



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

April 30, 2012

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
05000321/2012002 AND 05000366/2012002**

Dear Mr. Madison:

On March 31, 2012 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, 2012, with Mr. David 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.

One self-revealing finding of very low safety significance (Green) was identified during this inspection. This finding was determined to involve violations of NRC requirements. Further, licensee-identified violations which were determined to be of very low safety significance are 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 non-cited violations, 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.

SNC

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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 05000321/2012002,
05000366/2012002
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

SNC

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cc w/encl: (See page 3)

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ADAMS: X Yes ACCESSION NUMBER: ML12122A377 X SUNSI REVIEW COMPLETE FORM 665 ATTACHED

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Letter to Dennis R. Madison from Frank Ehrhardt dated April 30, 2012

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT
05000321/2012002 AND 05000366/2012002

Distribution w/encl:

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RidsNrrPMHatch Resource

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-321, 50-366

License Nos.: DPR-57 and NPF-5

Report Nos.: 05000321/2012002 and 05000366/2012002

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Edwin I. Hatch Nuclear Plant

Location: Baxley, Georgia 31513

Dates: January 1 – March 31, 2012

Inspectors: E. Morris, Senior Resident Inspector
D. Hardage, Resident Inspector
C. Dykes, Health Physicist (Section 2RS1)
M. Coursey, Reactor Inspector (Section 1R08)

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

Enclosure

SUMMARY OF FINDINGS

IR 05000321/2012002, 05000366/2012002; 01/01/2012-3/31/2012; Edwin I. Hatch Nuclear Plant, Units 1 and 2, Maintenance Risk Assessments and Emergent Work Evaluation

The report covered a three-month period of inspection by two resident inspectors, one reactor inspector, and one health physicist. There was one self-revealing finding identified and documented in this report. The significance of most findings is indicated by their color (great than Green, or Green, White, Yellow, Red); the significance was determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP); the cross-cutting aspect was determined using IMC 0310, "Components Within The Cross-Cutting Areas." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review.

Cornerstone: Mitigating Systems

- Green. A self-revealing non-cited violation (NCV) of 10 CFR 50.65(a)(4) became apparent during the Unit 1 refueling outage when the residual heat removal shutdown cooling discharge valve, 1E11-F017B, failed to open electrically from the control room. The inspectors subsequently determined, on February 17, 2012, the licensee had failed to assess the increase in risk to the plant prior to hanging a tagout which removed reactor coolant system injection capability from all four residual heat removal pumps and both core spray pumps. This resulted in an unplanned Orange risk condition for Unit 1 versus the previously assessed Green risk condition. The licensee removed the tagout and restored operation of residual heat removal pump and core spray pump discharge valves to electrically open and restore compliance. This violation has been entered into the licensee's corrective action program as condition report (CR) 410382.

Failure to perform an adequate risk assessment prior to hanging tagout 1-DT-11-1E11-00310 and removing residual heat removal and core spray equipment from service is a performance deficiency. The performance deficiency affects the Mitigating Systems Cornerstone and was determined to be more-than-minor because this issue is similar to IMC 0612, Appendix E, example 7e, not minor if the overall elevated risk would put the plant in a higher licensee-established risk category. Because this issue involves the licensee's assessment and management of risk associated with performing maintenance activities under shutdown conditions, the inspectors utilized IMC 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," and IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." The Phase 1 screening required a Senior Reactor Analyst (SRA) to perform an independent risk assessment because the licensee's shutdown risk assessment involved only qualitative analysis of the plant configuration. A Phase 3 analysis was performed by the regional SRA to characterize the risk associated with the performance deficiency. IMC0609, Appendix K requires performance of a risk analysis for Maintenance Rule issues. The SRA used IMC0609, Appendix

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G, which is a tool to estimate shutdown risk, to bound the risk of the deficiency. With the water level at the level for fuel transfer, and an exposure time of less than 3 days, the SRA used Worksheet 3 of IMC0609, Appendix G, Attachment 3. The dominant sequence was a loss of inventory, with a failure to line up an alternate source of water. Recovery credit was given for manually opening the valves or using alternate water sources due to the length of time available before fuel damage. The finding was subsequently determined to be Green. This performance deficiency has a cross-cutting aspect in the Decision-Making component of the Human Performance area, because the licensee failed to validate the underlying assumptions and identify possible unintended consequences when hanging tag out 1-DT-11-1E11-00310 and removing residual heat removal and core spray equipment from service. [H.1(b)] (Section 1R13)

Violations of very low safety significance or severity level IV that were identified by the licensee have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. These violations and corrective actions are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at or near 100% Rated Thermal Power (RTP). On February 13 the licensee shut down Unit 1 for a scheduled refueling outage. The licensee restarted Unit 1 on March 18 and increased power to 100% RTP on March 28, 2012.

The licensee operated Unit 2 at or near 100% RTP throughout the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather

a. Inspection Scope

Readiness for Impending Adverse Weather Conditions: Freezing. The inspectors performed a review of licensee readiness to cope with freezing weather experienced at the site January 1 through January 4, 2012. The inspectors performed walk downs to verify that equipment was in place to mitigate the potential impacts from freezing conditions. The inspectors reviewed licensee procedure DI-OPS-36-0989, "Cold Weather Checks," to verify actions were taken by the licensee to cope with freezing conditions. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial Walkdowns. The inspectors performed partial walkdowns of the following three systems when the opposite train was removed from service, a remaining operable system/train with high risk significance for the plant configuration existed, or a system/train that was recently realigned following an extended system outage or a risk significant single train system existed. The inspectors checked system valve positions, electrical breaker positions, and operating switch positions to evaluate the operability of the opposite trains or components by comparing the position listed in the system operating procedure to the actual position. Documents reviewed are listed in the Attachment.

Enclosure

- Unit 1 B train of residual heat removal system while the A train was out of service for maintenance, January 10
- Unit 1 A emergency diesel generator while C emergency diesel generator was out of service for maintenance, January 23 through January 27
- Unit 1 A train of residual heat removal shutdown cooling system while B train was out of service for maintenance, March 7

Complete System Walkdown. The inspectors performed a complete walkdown of the following system. The inspectors performed a detailed check of valve positions, electrical breaker positions, and operating switch positions to evaluate the operability of the system or components by comparing the required position in the system operating procedure to the actual position. The inspectors also interviewed personnel and reviewed control room logs to verify that alignment and equipment discrepancies were identified and appropriately resolved. Documents reviewed are listed in the Attachment.

- Unit 2 high pressure coolant injection

b. Findings

No findings were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Area Tours. The inspectors toured the following four risk significant plant areas to assess the material condition of the fire protection and detection equipment, verify fire protection equipment was not obstructed, and that transient combustibles were properly controlled. The inspectors reviewed the Fire Hazards Analysis drawings to verify that the necessary fire fighting equipment, such as fire extinguishers, hose stations, ladders, and communications equipment, was in place. Documents reviewed are listed in the Attachment.

- Unit 1 & 2, control building general area elevation 112', fire area 0001
- Unit 1, oil storage tank room, fire area 1003
- Unit 1 & 2, 600 volt switchgear rooms, fire areas 1016, 1017, 2016, 2017
- Unit 1, control building east cableway area elevation 130' fire area 1104

b. Findings

No findings were identified.

1R06 Flood Protection Measures.1 Internal Floodinga. Inspection Scope

The inspectors reviewed selected risk-important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analysis and design documents, the FSAR, engineering calculations, and abnormal operating procedures for licensee commitments. The inspectors walked-down the areas listed below to verify plant design features and plant procedures for flood mitigation were consistent with design requirements and internal flooding analysis assumptions. The inspectors reviewed the condition of flood protection barriers, which included plant floor drains, penetrations, sumps, and water-tight doors. The inspectors also reviewed CRs to verify the licensee was identifying and resolving problems. Documents reviewed are listed in the Attachment.

- Unit 1, reactor building northwest diagonal
- Unit 1, reactor building northeast diagonal

b. Findings

No findings were identified.

1R07 Heat Sink Performancea. Inspection Scope

Annual Resident Review. The inspectors observed the performance of the licensee's inspection of the heat exchangers listed below. The inspectors also interviewed licensee engineers and reviewed procedure 42IT-TET-012-1, "PSW and RHRSW Piping Inspection procedure," and procedure 42EN-ENG-033-1, "PSW Flow Model Data Collection." Documents reviewed are listed in the Attachment.

- Unit 1 emergency diesel generator lube oil, jacket cooling water, and scavenging air heat exchangers

b. Findings

No findings were identified.

1R08 Inservice Inspection (ISI) Activities

.1 Piping Systems ISI

a. Inspection Scope

The inspectors evaluated the following non destructive examinations to verify 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.

- Liquid penetrant testing (PT) examination for Hatch U1 branch connection to pipe 1B31-28A-8BC-1 – Records review
- Ultrasonic testing (UT) examination for Hatch U1 pipe to elbow 1N11-2MSA-14B-SSR-2, ASME Class 2, 14-inch weld – records review
- UT examination for Hatch U1 branch connection to pipe 1E41-1HPCI-10-D-1, ASME Class 1, 10-inch weld – direct observation

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

The inspectors reviewed documentation for the following pressure boundary welds completed for risk-significant systems during the outage to evaluate if the licensee applied the pre-service non-destructive examinations and acceptance criteria required by ASME Code Section XI. In addition, the inspectors reviewed the welding procedure specification, welder qualifications, welding material certification and supporting weld procedure qualification records, to evaluate if the weld procedures were qualified in accordance with the requirements of Construction Code and the ASME Code Section IX.

- Maintenance work order 1081315401 residual heat removal service water pump 1B discharge valve
- Maintenance work order 1081999905 install high pressure coolant injection gas intrusion vents

b. Findings

No findings were identified.

.2 Identification and Resolution of Problems

b. Inspection Scope

The inspectors performed a review of ISI related problems entered into the licensee's corrective action program and conducted interviews with licensee staff to determine if

- the licensee had established an appropriate threshold for identifying ISI related problems;
- the licensee had performed a root cause (if applicable) and taken appropriate corrective actions; and
- the licensee had evaluated operating experience and industry generic issues related to ISI and pressure boundary integrity.

The inspectors performed these reviews to evaluate 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 Attachment to this report.

1R11 Licensed Operator Requalification

a. Inspection Scope

Resident Quarterly Observation

On January 4, 2012, the inspectors observed the performance of licensee simulator scenario LT-SG-50317, which included plant shutdown and reactor shutdown. The inspectors reviewed licensee procedures NMP-AP-003, "Procedure and Work Instruction Use and Adherence," and DI-OPS-59-0896, "Operations Management Expectations," to verify formality of communication, procedure usage, alarm response, control board manipulations, group dynamics, and supervisory oversight. The inspectors attended the post-exercise critique of operator performance to assess whether performance issues identified by the licensee were comparable to those identified by the inspectors. In addition, the inspectors observed licensed operator performance in the main control room during periods of heightened activity or risk.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the following two samples associated with structures, systems, and components to assess the licensee's implementation of the Maintenance Rule (MR) (10 CFR 50.65) with respect to the characterization of failures and the appropriateness of the associated (a)(1) or (a)(2) classification. The inspectors reviewed operator logs, associated CRs, maintenance work orders (WO), and the licensee's procedures for implementing the MR to determine if equipment failures were being identified, properly assessed, and corrective actions established to return the equipment to a satisfactory condition. Documents reviewed are listed in the Attachment.

- Unit 1 and 2 primary containment, 1T23-2T23
- Unit 1 sampling system, 1P33

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the following five work activities listed below to verify that risk assessments were performed prior to components being removed from service. The inspectors reviewed the risk assessment and risk management controls implemented for these activities to verify they were completed in accordance with licensee procedure 90AC-OAM-002-0, "Scheduling Maintenance," and 10 CFR 50.65 (a)(4). For emergent work, the inspectors assessed whether any increase in risk was promptly assessed and that appropriate risk management actions were implemented.

- Week of January 1 – January 6, including Unit 1 station service battery charger repairs, emergency diesel generator room louver testing, decay heat removal system maintenance activities, and Unit 2 plant service water pump testing
- Week of January 23 – January 27, including Unit 1 C emergency diesel generator maintenance outage
- Week of February 5 – February 10, including Unit 1 residual heat removal pump pressure transmitter replacement, decay heat removal system testing, and Unit 2 control rod drive pump planned maintenance
- February 18, Unit 1 unplanned Orange risk entry
- Week of March 19 – March 23, including Unit 1 restart from refueling outage, Unit 1 reactor core isolation cooling pump corrective maintenance, Unit 2 traversing in-core probe corrective maintenance

b. Findings

Introduction: On February 18, 2012, a Green self-revealing NCV of 10 CFR 50.65(a)(4) became apparent during the Unit 1 refueling outage when the residual heat removal shutdown cooling discharge valve, 1E11-F017B, failed to open electrically from the control room. The inspectors subsequently determined that on February 17, 2012, the licensee had failed to assess the increase in risk to the plant prior to hanging a tagout which removed reactor coolant system injection capability from all four residual heat removal pumps and both core spray pumps. This resulted in an unplanned Orange risk condition for Unit 1 versus the previously assessed Green risk condition.

Description: On February 17, 2012, while Unit 1 was in Mode 5 with the reactor vessel head removed, water level greater than 22 feet 1/8 inches above the vessel flange, and the decay heat removal system in service the licensee hung tagout 1-DT-1R25 / 1-DT-

11-1E11-00310. This tagout opened various electrical connections in the residual heat removal system and core spray valve logic systems which prevented the residual heat removal pump shutdown cooling discharge valves, 1E11-F017A and 1E11-F017B, and the core spray pumps discharge valves, 1E21-F005A and 1E21-F005B, from being electrically opened either automatically or remote manually, thereby rendering residual heat removal low pressure coolant injection and core spray systems inoperable. Prior to authorizing the hanging of this tagout, the licensee did not assess that this tagout would render these systems inoperable, and did not include the loss of reactor coolant system inventory control injection sources in the Unit 1 outage risk assessment per procedure 31GO-OPS-024-0, "Outage Safety Assessment," Version 1.6. Approximately twelve hours later on February 18, 2012, the inability to electrically open these valves became self-revealing when the licensee started residual heat removal pump 1B and the discharge valve, 1E11-F017B, failed to open. The licensee entered abnormal operating procedure 34AB-E11-001-1, "Loss of Shutdown Cooling," and procedure 34SO-G41-001-1, "Loss of Fuel Pool Cooling." The licensee also verified reactor coolant circulation was provided by an alternate method in accordance with Technical Specification (TS) 3.9.7 Condition C, and that fuel assembly decay heat was being removed by the decay heat removal system. Licensee investigations revealed 1E11-F017A failed to open due to the hanging of tagout 1-DT-11-1E11-00310 which had disabled the residual heat removal and core spray pump discharge valves. The licensee performed an outage safety risk assessment which resulted in an unplanned Orange risk condition instead of a Green risk condition. The Orange risk condition resulted from all four residual heat removal pumps and both core spray pumps being inoperable and unable to provide a make-up source of water to the reactor pressure vessel and spent fuel pool. Based on the Orange risk condition the licensee stationed a compensatory and dedicated operator to manually align valves for low pressure injection should plant conditions require emergency make-up water to the reactor pressure vessel and spent fuel pool. The licensee removed tagout 1-DT-11-1E11-00310 approximately thirty-four hours after it was hung and restored the ability of residual heat removal pump and core spray pump discharge valves to electrically open. After the tagout was removed and the valves were verified operable, unit risk returned to a Green risk condition. The licensee entered this issue into their corrective action program as condition report (CR) 410382.

The inspectors determined that the licensee's failure to perform an adequate risk assessment prior to hanging tagout 1-DT-11-1E11-00310 is a performance deficiency. 10 CFR 50.65(a)(4), requires in part that before performing maintenance activities, the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities.

Analysis: Failure to perform an adequate risk assessment prior to hanging tagout 1-DT-11-1E11-00310 and removing residual heat removal and core spray equipment from service is a performance deficiency. The performance deficiency affects the Mitigating Systems Cornerstone and was determined to be more-than-minor because this issue is similar to IMC 0612, Appendix E, example 7e, not minor if the overall elevated risk would put the plant in a higher licensee-established risk category. Because this issue involves the licensee's assessment and management of risk associated with performing maintenance activities under shutdown conditions, the inspectors utilized IMC 0609,

Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," and IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process." Phase 1 screening required a Senior Reactor Analyst (SRA) to perform an independent risk assessment because the licensee's shutdown risk assessment involved only qualitative analysis of the plant configuration. A Phase 3 analysis was performed by the regional SRA to characterize the risk associated with the performance deficiency. IMC0609, Appendix K requires performance of a risk analysis for Maintenance Rule issues. The SRA used IMC0609, Appendix G, which is a tool to estimate shutdown risk, to bound the risk of the deficiency. With the water level at the level for fuel transfer, and an exposure time of less than 3 days, the SRA used Worksheet 3 of IMC0609, Appendix G, Attachment 3. The dominant sequence was a loss of inventory, with a failure to line up an alternate source of water. Recovery credit was given for manually opening the valves or using alternate water sources due to the length of time available before fuel damage. The finding was subsequently determined to be Green.

This performance deficiency has a cross-cutting aspect in the Decision-Making component of the Human Performance area, because the licensee failed to validate the underlying assumptions and identify possible unintended consequences when hanging tag out 1-DT-11-1E11-00310 and removing residual heat removal and core spray equipment from service. [H.1(b)]

Enforcement: 10 CFR 50.65(a)(4), requires in part that before performing maintenance activities, the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities. Contrary to the above on February 17, 2012, before performing the maintenance activity of hanging Unit 1 tagout 1-DT-11-1E11-00310 which removed residual heat removal and core spray equipment, the licensee failed to assess and manage the increase in risk which resulted from hanging this tagout. The hanging of this tagout resulted in the plant configuration being in an Orange risk condition, whereas the licensee's risk assessment only predicted Green risk. Immediate corrective actions included restoring the ability of residual heat removal pump and core spray pump discharge valves to electrically open by removing the tagout on February 18, 2012. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program as CR 410382, this violation is being treated as an NCV, consistent with the Enforcement Policy. NCV 05000321/2012002-01, "Failure to assess and manage the increase in risk when removing residual heat removal and core spray from service."

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following eight operability evaluations and compared the evaluations to the system requirements identified in the TS and the FSAR to ensure operability was adequately assessed and the system or component remained available to perform its intended function. Also, the inspectors assessed the adequacy of

compensatory measures implemented as a result of the condition. Documents reviewed are listed in the Attachment.

- 1R42S030 elevated temperature on alarm and metering power supply board transistor Q2, CR388576
- 1B emergency diesel generator jacket cooling water heat exchanger plant service water leak, CR 387601
- Plant service water leak on 1B emergency diesel generator lube oil heat exchanger, CR 390920
- 2P41F098 piping design and body corrosion, CR 396706
- Unit 1 secondary containment insufficient differential pressure with 1A, 1B, 2B standby gas trains in service, CR 406914
- Unit 2 traversing in-core probe 'A' unit fault resulting in probe not retracting into the shield chamber, CR 407148
- Emergency health physics chemistry heating ventilation and air conditioning unit, 1Z41-B101, not maintaining chemistry counting room temperature, CR 413609
- Technical Support Center (TSC) air condition discovered not operating, CR 386124

b. Findings

No findings were identified.

1R18 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following plant modifications to ensure that safety functions of important safety systems were not affected. Also, the inspectors verified that the design bases, licensing bases and performance capability of risk significant structures, systems and components were not degraded by the modifications. The inspectors verified that any modifications performed during increased risk-significant configurations did not place the plant in an unsafe condition. Documents reviewed are listed in the Attachment.

Modification

- DCP SNC 330548 Remove/Replace Cooling Coils & Condensing Unit Serving TSC (1X75-B001 & 1X75-B002)

b. Findings

Introduction: An unresolved item was identified to determine if a violation of regulatory requirements occurred when on December 21, 2011, the Hatch TSC climate control air condition unit tripped due to an overload condition. The cause of the overload condition was attributed to a design modification on November 11, 2011, which installed a control transformer that was undersized to maintain full system air conditioning load.

Description: From November 4 to November 10, 2011, Hatch implemented a design change to the TSC ventilation system, DCP SNC330548, "Remove/Replace Cooling Coil and Condensing Unit serving TSC (1X75-B001 and 1X75-B002)". On November 10, 2011, the TSC ventilation system was returned to service following replacement of the cooling coils and condensing unit. On December 21, 2011, Operations department personnel noted TSC ambient temperature was increasing and the TSC condensing units were not operating. The TSC ventilation system was restarted by resetting the cooling coil and condensing unit control circuit transformer and the licensee commenced an investigation to determine the cause of the trip. Hatch determined that the transformer for the cooling coil and condensing unit control circuit was not rated to supply full control circuit load under high load demand and that a conjectured thermostat adjustment in the TSC had resulted in the HVAC system responding to a cooling demand that exceeded the protective trip set point for the control transformer.

The requirements for TSC functionality are documented in Section T 4.0 of the Hatch Unit 1 and Unit 2 technical requirements manual (TRM), Section 3.10.1. The ventilation system for filtration and climate control of the TSC is required for TSC functionality. A suitable environment must be maintained in the TSC for personnel occupancy and equipment operation during radiological events. The licensee performed a functionality assessment (CR 386124) and determined that the heat load of the condensing unit between November 10, 2011, and December 20, 2011, would require only one circuit of the dual unit cooling coil and condensing unit. This determination was made using the maximum ambient temperature recorded during the period (83°F) and assuming that the TSC HVAC thermostat was set to maintain the temperature in the TSC at 75 °F as recommended in the TSC activation procedure, 73EP-EIP-063-0. With only one circuit of cooling in operation, the electrical load on the control transformer is within the rating of the undersized transformer. Therefore, during this period, the licensee concluded TSC ventilation was functional for climate control of the TSC. On December 21, 2011, at 0522, Operations department personnel noted TSC ambient temperature was increasing. Hatch determined that a thermostat adjustment in the TSC had resulted in the HVAC system responding to a high load cooling demand (both cooling coils and condensing units) that exceeded the protective trip set point for the undersized control transformer. This condition prohibited the TSC ventilation system from cooling the TSC and thus the TSC ventilation system was not available to provide the required climate control function. NRC inspectors concluded since the TSC HVAC thermostat was susceptible to adjustment at any time during the period the undersized control transformer was in service, and that adjustment to the thermostat during a TSC activation could cause high cooling demand which could trip the transformer, the TSC was nonfunctional for the entire period the undersize control transformer was installed in the system.

Although the TRM states that the TSC air conditioning system is required for the TSC to be functional, clarification is required by the inspectors to determine if the licensee committed to maintaining climate control for the TSC. Review of the licensee's NUREG 0696, NUREG 0737, and pertinent Generic Letter responses is required to determine whether climate control affects functionality and whether this issue constitutes a violation of 10 CFR Part 50.54(q), and the planning standards in 10 CFR 50.47(b) (8). URI

Enclosure

05000321,366/2012002-02, "Installation of a transformer for the TSC cooling coil and condensing unit control circuit not adequately designed to provide full system load."

1R19 Post Maintenance Testing

a. Inspection Scope

For the following eight 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 TS 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 358253, repair 1B emergency diesel generator jacket cooling water heat exchanger plant service water leak, January 6
- WO 999997, 1A residual heat removal pump motor oil replacement and motor meggar, January 11
- WO 362069, repair oil leak on 1B emergency diesel generator, January 18
- WO 323891, turbine building exhaust ventilation damper replacement, February 9
- WO 367213, reactor core isolation cooling pump discharge valve position indication system failed low, February 10
- WO 377882, replace emergency diesel generator 1C under frequency relay 1S32K266, March 7
- WO 331165, reactor core isolation cooling pump post outage functional test run, March 19
- WO 331175, high pressure coolant injection pump post outage functional test run, March 19

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities

a. Inspection Scope

The inspectors performed the inspection activities described below for the Unit 1 refueling outage that began on February 13. 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 TS and 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:

- Prior to the outage, the resident inspectors reviewed the licensee's integrated risk control plan 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, other requirements, commitments, and administrative procedure prerequisites were met prior to changing plant configuration
- Inspection of containment for as-found degraded conditions

b. Findings

No findings were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed seven licensee 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

- 57SV-SUV-009-2, Analog Transmitter Trip System Panel 2H11-P923 Channel FT&C
- 34SV-R43-002-1, Diesel Generator 1B Monthly Test
- 57SV-G11-005-1, Drywell Floor Drain Sump Level FT&C

In-Service Test

- 34SV-E11-001-1, Residual Heat Removal Pump Operability

Leak-rate Test

- 34SV-SUV-019-2, Surveillance Checks

Containment Isolation Valves

- 42SV-TET-001-0, Local Leak Rate Test (LLRT) Testing Methodology for 1E21-F006A & F037A, February 21
- 42SV-TET-001-0, Local Leak Rate Test (LLRT) Testing Methodology for 1G31-F001, February 28

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluationa. 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 / Evolution conducted on January 11

b. Findings

No findings were identified.

2. RADIATION SAFETY (RS)

2RS1 Radiological Hazard Assessment and Exposure Controls

a. Inspection Scope

Hazard Assessment and Instructions to Workers During facility tours, the inspectors directly observed labels on containers of radioactive material and postings for radiation areas and high radiation areas (HRAs). Inspectors observed worker practices in contamination areas (CA) within the radiological controlled area (RCA) of Unit 1 (U1) such as the drywell, torus, and the torus proper. Inspectors performed walk downs of areas in the U1 and Unit 2 (U2) reactor buildings, control and turbine buildings, and radioactive waste (radwaste) processing and storage locations. The inspectors directly observed conduct of licensee radiation surveys for selected RCA areas. The inspectors reviewed survey records for several plant areas including surveys for hot particles, airborne radioactivity, and gamma surveys with a range of dose rate gradients. The inspectors also discussed changes to plant operations that could contribute to changing radiological conditions since the last inspection. For selected outage work, the inspectors attended pre-job ALARA 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 U1 and U2 Locked High Radiation Area (LHRA) and Very High Radiation Area (VHRA) locations. Procedural guidance for LHRA and VHRA controls were discussed with health physics (HP) supervisors. Controls and implementation for storage of irradiated material within the spent fuel pool (SFP) were reviewed. Established radiological controls (including airborne controls) were evaluated for selected U1 Refueling Outage 25 (1R25) tasks including torus diving, radiography of valve welds, control rod drive pulls, and work in reactor building HRAs.

The inspectors evaluated occupational workers' adherence to selected RWPs and HP technician (HPT) proficiency in providing job coverage through direct observations and interviews with licensee staff. The inspectors reviewed electronic dosimeter (ED) alarm logs and evaluated worker response to dose and dose rate alarms during selected work activities. For HRA tasks involving significant dose rate gradients, for example, radiography and torus proper diving, the inspectors evaluated the use and placement of whole body and extremity dosimeters to monitor worker exposure.

Control of Radioactive Material The inspectors observed surveys of material and personnel being released from the RCA using small article monitor, personnel contamination monitor, and portal monitor instruments. The inspectors discussed alarm setpoints, and release program guidance with licensee staff. The inspectors also reviewed records of leak tests on selected sealed sources and discussed nationally tracked source transactions with licensee staff.

Problem Identification and Resolution Condition Reports (CR)s associated with radiological hazard assessment and control were reviewed and assessed. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with procedure NMP-GM-002, "Corrective Action Program", Version 12, and NMP-GM-002-001, "Corrective Action Program Instructions", Version 27. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent assessment results.

Radiation protection activities were evaluated against the requirements of Final Safety Analysis Report (FSAR) Section 12; 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 Section 2RS1 of the Attachment.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors reviewed a sample of the licensee submittals for the performance indicators 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 2011 and December 2011 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. The inspectors also reviewed applicable licensee event reports (LERs) issued during the referenced time frame. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems

.1 Daily Screening of Corrective Action Items

As required by inspection procedure 71152, "Identification and Resolution of Problems," and in order to 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, and 10 CFR 50, Appendix B. Documents reviewed are listed in the Attachment.

- CR 353886, 2A standby gas train failure

b. Findings and Observations

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

4OA3 Event Follow-up

.1 (CLOSED) LER 05000366/2011-001, Primary Containment Isolation Penetration Exceeded Overall Allowed Technical Specification Leakage Limits

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 2011105213. LER 05000366/2011-001 and LER 05000366/2011-001-01, Revision 1 are closed.

b. Findings

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

.2 (CLOSED) LER 05000366/2011-003, Manual Reactor Scram During Startup Due to Too Few Operable Intermediate Range Monitors

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. The inspectors did not identify a licensee performance deficiency or violations of regulatory requirements. The intermediate range monitor failures were attributed to degraded signal cable shielding caused by stresses from three mid-cycle maintenance shutdown and startups. The licensee inserted the manual scram to comply with TSs. This condition was documented in the licensee's corrective action program as CR 2011105213. LER 05000366/2011-003 and LER 05000366/2011-003 Revision 1 are closed.

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 Institute of Nuclear Power Operations (INPO) Report Review

During this inspection period the final INPO Evaluation Report dated November, 2010, was reviewed. The report contained no safety issues which were not already known by the NRC.

4OA6 Meetings, Including Exit

On April 26, 2012, the resident inspectors presented the inspection results to Mr. David Vineyard and other members of your staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

4OA7 Licensee-Identified Violations

The following violations of very low safety significance (Green) or Severity Level IV were identified by the licensee and are violations of NRC requirements which meet the criteria of the NRC Enforcement Policy for being dispositioned as a NCV.

- A licensee-identified violation was discovered on April 16, 2011, for Unit 2 TS 3.6.1.1 which states that primary containment shall be operable during Modes 1, 2 and 3. TS 5.5.12 requires primary containment overall leakage rate acceptance criteria be less than or equal to L_a (allowable leakage). Contrary to this requirement, on April 16, 2011, the licensee discovered during the Unit 2 refueling outage that primary containment isolation valves 2T48-F309 and 2T48-F324 exceeded the as-found local leak rate requirements and resulted in an overall leak rate through penetration 2T23X205 greater than L_a . The inspectors screened the significance of this violation using IMC 0609 Appendix H. The Appendix H Phase 2 screening results required a more detailed analysis by an NRC senior risk analyst (SRA). A regional SRA reviewed the Appendix H Phase 2, and requested that NRC headquarters' risk analysts perform an analysis to determine the impact of the finding given the potential for scrubbing of the fission products prior to release. The analysts used NUREG-1765, and concluded that this was a Type B LERF finding which involves leakage through the torus and not a drywell bypass. Section 3.2.1 of NUREG-1765 states that for such cases, fission product scrubbing through the suppression pool can be credited and that this type of finding does not contribute significantly to LERF. Therefore, the finding is GREEN. Corrective actions taken by the licensee included repairs to valves 2T48-F309 and 2T48-F324 and satisfactory post-maintenance testing to verify leakage was within limits prior to plant restart. This issue was captured in the licensee's corrective action program as CR 2011105213 and was documented in LER 05000366/2011-001. (4OA3.1)
- A licensee-identified violation of 10 CFR 50 Appendix B, Criterion V, "Procedures," was discovered on September 22, 2011, when the 2A standby gas treatment train discharge damper failed to fully open during surveillance testing. 10 CFR 50 Appendix B, Criterion V, requires in part that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions. Contrary to this requirement on January 14, 2010, the licensee failed to install a required cotter pin in the 2A standby gas treatment train discharge damper which led to the failure of the damper on September 22, 2011. The inspectors screened the significance of this violation using

IMC 0609 Attachment 4, Table 4a where this finding screened as Green because the finding only represented a degradation of the radiological barrier function provided for the standby gas treatment system. This issue is captured in the licensee's corrective action program as CR 353886. (4OA2.2).

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

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
B. Duval, Site Support Manager
J. Edwards, Southern Nuclear Corporate ISI Engineer
G. Fechter, Site Welding/Repair & Replacement
B. Hulett, Engineering Design Manager
G. Johnson, Outage and Scheduling Manager
C. Lane, Engineering Director
D. Madison, Hatch Vice President
J. Merritt, Nuclear Security Manager
D. Pagan, Hatch Site ISI Engineer
J. Robertson, Site Projects Manager
S. Tipps, Licensing
R. Varnadore, Operations Manager
D. Vineyard, Plant Manager

LIST OF ITEMS OPENED AND CLOSED

Opened

05000321,366/2012002-02	URI	Failure to perform an adequate design modification for replacement of the TSC air conditioning unit. (1R18)
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Closed

05000366/2011-001 and 05000366/2011-001 Rev 1	LER	Primary Containment Isolation Penetration Exceeded Overall Allowed Technical Specification Leakage Limits(4OA3.1)
05000366/2011-003 and 05000366/2011-003 Rev 1	LER	Manual Reactor Scram During Startup Due to Too Few Operable Intermediate Range Monitors (4OA3.2)

Opened & Closed

05000321/2012002-01	NCV	Failure to assess and manage the increase in risk when removing residual heat removal and core spray from service. (1R13)
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LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather

Condition Reports

389004, 389249, 389000, 389251

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-E41-001-2, "High Pressure Coolant Injection (HPCI)", Ver.23.2
34SO-R43-001-1, "Diesel Generator Standby AC System", Ver. 23.14
34SO-E11-010-1, "Residual Heat Removal System", Ver. 38.0

Drawings

H-26020, H-26021, H-11037, H-11631, H-16329, H-16330

Condition Reports

392384

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 5A/B, Unit 1 & 2 Pre-Fire Plan Control Building General Area Elevation 112'
A-43965 sheet 10A/B, Unit 1 Pre-Fire Plan Oil Storage Tank Room
A-43965 sheet 28A/B, Unit 1 Pre-Fire Plan 600V Switchgear Room 1C
A-43965 sheet 29A/B, Unit 1 Pre-Fire Plan 600V Switchgear Room 1D
A-43965 sheet 37A/B, Unit 1 Pre-Fire Plan 600V Switchgear Room 2C
A-43965 sheet 38A/B, Unit 1 Pre-Fire Plan 600V Switchgear Room 2D
A-43965 sheet 34B, Unit 1 Pre-Fire Plan Control Building East Cableway 130'

Section 1R06: Internal Flood Protection

Documents

HNP-1-FSAR Chapter 10.13.3.1
E.I. Hatch Individual Plant Examination dated December 1992
HL-4690, E.I. Hatch response to request for additional information regarding Individual Plant Examination submittal, dated October 7, 1994

Section 1R07: Heat Sink PerformanceProcedures

42EN-ENG-033-1, "PSW Flow Model Data Collection", Ver. 1.2

42IT-TET-012-1, "PSW and RHRSW Piping Inspection Procedure", Ver. 2.7

52SV-R43-001-0, "Diesel, Alternator, and Accessories Inspection", Ver. 22.0

Work Order

99621

Section 1R08: Inservice Inspection ActivitiesProcedures

NMP-MA-005-002, General Welding Standard for Pressure Boundary Applications, Ver. 4.0

Calculations

None

Corrective Action Documents

CR 396404 Temporary Modification of RHR SW Piping dated 1/20/2012

CR 2011106055 Operating Experience Review of IWE by Hatch IWE Program owner dated 4/29/2011

CR 2011105018 QC Hold Point Missed on WO 2081311507 dated 4/13/2011

CR 346837 Control of Weld Filler Material dated 8/25/2011

CR 412175 Missed VT-2 Visual Examination for Leakage dated 2/22/2012

Other

Work Order SNC 362858 Weld Overlay for RHR SW wall-thinning including welder and NDE Personnel certifications, equipment calibrations, certified material test reports, weld procedure specifications, and review of site procedures

Maintenance Work Order 1081315401 RHR SW Pump 1B Discharge Valve including welder and NDE Personnel certifications, equipment calibrations, certified material test reports, weld procedure specifications, and review of site procedures

Maintenance Work Order 1081999905 Install HPCI Gas Intrusion Vents including welder and NDE Personnel certifications, equipment calibrations, certified material test reports, weld procedure specifications, and review of site procedures

PT Examination for Hatch U1 Branch Connection to Pipe 1B31-28A-8BC-1 dated 2/17/2012 including NDE Personnel certifications, equipment calibrations, and review of site procedures

UT Examination for Hatch U1 Pipe to Elbow 1N11-2MSA-14B-SSR-2 dated 2/18/2012 including NDE Personnel certifications, equipment calibrations, EPRI PDI certifications, and review of site procedures

UT Examination for Hatch U1 Branch Connection to Pipe 1E41-1HPCI-10-D-1 dated 2/21/2012 including NDE Personnel certifications, equipment calibrations, EPRI PDI certifications, and review of site procedures

Hatch Nuclear Plant Units 1 Inservice Inspection Plan Fourth Inspection Interval Volume 2 dated 5-26-11

Edwin I. Hatch Nuclear Plant Unit 1 Inservice Inspection Plan Third Inspection Interval dated 1/28/10

Section 1R11: Licensed Operator RequalificationOther

Drill Scenario: LT-SG-50317-17

Section 1R12: Maintenance EffectivenessOther

System Health Report Primary Containment 2nd quarter 2011
 Maintenance Rule Scoping Manual Documents
 T23 Maintenance Rule Performance Criteria
 Unit 2 Maintenance Rule Monthly Report – November 2011
 NMP-ES-002, System Monitoring and Health Reporting, Ver. 15.0
 P33 Maintenance Rule Performance Criteria
 System Health Report Sampling System 4th quarter 2011

Section 1R13: Maintenance Risk Assessments and Emergent Work EvaluationProcedures

90AC-OAM-002-0, Scheduling Maintenance, Ver. 4.4
 NMP-OS-010-002, Hatch Protected Equipment Logs, Ver. 7.0
 NMP-ES-027, Maintenance Rule Program, Ver. 1.0

Other

Equipment Out of Service calculations 12/31/11-1/6/12
 Equipment Out of Service calculations 1/21/12-1/27/12
 Equipment Out of Service calculations 2/4/12-2/10/12
 Equipment Out of Service calculations 2/18/12-2/24/12
 Equipment Out of Service calculations 3/18/12-3/24/12
 Control Room Logs

Condition Reports

410382

Section 1R15: Operability EvaluationsProcedures

NMP-AD-012, Operability Determinations and Functional Assessments, Ver. 6.0

Drawings

H11638, H11600, H11609, H26051, H16034

Work Orders

359872, 368257, 368247

Other

Control room logs
 E. I. Hatch Final Safety Analysis Report Unit 1 and Unit 2
 E. I. Hatch Technical Specifications Unit 1 and Unit 2
 E. I. Hatch Technical Specifications Bases Unit 1 and Unit 2
 E. I. Hatch Technical Requirements Manual Unit 1 and Unit 2
 S-51773, Traversing In-Core Probe Calibration System Operation and Maintenance

Instructions, Ver. 1.0

Operating Experience Smart Sample 2012/02, Technical Specification Interpretation and Operability Determination.

Technical Evaluations

310761, 314258, 322745

Condition Reports

406872, 407023, 407107, 407344, 413609

Section 1R18: Plant Modifications

Procedures

73EP-EIP-016-0, TSC HVAC Operation, Ver. 5.0

73EP-EIP-063-0, Technical Support Center Activation, Ver. 11.0

CR's

386463, 386124

Section 1R19: Post Maintenance Testing

Work Orders

358253, 99997, 362069, 323891, 118599, 367213, 331175, 331165

Procedures

34SV-P41-003-2, Standby Diesel Service Water Operability

34SV-E11-001-1, Residual Heat Removal Pump Operability, Ver. 24.2

34SV-R43-002-1, Diesel Generator 1B Monthly Test,

34SV-U41-001-2, Turbine Building Exhaust Ventilation Surveillance, Ver. 1.3

57SV-CAL-003-1, ATTS Transmitter Calibration, Ver. 20.1

57CP-R43-003-1, Westinghouse Type KF Under Frequency Relay, Ver. 4.0

34SV-E41-005-1, High Pressure Coolant Injection Pump Operability 165 PSIG Test, Ver. 5.10

34SV-E51-004-1, Reactor Core Isolation Cooling Pump Operability 150 PSIG Test, Ver. 5.7

Drawing

H11638, H11600,

Condition Reports

387601, 394874, 394866,

Section 1R20: Refueling and Outage Activities

Operating Logs

34GO-OPS-001-1 and 2, Plant Startup

34GO-OPS-003-2, Startup System Status Checklist

Section 1R22: Surveillance Testing

Procedures

57SV-SUV-009-2, Analog Transmitter Trip System Panel 2H11-P923 Channel FT&C, Ver. 7.15

34SV-R43-002-1, Diesel Generator 1B Monthly Test
 34SV-E11-001-1, Residual Heat Removal Pump Operability, Ver. 24.2
 57SV-G11-005-1, Drywell Floor Drain Sump Level FT&C, Ver.5.16
 34SV-SUV-019-2, Surveillance Checks, Ver. 37.1
 42SV-TET-001-0, Local Leak Rate Test (LLRT) Testing Methodology, Ver. 5
 42SV-TET-001-1, Primary Containment Type B and Type C Leak Rate Testing, Ver. 27

Work Orders

314501, 109165, 109163, 109166, 317485

Section 1EP6: Drill Evaluation

EP Exercise Narrative and Timeline for drill conducted January 11, 2012

Drill event notification forms from drill conducted January 11, 2012

Section 2RS1: Radiological Hazard Assessment and Exposure Controls

Procedures, Guidance Documents, and Manuals

60AC-HPX-004-0, "Radiation and Contamination Control", Version 21.0
 60AC-HPX-007-0, "Control of Radioactive Materials", Version 8.3
 62RP-RAD-004-0, "Monitor Alarm Response and Personnel Decontamination", Version 15
 62RP-RAD-006-0, "RPW Processing", Version 11.12
 62RP-RAD-017-0, "Release Surveys", Version 15
 62RP-RAD-055-0, "Underwater Storage and Inventory of Radioactive Materials in the Spent Fuel Pools", Ver. 3.2
 NMP-SH-016-001, "Control of Radiological Diving Operations", Version 1.0
 NMP-GM-002, "Corrective Action Program", Version 12
 NMP-GM-002-001, "Corrective Action Program Instructions", Version 27

Records and Data

62RP-RAD-007-0, HPX-0265 Version 4.0, Inventory and Leak Test Sheet
 RWP 12-1500, Diving Outage Coordinator/Job Supervisor RCA Tours in all areas except High Rad &/or High Contamination Areas
 RWP 12-1001, RB/RW Bldg & Outside Areas Decon, Pull Drum, Laundry, And Routine Fire Watch
 RWP 12-1600, DW/SC MinorMech./Elec., Inspection Work & Supporting Activities
 RWP 12-1014, Torus Proper Diving11
 RWP 12-1012, Radiography and Support in All Plant Locations
 RWP 12-1615, Drywell/Reactor Control Rod Drive Change out, Transport & Support Activities and Vortex Flushing
 RWP 12-1004, RB-Tip/Tip Drive Maintenance, Squib Valve Test, Scram Discharge Header Piping Hydrolaze and Support Activites.
 RWP 12-1202, Refuel Floor- Bridge Hoist, Grapple and Upper Platform Repairs, Underwater Camera/Tool Activities/Repairs, CRB Activities, LPRM/RPIS Test and Repair
 Form HPX-0213, Air Sample Calculation Sheet, for the following air sample log numbers:

<u>Log #</u>	<u>Sample Date</u>	<u>Description</u>
1-12-029	2/21/12	U1 Drywell
1-12-029	2/21/12	U1 Drywell subpile room
1-12-008	2/14/12	Rx Torus Proper

1-12-008	2/14/12	TB 164' Deck/Enclosure
1-12-012A	2/15/12	DW 127' Subpile room
1-12-012A	2/15/12	DW 127' GA

Plant Hatch Radiological Information Survey

#87272 02/29/12, U1 Reactor Building (1Rx130)
 #87207 02/28/12, U1 Torus Proper (1Rx114)
 #65078 02/26/12, U1 Torus Proper (1Rx114)
 #86988 02/25/12, U1 Torus Proper (1Rx114)
 #86674 02/22/12, U1 Torus Proper (1Rx114)
 #86467 02/19/12, U1 Torus Proper (1Rx114)
 #86373 02/18/12, U1 Torus Proper (1Rx114)
 #86274 02/17/12, U1 Torus Proper (1Rx114)
 #86241 02/16/12, U1 Torus Proper (1Rx114)
 #86673 02/21/12, U2 Reactor Building 185 (2RX185)
 #86845 02/23/12, PCE #578
 #86776 02/22/12, PCE #575
 #86422 02/18/12, PCE #566

NMP-GM-003-F04, Self-Assessment Final Report (Focused Self Assessment), Version 1.0 Exit
 Date 08/12/2011

Condition Reports

321234

CAR

CAR 176333, HP procedure NMP-CH-002 has been violated
 CAR 191622, Verification of HRA posting not performed per 62RP-RAD-016
 CAR 191933, Source missing from cabinet
 CAR 191388, Uncontrolled RAM outside of the primary RCA
 CAR 193045, Failure to monitor for neutron radiation exposure
 CAR 193773, PCR a body count was performed

Section 40A1: Performance Indicator Verification

Procedures

OOAC-REG-005-0, Preparation and Reporting of NRC Performance Indicator Data, Ver. 6.1

Other

Control room logs
 Unit 1 and Unit 2 Licensee Event Reports 2011-2012

Section 40A2: Identification and Resolution of Problems

Procedures

NMP-GM-002, Corrective Action Program, Ver. 12.1
 34SV-T22-001-0, Secondary Containment Test, Ver. 13.11
 57CP-CAL-250-0, Air Operated Valve Stroke/Positioner Test and Setup

Condition Reports

353886, 354165, 354206, 353473, 353514, 353477, 353476, 353475, 353648,

Work Order

333648, 334284, 2072082801

Section 4OA3: Event Follow-up

Condition Reports

365441

Documents

CAR 192604, Root Cause Report Intermediate Range Monitor Erratic Indications / Manual Scram

Procedures

NMP-GM-027, Plant Health Process, Version 2.0

Other

E.I. Hatch Nuclear Plant Technical Specifications and Bases

E.I. Hatch Unit 1 and Unit 2 Final Safety Analysis Report

LER 2011-003, E. I. Hatch Unit 2 Manual Reactor Scram Due to Too Few Operable Intermediate Range Monitors

LER 2011-003-1, E. I. Hatch Unit 2 Manual Reactor Scram Due to Too Few Operable Intermediate Range Monitors

BWR SIL#583, Electrical Insulating Source Range Monitor & Intermediate Range Monitor Connection From Ground, dated 09/11/1994

BWR SIL#192, Improved Coaxial Signal Cables For Startup and Intermediate Range Monitors, dated August 31, 1976

S30519, Operation and Maintenance Instructions Mean Square Voltage Wide Range Monitor 194X672G8-G9, Version 1.0