.

Contrary to the above, Southern Nuclear failed to implement and maintain in effect all provisions of the fire protection program, as contained in the updated fire hazards analysis. Specifically, Southern Nuclear failed to institute pre-fire plans for fighting fires in safety-related fire areas 1201, "Unit 1 Drywell and Torus" and 2201, "Unit 2 Drywell and Torus." This violation has existed since initial plant start-up. The licensee entered this violation into their corrective action program as CR 788963.

Because the licensee committed to adopt NFPA 805 and change their fire protection licensing bases to comply with 10 CFR 50.48(c), the NRC is exercising enforcement and reactor oversight process (ROP) discretion for this issue in accordance with the NRC Enforcement Policy, Section 9.1, "Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48)" and Inspection Manual Chapter 0305. Specifically, this issue was identified and will be addressed during the licensee's transition to NFPA 805, was entered into the licensee's corrective action program (immediate corrective action and compensatory measures were taken), was not likely to have been previously identified by routine licensee efforts, was not willful, and it was not associated with a finding of high safety significance (i.e., Red).

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1R06 Flood Protection Measures (71111.06)a. Inspection Scope.1 Internal Flooding

The inspectors reviewed related flood analysis documents and walked down the areas listed below that contain risk significant structures, systems, and components susceptible to flooding. The inspectors verified plant design features and plant procedures for flood mitigation were consistent with design requirements and internal flooding analysis assumptions. The inspectors also assessed the condition of flood protection barriers and drain systems. In addition, the inspectors verified the licensee was identifying and properly addressing issues using their corrective action program. Documents reviewed are listed in the attachment.

- Unit 1, high pressure coolant injection pump room
- Unit 1, reactor core isolation cooling pump room

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07)a. Inspection ScopeAnnual Review

The inspectors verified the readiness and availability of the Unit 1 "A" residual heat removal heat exchanger to perform its design function by verifying the licensee uses the periodic maintenance method outlined in Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment," dated July 18, 1989. Additionally, the inspectors verified that the licensee had entered any significant heat exchanger performance problems into their corrective action program and that the licensee's corrective actions were appropriate. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

1R08 Inservice Inspection (ISI) Activities (IP 71111.08P, Unit 1)a. Inspection Scope

Non-Destructive Examination Activities and Welding Activities: From February 10 – 14, 2014, the inspectors conducted an on-site review of the implementation of the licensee's ISI Program for monitoring degradation of the reactor coolant system, emergency feedwater systems, risk-significant piping and components, and containment systems in

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Unit 1. The inspectors' activities included a review of non-destructive examinations (NDEs) to evaluate compliance with the applicable edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPVC), Section XI (Code of record: 2001 Edition, 2003 Addenda), and to verify that indications and defects (if present) were appropriately evaluated and dispositioned in accordance with the requirements of the ASME Code, Section XI, acceptance standards.

The inspectors directly observed the following NDE mandated by the ASME Code to evaluate compliance with the ASME Code Section XI and Section V requirements and, if any indications and defects were detected, to evaluate if they were dispositioned in accordance with the ASME Code or an NRC-approved alternative requirement.

- Ultrasonic Testing (UT) examination of weld 1B21-1FW-12AA-14, ASME Class 1, Feedwater System, 12 inch elbow-to-pipe weld
- Penetrant Testing (PT) examination of weld FW108/SNC463979W01 R2, ASME Class 3, Plant Service Water (PSW) System, 6 inch pipe-to-pipe weld
- Visual Testing (VT) examination of weld 1B11 I/OB2A, ASME Class 2, Feedwater Sparger End Bracket Pin Area at 175°, fillet weld and end pin

The inspectors reviewed records of the following NDEs mandated by the ASME Code Section XI to evaluate compliance with the ASME Code Section XI and Section V requirements and, if any indications and defects were detected, to evaluate if they were dispositioned in accordance with the ASME Code or an NRC-approved alternative requirement.

- Ultrasonic Testing (UT) examination of weld V8, Core Shroud, vertical seam weld

The inspectors observed the welding activities referenced below and reviewed associated documents in order to evaluate compliance with procedures and the ASME Code. The inspectors reviewed the work order, repair and replacement plan, weld data sheets, welding procedures, procedure qualification records, welder performance qualification records, and NDE reports.

- Work Order SNC463979, PSW Replacement Project – FW108/SNC463979W01 R2 and FW109/SNC463979W01 R2, ASME Class 3, 6 inch pipe-to-pipe welds

During non-destructive surface and volumetric examinations performed since the previous refueling outage, the licensee did not identify any relevant indications that were analytically evaluated and accepted for continued service. Therefore, no NRC review was completed for this inspection procedure attribute.

Identification and Resolution of Problems: The inspectors reviewed a sample of ISI-related problems which were identified by the licensee and entered into the corrective action program as condition reports (CRs). The inspectors reviewed the CRs to confirm the licensee had appropriately described the scope of the problem, and had initiated corrective actions. The review also included the licensee's consideration and assessment of operating experience events applicable to the plant. The inspectors

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performed this review to ensure compliance with 10CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requirements.

The inspectors also performed a review of the following Condition Reports (CR) associated with the Unit 1 Core Shroud cracking issue to verify the full extent of the issue was identified, an appropriate evaluation was performed, and appropriate corrective actions were specified and prioritized. Additionally, the inspectors conducted interviews with licensee staff to those same ends. The inspectors evaluated the actions taken as described in the CRs against the licensee's corrective action program as delineated in licensee procedure NMP-GM-002, "Corrective Action Program," and 10CFR50, Appendix B. Documents reviewed are listed in the attachment.

- CR777484, GE INR H1R26 IVVI-14-07 Results (EVT-1 Surface Exams)
- CR777485, GE INR H1R26 IVVI-14-10 Results (VT-3 Surface Exams)
- CR777486, GE INR H1R26 IVVI-14-12 Results (EVT-1 Surface Exams)
- CR777512, CNF-SHRD-008 Results (UT of H5/V7 Weld Intersection)
- CR775507, GE INR H1R26 IVVI-14-04 Results (Visual Exam of 0 and 180 Degree Core Shroud Access Hole Covers)
- CR775508, GE INR H1R26 IVVI-14-01 Results (Indications Found on VP3/2-4 Welds)
- CR775509, GE INR H1R26 IVVI-14-02 Results (Shroud Head Bolts Exams)
- CR775518, Core Shroud H4/V4 UT Results
- CR776196, CNF-SHRD-001 Results (V7 Shroud Weld UT Exam)
- CR776197, CNF-SHRD-002 Results (V8 Shroud Weld UT Exam)
- CR776198, CNF-SHRD-003 Results (UT Indication between H3 and H4 at 65 degree azimuth)
- CR776199, CNF-SHRD-004 Results (V5 Shroud Weld UT Exam)
- CR776201, CNF-SHRD-006 Results (V6 Shroud Weld UT Exam)

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)

a. Inspection Scope

.1 Resident Inspector Quarterly Review of Licensed Operator Requalification

The inspectors observed an evaluated simulator scenario administered to an operating crew conducted in accordance with the licensee's accredited requalification training program.

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The inspectors assessed the following:

- licensed operator performance
- the ability of the licensee to administer the scenario and evaluate the operators
- the quality of the post-scenario critique
- simulator performance

Documents reviewed are listed in the attachment.

.2 Resident Inspector Quarterly Review of Licensed Operator Performance

The inspectors observed licensed operator performance in the main control room during Unit 1 shutdown on February 2.

The inspectors assessed the following:

- use of plant procedures
- control board manipulations
- communications between crew members
- use and interpretation of instruments, indications, and alarms
- use of human error prevention techniques
- documentation of activities
- management and supervision

Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors assessed the licensee's treatment of the two issues listed below in order to verify the licensee appropriately addressed equipment problems within the scope of the maintenance rule (10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants"). The inspectors reviewed procedures and records to evaluate the licensee's identification, assessment, and characterization of the problems as well as their corrective actions for returning the equipment to a satisfactory condition. The inspectors also interviewed system engineers and the maintenance rule coordinator to assess the accuracy of performance deficiencies and extent of condition. Documents reviewed are listed in the attachment.

- Unit 1 instrument air system, air dryer pre-filter tagged out with no maintenance performed
- Unit 1 "A" traveling water screen jumping the sprocket

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b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)a. Inspection Scope

The inspectors reviewed the five maintenance activities listed below to verify that the licensee assessed and managed plant risk as required by 10 CFR 50.65(a)(4) and licensee procedures. The inspectors assessed the adequacy of the licensee's risk assessments and implementation of risk management actions. The inspectors also verified that the licensee was identifying and resolving problems with assessing and managing maintenance-related risk using the corrective action program. Additionally, for maintenance resulting from unforeseen situations, the inspectors assessed the effectiveness of the licensee's planning and control of emergent work activities. Documents reviewed are listed in the attachment.

- Week of January 11 - 17, including planned maintenance on Unit 1 "B" standby gas treatment train, Unit 1 "C" main control room air conditioner, and emergent maintenance on Unit 1 "B" emergency diesel generator.
- Week of February 10 - 14, including Unit 1 fuel movement and outage activities.
- Week of February 17 - 21, including protected equipment status reviews for Unit 1 outage and Unit 2 routine maintenance.
- Week of March 10 - 14, including Unit 1 power ascension to RTP and Unit 2 scheduled surveillance testing.
- Week of March 17 - 21, including Unit 2 planned maintenance activities for the "B" plant service water pump and high pressure coolant injection pump.

b. Findings

No findings were identified.

1R15 Operability Evaluations and Functionality Assessments (71111.15)a. Inspection Scope

The inspectors selected the five operability determinations or functionality evaluations listed below for review based on the risk-significance of the associated components and systems. The inspectors reviewed the technical adequacy of the determinations to ensure that technical specification operability was properly justified and the components or systems remained capable of performing their design functions. To verify whether components or systems were operable, the inspectors compared the operability and design criteria in the appropriate sections of the technical specification and updated final safety analysis report to the licensee's evaluations. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. Additionally, the

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inspectors reviewed a sample of corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the attachment.

- Emergency diesel generator “1B” tripped following surveillance testing, CR 759068
- Unit 2 emergency core cooling system automatic loading control circuitry cabinet for emergency diesel generator “1B” found not restrained, CR 750731
- Unit 1 reactor core isolation cooling pump snubber, 1E51-RCSEH-707, at full stroke, CR 764857
- Unit 1 “1B” emergency diesel generator and “B” loop residual heat removal inoperable at the same time, CR 767729
- Unit 1 containment air lock door 1R-62 outer door not shut, CR 772304

b. Findings

Introduction: The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” when the licensee failed to prescribe in documented instructions, procedures, or drawings appropriate to the circumstances the inspection of the Unit 2 loss of coolant accident (LOCA)/loss of offsite power (LOSP) emergency diesel generator loading timers.

Description: On January 2, 2014, the Hatch resident inspectors identified that the Unit 2 LOCA / LOSP emergency diesel generator loading timer cabinet doors were not closed with all the latches installed. The cabinets are designed to be held closed by fourteen bolted latches that are slid over the door lip and tightened with a wrench. For the “2A” and “2C” emergency diesel generator loading timer cabinet only one of fourteen latches was slid over engaging the door lip. For the “1B” swing emergency diesel generator loading timer cabinet none of the fourteen latches were slid over resulting in the door being partially opened. Upon notification by the NRC the licensee tightened each available cabinet latch and initiated CR 750731. Since March 2009 as part of the nightly operations outside rounds, each of these Unit 2 cabinet doors have been opened for inspection. Following the inspection on January 2, 2014, the operator did not reengage and tightened the latches. The inspectors identified the licensee had not prescribed this inspection activity in documented instructions, procedures, or drawings appropriate to the circumstances, contrary to the requirements of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings.”

Analysis: Failure to engage and tighten the Unit 2 LOCA/LOSP emergency diesel generator loading timer cabinet doors following inspection on January 2, 2014, was a performance deficiency. The performance deficiency was more than minor, because it was associated with the mitigating systems cornerstone protection against external factors attribute and adversely affected the corner objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, with none of the latches engaged the reliability of circuitry within the cabinet following a seismic event was adversely affected. The inspectors screened this finding using IMC 0609, Appendix A, “The Significant Determination Process (SDP) For Findings At-Power”, dated June 19, 2012. The finding screened as Green per Section

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A. of Exhibit 2, "Mitigating Systems Screening Questions," because each of the four screening questions were answered "no". The inspectors determined the finding had a cross cutting aspect of "resources" in the human performance area because the licensee did not ensure that procedures were available and adequate for performing the nightly inspection of the Unit 2 LOCA/LOSP emergency diesel generator loading timers. [H.1]

Enforcement: 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires in part that activities affecting quality shall be prescribed in documented instructions, procedures, or drawings appropriate to the circumstances. Contrary to this requirement since March 2009 the licensee failed to prescribe in documented instructions, procedures, or drawings appropriate to the circumstances the inspection of the safety-related Unit 2 LOCA/LOSP emergency diesel generator loading timers, which is an activity affecting quality. The licensee restored compliance by adding a step within the operator rounds to confirm the LOCA/LOSP emergency diesel generator loading timer cabinet door fasteners are reengaged and tightened. This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy. The violation was entered into the licensee's corrective action program as CR 793669. (NCV 05000366/2014002-01, "Failure to Install Seismic Restraints of the Unit 2 LOCA/LOSP Timer Cabinet Doors Following Inspection")

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors verified that the plant modification listed below did not affect the safety functions of important safety systems. The inspectors confirmed the modifications did not degrade the design bases, licensing bases and performance capability of risk significant structures, systems and components. The inspectors also verified modifications performed during plant configurations involving increased risk did not place the plant in an unsafe condition. Additionally, the inspectors evaluated whether system operability and availability, configuration control, post-installation test activities, and changes to documents, such as drawings, procedures, and operator training materials, complied with licensee standards and NRC requirements. In addition, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with modifications. Documents reviewed are listed in the attachment.

Modification:

- SNC547464, Bypass Unit 1 "B" adjustable speed drive fast acting relay emergency stop logic

b. Findings

No findings were identified.

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1R19 Post-Maintenance Testing (71111.19)a. Inspection Scope

The inspectors either observed post-maintenance testing or reviewed the test results for the seven maintenance activities listed below to verify the work performed was completed correctly and the test activities were adequate to verify system operability and functional capability.

- Work order (WO) SNC547216, "1B" emergency diesel generator governor replacement
- WO SNC554487, Replace Unit 1 reactor core isolation cooling electronic governor module
- WO SNC376610, Replace standby liquid key-lock switch, 1C41-F004A
- WO SNC493706, Replace high pressure coolant injection pump mechanical seal
- WO SNC478675, Perform post maintenance testing high pressure coolant injection system valves
- WO SNC316956, Remove/replace residual heat removal heat exchanger discharge valve, 1E11-F068A
- WO SNC484452, Replace residual heat removal seal cooler piping

The inspectors evaluated these activities for the following:

- Acceptance criteria were clear and demonstrated operational readiness
- Effects of testing on the plant were adequately addressed
- Test instrumentation was appropriate
- Tests were performed in accordance with approved procedures
- Equipment was returned to its operational status following testing
- Test documentation was properly evaluated

Additionally, the inspectors reviewed a sample of corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with post-maintenance testing. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20)a. Inspection Scope

For the Unit 1 refueling outage from February 3, 2014, through March 3, 2014, the inspectors evaluated the following outage activities:

- outage planning
- shutdown, cooldown, refueling, heatup, and startup

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- reactor coolant system instrumentation and electrical power configuration
- reactivity and inventory control
- decay heat removal and spent fuel pool cooling system operation
- containment closure

The inspectors verified that the licensee:

- considered risk in developing the outage schedule
- controlled plant configuration in accordance with administrative risk reduction methodologies
- developed work schedules to manage fatigue
- developed mitigation strategies for loss of key safety functions
- adhered to operating license and technical specification requirements

Additionally, inspectors verified that safety-related and risk-significant structures, systems, and components not accessible during power operations were maintained in an operable condition. The inspectors also reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with outage activities. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed the nine surveillance tests listed below and either observed the test or reviewed test results to verify testing adequately demonstrated equipment operability and met technical specification and licensee procedural requirements. The inspectors evaluated the test activities to assess for preconditioning of equipment, procedure adherence, and equipment alignment following completion of the surveillance. Additionally, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with surveillance testing. Documents reviewed are listed in the attachment.

Routine Surveillance Tests

- 34SV-R43-001-2, "Diesel Generator "2A" Monthly Test"
- 34GO-OPS-013-1, Attachment 1, "Cooldown/Depressurization Check"
- 34SV-T22-001-0, "Secondary Containment Test" with "1A", "1B", "2A" standby gas treatment trains"
- 42SV-R43-024-1, "Diesel Generator "B" LOCA/LOSP LSFT"
- 34SV-E41-005-1, "High Pressure Coolant Injection Pump Operability 165 PSIG Test"

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Containment Isolation Valve

- 42SV-TET-001-1, "Primary Containment Periodic Type B and Type C Leak Rate Testing for 1T48-319 and 320," February 12
- 42SV-TET-001-1, "Primary Containment Periodic Type B and Type C Leak Rate Testing for 1B21-F036G," February 23

In-Service Tests

- 34SV-E11-001-2, "Residual Heat Removal Pump Operability" for the "2A" residual heat removal pump

Reactor Coolant System Leak Detection

- 34SV-SUV-019, "Surveillance Checks"

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed the emergency preparedness evolution conducted on January 22, 2014. The inspectors observed licensee activities in the simulator to evaluate implementation of the emergency plan, including event classification, notification, and protective action recommendations. The inspectors evaluated the licensee's performance against inspection criteria established in the licensee's procedures. Additionally, the inspectors attended the post-exercise critique to assess the licensee's effectiveness in identifying emergency preparedness weaknesses and verified the identified weaknesses were entered in the corrective action program. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

2. RADIATION SAFETY (RS)

2RS1 Radiological Hazard Assessment and Exposure Controls

a. Inspection Scope

Radiological Hazard Assessment and Instruction to Workers: During facility tours, the inspectors directly observed labeling of radioactive material and postings for radiation areas, high radiation areas (HRA), locked high radiation areas (LHRA), and very high radiation areas (VHRA) established within the radiologically controlled area (RCA) of the Unit 1 and Unit 2 reactor buildings, Unit 1 and Unit 2 turbine buildings, and radioactive waste (radwaste) processing and storage locations. Inspectors discussed with cognizant plant personnel changes to plant operations since the last inspection that would have resulted in any new significant radiological hazards. Radiological surveys from selected areas of the plant were reviewed for consistency, thoroughness and appropriateness. The inspectors reviewed survey records for several plant areas including surveys for alpha emitters, discrete radioactive particles, airborne radioactivity, gamma surveys with a range of dose rate gradients, and pre-job surveys for upcoming tasks. For selected Unit 1 Refueling Outage 26 (U1R26) outage jobs, the inspectors attended pre-job briefings and reviewed radiation work permit (RWP) details to assess communication of radiological control requirements and current radiological conditions to workers. Selected work activities included control rod drive (CRD) pulls and pre-staging work involved, shroud head bolt removal on refueling floor, structural welding for safety relief valves in the drywell, and removal of radioactive materials out of the drywell radiation controlled area (RCA). Surveys and ALARA plans and air sample records were reviewed for some of these jobs and others such as diving in the torus.

Hazard Control and Work Practices: The inspectors observed evaluated access barrier effectiveness for selected LHRA locations. Any changes to procedural guidance for LHRA and VHRA controls were discussed with health physics (HP) supervisors. The inspectors reviewed implementation of controls for the storage of irradiated material within the spent fuel pool (SFP). Established radiological controls (including airborne controls) were evaluated for selected U1R26 tasks including drywell welding activities on the main steam isolation valves, CRD removal, activities in the under-vessel area, torus diving, and manipulation and movement of the fuel pins. In addition, the inspectors reviewed licensee controls for areas where dose rates could change significantly as a result of plant shutdown and refueling operations.

Occupational workers' adherence to selected RWPs and HP technician proficiency in providing job coverage were evaluated through direct observation and interviews with licensee staff. Electronic dosimeter (ED) alarm set points and worker stay times were evaluated against area radiation survey results. The inspectors also evaluated worker responses to dose and dose rate alarms during selected work activities. For selected tasks involving significant dose rate gradients, the use and placement of whole body and extremity dosimetry to monitor worker exposure was discussed with cognizant licensee staff.

Control of Radioactive Material: The inspectors observed surveys of material and personnel being released from the RCA using small article monitor (SAM), personnel contamination monitor (PCM), portal monitor (PM) instruments, and portable radiation survey instruments. The inspectors reviewed calibration records for selected release point survey instruments and discussed equipment sensitivity, alarm setpoints, and release program guidance with licensee staff. The inspectors reviewed records of leak tests on selected sealed sources and discussed nationally tracked source transactions with RP staff.

Problem Identification and Resolution: The inspectors reviewed and assessed corrective action program (CAP) documents associated with radiological hazard assessment and control. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with procedure NMP-GM-002, "Corrective Action Program". The inspectors also reviewed recent self-assessment results.

Radiation protection activities were evaluated against the requirements of Technical Specifications (TS) Sections 5.4 and 5.7, 10 CFR Parts 19 and 20, and approved licensee procedures. Licensee programs for monitoring materials and personnel released from the RCA were evaluated against 10 CFR Part 20 and IE Circular 81-07, "Control of Radioactively Contaminated Material". Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

2RS6 Radioactive Gaseous and Liquid Effluent Treatment

a. Inspection Scope:

Event and Effluent Program Reviews: The inspectors reviewed the 2011 and 2012 Annual Radioactive Effluent Release Report (ARERR) documents for consistency with requirements in the offsite dose calculation manual (ODCM) and TS. Routine and abnormal effluent release results and reports, as applicable, were reviewed and discussed with responsible licensee representatives. Status of the radioactive gaseous and liquid effluent processing and monitoring equipment, and applicable equipment changes, as described in the updated final safety analysis report (UFSAR) and current ODCM, were discussed with responsible staff.

Equipment Walkdowns: The inspectors walked-down and discussed selected components of gaseous processing systems, and selected Unit 1 and Unit 2 liquid waste processing and discharge systems to ascertain material condition, configuration and alignment. To the extent practical, the inspectors observed and evaluated the material condition of in-place liquid waste processing equipment for indications of degradation or leakage that could constitute a possible release pathway to the environment. The inspectors observed weekly change out and analysis of gaseous and particulate samples of the Unit 1 and Unit 2 reactor building vent and sampling of Unit 1

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waste storage tank 'B" prior to a liquid effluent release. Sampling and analysis procedures and generation of the liquid and gaseous release permits were discussed with plant personnel.

Effluent Processing: The inspectors discussed ongoing processing of a waste monitoring tank and plans to close out release permit and start another release on a different tank with chemistry and operations personnel. The reviews included review and discussion of selected dose calculation summaries. Release quantities and dose impacts were reviewed and discussed. The inspectors reviewed 10 CFR 61 analysis data for expected nuclide distributions used to quantify effluents, treatment of hard to detect nuclides, and determination of appropriate calibration nuclides for effluent analysis instruments. The inspectors followed up on an unplanned but monitored release from a waste gas decay tank. The inspectors reviewed the calculated public dose results for any indications of higher than anticipated or abnormal releases.

Ground Water Protection: The inspectors reviewed the current groundwater sample results, observed selected sample well placement, and reviewed the most recent groundwater monitoring program report. The inspectors discussed groundwater program modifications due to the ongoing Unit 1 condensate storage tank piping leaks and repairs. The groundwater program was discussed with chemistry representatives.

Problem Identification and Resolution: The inspectors reviewed selected CR documents in the areas of gaseous and liquid effluent processing and release activities. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with procedures NMP-GM-002, "Corrective Action Program," and NMP-GM-002-001, "Corrective Action Program Instructions." The inspectors also discussed the scope of the licensee's internal audit program and reviewed recent assessment results.

Effluent process and monitoring activities were evaluated against details and requirements documented in ODCM; 10 CFR Part 20; Appendix I to 10 CFR Part 50; and approved licensee procedures. In addition, ODCM and UFSAR changes since the last onsite inspection were reviewed against the guidance in NUREG-1301 and Regulatory Guide (RG) 1.109, RG 1.21, and RG 4.1. Records reviewed are listed in the attachment.

b. Findings

No findings were identified.

2RS7 Radiological Environmental Monitoring Program (REMP)

a. Inspection Scope

REMP Implementation: The inspectors observed routine sample collection and surveillance activities as required by the licensee's environmental monitoring program. The inspectors noted the material condition and operability of airborne particulate filter and iodine cartridge sample stations and observed collection of weekly air samples at

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selected monitoring locations. The inspectors checked environmental optically stimulated luminescent (OSL) dosimeters at selected sites for material condition. Land use census results, changes to the ODCM, and sample collection/processing activities were discussed with environmental technicians and licensee staff.

The inspectors reviewed the 2011 and 2012 Radiological Environmental Operating Reports, the 2012 Annual Radioactive Effluent Report, internal and external audits of the Georgia Power Environmental Laboratory, results of the 1st three quarters of the 2013 interlaboratory cross-check program, and procedural guidance for environmental sample collection and processing. The inspectors also reviewed the last two calibration records for selected environmental air samplers. The inspectors evaluated environmental measurements for consistency with licensee effluent data, radionuclide concentration trends, and adequacy of detection instrument sensitivity. In addition, the current status and completeness of the licensee's 10 CFR 50.75(g) decommissioning files were reviewed and discussed, as well as structures, systems, and components that could potentially leak material into the groundwater and reviewed recent ground water monitoring results.

Meteorological Monitoring Program: The inspectors observed a weekly surveillance on the primary meteorological tower and local data collection equipment. The inspectors observed the physical condition of the tower and its instrumentation and discussed equipment operability and maintenance history with licensee staff. The inspectors evaluated transmission of locally generated meteorological data to other licensee groups such as emergency operations personnel and main control room operators. For the meteorological measurements of wind speed, wind direction, and temperature, the inspectors reviewed the last two calibration records for applicable tower instrumentation. The inspectors also discussed with licensee staff measurement data recovery for 2013.

Identification and Resolution of Problems: The inspectors reviewed CRs in the areas of radiological environmental monitoring and meteorological tower maintenance. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with procedure NMP-GM-002, "Corrective Action Program." The inspectors also evaluated the scope of the licensee's corporate audit program and reviewed recent assessment results.

The inspectors evaluated REMP implementation and meteorological monitoring against the requirements and guidance contained in: 10 CFR Part 20; Appendix I to 10 CFR Part 50; TS Sections 5.4, 5.5, and 5.6; ODCM, Rev. 23; RG 4.15, "Quality Assurance for Radiological Monitoring Programs (Normal Operation) – Effluent Streams and the Environment;" and the Branch Technical Position, "An Acceptable Radiological Environmental Monitoring Program" – 1979; and RG 1.23, "Onsite Meteorological Programs" (1972). Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

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2RS8 Radioactive Solid Waste Processing and Radioactive Material Handling, Storage, and Transportation

a. Inspection Scope

Radioactive Material Storage: The inspectors walked down indoor and outdoor areas inside the protected area as well as the waste separation and temporary storage facility and sealand storage facility. During the walkdowns, the inspectors observed the physical condition and labeling of storage containers and the radiological postings for satellite radioactive material storage areas. The inspectors also reviewed the licensee's radwaste procedures for routine surveys and waste storage.

Radioactive Waste System Walkdown, Characterization and Classification: The inspectors walked down accessible sections of the liquid and solid radwaste systems to assess material condition and conformance of equipment with system design diagrams. This included the indoor portion of the radwaste building containing storage tanks, the unused equipment area, the Unit 1 radwaste control room, and the outdoor resin processing pad areas for Units 1 and 2. The inspectors discussed the function of radwaste components with the radwaste operator. The inspectors discussed possible changes to the radwaste processing systems with radwaste staff. The processes for the dewatering of resins, spent resin tank recirculation, resin sampling, and transfer of resins from the processing pads to the shipping casks and temporary storage casks were reviewed and discussed with the resin processing contractor.

The inspectors reviewed the 2011 radioactive effluent release report and the 2012-2013 radionuclide characterization and classification for the DAW and dewatered resin waste streams. The inspectors evaluated analyses for hard-to-detect nuclides, reviewed the use of scaling factors, and examined quality assurance comparison results between licensee waste stream characterizations and outside laboratory data. The inspectors also evaluated how changes to plant operational parameters were taken into account in waste characterization.

Shipment Preparation and Records: There were no radioactive material shipments available for observation during the week of the inspection. The inspectors reviewed six shipping records for consistency with licensee procedures and compliance with NRC and Department of Transportation (DOT) regulations. This included review of emergency response information, waste classification, radiation survey results, information on the waste manifest, and the authorization of the receiving licensee to receive shipments. Training records for selected individuals currently qualified to ship radioactive material were reviewed for compliance with 49 CFR Part 172 Subpart H.

Identification and Resolution of Problems: The inspectors reviewed selected CRs in the area of radwaste/shipping, as well as the results of a self-assessment. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with procedure NMP-GM-002, "Corrective Action Program."

Radioactive material and waste storage activities were reviewed against the requirements of 10 CFR Part 20. Radwaste processing activities and equipment configuration were reviewed for compliance with the licensee's process control program. Waste stream characterization analyses were reviewed against regulations detailed in 10 CFR Part 20, 10 CFR Part 61, and guidance provided in the Branch Technical Position on Waste Classification (1983). Transportation program implementation was reviewed against regulations detailed in 10 CFR Part 20, 10 CFR Part 71 (which requires licensees to comply with DOT regulations in 49 CFR Parts 107, 171-180, and 390-397), as well as the guidance provided in NUREG-1608. Training activities were assessed against 49 CFR Part 172 Subpart H. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

a. Inspection Scope

The inspectors reviewed a sample of the PI data, submitted by the licensee, for the Unit 1 and Unit 2 PIs listed below. The inspectors reviewed plant records compiled between January 2013 and January 2014 to verify the accuracy and completeness of the data reported for the station. The inspectors verified that the PI data complied with guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," and licensee procedures. The inspectors also confirmed the PIs were calculated correctly. In addition, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with PI data. Documents reviewed are listed in the attachment.

Cornerstone: Initiating Events

- unplanned scrams per 7,000 critical hours
- unplanned power changes per 7,000 critical hours
- unplanned scrams with complications

Occupational Radiation Safety Cornerstone

The inspectors reviewed the occupational exposure control effectiveness PI results for the occupational radiation safety cornerstone from April 2013 through November 2013. For the assessment period, the inspectors reviewed electronic dosimeter alarm logs and CRs related to controls for exposure significant areas. Documents reviewed are listed in the attachment.

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Public Radiation Safety Cornerstone

The inspectors reviewed the radiological control effluent release occurrences PI results for the public radiation safety cornerstone from January 2013 through December 2013. For the assessment period, the inspectors reviewed cumulative and projected doses to the public contained in liquid and gaseous release permits and CRs related to radiological effluent technical specifications/ODCM issues. The inspectors also reviewed licensee procedural guidance for collecting and documenting PI data. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152)

.1 Routine Review

The inspectors screened items entered into the licensee's corrective action program in order to identify repetitive equipment failures or specific human performance issues for followup. The inspectors reviewed condition reports, attended screening meetings, or accessed the licensee's computerized corrective action database.

.2 Annual Follow-up of Selected Issues

a. Inspection Scope

The inspectors conducted a detailed review of the following two condition reports:

- CR 676775, "Wrong gas (Argon) used in forced Helium dehydration of a dry cask"
- CR 637189, "Questions raised regarding scoping for MOVs to be included in Generic Letter 96-05 program"

The inspectors evaluated the following attributes of the licensee's actions:

- complete and accurate identification of the problem in a timely manner
- evaluation and disposition of operability and reportability issues
- consideration of extent of condition, generic implications, common cause, and previous occurrences
- classification and prioritization of the problem
- identification of root and contributing causes of the problem
- identification of any additional condition reports
- completion of corrective actions in a timely manner

Documents reviewed are listed in the attachment.

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b. Findings

Introduction: NRC inspectors identified a Green NCV of 10 CFR 50.55a, "Codes and Standards," for the licensee's failure to establish a periodic verification program for the core spray, high pressure core injection, and reactor core injection cooling systems pump outboard discharge motor-operated valves (MOV) to ensure their long-term capability to perform their design bases safety functions.

Description: The core spray and high pressure core injection emergency core cooling systems at Hatch have design provisions to maintain system availability during system or component testing. As stated in updated final safety analysis report (UFSAR) Section 7.3.1.2, the controls of these systems are designed such that they automatically return from the test to the operating mode if system initiation is required. The reactor core injection cooling system is also designed to automatically return to the operating mode when required during testing of individual components, as indicated in UFSAR Section 5.5.6.5. Because these systems are capable of automatically realigning, Hatch does not declare these systems inoperable when performing stroke time in-service testing of the pump's outboard discharge MOV for these systems. These valves (E21-F004A(B), E41-F007, and E51-F012) are maintained open during normal operation and must remain open during design bases accidents to ensure system flow paths to the reactor vessel. During in-service testing, the valves are cycled to their non-safety position (closed) and time-stroked in the open direction. If closed during a design bases accident, the valves receive a signal to automatically reposition to the open position.

In 1989, Generic Letter (GL) 89-10, "Safety-Related Motor-Operated Valve Testing and Surveillance," the NRC informed licensees that stroke time in-service testing alone was not sufficient to provide assurance of MOV operability under design basis conditions. Via the GL, the NRC requested that licensees ensure the capability of MOVs in safety-related systems to perform their intended functions by reviewing MOV design bases, initially and periodically verifying MOV switch settings, testing MOVs under design basis conditions where practicable, improving evaluations of MOV failures and necessary corrective action, and trending MOV problems. On September 18, 1996, the NRC staff issued GL 96-05, "Periodic Verification of Design-Basis Capability of Safety-Related Motor-Operated Valves," requesting each licensee establish a program, or ensure the effectiveness of its current program (per GL89-10), to periodically verify that safety-related MOVs continue to be capable of performing their safety functions within the current licensing basis of the facility. The program provides assurance that valve performance (operational thrust/torque requirements and motor actuator capability) is not affected by age and wear related degradation.

On February 3, 1994, Hatch submitted a letter to the NRC requesting review for changing the scope of MOVs included in their GL 89-10 program. In a request for additional information, dated February 13, 1995, the NRC expressed concerns that the category of safety system test valves (valves that when in their test position can defeat the associated safety system response) were not included in Hatch's GL 89-10 program. The NRC indicated that, because Hatch relied on the automatic repositioning of these MOVs to justify operability of the associated safety systems during test or surveillance activities, the valves should be included the GL 89-10 program. On March 14, 1995,

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Hatch responded to the request for additional information and stated that valve operability was not required during testing because the valves are not assumed to be called upon to operate during the short periods of time the system (or the valve) is in the test mode and therefore, the valves would not be included in the GL 89-10 program. On October 16, 1995, the NRC issued a safety evaluation for the licensee's proposed reclassification of valves in the GL 89-10 program. In the safety evaluation, the NRC stated that the licensee's position that valve operability was not required during test mode appeared to be inconsistent with Technical Specification requirements. The NRC also stated that an MOV placed in a position that prevents the safety-related system (or train) from performing its safety function must be capable of returning to its safety position or the system (or train) must be declared inoperable. This position was again reiterated in GL 96-05, and in NUREG-1482, "Guidelines for In-service Testing at Nuclear Power Plants," dated January 2005 (revision 1), Section 3.1.2, "Entry into a Limiting Condition for Operation to Perform Testing."

The inspectors identified that the pump outboard discharge MOVs in the core spray, high pressure core injection, and reactor core injection cooling systems were not in the periodic verification program. However, as described in the UFSAR and valve in-service testing procedures for these components, the licensee relied on the capability of these MOVs to automatically return to their safety positions following design bases accidents to justify system operability during testing. The inspectors determined that the licensee failed to incorporate these MOVs in the periodic verification program as required by Paragraph (b)(3)(ii) of 10 CFR 50.55a, "Codes and Standards."

The inspectors also identified that the alarm response procedure (34AR-601-902-2, ARP's For Control Panel 2H11-P601, Alarm Panel 1, Ver. 13.19) for abnormal high core spray discharge pressure conditions directs operators to close E21-F004A(B) and cycle the downstream inboard isolation MOV, E21-F005A(B) (normally closed), to clear any small debris that may be causing leakage past the valve. The inspectors noted that the procedure did not caution the operators that closure of E21-F004B would rendered the affected core spray train inoperable. The licensee entered this issue into their corrective action program as CR 799261, and provided operators with interim instructions to declare the affected systems inoperable when these valves are placed in their non-safety position until permanent corrective actions are implemented.

Analysis: The failure to establish a periodic verification program for the core spray, high pressure core injection, and reactor core injection cooling systems pump outboard discharge MOVs to ensure their long-term capability to perform their design basis safety functions was a performance deficiency. The performance deficiency was more than minor because it adversely affected the equipment performance attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to ensure the long-term capability of the valves to perform their design basis safety functions overestimated the availability and reliability of the core spray, high pressure core injection, and reactor core injection cooling systems during testing or other activities that would place the valves in their non-safety position. The inspectors evaluated the finding in accordance with IMC 0609, Attachment 4, "Initial Characterization of Findings," dated June 19, 2012. Using Table 2, "Cornerstones

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Affected by Degradation Condition or Programmatic Weakness,” the finding affected the mitigating systems cornerstone and required further evaluation using IMC 0609 Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” dated June 19, 2012. Using Appendix A, Exhibit 2, “Mitigating Systems Screening Questions,” the finding screened as Green because all the questions were answered “no.” The inspectors determined the finding had a cross-cutting aspect of “evaluation” in the problem identification and resolution area because in 2013 the licensee had corrective actions in the corrective action program to evaluate the adequacy of the MOV periodic verification program scope and failed to identify that reliance on the valves to reposition when in the closed position required the valves to be in the program. [P.2]

Enforcement: 10 CFR 50.55a, “Codes and Standards,” Paragraph (b)(3)(ii), “Motor Operated Valve Testing,” requires in part, that the licensee “...shall establish a program to ensure that motor-operated valves continue to be capable of performing their design basis safety functions.” Contrary to the above, since October 16, 1995, the licensee failed to establish a program to ensure that the pump outboard discharge MOVs for the core spray, high pressure core injection, and reactor core injection cooling systems continued to be capable of performing their design basis safety functions. Because these valves were not maintained in accordance with the MOV periodic verification program, the licensee was not able to rely on their ability to automatically reposition from their non-safety positions and perform their design basis functions. The licensee entered this issue in their corrective action program as CR 799261 and provided operators with interim instructions to declare the affected systems inoperable until permanent corrective actions are implemented. This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy. (NCV 05000321, 366/2014005-02, “Failure to Scope Safety System MOVs in the GL 96-05 Periodic Verification Program”).

4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153)

.1 Unit 2 Recirculation Pump Runback in Response to Lowering Reactor Water Level

a. Inspection Scope

On January 17, 2014, a Unit 2 automatic recirculation pump runback from 100 percent RTP to 82 percent RTP occurred in response to lowering reactor water level. The inspectors reviewed operator response, control room logs, operating procedures, plant computer data, and operator statements.

b. Findings

Introduction: A self-revealing Green NCV of Technical Specification 5.4, “Procedures,” was identified when an automatic recirculation pump runback occurred after improper operations of the Unit 2 master feedwater controller “PF” push button.

Description: On January 17, 2014, a licensed reactor operator incorrectly manipulated the Unit 2 master feedwater controller, 2C32-R600. The operator pushed the controller “PF” button assuming that the controller would display the setpoint in the controller

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digital window. However, as indicated within plant procedures and on a placard located directly below the controller, when the "PF" button is pushed it causes the reactor water level setpoint to be lowered by four inches. Plant systems responded to the reactor water level setpoint being lowered, which resulted in an automatic recirculation pump runback from 100 percent RTP to 82 percent RTP. The crew responded to the runback using approved procedures, and restored reactor water level to the correct setpoint.

Analysis: Failure to operate the Unit 2 master feedwater controller, 2C32-R600, in accordance with plant procedures on January 17, 2014, was a performance deficiency. This performance deficiency was more than minor because it is associated with the human performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability during power operations. Specifically, the performance deficiency directly resulted in an unplanned transient when plant systems automatically reduced reactor power. The inspectors screened this finding using IMC 0609, Appendix A, "The Significant Determination Process (SDP) For Findings At-Power", dated June 19, 2012. The finding screened as Green per Section B. of Exhibit 1, "Initiating Events Screening Questions," because the finding did not cause a reactor trip AND the loss of mitigation equipment, a high energy line-break, internal flooding, or a fire. Inspectors determined the finding had a cross cutting aspect of "avoid complacency" of the human performance area because the operator did not implement the error reduction tool (reading the placard below the controller) prior to performing an action. [H.12]

Enforcement: Technical Specification 5.4, "Procedures," Section 5.4.1.a. requires in part that written procedures shall be implemented covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Appendix A, Section 4.o. requires in part procedures for operation of the feedwater system. Hatch procedure 34SO-N21-007-2, "Condensate and Feedwater System," is the site procedure for operating the feedwater system. Contrary to the above, on January 17, 2014, the licensee failed to implement the feedwater system operation procedure when the "PF" button was pushed on the master feedwater controller. The licensee restored compliance when the crew responded to the runback using approved procedures, and restored reactor water level to the correct setpoint. The violation was entered into the licensee's corrective action program as CR 759497. (NCV 05000366/2014002-03, "Failure to Operate the Unit 2 Master Feedwater Controller In Accordance With Procedures").

.2 Unit 1 "B" Recirculation Pump Runback Due to Failure of NXG Master "A" Controller

a. Inspection Scope

On January 18, 2014, a Unit 2 automatic recirculation pump runback from 92 percent RTP to 75 percent RTP occurred in response to the failure of NXG master "A" controller. The inspectors reviewed operator response, control room logs, operating procedures, plant computer data, and operator statements.

b. Findings

No findings were identified.

.3 Unit 1 Control Rod Inadvertently Withdrawn to Position 48a. Inspection Scope

On February 10, 2014, Unit 1 control rod 42-47 was inadvertently withdrawn to position 48 during performance of procedure 34GO-OPS-066-0, "Control Rod Withdrawal In Shutdown or Refuel." The inspectors reviewed operator response, control room logs, operating procedures, plant computer data, and operator statements.

b. Findings

The enforcement aspects of this finding are discussed in Section 4OA7.

.4 (Discussed) Licensee Event Report (LER) 05000321,366/2013-004-00,01,02 Postulated Inter-cable Fault Vulnerability for Residual Heat Removal Shutdown Cooling Isolation Valves During A Postulated Fire Event Results in Unanalyzed Condition

On August 8, 2013, the licensee discovered vulnerabilities while performing circuit analysis that postulated fire scenarios can cause two residual heat removal shutdown cooling isolation valves to spuriously open while at rated power. The details of this LER are discussed in the NRC Inspection Report 05000321, 366/2013009. During the inspection the inspectors identified additional vulnerabilities in the cable spreading room for the respective units for the same residual heat removal shutdown cooling isolation valves. Upon identification of the vulnerabilities, the licensee took immediate actions to de-activate the Unit 1 valves in the "closed" position to remove the vulnerability. Actions had been previously taken to de-activate the Unit 2 valves.

The inspectors reviewed the subject LER revision to verify the LER accuracy and appropriateness of the additional corrective actions. The revision to the LER provided additional details by the licensee regarding the extent of condition of the additional vulnerabilities in the cable spreading room for the respective units for the same residual heat removal shutdown cooling isolation valves. This LER remains open pending NRC review of the completed assessment of the fire risk associated with the potential for an interfacing system loss of coolant accident in the residual heat removal shutdown cooling suction path due to fire induced cable shorts for fire area 2203 and 0024.

4OA5 Other Activities.1 Cross-Cutting Aspect Common Language Initiative Transition

The table below provides a cross-reference from the 2013 and earlier findings and associated cross-cutting aspects to the new cross-cutting aspects resulting from the

common language initiative. These aspects and any others identified since January 2014, will be evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review.

Finding	Old Cross-Cutting Aspect	New Cross-Cutting Aspect
05000321, 366/2013004-01	H.1(b)	H.14
05000321, 366/2013005-01	H.4(c)	H.2
05000321/2013005-02	H.1(b)	H.14
05000321, 366/2013005-03	H.3(b)	H.5

4OA6 Meetings, Including Exit

On April 18, 2014, the resident inspectors presented the inspection results to Mr. David Vineyard and other members of the licensee's staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) or Severity Level IV was identified by the licensee and was a violation of NRC requirements which met the criteria of the NRC Enforcement Policy for being dispositioned as a Non-Cited Violation.

- A licensee-identified violation of Hatch Unit 1 Technical Specification 5.4, "Procedures," occurred on February 10, 2014, when operators withdrew the wrong control rod during performance of procedure 34GO-OPS-066-0, "Control Rod Withdrawal in Shutdown or Refuel." Technical Specification 5.4.a. requires in part that written procedures shall be implemented covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.I. requires procedures for refueling and core alternations. Hatch procedure 34GO-OPS-066-0 is a procedure developed for performing activities during refueling and core alterations. Contrary to the above, on February 10, 2014, the licensee failed to implement procedure 34GO-OPS-066-0 when control rod 42-47 was fully withdrawn outside of procedural controls. This violation screened as Green in accordance with IMC 0609, Appendix G, Figure 1, because the IMC 0609, Appendix G, Attachment 1, Checklist 7, screening did not require a quantitative assessment to be performed. The licensee entered this violation into their corrective action program as CR 771623. (Section 4OA3.3)

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

B. Anderson, Health Physics Manager
G. Brinson, Maintenance Director
V. Coleman, Chemistry Manager
D. Cordes, SNC Corporate ISI Examinations Coordinator
A. Giancattarino, Engineering Director
A. Gordon, ISI Engineer
D. Komm, Operations Director
K. Long, Work Management Director
B. Mathews, Site Welding Engineer
R. Spring, Plant Manager
S. Tipps, Principal Licensing Engineer
M. Torrance, Nuclear Oversight Manager
D. Vineyard, Site Vice President
K. White, ISI Examinations Coordinator

LIST OF ITEMS OPENED AND CLOSED

Opened & Closed

05000366/2014002-01	NCV	Failure to Install Seismic Restraints of the Unit 2 LOCA LOSP Timer Cabinet Doors Following Inspection (1R15)
05000366/2014002-02	NCV	Failure to Scope Safety System MOVs in the GL 96-05 Periodic Verification Program (4OA2.2)
05000366/2014002-03	NCV	Failure to Operate the Unit 2 Master Feedwater Controller In Accordance With Procedures (4OA3.1)

Discussed

05000321,366/2013-004-00	LER	Postulated Inter-cable Fault Vulnerability for RHR
05000321,366/2013-004-01		Shutdown Cooling Isolation Valves During A
05000321,366/2013-004-02		Postulated Fire Event Results in Unanalyzed Condition (4OA3.4)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather

52PM-MEL-005-0, "Cold Weather Checks," Ver. 14.0

DI-OPS-36-0989, "Cold Weather Checks," Ver. 21.1

Section 1R04: Equipment Alignment

Procedures

34SO-R43-001-2, "Diesel Generator Standby AC System," Ver. 28.1

34SO-T46-001-1, "Standby Gas Treatment System," Ver. 20.15

34SO-E51-001-2, "Reactor Core Isolation Cooling System," Ver. 24.2

Drawings

H-21074, S-13639, H-26023

Section 1R05: Fire Protection

Procedures

E.I. Hatch Fire Protection Fire Hazards Analysis

42FP-FPX-018-0, "Use, Control and Storage of Flammable/Combustible Materials," Version 1.2

34AB-X43-001-1, "Fire Procedure," Version 10.25

42SV-FPX-024-0, "Fire Hose Stations – Appendix B Areas," Version 3.2

Drawings

A-43965 sheet 8A/B, Unit 1 Pre-Fire Plan Water Analysis Room Elevation 112' 0"

A-43965 sheet 11A/B, Unit 1 Pre-Fire Plan W Station Battery Room 1A Control Bldg. Elevation 112' 0"

A-43965 sheet 12A/B, Unit 1 Pre-Fire Plan E Station Battery Room 1B Control Bldg. Elevation 112' 0"

A-43965 sheet 17A/B, Unit 2 Pre-Fire Plan W Station Battery Room 2A Control Bldg. Elevation 112' 0"

A-43965 sheet 18A/B, Unit 2 Pre-Fire Plan E Station Battery Room 2B Control Bldg. Elevation 112' 0"

A-43965 sheet 19A/B, Unit 2 Pre-Fire Plan Water Analysis Room Control Bldg. Elevation 112' 0"

A-43965 sheet 26A/B, Unit 1 & 2 Pre-Fire Plan RPS and Cable Tray Room Control Bldg. Elevation 130' 0"

A-43965 sheet 27A/B, Unit 1 Pre-Fire Plan Annunciator Room Control Bldg. Elevation 130' 0"

A-43965 sheet 36A/B, Unit 2 Pre-Fire Plan Annunciator Room Control Bldg. Elevation 130' 0"

Section 1R06: Internal Flood Protection

Documents

HNP-2-FSAR Chapter 9.3.3.2.2.B

52PM-Y46-001-0, "Inground Pullbox and Cable Duct Inspection For Water," Ver 6.8

Hatch Individual Plant Examination

Updated Final Safety Analysis Report

Section 1R07: Heat Sink Performance**Procedures**

52PM-E11-009-0, "RHR Heat Exchanger Preventative Maintenance," Ver. 5.1
 42IT-TET-012-1, "Plant Service Water and RHR Service Water Piping Inspection Procedure," Ver. 2.11
 AMP-RHRHX-CM, "RHR Heat Exchanger Augmented Inspection and Testing Program," Ver. 1.0

Condition Reports

774387

Section 1R08: Inservice Inspection (ISI) Activities**Procedures**

NMP-ES-010-GL02, BWRVIP NMP: Core Shroud and Shroud Stabilizer Guideline, Ver. 9.0
 NMP-ES-024-201, Visual Examination (VT-1), Ver. 3.0
 NMP-ES-024-203, Visual Examination (VT-3), Ver. 5.0
 NMP-ES-024-206, Visual Examination of the Reactor Pressure Vessel Internals, Ver. 11.1
 NMP-ES-024-301, Liquid Penetrant Examination Color Contrast and Fluorescent, Ver. 11.0
 NMP-ES-024-401, Magnetic Particle Examination, Ver. 9.0
 NMP-ES-024-501, PDI Generic Procedure for the Ultrasonic Examination of Austenitic Pipe Welds, Ver. 4.1
 NMP-ES-024-502, PDI Generic Procedure for the Ultrasonic Examination of Ferritic Pipe Welds, Ver. 4.0
 NMP-ES-024-504, Manual Ultrasonic Examination of Bolts and Studs (Appendix VIII), Ver. 4.2
 NMP-ES-057, Snubber Program, Ver. 3.1
 NMP-ES-057-001, Snubber Program Development/Maintenance, Ver. 2.0
 NMP-ES-057-003, Snubber Program Implementation, Ver. 4.0
 NMP-ES-057-004, Snubber Program Service Life Monitoring, Ver. 4.0
 NMP-GM-002, Southern Nuclear Company, Corrective Action Process, Version 13.0

Calculations

1200283.302, Structural Integrity Associates, Inc. Calculation Package: Hatch V5/V6 Shroud Vertical Weld Evaluation, Rev. 1
 SMNH93-021, Hatch 1 – Replacement Access Hole Cover Stress Analysis, dated 2/14/93

Corrective Action Documents

477473, ASME Section XI Code-required Examination Missed
 518603, Welding Procedure Specification One-line Edit
 586792, Degraded Pipe Support
 592451, Degraded Snubber Due to Low Oil
 593263, Inservice Inspection Indication
 594398, Feedwater Piping Spring Can Out of Tolerance
 659847, Improper Valve Alignment on Inservice Inspection Pressure Test
 733419, Plant Service Water Leak
 CR777484, GE INR H1R26 IVVI-14-07 Results (EVT-1 Surface Exams)
 CR777485, GE INR H1R26 IVVI-14-10 Results (VT-3 Surface Exams)
 CR777486, GE INR H1R26 IVVI-14-12 Results (EVT-1 Surface Exams)
 CR777512, CNF-SHRD-008 Results (UT of H5/V7 Weld Intersection)

CR775507, GE INR H1R26 IVVI-14-04 Results (Visual Exam of 0 and 180 Degree Core Shroud Access Hole Covers)
 CR775508, GE INR H1R26 IVVI-14-01 Results (Indications Found on VP3/2-4 Welds)
 CR775509, GE INR H1R26 IVVI-14-02 Results (Shroud Head Bolts Exams)
 CR775518, Core Shroud H4/V4 UT Results
 CR776196, CNF-SHRD-001 Results (V7 Shroud Weld UT Exam)
 CR776197, CNF-SHRD-002 Results (V8 Shroud Weld UT Exam)
 CR776198, CNF-SHRD-003 Results (UT Indication between H3 and H4 at 65 degree azimuth)
 CR776199, CNF-SHRD-004 Results (V5 Shroud Weld UT Exam)
 CR776201, CNF-SHRD-006 Results (V6 Shroud Weld UT Exam)

Other Documents

515, Procedure Qualification Record, dated 2-20-84
 516, Procedure Qualification Record, dated 3/29/84
 517, Procedure Qualification Record, dated 2-13-84
 GE Hitachi Vision Acuity Record (Goss)
 GE Hitachi Vision Acuity Record (Johnson)
 H1 1B21-1FW-12AA-14, Southern Company Component Summary: UT Exam, N4A Nozzle Weld
 H1R26 Feedwater Bracket Sparger End Pin Area at 175° (video)
 HAT1-14-TS2-184479, GE Hitachi Shroud Ultrasonic Examination Data Sheet, dated 22-Feb-14
 I14H1006, Indication Notification Form – Feedwater Sparger End Pin Areas, dated 02-21-2014
 I14H1016, Indication Notification Form – Core Shroud Vertical Welds 1-8, dated 4-2-14
 International Quality Consultants, Inc. Certificate of Qualification and Certification Summary (Kordzikowski)
 International Quality Consultants, Inc. Vision Examination (Kordzikowski)
 Sonic Systems International, Inc. Vision Acuity Record (Blecha)
 Southern Company NDE Examiner Certification (Blecha)
 Southern Company NDE Examiner Certification (Fish)
 Southern Company NDE Examiner Certification (Goss)
 Southern Company NDE Examiner Certification (Hoyer)
 Southern Company NDE Examiner Certification (Johnson)
 Southern Company NDE Examiner Certification (Rabon)
 Southern Nuclear Operating Company Welder Qualification Report – ASME Section IX (Jackson)
 Southern Nuclear Operating Company Welder Qualification Report – ASME Section IX (Suralis)
 Southern Nuclear Operating Company Welder Qualification Report – ASME Section IX (Creamer)
 Southern Nuclear Operating Company Welder Qualification Report – ASME Section IX (Roberson)
 TS88OA-14, Georgia Power Welding Procedure Specification, Rev. 1
 Weld Process Control Sheet – Weld # FW203/SNC463979W02
 DOEJ-HRSNC484916-M001, ECCS Performance Verification for Hatch-1 Cycle 27, Ver. 1
 DOEJ-HRSNC529888-M004, Hatch GNF2 Fuel Transition ECCS-LOCA OPL-4: In-Vessel Leakage Rates, Ver. 1
 SNC555460, Hatch 1 RFO 26 Core Shroud Leakage Margin
 GEH-0000-0162-8684 01 R0, GE Hitachi Technical Safety Evaluation Report – Shroud Removal Sample, Hatch Unit 1

SNC479412, Southern Company Design Change Package: U1 Shroud UT & Boat Sample,
dated 14 Jan 2014

Section 1R11: Licensed Operator Requalification

Drill Scenario: LR-SE-00177-01
34GO-OPS-013-1, "Normal Plant Shutdown," Ver. 28.4

Section 1R12: Maintenance Effectiveness

Condition Reports
473844, 692237

Other

System Health Report – P52 System
P52 Maintenance Rule Scoping Manual Documents
P52 Maintenance Rule Performance Criteria
System Health Report – W33 System
W33 Maintenance Rule Scoping Manual Documents
W33 Maintenance Rule Performance Criteria
NMP-ES-002, System Monitoring and Health Reporting, Ver. 16.0

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation

Condition Reports
772241

Other

Equipment Out of Service calculations 1/11/14 - 1/17/14
Equipment Out of Service calculations 2/10/14 - 2/14/14
Equipment Out of Service calculations 2/15/14 - 2/21/14
Equipment Out of Service calculations 3/10/14 - 3/14/14
Equipment Out of Service calculations 3/17/14 - 3/21/14

Section 1R15: Operability Evaluations

Procedures

NMP-AD-012, "Operability Determinations and Functional Assessments," Ver. 12.3
NMP-ES-057-003, "Snubber Program Implementation," Ver. 4.0

Condition Reports

750731, 755637, 764857, 791602

Drawings

A16577

Work Orders

SNC548190

Other

DOEJ-HX-750731-C001, Ver. 1
 DOEJ-HX-750731-C001, Ver. 2
 Calculation BH1-PD-2612

Technical Evaluation

760011, 764976

Section 1R18: Plant ModificationsProcedures

NMP-ES-054, "Temporary Modifications," Ver. 2.0

Work Orders

SNC547464, SNC547645

Section 1R19: Post Maintenance TestingMaintenance Work Orders (MWOs)

SNC547216, SNC547255, SNC554487, SNC425542, SNC493706, SNC478675, SNC316956,
 SNC325064, SNC484452

Procedures

NMP-MA-014-001, "Post Maintenance Testing Guidance," Ver. 3.0
 52PM-R43-001, "Diesel Engine Major Inspection," Ver. 8.0
 34SV-R43-005-2, "Diesel Generator 1B Semi-Annual Test," Ver. 19.1
 52SV-R43-001-0, "Diesel, Alternator, and Accessories Inspection," Ver. 25.1
 57IT-CAL-002-1, "RCIC Turbine Control FT&C," Ver. 10.5
 34SV-C41-003-1, "Standby Liquid Control Injection Test," Ver. 10.1
 52CM-E41-002, "High Pressure Coolant Injection System Main Pump Inspection / Overhaul,"
 Ver. 7.0
 42IT-TET-004-0, "Operating Pressure Testing of Piping and Components," Ver. 9.1
 NMP-ES-013-005, "IST Implementation," Ver.4.0

Other

TE 785454

Condition Reports

785469, 782845

Section 1R20: Refueling and Outage ActivitiesOther

Operating Logs

Procedures

34GO-OPS-001-1, "Plant Startup"
 34GO-OPS-003-1, "Startup System Status Checklist"
 34GO-OPS-013-1, "Normal Plant Shutdown"

Condition Reports
791373

Section 1R22: Surveillance Testing

Procedures

34SV-SUV-019, "Surveillance Checks"
34SV-R43-001-2, "Diesel Generator 2A Monthly Test"
34GO-OPS-013-1, "Normal Plant Shutdown", Ver. 28.4
42SV-TET-001-1, "Primary Containment Type B and Type C Leak Rate Testing", Ver. 28.3
42SV-TET-001-0, "LLRT Testing Methodology", Ver. 8.0
42SV-R43-024-1, "Diesel Generator B LOCA/LOSP LSFT", Ver. 9.0
34SV-E41-005-1, "High Pressure Coolant Injection Pump Operability 165 PSIG Test", Ver. 5.11

Work Orders
503762

Section 2RS1: Radiological Hazard Assessment and Exposure Controls

Procedures, Guidance Documents and Manuals

NMP-HP-206, "Issuance, Use and Control of Radiation Work Permit ", Ver. 3.0
NMP-HP-300, "Radiation and Contamination Surveys", Ver. 2.1
NMP-HP-302, "Restricted Area Classification, Postings, and Access Control", Ver. 6.0
NMP-HP-302-001, "Radiological Key Control", Ver. 2.1
NMP-HP-303, "Personnel Decontamination", Ver. 2.2
NMP-HP-403, "Control and Monitoring of Materials in Radiation Controlled Areas", Ver. 1.0
NMP-HP-404, "Release of Materials from the RCA and Protected Areas", Ver. 1.0
NMP-GM-002, "Corrective Action Program", Ver. 12.1
62RP-RAD-055-0, "Underwater Storage and Inventory of Radioactive Materials in the Spent Fuel Pools", Ver. 4.0

Records and Data

RWP 14-1202 RF-Bridge, Hoist, Grapple and Upper Platform Main./Repairs, ..., Dry tube Repl
RWP 14-1014 Torus Proper Diving/Desludging
RWP 14-1012 Radiography and Support
RWP 14-1615 Drywell/Reactor Control Rod Drive Change Out, Transport & Support Activities
NMP-HP-400, Control and Accountability of Radioactive Sources- Data sheet 5, 09/19/2013
ALARA Plan 1R26 Drywell/Reactor Building CRD Change Out, Transport, Support Activities
1R26 Pulsed X-ray Radiography Plan
62RP-RAD-055-0, Unit 2 SFP Annual Inventory Sheet, 07-16-13
62RP-RAD-055-0, Unit 1 SFP Annual Inventory Sheet, 07-16-13
Radiological Survey, SFP LHRA Surveillance
103015, 07/08/2013; #10306, 07/08/2013; # 107077, 12/13/2013; #103086, 07/11/2013;
#103324, 07/19/2013; #103325, 07/19/2013; #103495, 07/25/2013
Radiological Survey, #109084, U1 Reactor Building 228 (1RX228), 02/11/2014
Radiological Survey, #108977, U1 Reactor Building 228 (1RX228), 02/09/2014
Radiological Survey, #109972, U1 Reactor Building 228 (1RX228), 02/09/2014
Radiological Survey, #108579, U1 Cavity, 02/05/2014
Radiological Survey, #108568, U1 Cavity, 02/05/2014
Radiological Survey, #109190, U1 Drywell, 02/12/2014

Radiological Survey, #109045, U1 Drywell, 02/10/2014
 Radiological Survey, #108568, U1 Drywell, 02/06/2014
 Radiological Survey, #108678, U1 Torus Proper, 02/06/2014
 Radiological Survey, #108722, U1 Torus Proper, 02/06/2014
 Radiological Survey, #108750, U1 Torus Proper, 02/06/2014
 Radiological Survey, #109060, Plant Hatch Shroud Head Bolt, 02/10/2014
 Radiological Survey, #108448, Plant Hatch DW Subpile room, 02/03/2014
 Radiological Survey, #108662, Plant Hatch DW Subpile room, 02/06/2014
 Radiological Survey, #109889, U1 Hotwell, 02/09/2014
 Radiological Survey, #109022, U1 Hotwell, 02/10/2014

Corrective Action Program Documents

CR 667773, CR 598027, CR 724826, CR 635832, CR 754546

Section 2RS6: Liquid and Gaseous Effluents

Procedures and Guidance Documents

Off-site Dose Calculation Manual for Edwin I. Hatch Nuclear Plant, Version 23
 Hatch Nuclear Plant- UFSAR Chapter 11, Rev. 28
 Chemistry Control Procedure, 64CH-RPT-006-0, Liquid Effluent Reports, Version 15.0
 Chemistry Control Procedure, 64CH-RPT-007-0, Gaseous Effluent Reports, Version 4.0
 Chemistry Control Procedure, 64CH-SAM-024-0, Liquid Radwaste Sampling and Analysis, Version 22.2
 Chemistry Control Procedure, 64CH-SAM-028-0, Release Via Planned and Unplanned Routes: Sampling and Analysis, Version 9.2
 Chemistry Control Procedure, 64CI-OCB-001-0, Main Stack Radiation Monitoring, Version 8.3
 Surveillance Procedure 57SV-D11-021-1, Reactor Building Vent Radiation Monitor FT&C, Version 6.0, 9/17/13

Records and Data Reviewed

Edwin I. Hatch Nuclear Plant - Units 1 & 2 Annual Radioactive Effluent Release Report for 2011, 4/25/2012
 Edwin I. Hatch Nuclear Plant - Units 1 & 2 Annual Radioactive Effluent Release Report for 2012, 4/30/2013
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