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

May 2, 2013

Mr. Dennis R. Madison
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 05000321/2013002 AND 05000366/2013002

Dear Mr. Madison:

On March 31, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your E. I. Hatch Units 1 and 2. The enclosed inspection report documents the inspection results which were discussed on April 26, 2013, with Mr. D. Vineyard and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

A self-revealing finding of very low safety significance (Green) was identified during this inspection. This finding was determined to involve a violation of NRC requirements. Further, a licensee-identified violation which was determined to be of very low safety significance is listed in this report. The NRC is treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest 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 Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Hatch.

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 Hatch.

In accordance with 10 CFR 2.390 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 Public Document Room or from the Publicly Available Records (PARS) component of

NRC's Agencywide Document 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/

Frank Ehrhardt, Chief
Reactor Projects Branch 2
Division of Reactor Projects

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

Enclosure: Inspection Report 05000321/2013002, 05000366/2013002
w/Attachment: Supplemental Information

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cc w/encl: (See page 3)

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Letter to Dennis R. Madison from Frank Ehrhardt dated May 2, 2013

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 05000321/2013002 AND 05000366/2013002

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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.:	05000321/2013002 and 05000366/2013002
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Edwin I. Hatch Nuclear Plant
Location:	Baxley, Georgia 31513
Dates:	January 1 – March 31, 2013
Inspectors:	E. Morris, Senior Resident Inspector D. Hardage, Resident Inspector J. Sowa, Senior Resident Inspector (Farley) A. Nielsen, Senior Health Physics Inspector (2RS1, 2RS3, 4OA1) R. Hamilton, Senior Health Physics Inspector (2RS5) C. Dykes, Health Physics Inspector (2RS2, 2RS4, 4OA1) L. Lake, Senior Reactor Inspector (1R08)
Approved by:	Frank Ehrhardt, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000321/2013002, 05000366/2013002; 01/01/2013-03/31/2013; Edwin I. Hatch Nuclear Plant, Units 1 and 2, Post-Maintenance Testing

The report covered a three-month period of inspection by three resident inspectors, three health physics inspectors, and a reactor inspector. There was one self revealing violation 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. The cross-cutting aspect was determined using IMC 0310, "Components Within The Cross-Cutting Areas" dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated January 28, 2013. The NRC's program for overseeing the safe operations of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process" revision 4.

Cornerstone: Mitigating Systems

Green. A self-revealing Green NCV of Hatch Unit 2 Technical Specification 5.4. "Procedures," was identified on March 9, 2013, when the licensee failed to perform post maintenance activities appropriate to the circumstances to verify "2A" emergency diesel generator (EDG) lube oil heat exchanger integrity at normal plant service water operating pressure prior to declaring the "2A" EDG operable. This violation has been entered into the licensee's corrective action program as condition report (CR) 603356. The licensee replaced the gasket on the lube oil heat exchanger waterbox flange and on March 10, 2013, "2A" EDG was returned to operable status.

Failure to perform post maintenance activities appropriate to the circumstances to verify "2A" EDG lube oil heat exchanger integrity at normal service water operating pressure prior to declaring the "2A" EDG operable was a performance deficiency. This 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, the "2A" EDG was rendered unavailable after leakage developed at plant service water pressure. The inspectors evaluated the finding in accordance with IMC 0609, Attachment 4, "Initial Characterization of Findings", June 19, 2012, using Table 2, "Cornerstones 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," June 19, 2012. Based on Exhibit 2, "Mitigating Systems Screening Questions," Section A, "Mitigating SSCs and Functionality", all four questions were answered 'no' and thus this finding screened as Green. The inspectors determined this finding had a cross cutting aspect in the human performance area associated with resources - training and sufficiently qualified personnel because senior reactor operators did not ensure that the post maintenance test conditions were at maximum system operating pressure as required by procedure. [H.2(b)] (Section 1R19)

A violation of very low safety significance 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 number is listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at or near 100 percent rated thermal power (RTP). On February 10, operators inserted a manual reactor scram due to a condenser tube leak. Operators restarted the unit on February 25, and returned the unit to 100 percent RTP on February 28. On March 17, operators reduced unit power to 60 percent RTP in response to isolation of the A feedwater heater train. The unit returned to 100 percent RTP on March 18. 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 February 12, operators shut down the unit for a scheduled refueling outage. Operators restarted the unit on March 17, and returned the unit to 100 percent RTP on March 24. The unit operated at or near 100 percent RTP for the remainder of the inspection period.

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 adverse freezing weather conditions expected during the week of January 21. 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 freezing weather conditions. The inspectors reviewed the licensee's plans to address the ramifications of potentially lasting effects that may result from the adverse freezing weather conditions. The inspectors verified that operator actions specified in the licensee's adverse weather procedure maintain readiness of essential systems. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

Partial Walkdowns

The inspectors verified that critical portions of selected risk-significant systems were correctly aligned. 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. The inspectors verified that critical portions of the selected systems were correctly aligned by performing partial walkdowns. Documents reviewed are listed in the Attachment. The inspectors selected the following three systems/trains to inspect:

- Unit 2 "A" train of plant service water system while "2B" plant service water pump was out of service for maintenance, January 14
- Unit 2 "A" train of residual heat removal service water system while "B" train was out of service for maintenance, March 9
- Unit 2 reactor core isolation cooling system while the high pressure coolant injection pump was out of service for troubleshooting and repair, March 18

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05AQ)

a. Inspection Scope

Quarterly 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: (1) control of transient combustibles and ignition sources, (2) fire detection systems, (3) water-based fire suppression systems, (4) gaseous fire suppression systems, (5) manual firefighting equipment and capability (6) passive fire protection features, (7) compensatory measures and fire watches, and (8) issues related to fire protection contained in the licensee's corrective action program. The inspectors toured the following four fire areas to assess material condition and operational status of fire protection equipment. Documents reviewed are listed in the Attachment.

- Unit 1 and 2, alternating current (AC) inverter rooms, fire zones 1008 and 2008
- Unit 1 and 2, general area and corridors control building, fire zone 0014K
- Cable spreading room control building elevation 147'0", fire zone 002A
- Unit 1 and 2, east cableway control building 130'0", fire zone 1104 and 2104

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

Internal Flooding

The inspectors reviewed related flood analysis documents and walked down the two 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 2, reactor building northwest diagonal
- Unit 2, reactor building northeast diagonal

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

Annual Review

The inspectors verified the readiness and availability of the "2A" EDG lube oil, jacket cooling water, and scavenging air heat exchangers to perform their design functions by verifying the licensee uses the periodic maintenance method outlined in 42IT-TET-012-1, "Plant Service Water and Residual Heat Removal Service Water Piping Inspection Procedure." 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 (71111.08G, Unit 2)

a. Inspection Scope

Non-Destructive Examination (NDE) Activities and Welding Activities: From February 18 to February 22, 2013, the inspectors conducted an on-site review of the implementation of the licensee's Inservice Inspection (ISI) Program for monitoring degradation of the reactor coolant system, emergency feedwater systems, risk-significant piping and components, and containment systems in Unit 2. The inspector's 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 with 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 NDEs required 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.

- UT Exam of Weld 2B11\2N3B(IR) Nozzle Inside Radius Section
- UT Exam of Weld 2B11\2N3B(n-SH) Nozzle to shell
- VT Exam of RPV Shroud Head Bolts

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.

- VT Exam of Hanger 2C41-S12-H1
- VT Exam of hanger 2B21- FW-H12

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

- WO SNC387057
- WO SNC387054

During non-destructive surface and volumetric examinations performed since the previous refuelling 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 performed a review of ISI-related problems which were identified by the licensee and entered into the corrective action program as 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 performed this review to ensure compliance with 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requirements. The corrective action documents reviewed by the inspectors are listed in the report attachment.

b. Findings

No findings were identified.

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

a. Inspection Scope

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. The inspectors assessed licensed operator performance, the ability of the licensee to administer the scenario and evaluate the operators, the quality of any post-scenario critique, any follow-up actions taken by the facility licensee, and the performance of the simulator. Documents reviewed are listed in the Attachment.

Resident Inspector Quarterly Review (Licensed Operator Performance):

The inspectors observed licensed operator performance in the main control room during Unit 1 cooldown following a manual reactor scram due to a condenser tube leak which occurred on February 10, 2013. Inspectors observed licensed operator performance to assess 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). The inspectors reviewed procedures and records in order 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. Documents reviewed are listed in the Attachment.

- Unit 1 and 2 standby liquid control system review, C41
- Unit 2 containment purge, vent, and nitrogen system, 2T48-F319 failed to meet local leak rate testing allowable leakage

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 verity 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.

- January 4, WO 456099 for unscheduled replacement of Unit 2 "A" EDG standby lube oil pump motor bearings.
- Week of January 14 – January 18, including Unit 2 "B" plant service water pump scheduled maintenance and scheduled replacement of Unit 1 "C" EDG over speed switch.
- Week of February 11 – February 15, including Unit 1 and Unit 2 maintenance evolutions while Unit 1 was in Mode 4 and Unit 2 in Mode 5.
- Week of March 11 – March 15, including Unit 2 scheduled maintenance activities while in Mode 4.

- Week of March 18 – March 22, including planned component testing during Unit 2 reactor startup.

b. Findings

No findings were identified.

1R15 Operability Evaluations and Functionality Assessments (71111.15)

a. Inspection Scope

The inspectors reviewed the following five operability evaluations and compared the evaluations to the system requirements identified in the technical specifications and the final safety analysis report to ensure operability was adequately assessed and the system or component remained available to perform its intended function. The inspectors also assessed the adequacy of compensatory measures implemented as a result of the condition. Documents reviewed are listed in the Attachment.

- Unit 1 “B” EDG room louver not opening, CR 572685
- Low high pressure coolant injection pump suction pressure while aligned to torus, CR 579376
- Unit 1 “A” & “B” standby gas treatment filter fans unexpected performance during logic system functional test, CR 585870
- Core spray pump minimum flow protection, CR 601107
- Secondary containment impact with valve 2B21-F021 removed, CR 593991

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

For the following seven post maintenance tests, the inspectors reviewed the test scope to verify the test demonstrated the work performed was completed correctly and the affected equipment was functional and operable in accordance with technical specification requirements. The inspectors also reviewed equipment status and alignment to verify the system or component was available to perform the required safety function. Documents reviewed are listed in the Attachment.

- WO SNC464715, 1G31-F050, reactor water clean-up suction from the reactor pressure vessel bottom head drain line repack, February 26, 2013
- WO SNC103498, remove safety relief valve pilot assembly from 1B21F013B, February 17, 2013
- WO SNC417842, “2A” EDG heat exchanger replacement, February 22, 2013

- WO SNC388544, move analog trip transmitter system card 2E11N694C from 2H11P927 to 2H11P925, March 3, 2013
- WO SNC330114, 2B21F077A, replace ASCO solenoid, March 6, 2013
- WO SNC328461,2T48F328B torus vacuum breaker inspection/leak test activity, March 11, 2013
- WO SNC472474, "2D" plant service water pump did not meet timing requirements for restart, March 13, 2013

b. Findings

Introduction: A self-revealing Green NCV of Hatch Unit 2 Technical Specification 5.4 "Procedures," was identified on March 9, 2013, when the licensee failed to perform post maintenance activities appropriate to the circumstances to verify "2A" EDG lube oil heat exchanger integrity at normal plant service water operating pressure prior to declaring the "2A" EDG operable.

Description: On July 4, 2012, the "2A" EDG tripped due to high crank case vacuum. The licensee performed an apparent cause investigation (CAR 195252), which identified tube leakage of plant service water into the "2A" EDG lube oil heat exchanger as the cause of the trip. As an interim action, prior to the replacement of the heat exchanger, the plant service water valve for the "2A" EDG, 2P41-F339A, was taken out of its normal closed position and placed in open in order to minimize leakage of plant service water into the EDG lube oil system. Opening 2P41-F339A allowed continuous plant service water flow through the EDG heat exchangers and decreased plant service water pressure at the diesel from approximately 104 psig to 35 psig. On February 14, 2013 the 2A EDG was removed from service to replace the lube oil heat exchanger per work order SNC 417842. On February 22, 2013, following a surveillance run and a pressure test of the new heat exchanger while the EDG was in operation, the "2A" EDG was declared operable. During and subsequent to this pressure test, service water system pressure was approximately 35 psig. On March 9, 2013, the clearance order maintaining 2P41-F339A open was released and 2P41-F339A was returned to its normal closed position, increasing plant service water pressure at the "2A" EDG lube oil heat exchanger to greater than 100 psig. Upon closing 2P41-F339A, a plant service water leak developed on the lube oil heat exchanger waterbox flange joint. On March 9, at 1305, plant service water to the "2A" EDG was isolated and the EDG was declared out of service due to leakage from the heat exchanger. The licensee entered this issue into their corrective action program as CR 603356. The licensee replaced the gasket on the lube oil heat exchanger waterbox flange and on March 10, 2013, "2A" EDG was returned to operable status.

Analysis: Failure to perform post maintenance activities appropriate to the circumstances to verify "2A" EDG lube oil heat exchanger integrity at normal service water operating pressure prior to declaring the "2A" EDG operable was a performance deficiency. Specifically, 42IT-TET-001-0, "Requirements for Pressure Testing of Piping and Components," requires in part "Systems designed to operate at different pressures under several modes of plant operation shall be subject to a system leakage test (operation pressure test) within the test boundary defined by the operation mode with the

higher pressure." The pressure test performed to establish operability on February 22 was performed at service water system pressure of approximately 35 psig instead of the higher normal operating pressure of greater than 100 psig with valve 2P41-F339A closed. When the "2A" EDG lube oil heat exchanger was subjected to the higher pressure by closing 2P41-F339A, leakage immediately developed and the EDG was declared inoperable. This performance deficiency was more-than-minor because it adversely affected 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, the "2A" EDG was rendered unavailable after leakage developed at the higher plant service water pressure. The inspectors evaluated the finding in accordance with IMC 0609, Attachment 4, "Initial Characterization of Findings," June 19, 2012, using Table 2 Cornerstones 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," June 19, 2012. Based on Exhibit 2, "Mitigating Systems Screening Questions," Section A. Mitigating SSCs and Functionality, all four questions were answered 'no' and thus this finding screens as Green. The inspectors determined this finding had a cross cutting aspect in the human performance area associated with resources - training and sufficiently qualified personnel because senior reactor operators did not ensure that the post maintenance test conditions were at maximum system operating pressure as required by procedure. [H.2(b)]

Enforcement: Hatch Unit 2 Technical Specification 5.4.1, "Procedures," requires, in part, that procedures shall be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Regulatory Guide 1.33, Appendix A, section 9.a requires that maintenance that can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances. Procedure 42IT-TET-001-0, "Requirements for Pressure Testing of Piping and Components," requires in part, "Systems designed to operate at different pressures under several modes of plant operation shall be subject to a system leakage test (operation pressure test) within the test boundary defined by the operation mode with the higher pressure."

Contrary to the above, on February 22, 2013, the licensee failed to implement procedure 42IT-TET-001-0 during maintenance of the "2A" EDG lube heat exchanger. The pressure test performed to establish operability on February 22 was performed at service water system pressure of approximately 35 psig instead of the higher normal operating pressure of greater than 100 psig with valve 2P41-F339A closed. On March 9, 2013, when the "2A" EDG lube oil heat exchanger was subjected to the higher pressure by closing 2P41-F339A, leakage immediately developed and the EDG was declared inoperable. The licensee replaced the gasket on the lube oil heat exchanger waterbox flange and on March 10, 2013, "2A" EDG was returned to operable status. 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 603356. (NCV 05000366/2013002-01; "Failure to perform appropriate post maintenance test on "2A" EDG.")

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

The inspectors performed the inspection activities described below for the Unit 1 forced outage from February 10 through February 25, 2013, and the Unit 2 refueling outage from February 12, 2013 through March 17, 2013. The inspectors confirmed that, when the licensee removed equipment from service, the licensee maintained defense-in-depth commensurate with the outage risk control plan for key safety functions and applicable technical specifications. The inspectors also verified that configuration changes due to emergent work and unexpected conditions were controlled in accordance with the outage risk control plan. Documents reviewed are listed in the Attachment. Inspection activities included:

- Reviewed the licensee's integrated risk control plan prior to the Unit 2 outage to verify that activities, systems, and/or components which could cause unexpected reactivity changes were identified in the outage risk plan.
- Observed portions of the plant shutdown and cooldown to verify that the technical specification cooldown restrictions were followed.
- Reviewed reactor coolant system pressure, level and temperature instruments to verify that the instruments provided accurate indication and that allowances were made for instrumentation errors.
- Verified that outage work did not impact the operation of the spent fuel cooling system.
- Reviewed the status and configuration of electrical systems to verify that those systems met technical specification requirements and the licensee's outage risk control plan.
- Observed decay heat removal parameters to verify that the system was properly functioning and providing cooling to the core.
- Reviewed system alignments to verify that the flow paths, configurations and alternative means for inventory addition were consistent with the outage risk plan.
- Reviewed selected control room operations to verify that the licensee was controlling reactivity in accordance with the technical specifications.
- Observed the licensee's control of containment penetrations to verify that the requirements of the technical specifications were met.
- Reviewed the licensee's plans for changing plant configuration to verify that technical specifications, license conditions and other requirements, commitments and administrative procedure prerequisites were met prior to changing plant configuration.
- Inspected containment for as-found degraded conditions.

b. Findings

Introduction: An URI was identified when on February 26, 2013, licensee personnel discovered leaking water under Unit 1 reactor vessel during 920 psig pressure test walkdowns. The licensee entered this abnormal condition in their corrective action

program as CR 596805. Unit 1 power ascension proceeded without identifying the leakage source.

Description: On February 26, 2013, during the Unit 1 reactor coolant system 920 psig normal operating temperature primary containment drywell walkdown, licensee personnel discovered a 15 drop-per-minute water leak under the reactor vessel. At the time of the discovery, personnel within the drywell were unable to go under Unit 1 reactor vessel to identify the source of the leak because they did not meet radiological work permit dress requirements for going under vessel. The leak description was reported to the sites Outage Command Center and CR 596805 was initiated. CR 596805 documented that the leak was accepted by management. Justification for accepting the leak is documented in technical evaluation 596805, which states in part "No steam leaks were visible, no sounds of leakage were heard, through indirect observation the water appeared to be cold. The drywell atmosphere consisted of humid air and due to the drywell cooler discharging in the area, it appeared to be condensation. Based on his judgment, it did not appear to the individual performing the walkdown to be pressure boundary leakage." Hatch Unit 1 Technical Specification 3.4.4, "Reactor Coolant System Operational Leakage," limits reactor coolant system leakage to no pressure boundary leakage. 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions," requires in part that measures shall be established to assure that conditions adverse to quality are promptly identified. Because the licensee accepted the leak without determining the source, the inspectors need more information to determine if the abnormal condition (leak identified under Unit 1 reactor vessel) constitutes a violation of Technical Specification 3.4.4 for pressure boundary leakage, and/or a violation of 10 CFR 50 Appendix B, Criterion XVI, for not promptly identifying a condition adverse to quality. To resolve this URI inspection of Unit 1 primary containment drywell is required to identify the source of the leak described in CR 596805. URI 05000321/2013002-02, "Unit 1 Under Vessel Leak Source Not Identified."

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors reviewed seven licensee surveillance test procedures and either witnessed the test or reviewed test records to determine if the scope of the test adequately demonstrated the affected equipment was operable. The inspectors reviewed these activities to assess for preconditioning of equipment, procedure adherence, and equipment alignment following completion of the surveillance. The inspectors reviewed licensee procedure NMP-GM-005-GL03, "Human Performance Tools," and attended selected briefings to determine if procedure requirements were met. Documents reviewed are listed in the Attachment.

Surveillance Tests

- 34SV-R43-001-1, "Diesel Generator "1A" Monthly Test"
- 34SV-B21-002-2, "Main Steam Line Isolation Valve Trip Test"
- 42SV-R43-012-2, "Diesel Generator 1B Loss of Coolant Accident / Loss of Offsite Power Logic System Functional Test"

In-Service Test
- 34SV-E51-002-1, “Unit 1 Reactor Core Isolation Cooling Pump Operability”

Leak-rate Test
- 34SV- SUV-019-1, “Surveillance Checks”

Containment Isolation Valves
- 42SV-TET-001-2, “Primary Containment Periodic Type “B” and Type “C” Leakage Tests for 2E41-F021 and F0049,” February 14
- 42SV-TET-001-2, “Primary Containment Periodic Type “B” and Type “C” Leakage Tests for 2T48-F309 and F324,” February 20

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed the following emergency plan evolution. The inspectors observed licensee activities in the simulator and Technical Support Center to verify implementation of licensee procedure 10AC-MGR-006-0, “Hatch Emergency Plan.” The inspectors reviewed the classification of the simulated events and the development of protective action recommendations to verify these activities were conducted in accordance with licensee procedure NMP-EP-110, “Emergency Classification Determination and Initial Actions” and NMP-EP-112, “Protective Action Recommendations.” The inspectors also reviewed licensee procedure NMP-EP-111, “Emergency Notifications,” to verify the proper offsite notifications were made. The inspectors attended the post-exercise critique to assess the licensee’s effectiveness in identifying areas of improvement. Documents reviewed are listed in the Attachment.

- Emergency preparedness drill conducted on January 9

b. Findings

No findings were identified.

2. RADIATION SAFETY

2RS1 Radiological Hazard Assessment and Exposure Controls

a. Inspection Scope

Hazard Assessment and Instructions to Workers During facility tours, the inspectors directly observed labeling of radioactive material and postings for radiation areas, high radiation areas (HRA)s, Locked High Radiation Areas (LHRA)s, and Very High Radiation Areas (VHRA)s established within the radiologically controlled area (RCA) of the Unit 1 (U1) and Unit 2 (U2) reactor buildings, U1 and U2 turbine buildings, and radioactive waste (radwaste) processing and storage locations. The inspectors independently measured radiation dose rates or directly observed conduct of licensee radiation surveys for selected RCA areas. 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. The inspectors also discussed changes to plant operations that could contribute to changing radiological conditions since the last inspection. For selected 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.

Hazard Control and Work Practices The inspectors evaluated access barrier effectiveness for selected LHRA locations and discussed procedural guidance for LHRA and VHRA controls 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 U2 refueling outage 22 (2R22) tasks including drywell head removal, activities in the under-vessel area, reactor water cleanup valve maintenance, and work on the main steam isolation valves. In addition, the inspectors reviewed licensee controls for areas where dose rates could change significantly as a result of plant shutdown and refueling operations.

Through direct observations and interviews with licensee staff, inspectors evaluated occupational workers' adherence to selected RWPs and HP technician (HPT) proficiency in providing job coverage. Electronic dosimeter (ED) alarm set points and worker stay times were evaluated against area radiation survey results for selected 2R22 job tasks. As part of Inspection Procedure (IP) 71124.04, inspectors reviewed the use of personnel dosimetry (ED alarms, extremity dosimetry, multibadging in high dose rate gradients, etc.). The inspectors also evaluated worker responses to dose and dose rate alarms during selected work activities.

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), and portal monitor (PM) 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 also evaluated the appropriateness of radionuclide sources used for

detector testing and calibration. The inspectors reviewed records of leak tests on selected sealed sources and discussed nationally tracked source transactions with licensee 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 licensee procedures. The inspectors also reviewed recent self-assessment results.

Radiation protection activities were evaluated against the requirements of Final Safety Analysis Report (FSAR) Section 12, Technical Specifications 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 Sections 2RS1, 2RS2, 2RS3, 2RS4 and 2RS5 of the report Attachment.

b. Findings

No findings were identified.

2RS2 As Low As Reasonably Achievable (ALARA)

a. Inspection Scope

Work Planning and Exposure Tracking The inspectors reviewed planned work activities and their collective exposure estimates for the current Hatch Unit 2 refueling outage 22 (H2R22), the unplanned forced Unit 1 outage and the previous H2R21. The inspectors reviewed ALARA planning packages for the following high collective exposure tasks: drywell activities including insulation, temporary ventilation, subpile room plate shielding, steam chase work, and scaffolds. ALARA planning packages for torus proper diving was also reviewed. For the selected tasks, the inspectors reviewed established dose goals and discussed assumptions regarding the bases for the current estimates with responsible ALARA planners. The inspectors evaluated the incorporation of exposure reduction initiatives and operating experience, including historical post-job reviews, into RWP requirements. Day-to-day collective dose data for the selected tasks were compared with established dose estimates and evaluated against procedural criteria (work-in-progress review limits) for additional ALARA review. Where applicable, the inspectors discussed changes to established estimates with ALARA planners and evaluated them against work scope changes or unanticipated elevated dose rates.

Source Term Reduction and Control The inspectors reviewed the collective exposure three-year rolling average from 2009 – 2011 and reviewed historical collective exposure trends. The inspectors evaluated historical dose rate trends and compared them to current H2R22 data. Source term reduction initiatives were reviewed and discussed with HP staff.

Radiation Worker Performance The inspectors observed radiation worker performance for job evolutions occurring in the drywell inclusive of work on the vessel head and in the torus. The inspectors observed ALARA briefings for multiple high radiation area jobs for specific RWPs and job-specific briefings. Radiation worker performance was also evaluated as part of IP 71124.01. While observing job tasks, the inspectors evaluated the use of remote technologies to reduce dose including teledosimetry and remote visual monitoring.

Problem Identification and Resolution The inspectors reviewed and discussed selected CAP documents associated with ALARA program implementation. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with licensee procedure NMP-GM-002, "Corrective Action Program," Ver. 12.1. The inspectors also evaluated the scope and frequency of the licensee's self-assessment program and reviewed recent assessment results.

ALARA program activities were evaluated against the requirements of FSAR Section 12, Technical Specification Section 5.4, 10 CFR Part 20, and approved licensee procedures.

Records reviewed are listed in Sections 2RS1 and 2RS2 of the Attachment.

b. Findings

No findings were identified.

2RS3 In-Plant Airborne Radioactivity Control and Mitigation

a. Inspection Scope

Engineering Controls The inspectors reviewed the use of temporary and permanent engineering controls to mitigate airborne radioactivity during the 2R22 refueling outage. The inspectors observed the use of portable air filtration units for work in U2 contaminated areas and reviewed filtration unit testing certificates. The inspectors evaluated the effectiveness of continuous air monitors and air samplers placed in work area "breathing zones" to provide indication of increasing airborne levels.

Respiratory Protection Equipment The inspectors reviewed the use of respiratory protection devices to limit the intake of radioactive material. This included review of devices used for routine tasks and devices stored for use in emergency situations. As part of IP 71124.02, the inspectors reviewed ALARA evaluations for the use of respiratory protection devices during work in the under-vessel subpile room. Selected Self-Contained Breathing Apparatus (SCBA) units and negative pressure respirators (NPR)s staged for routine and emergency use in the Main Control Room and other locations were inspected for material condition, SCBA bottle air pressure, number of units, and number of spare masks and air bottles available. The inspectors reviewed maintenance records for selected SCBA units for the past two years and evaluated SCBA and NPR compliance with National Institute for Occupational Safety and Health certification requirements. The inspectors also reviewed records of air quality testing for supplied-air devices and SCBA bottles.

The inspectors observed the use of powered air-purifying respirators during under-vessel maintenance work. The inspectors discussed training for various types of respiratory protection devices with HP staff and interviewed radworkers and control room operators on use of the devices including SCBA bottle change-out and use of corrective lens inserts. The inspectors reviewed respirator qualification records for several Main Control Room operators and emergency responder personnel in the Maintenance and HP departments. In addition, inspectors evaluated qualifications for individuals responsible for testing and repairing SCBA vital components.

Problem Identification and Resolution The inspectors reviewed and assessed CAP documents associated with airborne radioactivity mitigation and respiratory protection. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with licensee procedures. The inspectors also reviewed recent self-assessment results.

Licensee activities associated with the use of engineering controls and respiratory protection equipment were reviewed against the requirements of FSAR Section 12, Technical Specification Section 5.4, 10 CFR Part 20, and applicable licensee procedures; and against the guidance in Regulatory Guide 8.15, "Acceptable Programs for Respiratory Protection."

Documents reviewed during the inspection are listed in Sections 2RS1, 2RS2, and 2RS3 of the report Attachment.

b. Findings

No findings were identified.

2RS4 Occupational Dose Assessment

a. Inspection Scope

External Dosimetry The inspectors reviewed the licensee's National Voluntary Accreditation Program (NVLAP) certification data for accreditation for 2011-2012 and 2012-2013 for Ionizing Radiation Dosimetry. The inspectors reviewed program procedures for processing active personnel dosimeters (ED)s and onsite storage of Optically Stimulated Luminescent Dosimeters (OSLD)s. Comparisons between ED and OSLD results, including correction factors, were discussed in detail. The inspectors also reviewed dosimetry occurrence reports regarding alarming dosimeters.

Internal Dosimetry Inspectors reviewed and discussed the *in vivo* bioassay program with the licensee. Inspectors reviewed procedures that addressed methods for determining internal or external contamination, releasing contaminated individuals, the assignment of dose, and the frequency of measurements depending on the nuclides. Inspectors reviewed and evaluated Whole Body Counter (WBC) records selected from April 2011 to January 2013. The inspectors evaluated the licensee's program for *in vitro* monitoring, however there were no dose assessments using this method to review.

There were no internal dose assessments for internal exposure greater than 10 millirem committed effective dose equivalent to review.

Special Dosimetric Situations The inspectors reviewed records for declared pregnant workers (DPW)s from April 2011 through January 2013 and discussed guidance for monitoring and instructing DPWs. Inspectors reviewed the licensee's practices for monitoring external dose in areas of expected dose rate gradients, including the use of multi-badging and extremity dosimetry. The inspectors evaluated the licensee's neutron dosimetry program including instrumentation which was evaluated under procedure 71124.05.

Problem Identification and Resolution The inspectors reviewed and discussed licensee CAP documents associated with occupational dose assessment. Inspectors evaluated the licensee's ability to identify and resolve the identified issues in accordance with procedure NPM-GM-002, "Corrective Action Program," Version 12.1. The inspectors also discussed the scope of the licensee's internal audit program and reviewed recent assessment results.

HP program occupational dose assessment activities were evaluated against the requirements of FSAR Section 12; TS Section 5.4; 10 CFR Parts 19 and 20; and approved licensee procedures.

Records reviewed are listed in Section 2RS01, 2RS02, and 2RS04 of the Attachment.

b. Findings

No findings were identified.

2RS5 Radiation Monitoring Instrumentation

a. Inspection Scope

Radiation Monitoring Instrumentation During walk-downs of the auxiliary building and the RCA exit point, the inspectors observed installed and portable radiation detection equipment. These included area radiation monitors (ARM)s, continuous air samplers, liquid and gaseous effluent monitors, PCMs, SAMs, PMs, a WBC, count room equipment, and portable survey instruments. The inspectors observed the physical location of the components, noted their material condition, observed the currency of calibration and source check stickers, and discussed performance of equipment with RP personnel.

In addition to equipment walk-downs, the inspectors observed source functional checks of portable detection instruments, including ion chambers and telepoles. For the portable instruments, the inspectors observed the use of a high-range calibrator and discussed periodic output value testing, calibration, and source check processes with health physics technicians. The inspectors reviewed calibration records and discussed with chemistry personnel alarm setpoint values for PCMs, PMs, effluent monitors, WBCs, and an ARM. This included a sampling of instruments used for post-accident

monitoring such as a containment high-range radiation monitor and effluent monitors for noble gas and iodine. The inspectors reviewed the most recent 10 CFR Part 61 analysis for dry active waste (DAW) to determine if calibration and check sources are representative of the plant source term. The inspectors observed computerized performance check calibration efficiency information for count room gamma detectors and a liquid scintillation detector. The inspectors also observed the currency of calibration for selected EDs at the RCA entry point.

Problem Identification and Resolution The inspectors reviewed selected CAP reports in the area of radiological instrumentation. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with procedure NMP-GM-002-001, "Corrective Action Program Instructions," Ver. 30.0. Documents reviewed are listed in section RS05 of the Attachment.

Effectiveness and reliability of selected radiation detection instruments were reviewed against details documented in the following: 10 CFR Part 20; NUREG-0737, Clarification of TMI Action Plan Requirements; FSAR Chapters 11 and 12; and applicable licensee procedures. Documents reviewed during the inspection are listed in Section RS05 of 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 licensee submittals for the Unit 1 and Unit 2 performance indicators (PI) listed below to verify the accuracy of the data reported. The PI definitions and the guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Rev. 6 and licensee procedure 00AC-REG-005-0, "Preparation and Reporting of NRC PI Data," were used to verify procedure and reporting requirements were met.

Cornerstone: Initiating Events

- Unplanned Scrams
- Unplanned Scrams with Complications
- Unplanned Power Changes

The inspectors reviewed raw PI data collected between January 2012 and January 2013 for the initiating events indicators identified. The inspectors compared graphical representations from the most recent PI report to the raw data to verify the data was included in the report. The inspectors also examined a sampling of operations logs and procedures to verify the PI data was appropriately captured for inclusion into the PI

report, and the individual PIs were calculated correctly. Applicable licensee event reports (LERs) issued during the referenced time frame were also reviewed. Documents reviewed are listed in the Attachment.

Cornerstone: Radiation Safety

Occupational Radiation Safety Cornerstone The inspectors reviewed the occupational exposure control effectiveness PI results for the occupational radiation safety cornerstone from January 2012 through January, 2013. For the assessment period, the inspectors reviewed ED alarm logs and selected CRs related to controls for exposure significant areas. The inspectors also reviewed licensee procedural guidance for collecting and documenting PI data. Documents reviewed are listed in sections 2RS1 and 4OA1 of the report Attachment.

Public Radiation Safety Cornerstone The inspectors reviewed the radiological control effluent release occurrences PI results for the public radiation safety cornerstone from April 2012 through December 2012. 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/Offsite Dose Calculation Manual issues. The inspectors also reviewed licensee procedural guidance for collecting and documenting PI data. Documents reviewed are listed in section 4OA1 of the report Attachment.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152)

.1 Daily Screening of Corrective Action Items

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This review was accomplished by either attending daily screening meetings that briefly discussed major CRs, or accessing the licensee's computerized corrective action database and reviewing each CR that was initiated.

.2 Annual Samples:

a. Inspection Scope

The inspectors performed a detailed review of the following CR to verify the full extent of the issues were identified, an appropriate evaluation was performed, and appropriate corrective actions were specified and prioritized. The inspectors evaluated the CR against the licensee's corrective action program as delineated in licensee procedure NMP-GM-002, "Corrective Action Program," and 10 CFR 50, Appendix B. Documents reviewed are listed in the Attachment.

- CR 430457, Unresolved Issue from the Hatch 2009 Component Design Bases Inspection

b. Findings and Observations

No findings were identified

4OA3 Follow-up of Events and Notices of Enforcement Discretion (71151)

.1 (Closed) LER 05000366/2-2012-001, 2B Standby Gas Treatment Filter Train Found Operating at Higher Flow Than Allowed by Technical Specifications

a. Inspection Scope

The inspectors reviewed this LER for potential performance deficiencies and/or violations of regulatory requirements. Additionally, discussions were held with Operations, Engineering and Licensing staff members to understand the details surrounding this issue. This condition was documented in the licensee's corrective action program as CR 558493. LER 05000366/2-2012-001 is closed.

b. Findings

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

.2 Unit 1 Manual Reactor Scram on February 10, 2013 (Event Notification 48738)

a. Inspection Scope

On February 10, 2013, Unit 1 operators inserted a manual reactor scram per abnormal operating procedure 34AB-N61-001-1, "Condenser Tube Leaks/Chemical Intrusion," due to high condensate/feedwater conductivity. The inspectors responded to the site and reviewed the performance of mitigating systems and operator actions. The inspectors reviewed the licensee's event classification in accordance with emergency action levels procedures and the licensee's notifications made per 10 CFR Part 50.72. The inspectors also reviewed operator logs, computer data, recorder data, and licensee procedural requirements for this event.

b. Findings

No findings were identified.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings were identified.

.2 (Closed) NRC Temporary Instruction (TI) 2515/187, "Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns"

a. Inspection Scope

The inspectors verified that licensee's walkdown packages for the independent spent fuel storage installation and plant service water strainer areas contained the elements as specified in NEI 12-07 Walkdown Guidance document. The inspectors accompanied the licensee on their walkdown of the intake area and verified that the licensee confirmed the following flood protection features.

- Visual inspection of the flood protection feature was performed if the flood protection feature was relevant. External visual inspection for indication of degradation that would prevent its credited function from being performed was performed
- Reasonable simulation
- Critical structures, systems, components dimensions were measured
- Available physical margin was determined
- Flood protection feature functionality was determined using either visual observation or by review of other documents

The inspectors independently performed their walkdown of the plant service water strainer area to verify that flood protection measures described in the FSAR were in place for this area.

The inspectors verified that noncompliances with current licensing requirements, and issues identified in accordance with 10 CFR 50.54(f) letter, Item 2.g of Enclosure 4, were entered into the licensee's corrective action program. In addition, issues identified in

response to item 2.g that could challenge risk significant equipment and the licensee's ability to mitigate consequences will be subject to additional NRC evaluation.

b. Findings and Observations

No findings were identified.

4OA6 Meetings, Including Exit

On April 26, 2013, the resident inspectors presented the inspection results to Mr. D. 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 is a violation of NRC requirements which meet the criteria of the NRC Enforcement Policy for being dispositioned as a Non-Cited Violation.

- A licensee-identified violation of Hatch Unit 2 Technical Specification 3.6.4.3, "Standby Gas Treatment System," was discovered by site engineering on December 10, 2012. Technical Specification 3.6.4.3 requires in part that Unit 1 and Unit 2 standby gas treatment subsystems required to support LCO 3.6.4.1, "Secondary Containment," shall be OPERABLE in Mode 1. Contrary to this Technical Specification requirement on November 6, 2012, while Unit 2 was operating in Mode 1, the licensee removed the Unit 2 refueling floor hatch which caused the "2B" standby gas treatment train flow to exceed 4000 cubic feet per minute. Hatch Unit 2 Surveillance Requirement 3.6.4.1.4 lists the operable flow limit for each standby gas treatment subsystem to be less than or equal to 4000 cubic feet per minute. From November 6, 2012 through November 17, 2012, the "2B" standby gas treatment train flow exceeded Surveillance Requirement 3.6.4.1.4 requirements and was therefore inoperable. The licensee entered this issue into their corrective action program as CR 576864. The inspectors screened this violation as Green per IMC 0609, Appendix A, Exhibit 3, question C.1, because this violation represented only a degradation of the radiological barrier function provided for the standby gas treatment system. (4OA3.1)

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel
B. Anderson, Health Physics Manager
G. Brinson, Maintenance Manager
V. Coleman, Chemistry Manager
M. Crosby, Engineering Programs Manager
J. Edwards, Corporate ISI Program Owner
A. Gordon, Site Engineer ISI
D. Hines, Site Design Manager
C. Lane, Engineering Director
K. Long, Operations Director
M. Madigan, Work Management Director
D. Madison, Hatch Vice President
D. Pagan-Diaz, Site Engineer ISI
S. Tipps, Principal Licensing Engineer
M. Torrance, Engineering Programs Manager
R. Varnadore, Site Support Manager
D. Vineyard, Plant Manager
A. Wheeler, Site Projects Manager

LIST OF ITEMS OPENED AND CLOSED

Opened & Closed

05000366/2013002-01	NCV	Failure to perform appropriate post maintenance test on “2A” EDG (Section 1R19)

Opened

05000321/2013002-02	URI	Unit 1 Under Vessel Leak Source Not Identified (Section 1R20)

Closed

05000366/2012-001	LER	“2B” Standby Gas Treatment Filter Train Found Operating at Higher Flow Than Allowed by Technical Specification. (Section 4OA3.1)
05000321,366/2515/187	TI	Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns (Section 4OA5.2)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather

Condition Reports

576611, 555906, 559810, 555296, 555304, 450907, 389004

Other

Individual Plant Examination of External Events
DI-OPS-36-0989, Cold Weather Checks, Ver. 19.1
Unit 1 and Unit 2 Control Room Logs

Section 1R04: Equipment Alignment

Procedures

34SO-P41-001-2, Plant Service Water System, Ver. 26.0
34SO-E11-010-2, Residual Heat Removal System, Ver. 39.7
34SO-E51-001-2, Reactor Core Isolation Cooling System, Ver. 24.2

Work Order

375854

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 13A/B, AC Inverter Room Control Bldg. Elevation 112'0" Pre-Fire Plan area 1008
A-43965 sheet 20A/B, AC Inverter Room Control Bldg. Elevation 112'0" Pre-Fire Plan area 2008
A-43965 sheet 24A/B, Unit 1 and 2 General Area and Corridors Control Building Elevation 130'-0" Pre-Fire Plan area 0014K
A-43965 sheet 44A/B, Unit 1 & 2 Cable Spreading Room Control Building Elevation 147'0" Pre Fire Plan area 0024A
A-43965 sheet 34A/B, Unit 1 East Cableway Control Building Elevation 130'0" Pre Fire Plan area 0024A
A-43965 sheet 44A/B, Unit 2 East Cableway Control Building Elevation 130'0" Pre Fire Plan area 0024A

Section 1R06: Internal Flood Protection

Documents

HNP-2-FSAR Chapter 9.3.3.2.2.B
HNP-F-2012-012-00, Walkdown Package for Unit 2 Reactor Bldg Below El. 112.0'

Drawings

H-26302, H-26026, H-26075, H-26076

Section 1R07: Heat Sink Performance

Procedures

42IT-TET-012-1, Plant Service Water and RHR Service Water Piping Inspection Procedure, Ver. 2.10

Condition Reports

CR 479693
CAR 195252

Section 1R08: Inservice Inspection Activities

Corrective Action Documents

CR 594504, Repair Replacement Plan Issue
CR 593315, Loose Nut and Bolt Hanger
CR 594398, Feedwater Piping spring can out of tolerance
CR 591468, Shroud Head Bolt broken indexing pin
CR 593762, Shroud Head Bolt UT Failure
CR 592284, Potential FME from Shroud Head Bolts 16 and 31
CR 585104, Coating Inspection Summary

Procedures

NMP-ES-024-206, Version 11.0, Visual Examination of the Reactor Pressure Vessel
NMP-ES-010, Version 6.2, SNC BWR Vessel & Internals Program (HNP)
NMP-MA-011, Version 4.1, Nuclear Coatings Program
NMP-MA-011-006, Version 5.0, Procedure Condition Assessment
QA-46, Rev. 2, Lambert MacGill Thomas Qualification and Certification of NDE and Visual Examination Personnel
386HA480, Rev. 24, GE-Hitachi Nuclear Energy Written Practice for Certification of Non-Destructive Test Personnel
GEH-UT-716, Version 3, GE-Hitachi Nuclear Energy Procedure for the Examination of Reactor Pressure Vessel Welds from the Outside Surface with Microtomo in Accordance with Appendix VII

Other Documents

Hatch Nuclear Plant Unit 2 Inservice Inspection Plan
Section XI Applicability Checklist for WO SNC387057 Replacement of SW supply piping
Section XI Applicability Checklist for WO SNC387054 Replacement of SW supply piping

Section 1R11: Licensed Operator Requalification

LT-SG-50421-14
LT-SG-50462-10

Section 1R12: Maintenance Effectiveness

System Health Report – C41 System – 3rd quarter 2012
System Health Report – T48 System – 4th quarter 2012
C41 Maintenance Rule MR Scoping Manual Documents
C41 Maintenance Rule Performance Criteria
NMP-ES-002, System Monitoring and Health Reporting, Ver. 15.2

NMP-ES-027-001, Maintenance Rule Implementation, Ver 3.0
Apparent Cause Determination Report for CR 2011105213

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation

Condition Reports
588651, 588594, 588601, 588894, 589876,

Other
Equipment Out of Service calculations 1/12/13-1/18/13
Equipment Out of Service calculations 2/9/13-2/15/13
Equipment Out of Service calculations 3/11/13-3/15/13
Equipment Out of Service calculations 3/18/13-3/22/13
Unit 2 shutdown risk assessments
Unit 1 shutdown risk assessments

Work Order
432486, 375854, 382009, 117006,

Section 1R15: Operability Evaluations

Procedures
NMP-AD-012, Operability Determinations and Functional Assessments, Ver. 6.0
34SO-X41-001-1, Diesel Generator Building Ventilation System, Ver. 10.1
34SO-E41-001-2, High Pressure Coolant Injection (HPCI) System, Ver. 27.0

Drawings
H-26020, H-26021

Other
Control room logs
Standing Order 2-2013-6
Risk Based Analysis: RBA-13-003-H
Operating Experience Smart Sample 2012/02
E. I. Hatch Final Safety Analysis Report
E. I. Hatch Technical Specifications
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Condition Report
579376, 587529, 585870, 587686, 600676, 601107, 593991

Technical Evaluations
75153, 588264, 603178

Section 1R19: Post Maintenance Testing

Maintenance Work Orders (MWOs)
SNC464715, SNC103498, SNC388544, SNC330114, SNC328461, SNC472474, SNC417842

Procedures
95IT-OTM-001-0, Maintenance Work Order Functional Test Guideline, Ver. 5.4
NMP-MA-014-001, Post Maintenance Testing Guidance, Ver.3.0
57SV-SUV-011-2, ATTS Panel 2H11-P925 FT & C, Ver. 20.0
52SV-T48-003-0, Torus to Reactor Building Vacuum Breaker Inspection, Ver. 1.0

Condition Reports
CR 604524, CR 604619, CR 603356, CR 609207

Section 1R20: Refueling and Outage Activities
Operating Logs

Procedures
34GO-OPS-001-1 and 2, Plant Startup
34GO-OPS-013-1, Normal Plant Shutdown. Ver. 28.2
34GO-OPS-003-2, Startup System Status Checklist
31GO-OPS-005-0, Primary Containment Entry, Ver. 12.18
34GO-OPS-028-1, Drywell Closeout, Ver. 6.13

Condition Reports
596805

Section 1R22: Surveillance Testing
Procedures
34SV-R43-001-1, Diesel Generator 1A Monthly Test, Ver. 23.4
34SV-E51-002-1, Reactor Core Isolation Cooling Pump Operability, Ver. 24.0
42SV-TET-001-2, Primary Containment Periodic Type B and Type C Leakage Tests, Ver. 35.1
42SV-TET-001-0, LLRT Testing Methodology, Ver. 7.2
34SV-B21-002-2, Main Steam Line Isolation Valve Trip Test, Ver. 5.17
34SO-G11-013-1, Drywell and Reactor Building Sumps System
34SV-SUV-019-1, Surveillance Checks, Ver. 36.4
42SV-R43-012-2, Diesel Generator 1B LOCA/LOSP LSFT, Ver. 10.9

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545238, 593678, 604593, 604567, 604524, 607030

Work Orders
411801

Section 1EP6: Drill Evaluation
EP Exercise Narrative and Timeline for drill conducted January 9, 2013
Drill event notification forms from drill conducted January 9, 2013

Section 2RS1: Radiological Hazard Assessment and Exposure Controls
Procedures, Guidance Documents, and Manuals
NMP-HP-300, “Radiation and Contamination Surveys”, Ver. 2.1
NMP-HP-302, “Restricted Area Classification, Postings, and Access Control”, Ver. 4.0
NMP-HP-305, “Alpha Radiation Monitoring”, Ver. 4.0

NMP-GM-002, “Corrective Action Program”, Ver. 12.1
62RP-RAD-008-0, “Radiation and Contamination Surveys”, Ver. 12.2
62RP-RAD-016-0, “Control of High Radiation Areas”, Ver. 31.0
62RP-RAD-017-0, “Release Surveys”, Ver. 20.0

Records and Data
HPX-1191, Ver. 1.0, U1 SFP Annual Inventory Sheet, 2/8/12
HPX-1192, Ver. 1.0, U2 SFP Annual Inventory Sheet, 2/8/12
HPX-0265, Ver. 5, Inventory and Leak Test Sheet, 8/23/12 – 9/28/12
Radiological Work Plan, TIP Drive Breach and TIP Replacement
Radiological Work Plan, Reactor Head Removal
RWP 13-2009, RB – G31 RWCU & G41 FPCU Heat Exchanger/Valve/Pump Inspection, Repair, Rev. 0
RWP 13-0502, Drywell Initial Entry/1045 lb Walkdown/Repairs and Support During Forced/Planned Outage, Rev. 0
RWP 13-2614, Subpile Room Work, Rev. 0
RWP 13-2617, Drywell/Steam Chase – MSIVs, Rev. 0
RWP 13-2600, U2 DW/SC: Minor Mech/Elec, Inspection Work & Support
RWP 13-2205, Refuel Floor Vessel Disassembly/Reassembly, Rev. 0
Radiological Survey 93758, ISFSI
Radiological Survey 98775, U1 Drywell 127’ el.
Radiological Survey 98784, U1 Drywell 114’ el.
Radiological Survey 98593, U1 Reactor Building 228’ el.
Radiological Survey 96182, U1 Spent Fuel Pool
Radiological Survey 93899, U1 Spent Fuel Pool
Radiological Survey 77388, 2B21FO22C Internals
Radiological Survey 98426, U2 MSIV C (Inboard)
Radiological Survey 97480, U2 Drywell 147’ el.
Radiological Survey 97477, U2 Subpile Room
Radiological Survey 97515, U2 Subpile Room
Radiological Survey 97454, U2 Drywell 127’ el.
Radiological Survey 97464, U2 Cavity
Radiological Survey 97490, U2 Cavity
Radiological Survey 97144, U2 RWCU HX
Radiological Survey 92777, U1 Rx Bldg
Radiological Survey 84304, U1 RWCU Valve Nest
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U1 Fission Product Monitor trends, 2/1/13 – 2/27/13
Radiological Hot Spot Log, 2/13/13

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CR 592548
CR 512071
CR 566052
CR 543893
CR 563388
CR 567862

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CAR 198010
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Section 2RS2: ALARA

Procedures and Guidance Documents

60AC-HPX-009-0, "ALARA Program", Ver. 19.0
NMP-AD-035, "ALARA Program", Ver 1.0
62RP-RAD-012-0, "Selection and use of Temporary Shielding", Ver 2.0
NMP-HP-206, "Issuance, Use and Control of Radiation Work Permits" Ver 2.0

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H-FOA-2011-3, "Plant Hatch Oversight Assessment; High Radiation Camera Functionality", 03/15/2012
ALARA Review Package, RWP 13-2603, Insulation, Shield Door Activities, Temp Ventilation
ALARA Review Package, RWP 13-2605, ISI & Support Work
ALARA Review Package, RWP 13-2613, Drywell B31&G31 Valve Breach/ Repair
ALARA Review Package, RWP 13-2620, Drywell/ Steam Chase Install/Remove Shielding
ALARA Review Package, RWP 13-2014, Torus Proper Diving
ALARA Review Package, RWP 12-1620, Drywell/ Steam Chase Install/Remove Shielding
ALARA Review Package, RWP 12-1609, SRV Replacement Project
SNC Strategic Plan for Radiation Exposure Reduction 2012-2017
RWP 13-2202 & 2203, U2 Refuel floor
RWP 13-2612, Drywell Snubbers Removal/Replacement/Repair and supporting activities
RWP 13-2605, U2 DW/SC ISI & Supporting activities
HPX-0297, Temporary Shielding request- 2R22 Multiple locations and components, 6/15/12
HPX-0297, Temporary Shielding request- U2 TB 164' and Conbay 112', 8/20/12

Condition Reports

108227- 2011101088, A work order is needed to cut a door from the service building hallway
383458 -Less than adequate survey for U1 RWCU 185 Work
107821 -2011100682, 2T45 - The floor drain in the unit 2 RWCU Hx room is mostly clogged
446544 -Locked HRA RWP allowed personnel to sign in without additional authorization

Section 2RS3: In-Plant Airborne Radioactivity Control and Mitigation

Procedures, Guidance Documents, and Manuals

10AC-MGR-026-0, "Respiratory Protection Program", Rev. 1.0
60AC-HPX-006-0, "Respirator Radiological Protection Program", Ver. 10.11
NMP-HP-301, "Airborne Radioactivity Sampling and Evaluation", Ver. 1.2
NMP-GM-002, "Corrective Action Program", Ver. 12.1
62RP-RAD-009-0, "Air Sampling and Concentration Determination", Ver. 5.5

62HI-OCB-002-0, “Portable HEPA Air Filtration Units and Vacuum Maintenance and Operation”, Ver. 9.3
73EP-INS-001-0, “Emergency Equipment Inventory”, Rev. 4.1

Records and Data
SCBA Qualification Records, Selected Maintenance, Health Physics, and Operations Personnel
HPX-0577, Rev. 7, Grade “D” Air Analysis Results, 1/10/11, 4/14/11, 8/17/11, 12/7/11, 2/8/12
HPX-0577, Rev. 8, Grade “D” Air Analysis Results, 4/13/12, 7/6/12, 10/2/12
HPX-0382, Ver. 7.0, HEPA/Vacuum Unit Maintenance Checklist, NPO 17, 2/7/13
HPX-0123, Rev. 4, SCBA Monthly Inspection Report, 1/18/13
MSA C.A.R.E. Certificates, 12/7/11
SCBA PosiChek3 Test Results, Kit 201, 8/9/10, 8/30/11, 9/25/12
SCBA PosiChek3 Test Results, Kit 206, 11/19/09, 1/4/11, 8/5/12
SCBA PosiChek3 Test Results, Kit 268, 6/7/10, 9/20/11, 10/11/12

CAP Documents
Plant Hatch Respiratory Protection Program Annual Evaluation Questionnaire 2012
CR 412170
CR 408266

Section 2RS4: Occupational Dose Assessment

Procedures
NMP-HP-303, “Personnel Decontamination”, Ver 2.0
NMP-HP-107-001,”Instructions for Retrieving, Printing and Updating Individual Radiation Exposure Records”, Ver1.0
NMP-HP-109, “Investigation, Evaluation, and Management of Damaged, Lost, Malfunctioning or Alarming Dosimetry”, Ver 1.1
NMP-HP-100, “Bioassay Program”, Ver 1.0
NMP-HP-102, “In-vitro Bioassay”, Ver 1.0
NMP-HP-101, “In-Vivo Bioassay and Internal Dose Assessment”, Ver 2.0
CR# TE# 514886, FASA Self-Assessment Report, Bioassay, 10/05/2012

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FASA Self-Assessment Report Health Physics, TE 514886, Approval Date 10-05-2012
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64CH-QCX-001-0 HPX-0564, Analytics Cross Check Millipore Geometry 2nd Quarter 2012
H-FOA-2011-3, Plant Hatch Fleet Oversight Assessment: High Radiation Area Camera Functionality, March 15, 2012.
H-FOA-QTR-2010-4, Fleet Oversight Assessment Plant E. I. Hatch 4th Quarter Performance Assessment Report, March 18, 2011.
H-FOA-QTR-2010-2, Fleet Oversight Assessment Plant E. I. Hatch 2nd Quarter Performance Assessment Report, August 2, 2010.
Intercompany Correspondence, Fleet Oversight Audit of Health Physics (H-HP-2011), August 2, 2011.

Whole body counts investigations initiated on 4/28/2011; 04/13/2011; 02/22/2012
NVLAP Accreditation Certificates, 2012-04-01-2013-03-31

Condition Reports
543893, Personnel entered ISFSI without digital alarming device
407715- Dose rate alarm
532594- Loss of Telemetry dosimetry contact in U2 condenser bay
108919- 2011101780, workers received dose rate alarms while working in the U1 Conbay
598866- DAD alarm investigation forms were not filled out in response to ED alarms

Section 2RS5: Radiation Monitoring Instrumentation

Procedures, Guidance Documents, and Manuals
17005-1, "Annunciator Response Procedures for ALB 05 on Panel 1A2 on MCB", Ver. 33
17100-2, "Annunciator Response Procedure for the Process and Effluent Radiation Monitoring System (RMS)", Rev. 20.1
24625-1, "Containment High Range (2RE-0005) Area Monitor 2RX-0005 Channel Calibration", Rev. 29.1
24652-1, "Plant Vent Wide Range Radiogas Monitor 1RX-12444 Channel Operational Test and Channel Calibration", Rev. 19
34313-C, "Operation of the DRMS Plant Vent Effluent Wide Range Monitor 1(2) RE-12444," Rev 17
43802-C, "Calibration of Gamma Standards", Rev. 12.1
43500-C, "Health Physics Instrument Calibration and Control Program," Rev. 53.10
43685-C, "Calibration and Operation of the Asp-1", Rev 20.3
43693-C, "Operation and Use of the JI Shepherd Model 89-400 Shielded Calibrator, Rev. 2.1
NMP-HP-703, "RO-2, RO-2A and RO-20 Operation and Calibration, Ver.1.0
NMP-HP-703, "Daily Instrumentation Source Checks," Ver. 1.1
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Chemistry Issues Turnover Log, Dated 09/17/2012
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Instruments Missing Operation Checks Report, Dated 09/19/2012
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IPM-7A/8/9, VEGP-HP 0637, Calibration Records, Dated 06/14/2011 and 06/12/2012
Model 28-5 Calibrator, Source VEGP 0292, Calibration Record, Dated 05/18/12
Model 89-400 Calibrator, Source VEGP 0413, Calibration Record, Dated 08/12/2012
Model 878-10 Calibrator, Source VEGP 1049, Calibration Record, Dated 08/12/2012
SAM-11, VEGP-HP 1151, Calibration Records, Dated 05/26/2011 and 05/23/2012
SPM-904B, VEGP-HP 0754, Calibration Records, Dated 02/8/2011 and 02/10/2012
WO 1090817001, Plant Vent Wide Range Radiogas Flow 1F-12444 Channel Operational Test and Channel Calibration, Dated 03/03/11
WO SNC332418, Plant Vent Wide Range Radiogas Flow 1F-12444 Channel Operational Test and Channel Calibration, Dated 03/28/2012
WO 1090816001, Plant Vent Wide Range Radiogas Radiation Monitor 1RX12444 Channel Operational Test and Channel Calibration, Dated 10/15/10
WO 1100068601, 2RE0005 Containment High Range Monitor Channel Calibration, Dated 08/09/2010
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Section 40A1: Performance Indicator Verification
00AC-REG-005-0, “Preparation and Reporting of NRC PI Data”, Ver. 6.2

Records and Data
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G-20121218-207-C, Gaseous Waste Release Permit, 12/25/12
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Corrective Action Program
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Section 4OA2: Identification and Resolution of Problems
Procedures
34SO-G11-013-1, Drywell and Reactor Building Sumps System, Ver. 14.2
34AR-657-901-1, ARPs for Control Panel 1H11-P657, Alarm Panel 1, Ver. 25.4

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34AB-N61-001-1, Condenser Tube Leaks/Chemical Intrusion, Ver. 3.0

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