



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

October 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  
05000321/2012004 AND 05000366/2012004**

Dear Mr. Madison:

On September 30, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Edwin I. Hatch Units 1 and 2. The enclosed inspection report documents the inspection results which were discussed on October 26, 2012, with you and other members of your staff.

The inspectors 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.

Two NRC identified and two self-revealing findings of very low safety significance (Green) were identified during this inspection. Three of these findings were determined to involve violations 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 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.

D. Madison

2

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, 72-036  
License Nos.: DPR-57 and NPF-5

Enclosures: Inspection Report 05000321/2012004, 05000366/2012004  
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

D. Madison

2

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, 72-036  
License Nos.: DPR-57 and NPF-5

Enclosures: Inspection Report 05000321/2012004, 05000366/2012004  
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

PUBLICLY AVAILABLE       NON-PUBLICLY AVAILABLE       SENSITIVE       NON-SENSITIVE  
ADAMS:  Yes      ACCESSION NUMBER: \_\_\_\_\_       SUNSI REVIEW COMPLETE       FORM 665 ATTACHED

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRS	RII:DRS	RII:DRS	RII:DRS
SIGNATURE	Via email	Via email	Via email	Via email	Via email	Via email	Via email
NAME	EMorris	DHardage	MMiller	ANielsen	CDykes	WPursley	BCaballero
DATE	10/19/2012	10/24/2012	10/19/2012	10/22/2012	10/29/2012	10/23/2012	10/22/2012
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
OFFICE	RII:DRS	RII:DRS	RII:DRP				
SIGNATURE	Via email	Via email	FJE /RA/				
NAME	AToth	AVargas	FEhrhardt				
DATE	10/22/2012	10/19/2012	10/30/2012				
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY      DOCUMENT NAME: G:\DRPI\RPB2\HATCH\REPORTS\2012 IRS\12-04\HATCH IR 2012-004.DOC

cc w/encl:  
C. Russ Dedrickson  
Fleet Support Supervisor  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

David R. Vineyard  
Plant Manager  
Edwin I. Hatch Nuclear Plant  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

S. Kuczynski  
Chairman, President and CEO  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

Todd L. Youngblood  
Vice President  
Fleet Oversight  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

Leigh Perry  
SVP & General Counsel-Ops & SNC  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

D. G. Bost  
Chief Nuclear Officer  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

Paula Marino  
Vice President  
Engineering  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

T. A. Lynch  
Vice President  
Joseph M. Farley Nuclear Plant  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

T. D. Honeycutt  
Regulatory Response Supervisor  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

Dennis R. Madison  
Vice President  
Edwin I. Hatch Nuclear Plant  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

T. E. Tynan  
Site Vice President  
Vogle Electric Generating Plant  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

M. J. Ajluni  
Nuclear Licensing Director  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

B. D. McKinney, Jr.  
Regulatory Response Manager  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

D. W. Daughhetee  
Licensing Engineer  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

Bradley J. Adams  
Vice President  
Fleet Operations Support  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

N. J. Stringfellow  
Licensing Manager  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

L. P. Hill  
Licensing Supervisor  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

L. L. Crumpton  
Administrative Assistant, Sr.  
Southern Nuclear Operating Company, Inc.  
Electronic Mail Distribution

(cc w/encl continued next page)

D. Madison

4

(cc w/encl continued)

Steven B. Tipps  
Hatch Principal Engineer - Licensing  
Edwin I. Hatch Nuclear Plant  
Electronic Mail Distribution

W. E. Duvall  
Site Support Manager  
Edwin I. Hatch Nuclear Plant  
Electronic Mail Distribution

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
Edwin I. Hatch Nuclear Plant  
U.S. NRC  
11030 Hatch Parkway N  
Baxley, GA 31513

Mr. Ken Rosanski  
Resident Manager  
Edwin I. Hatch Nuclear Plant  
Oglethorpe Power Corporation  
Electronic Mail Distribution

Mark Williams  
Commissioner  
Georgia Department of Natural Resources  
Electronic Mail Distribution

Jerry Ranalli  
Municipal Electric Authority of Georgia  
Power  
Electronic Mail Distribution

Lee Foley  
Manager of Contracts Generation  
Oglethorpe Power Corporation  
Electronic Mail Distribution

Arthur H. Domby, Esq.  
Troutman Sanders  
Electronic Mail Distribution

James C. Hardeman  
Environmental Radiation Program Manager  
Environmental Protection Division  
Georgia Department of Natural Resources  
Electronic Mail Distribution

Chuck Mueller  
Manager  
Policy and Radiation Program  
Georgia Department of Natural Resources  
Electronic Mail Distribution

Cynthia A. Sanders  
Radioactive Materials Program Manager  
Environmental Protection Division  
Georgia Department of Natural Resources  
Electronic Mail Distribution

Mr. Steven M. Jackson  
Senior Engineer - Power Supply  
Municipal Electric Authority of Georgia  
Electronic Mail Distribution

Reece McAlister  
Executive Secretary  
Georgia Public Service Commission  
Electronic Mail Distribution

Chairman  
Appling County Commissioners  
County Courthouse  
69 Tippins Street, Suite 201  
Baxley, GA 31513

Amy Whaley  
Resident Manager  
Electronic Mail Distribution

D. Madison

5

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

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT  
05000321/2012004 AND 05000366/2012004

Distribution w/encl:

C. Evans, RII

L. Douglas, RII

OE Mail

RIDSNRRDIRS

PUBLIC

RidsNrrPMHatch Resource

**U. S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket Nos.: 50-321, 50-366, 72-036

License Nos.: DPR-57 and NPF-5

Report Nos.: 05000321/2012004 and 05000366/2012004

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Edwin I. Hatch Nuclear Plant

Location: Baxley, Georgia 31513

Dates: July 1 – September 30, 2012

Inspectors: E. Morris, Senior Resident Inspector  
D. Hardage, Resident Inspector  
M. Miller, Senior Project Engineer  
A. Nielsen, Senior Health Physicist (2RS7, 4OA1)  
C. Dykes, Health Physicist (2RS6, 4OA1)  
W. Pursley, Health Physicist (2RS8)  
B. Caballero, Senior Operations Engineer (1R11)  
A. Toth, Operations Engineer (1R11)  
A. Vargas, Reactor Inspector (4OA5.4)

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

Enclosure

## SUMMARY OF FINDINGS

IR 05000321/2012004, 05000366/2012004; 07/01/2012-09/30/2012; Edwin I. Hatch Nuclear Plant, Units 1 and 2, Fire Protection, Licensed Operator Requalification Program and Licensed Operator Performance, Maintenance Effectiveness, Problem Identification and Resolution.

The report covered a three-month period of inspection by the Hatch resident inspectors, one senior project engineer, three health physicists, two operations engineers, and one reactor inspector. There were two NRC identified findings, and two self revealing findings 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). The cross-cutting aspect was determined using IMC 0310, Components Within The Cross-Cutting Areas. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy. The NRC's program for overseeing the safe operations of commercial nuclear power reactors is described in NUREG-1649, Reactor Oversight Process.

### Cornerstone: Initiating Events

Green. An NRC identified Green non-cited violation (NCV) of Technical Specification 5.4, Procedures, was identified on August 14, 2012, for failure of the licensee to follow transient combustible control requirements within the site's intake structure. Specifically, inspectors discovered unattended transient combustibles within the intake, which is designated by site procedures as a transient combustible free zone. The licensee immediately removed the transient combustible from the intake structure, and entered this issue into their corrective action program as CR 500623.

Failure to follow transient combustible control requirements within the site's intake structure on August 14, 2012, was a performance deficiency. This performance deficiency is more than minor because it is associated with the Protection Against External Factors (Fire) attribute and adversely affected the Initiating Events cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. The performance deficiency is also similar to example 4.k. of IMC 0612 Appendix E, Examples of Minor Issues. Specifically, this issue meets the "Not minor if" criteria because identified transient combustibles were in a combustible free zone required for separation of redundant trains. Because this finding involved the administrative controls of transient combustibles, the inspectors utilized IMC 0609 Appendix F, Fire Protection Significance Determination Process, to assess the risk. This issue was assigned a low degradation rating in IMC 0609 Appendix F, step 1.2, because the degradation reflected a fire protection element whose performance and reliability was minimally impacted. Specifically the combustible liquids were not open and were contained within their approved containers. Because the finding was assigned a low degradation rating, this finding screened as Green per step 1.3. This performance deficiency has a cross-cutting aspect in the Work Practices component of the Human Performance area because personnel did not follow procedures for control of transients combustibles at the intake. [H.4(b)] (Section 1R05)

Enclosure



### Cornerstone: Mitigating Systems

Green. An NRC-identified finding (FIN) was identified for the licensee's failure to adhere to licensed operator requalification examination standards during the administration of an annual operating test. Specifically, the licensee failed to adhere to the examination guide to allow adequate time for operating crews to respond to planned events, and the licensee failed to correct the error before finalizing operator evaluation and critique documentation. This affected the licensee's ability to effectively test and evaluate operator performance in response to a simulated malfunction in the automatic scram circuitry. As part of their immediate corrective action, the licensee re-evaluated the affected operators and entered the issue into their corrective action program.

This performance deficiency was more than minor because it was associated with the Human Performance attribute of the Mitigating Systems Cornerstone, and it adversely affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to adhere to scenario examination administration standards adversely affected the quality of the operating exams, which test licensed operator performance in order to ensure timely and accurate mitigating actions after an event. Using Inspection Manual Chapter 0609, Appendix I, Licensed Operator Requalification Significance Determination Process, this finding was determined to be of very low safety significance (Green) because it occurred in the simulator and was not an actual plant event, and the crew whose scenario was administered with the error was re-evaluated with an alternate scenario prior to resuming on-shift duties. The cause of the finding was related to the cross-cutting aspect of training of personnel and sufficient qualified personnel under the Resources component of the Human Performance cross-cutting aspect, because the scenario guide's narrative description of the required malfunction sequencing did not match the listed simulator operator actions in the body of the scenario guide. [H.2(b)] (Section 1R11) (Section 1R11)

### Cornerstone: Barrier Integrity

Green. A self revealing Green NCV (with two examples) of Hatch Unit 1 and Unit 2 TS 5.4, Procedures, was identified for failure to establish and perform preventive maintenance activities to replace the B main control room condensing unit overload in the MS2 motor starter components prior to age related failure of the component. The licensee entered this issue into their corrective action program as CR 195542.

Failure to establish and perform preventive maintenance activities to replace aged B main control room condensing unit overload in the MS2 starter components prior to their failure is a performance deficiency. Specifically, section 5.4 of NMP-ES-006, "Predictive Maintenance Implementation and Continuing Equipment Reliability Improvement", requires, in part, that the licensee develop and maintain a documented maintenance strategy with recommended time-based preventive maintenance taking into account OEM/Vendor recommendations and other data affecting component reliability. This performance deficiency is more than minor

Enclosure

because it adversely affected the SSC and Barrier Performance attribute of the barrier integrity cornerstone objective to ensure physical design barriers protect the public from radionuclide releases caused by accidents or events. The inspectors evaluated the finding in accordance with IMC 0609, Attachment 4, Initial Characterization of Findings, using table 2 Cornerstones Affected by Degraded Condition or Programmatic Weakness. The finding affected the barriers cornerstone. Further evaluation was required using Appendix A, The Significance Determination Process (SDP) for Findings At-Power. Based on Appendix A, Exhibit 3 Barrier Integrity Screening Questions, the finding represented a degradation of the radiological barrier function provided for the control room, spent fuel pool, or SBT system and therefore screened as Green. This finding has a cross-cutting aspect in the Operating Experience component of the Problem Identification and Resolution area because the licensee did not implement operating experience through changes to station procedures when prior age related failures were identified at the site. [P.2(b)] (Section 1R12)

Green. A self-revealing Green NCV of Hatch Unit 1 and Unit 2 Technical Specification 5.4. Procedures, was identified on June 21, 2012, when the “C” main control room air conditioning unit tripped due to loss of power when the licensee operated an electrical breaker outside of procedural guidance. The licensee entered this issue into their corrective action program as CR 473701.

Failure to restore the “A” main control room air conditioner tagout clearance in accordance with the tag removal list on June 21, 2012, was a performance deficiency. Specifically, tagout 1-DT-1Z41-00168(004) required the normal supply breaker for 1R24S029 to be maintained open but the breaker was improperly positioned closed instead. This performance deficiency was more-than-minor because it adversely affected the Human Performance attribute of the Barrier Integrity Cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclides caused by accidents or events. The inspectors evaluated the finding in accordance with IMC 0609, Attachment 4, Initial Characterization of Findings, using Table 2 Cornerstones Affected by Degradation Condition or Programmatic Weakness. The inspectors determined that the finding affected the barriers cornerstone. Further evaluation was required using IMC 0609 Appendix A, The Significance Determination Process (SDP) for Findings At-Power. Based on Appendix A, Exhibit 3, Barrier Integrity Screening Questions, the finding represented a degradation of the radiological barrier function provided for the control room and therefore screened as Green. The inspectors determined this finding has a cross-cutting aspect in the Work Practices component of the Human Performance Area because the licensee did not communicate the human error prevention technique of holding an adequate pre-job brief for the restoration of the electrical portion of the tagout. [H.4(a)] (4OA2.2)

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

Enclosure

## REPORT DETAILS

### Summary of Plant Status

Unit 1 operated throughout the inspection period at or near 100 percent rated thermal power (RTP).

Unit 2 began the inspection period at or near 100 percent RTP. On August 11 the licensee reduced Unit 2 power to 35 percent RTP due to an offgas system isolation resulting from a loss of post treatment area radiation monitors. The licensee returned Unit 2 to 100 percent RTP on August 13, 2012. The unit operated at or near 100 percent RTP through 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

##### Readiness to Cope with External Flooding

The inspectors evaluated the implementation of flood protection preparation procedures and compensatory measures implemented by the licensee during impending conditions of flooding or heavy rains. The inspectors reviewed the updated final safety analysis report and related flood analysis documents to identify those areas containing safety-related equipment that could be affected by external flooding and their design flood levels. The inspectors walked down flood protection barriers, reviewed procedures for coping with external flooding, and reviewed corrective actions for past flooding events. The inspectors verified that the procedures for coping with flooding could reasonably be used to achieve the desired results. For those areas where operator actions are credited, the inspectors assessed whether the flooding event could limit or preclude the required actions. Documents reviewed are listed in the attachment. The inspectors conducted walk-downs of the following plant areas containing risk significant structures, systems, and components which are below flood levels or otherwise susceptible to flooding:

- Unit 1 Intake Area
- Unit 2 Intake Area

##### b. Findings

No findings were identified.

Enclosure

#### 1R04 Equipment Alignment (71111.04)

##### a. Inspection Scope

###### Partial Walkdown

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 'B' train of the core spray system while 'A' train was out of service for maintenance, July 10, 2012
- Unit 1 'A' train of the residual heat removal system while 'B' train was out of service for maintenance, August 14, 2012
- Unit 2 high pressure core spray system while reactor core cooling isolation train was out of service for maintenance, August 28, 2012

###### Complete Walkdown.

The inspectors verified the alignment of the Unit 1 residual heat removal system. The inspectors selected this system for assessment because it is a risk-significant mitigating system. The inspectors determined the correct system lineup by reviewing plant procedures, drawings, the updated final safety analysis report, and other documents. In order to identify any deficiencies that could affect the ability of the system to perform its function(s), the inspectors reviewed records related to outstanding design issues and maintenance work requests. The inspectors verified that the selected system was correctly aligned by performing a complete walk down of accessible components.

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

##### b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)a. Inspection Scope

Fire Area Tours. The inspectors toured the following five 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 2, high pressure coolant injection pump room, fire area 2205Z
- Unit 2, reactor core isolation cooling pump and turbine room, fire area 2203C
- Unit 2, control rod drive pump room, fire area 2205C
- Intake Structure, fire area 0501
- Unit 2, northeast residual heat removal and core spray pump room, fire area 2203B

Annual Inspection. The inspectors evaluated the licensee's fire brigade performance during a drill and assessed the brigade's capability to meet fire protection licensing basis requirements. The inspectors observed the following aspects of fire brigade performance: (1) capability of fire brigade members, (2) leadership ability of the brigade leader, (3) use of turnout gear and fire-fighting equipment, and (4) team effectiveness, and (5) compliance with site procedures. The inspectors also assessed the ability of control room operators to combat potential fires, including identifying the location of the fire, dispatching the fire brigade, and sounding alarms. Documents reviewed are listed in the attachment.

b. Findings

Introduction: An NRC identified Green non-cited violation (NCV) of Technical Specification 5.4, Procedures, was identified on August 14, 2012, for failure of the licensee to follow transient combustible control requirements within the site's intake structure. Specifically, unattended transient combustibles were discovered within the intake structure which is designated by site procedures as a transient combustible free zone.

Description: On August 14, 2012, NRC inspectors identified two unattended aerosol cans marked flammable within the Hatch intake area in the vicinity of the Unit 2 'A' residual heat removal pump. Hatch procedures do not allow unattended transient combustibles within the intake structure, which is an area where separation of redundant trains is required. Specifically, Hatch procedure 10AC-MGR-022-0, Plant Housekeeping and Material Condition, Ver. 5.4, section 5.3.4 states in part that temporary storage of flammable materials is not allowed in the intake structure without continuous monitoring. Also, Hatch procedure 42FP-FPX-018-0, Use, Control, and Storage of Flammable/Combustible Materials, Ver. 1.4, section 8.1.1.6 states in part that storage or movement of any transient combustibles, or maintenance or repair activities involving

the use of combustible materials at the intake shall require a transient combustible permit and that a continuous fire watch be posted. In this instance the licensee did not station a continuous fire watch or generate a transient combustible permit as required by procedures. Upon being notified by the NRC inspectors, the licensee immediately removed the transient combustible from the intake structure, and entered this issue into their corrective action program as CR 500623.

Analysis: Failure to follow transient combustible control requirements within the site's intake structure on August 14, 2012, was a performance deficiency. This performance deficiency is more than minor because it is associated with the Protection Against External Factors (Fire) attribute and adversely affected the Initiating Events cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operations. The performance deficiency is also similar to example 4.k. of IMC 0612 Appendix E, Examples of Minor Issues. Specifically, this issue meets the "Not minor if" criteria because identified transient combustibles were in a combustible free zone required for separation of redundant trains. Because this finding involved the administrative controls of transient combustibles, the inspectors utilized IMC 0609 Appendix F, Fire Protection Significance Determination Process, to assess the risk. This issue was assigned a low degradation rating in IMC 0609 Appendix F, step 1.2, because the degradation reflected a fire protection element whose performance and reliability was minimally impacted. Specifically the combustible liquids were not open and were contained within their approved containers. Because the finding was assigned a low degradation rating, this finding screened as Green per step 1.3. This performance deficiency has a cross-cutting aspect in the Work Practices component of the Human Performance area because personnel did not follow procedures for control of transients combustibles at the intake structure. [H.4(b)]

Enforcement: Hatch Unit 1 and Unit 2 Technical Specifications 5.4, Procedures, requires in part that written 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 1.1 requires administrative procedures for implementation of the plant fire protection program. Hatch procedures 10AC-MGR-022-0, Plant Housekeeping and Material Condition, Ver. 5.4, and 42FP-FPX-018-0, Use, Control, and Storage of Flammable/Combustible Materials, Ver. 1.4, contain implementing instructions for the plant fire protection program, including control of transient combustible material within the site intake structure. Specifically Hatch procedure 10AC-MGR-022-0, section 5.3.4 states in part that temporary storage of flammable materials is not allowed in the Intake Structure without continuous monitoring. Also, Hatch procedure 42FP-FPX-018-0, section 8.1.1.6 states in part that storage or movement of any transient combustibles, maintenance or repair activities involving the use of combustible materials at the intake structure shall require a transient combustible permit and that a continuous fire watch be posted. Contrary to the above, on August 14, 2012, the licensee failed to implement plant fire protection program procedures for the control of transient combustibles when transient combustibles were located within the intake structure without continuous monitoring. The licensee restored compliance by removing the transient combustibles from the intake structure upon notification. This violation is being treated as an NCV, consistent with

Enclosure

Section 2.3.2 of the Enforcement Policy because it was of very low safety significance and was entered into the licensee's corrective action program as CR 500623. NCV 05000321,366/2012004-01, Failure to follow transient combustible control requirements within the site's intake structure.

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

a. Inspection Scope

Resident Quarterly Observation. On July 9 the inspectors observed the performance of licensee simulator scenario LT-SG-50914-08, which included an inadvertent start of the high pressure coolant injection pump at power, a loss of a reactor feedwater pump and resultant recirculation pump runback, a total loss of feedwater flow, a loss of all high pressure emergency core cooling injection sources, and an emergency depressurization. The inspectors reviewed the proper classification in accordance with the Emergency Plan and 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 if the licensee identified performance issues were comparable to those identified by the inspectors. The inspectors reviewed the critique results from previous training sessions to assess performance improvement. In addition on September 10 and 12, the inspectors observed licensed operator performance in the Unit 2 main control room during periods of heightened activity.

Biennial Regualification Inspection. The inspectors reviewed the facility operating history and associated documents in preparation for this inspection. During the week of August 27 - 31, 2012, the inspectors reviewed documentation, interviewed licensee personnel and observed the administration of operating tests associated with the licensee's operator requalification program. Each of the activities performed by the inspectors was done to assess the effectiveness of the facility licensee in implementing requalification requirements identified in 10 CFR Part 55, "Operators' Licenses." The evaluations were also performed to determine if the licensee effectively implemented operator requalification guidelines established in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and Inspection Procedure 71111.11, "Licensed Operator Regualification Program." The inspectors also evaluated the licensee's simulation facility for adequacy for use in operator licensing examinations using ANSI/ANS-3.5-1985, "American National Standard for Nuclear Power Plant Simulators for use in Operator Training and Examination." The inspectors observed two crews during the performance of the operating tests. Documentation reviewed included written examinations, Job Performance Measures (JPMs), simulator scenarios, licensee procedures, on-shift records, simulator modification request records, simulator performance test records, operator feedback records, licensed operator qualification records, remediation plans, watchstanding records, and medical records. The records were inspected using the criteria listed in Inspection Procedure 71111.11. Documents reviewed during the inspection are documented in the List of Documents Reviewed.

Enclosure

b. Findings

Introduction: An NRC-identified Green finding (FIN) was identified for the licensee's failure to adhere to examination procedure administration standards, which required evaluators to allow adequate time for licensed operators to respond to planned and unplanned events during annual operating test scenarios administered in the simulator. The licensee personnel administering the test failed to correct the error before finalizing crew evaluations and critique documentation.

Description: On August 28, 2012, the inspectors observed the licensee administer exam scenario guide LR-SE-00147-00.2 (Loss of Vital AC/Loss of 2C 4160/Loss of EHC/SRV Tailpipe break/PSP) to two different crews of licensed operators (Team A, Groups 1 and 2). The Group 1 crew response for one critical task listed in the exam scenario guide was different than the Group 2 crew response. The Group 1 crew diagnosed a failure of the reactor to automatically scram following a spurious turbine trip malfunction and then inserted a manual scram, which was a critical task. The Group 1 crew also determined that an Alert emergency classification existed based on the failure of the reactor to automatically scram. Additionally, Group 1 determined that a separate Alert classification existed due to a high drywell pressure (which occurred coincident with the failure of the automatic scram circuitry). The Group 2 crew did not diagnose that the reactor had failed to automatically scram following the spurious turbine trip malfunction; however, they did insert a manual scram. Because they did not diagnose that the reactor had failed to automatically scram, Group 2 did not determine that an Alert classification existed for that reason; however, Group 2 did declare an Alert classification based on high drywell pressure (which occurred coincident with the failure of the automatic scram circuitry).

The inspectors reviewed the final crew and individual grading documentation, which was completed by the licensee's evaluators. Licensee personnel administering the test determined that both crews (Group 1 and Group 2) had passed the scenario examination because both crews had inserted a manual reactor scram, which was a critical task, even though the operators in Group 2 had not identified a failure of the automatic scram circuitry. Licensee personnel administering the test stated that since each crew had inserted a manual reactor scram, they had each met the critical task.

Upon further investigation, the inspectors identified that the narrative portion of the exam scenario guide LR-SE-00147-00.2 described that the malfunctions were planned to be sequenced such that first, a 4160-volt electrical bus malfunction was to occur to evaluate the crew's diagnosis of the electrical bus loss and to respond to the resulting reactor feedwater pump trip and recirculation pump runback. Next, a spurious turbine trip malfunction was to be inserted to evaluate the crew's diagnosis of a failure of the automatic reactor scram circuitry and their ability to manually scram the reactor, which was a crew critical task. However, the exam scenario guidance for the simulator booth operator was not clear. Consequently, during the licensee's administration of the exam scenario guide, the simulator booth operator inserted both of these malfunctions simultaneously during each operating crew's scenario.



The licensee's procedure, Simulator Evaluator Guide LR-EG-00104-11, Revision 11, Section 13, Examination Administration, Step 13.1.6, stated "Crews should be given adequate time to respond to all planned and unplanned events." The simultaneous insertion of the 4160-volt electrical bus malfunction and spurious turbine trip malfunction resulted in a partial loss of feed water and a high reactor pressure condition. Because of the combined effects of these malfunctions, the Group 2 crew inserted a manual scram, which precluded the licensee's evaluators from assessing the crew's diagnosis of the failure of the automatic scram circuitry and their ability to implement the associated emergency plan classification. However, even though the crew's ability to diagnose the automatic reactor scram circuitry failure and to implement the planned emergency classification was not effectively tested and evaluated, the licensee evaluators finalized the crew's evaluation and critique documentation. The inspectors determined that the simultaneous insertion of both events was not consistent with the examination guide LR-SE-00147-00.2 and that the subsequent test administration represented a failure to adhere to examination standards set forth in LR-EG-00104-11, in that crews were not given adequate time to respond to both events.

After the inspectors identified the scenario guide administration error to the licensee, the licensee administered an additional scenario to the Group 2 crew, which evaluated their ability to diagnose a failure of the automatic scram circuitry and implement the associated emergency plan classification in a different method. The licensee entered the scenario guide administration error in their corrective action program as CR # 510627.

Analysis: The inspectors determined that the licensee's failure to adhere to the examination administration standards in LR-EG-00104-11 was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the Human Performance attribute of the Mitigating Systems Cornerstone, and adversely affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to adhere to examination administration standards precluded an effective evaluation of crews' ability to diagnose the automatic reactor scram circuitry failure and to implement the planned emergency classification. This adversely affected the quality of the administration of the operating exams, which test licensed operator performance in order to ensure timely and correct mitigating actions after an event.

The significance determination was performed in accordance with Manual Chapter 0609, Significance Determination Process, Appendix I, "Licensed Operator Requalification Significance Determination Process (SDP)". Question 9, in Appendix I, asked if the finding was related to the licensee's administration of annual requalification operating test. The answer to this question was "yes", because the finding was related to an uncorrected exam administration error during the 2012 annual operating exam, which is required by 10 CFR 55.59. Consequently, this finding was characterized as having very low safety significance (Green).

This finding had a cross-cutting aspect in the area of Human Performance, in that the licensee did not ensure that the narrative description of the required malfunction sequencing matched the listed booth operator actions in the body of the scenario guide. This directly affected personnel training and sufficiently qualified personnel under the Resources component. [H.2(b)]

Enforcement: This finding does not involve enforcement action because no regulatory requirement violation was identified. Because this finding does not involve a violation and has very low safety significance, it is identified as FIN 05000321,366/2012004-02, Licensed Operator Requalification Annual Operating Test Administration Issues.

## 1R12 Maintenance Effectiveness (71111.12)

### 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 (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 (MWO), and the licensee's procedures for implementing the Maintenance Rule 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 travelling water screen 1W33-E003B tripping due to sensing line mud blockage
- B main control room air conditioner 1Z41-B008B tripped due to failed overloads

### b. Findings

Introduction: A self revealing Green NCV (with two examples) of Hatch Unit 1 and Unit 2 TS 5.4, Procedures, was identified for failure to establish and perform preventive maintenance activities to replace the main control room condensing unit MS2 motor starter prior to age related failure of the component.

Description: On July 17, 2012, while performing 34GO-OPS-024-1, Equipment Rotation and Flushing of PSW and RHRSW Piping Dead Legs, with the 1Z41B008B, 'B' main control room condensing unit in service, the unit tripped with no running light indications on the control room panel and no local alarms at the condensing unit. The licensee entered this issue into their corrective action program as CR 195542, and performed an apparent cause determination (ACD) to investigate the failure of the 'B' main control room condensing unit. The ACD report determined the cause of the 'B' main control room condensing unit trip was a failure of the overload in the MS2 starter. The report concluded the likely cause of this failure was age related due to a lack of replacement or preventative maintenance. 'A' main control room condensing unit had a failure in February 2012 due an age related failure of the coil in the MS2 starter. Correspondence with the vendor indicated the qualified life of the coil in the MS2 starter is 10.78 years. The licensee had no preventative maintenance in place to replace the MS2 starter or

Enclosure

starter subcomponents within the qualified lifetime. The licensee classified both of these MS2 starter failures as maintenance preventable functional failures.

Procedure NMP-ES-006, Predictive Maintenance Implementation and Continuing Equipment Reliability Improvement, is the licensee's procedure which requires that component preventive maintenance activities be developed and scheduled to replace parts that have a specific lifetime. Specifically Section 5.4 of NMP-ES-006 requires, in part, that the licensee develop and maintain a documented maintenance strategy with recommended time-based preventive maintenance taking into account OEM/Vendor recommendations and other data affecting component reliability.

The licensee failed to implement site procedures to develop preventive maintenance schedules that specify replacement of the main control room condensing unit MS2 starter, which are parts that have been identified by the vendor as having a specific qualified lifetime.

Analysis: Failure to establish and perform preventive maintenance activities to replace aged MS2 starter components prior to their failure is a performance deficiency. Specifically, section 5.4 of NMP-ES-006 requires, in part, that the licensee develop and maintain a documented maintenance strategy with recommended time-based preventive maintenance taking into account OEM/Vendor recommendations and other data affecting component reliability. This performance deficiency is more than minor because it adversely affected the SSC and Barrier Performance attribute of the Barrier Integrity cornerstone objective to ensure physical design barriers protect the public from radionuclide releases caused by accidents or events. The inspectors evaluated the finding in accordance with IMC 0609, Attachment 4, Initial Characterization of Findings, using Table 2, Cornerstones Affected by Degraded Condition or Programmatic Weakness. The finding affected the barriers cornerstone. Further evaluation was performed using Appendix A, The Significance Determination Process (SDP) for Findings At-Power. Based on Appendix A, Exhibit 3 Barrier Integrity Screening Questions, the finding represented a degradation of the radiological barrier function provided for the control room, spent fuel pool, or standby gas treatment (SBGT) system and therefore screened as Green. The inspectors determined this finding has a cross-cutting aspect in the Operating Experience component of the Problem Identification and Resolution area because the licensee did not use internal operating experience regarding establishing preventative maintenance to replace components prior to failure to make changes to station procedures that affect safety related equipment. [P.2(b)]

Enforcement: TS 5.4.1 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.b states, in part, preventive maintenance schedules should be developed to specify replacement of parts that have a specific lifetime. Procedure NMP-ES-006, Predictive Maintenance Implementation and Continuing Equipment Reliability Improvement, is the licensee's procedure which requires that component preventive maintenance activities be developed and scheduled to replace parts that have a specific lifetime. Specifically Section 5.4 of NMP-ES-006 requires, in part, that the licensee develop and maintain a documented maintenance strategy with recommended time-

Enclosure

based preventive maintenance taking into account OEM/Vendor recommendations and other data affecting component reliability. Contrary to the above, between plant startup and 2012, the licensee failed to implement site procedures to develop preventive maintenance schedules that specify replacement of the main control room condensing unit MS2 starters, which are parts that have a specific lifetime. Immediate corrective action includes replacement of the failed overloads on the B main control room condensing unit and creation of a preventive maintenance task to replace the main control room condensing unit MS2 starters on a ten year interval. This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy because it was of very low safety significance and was entered into the licensee's corrective action program as CR 195542. NCV 05000321,366/2012004-03; "Failure to establish appropriate preventative maintenance for main control room condensing unit MS2 Starter."

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed the following 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 July 2 – July 6, including high heat advisory conditions, Unit 1 turbine building chiller maintenance, Unit 1 A emergency diesel generator testing, and Unit 2 C emergency diesel generator corrective maintenance
- Week of July 16 – July 20, including Unit 1 B train emergency core cooling system room cooler maintenance, 4160v emergency bus 1G, 1E, 1F under voltage relay calibration, Unit 1 D residual heat removal service water pump maintenance, and Unit 2 C diesel generator battery calibration
- Week of July 28 – August 3, including scheduled activities on Unit 1 reactor protection system channel test, average power range monitor functional test, battery charger preventive maintenance, main turbine and auxiliaries weekly testing, reactor feed pump turbine weekly test B H<sub>2</sub>/O<sub>2</sub> analyzer 5 year preventative maintenance, Unit 2 turbine weekly surveillance test, repair of 2A residual heat removal service water components, main steam line pressure instrument functional test and calibration, main steam line high flow loop calibration and turbine bypass valve testing. Emergent work control included 2A electro-hydraulic pump suction strainer and 2T48-F310 reactor building to torus vacuum breaker
- Week of August 13 – August 17, including Unit 1 B train residual heat removal maintenance outage
- Week of August 27 – August 31, including Unit 2 reactor core isolation cooling pump maintenance outage, and Unit 2 plant service water strainer division I preventive maintenance

b. Findings

No findings were identified.

1R15 Operability Determinations 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 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.

- Unit 2 reactor building to suppression pool vacuum breaker, 2T48-F310, exceeded maximum closure time limits inservice testing closure, CR 494261
- Unit 2 A emergency diesel generator lube oil heat exchanger tube leak, CR 479693
- Main control room ventilation intake calculation non-conservative, CR 504921
- Residual heat removal service water valve, 2E11-F207B, failed to meet diagnostic test data, CR 504943
- Reactor core isolation cooling remote shutdown flow indication out of tolerance high, CR 511112

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)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 through 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.

Temporary Modification:

- SNC416415, Unit 2 A emergency diesel generator plant service water heat exchanger discharge valve overridden open
- SNC362042, Install accelerometers for vibration monitoring of Unit 1 two stage safety relief valves

b. Findings

No findings were identified.

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

For the following six 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 416247, Investigate and repair 2A emergency diesel generator lube oil heat exchanger tube leak, July 7
- WO 417365, Investigate reactor core isolation cooling trip and throttle valve, July 11
- WO 352543, Unit 1 B train emergency core cooling system room cooler outage, July 17
- WO 379926, Breaker inspection for Unit 2 B residual heat removal service water pump, August 22
- WO 355390, Unit 2 reactor core isolation cooling twenty four month preventive maintenance, August 30
- WO 378215, Inspect 4160v circuit breaker auxiliary switch, 1R22-S006 frame 7, August 16

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)a. Inspection Scope

The inspectors reviewed three 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. The inspectors also reviewed one surveillance test associated with a modification to its surveillance frequency in accordance with the Risk Management Technical Specification Initiative 5b Surveillance Frequency Control Program.

In-Service Test

- 34SV-E41-002-1, High Pressure Coolant Injection Pump Operability

Leak-rate Test

- 34SV-SUV-019-1, Surveillance Checks
- 34SO-G11-013-1, Drywell and Reactor Building Sumps System

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 July 18, 2012.

b. Findings

No findings were identified.

## 2. RADIATION SAFETY

### 2RS6 Radioactive Gaseous and Liquid Effluent Treatment

#### a Inspection Scope

Walkdowns and Observations The inspectors completed a walkdown of the Unit 1 and Unit 2 SBT systems. Inspectors also reviewed recent high efficiency particulate air and charcoal filtration surveillance testing results for each train of SBT. The inspectors observed and evaluated, to the extent practical, material condition and configuration of accessible sections of liquid and gaseous radioactive waste (radwaste) processing and effluent discharge systems. Inspectors observed sample collection for gaseous effluent discharge locations, specifically the main stack, Unit 1 recombiner, and offgas pretreatment monitor. No significant changes were made to the licensee's effluent release points, however the inspectors did observe a future sample location identified as a result of a 10 Code of Federal Regulations (CFR) 50.59 evaluation. No liquid effluent discharges occurred during the time period of the onsite inspection.

The inspectors reviewed compensatory sampling records for out-of-service effluent radiation monitors between 2010 and 2012. Inspectors reviewed recent effluent count room inter-laboratory comparison results. During walkdowns, inspectors observed ventilation and sample line flow rates which were compared to Offsite Dose Calculation Manual (ODCM) and Updated Final Safety Analysis Report (UFSAR) values. The inspectors reviewed the results of recent liquid and gaseous release permits including pre-release sampling results, effluent monitor setpoints, and public dose calculations. Inspectors also observed preparation of gaseous and liquid release permits and discussed input values, setpoints and dose calculations with technical staff. The inspectors reviewed the 2010 and 2011 Annual Radiological Effluent Reports and evaluated changes to the ODCM. The inspectors reviewed the 2011 Land Use Census and most recent 10 CFR Part 61 analysis for Dry Active Waste (DAW) under Inspection Procedures (IP)s 71124.06, 71124.07, and 71124.08.

Groundwater Protection Initiative (GPI) Implementation The inspectors reviewed the licensee's continued implementation of the GPI (Nuclear Energy Institute (NEI) 07-07) including recent groundwater monitoring results. The inspectors reviewed 10 CFR 50.75 (g) decommissioning records and discussed new entries with licensee staff. Inspectors completed a walkdown of groundwater sample points and spill sites. The inspectors discussed recent spills/leaks with licensee staff and evaluated assessment and remediation actions. The inspectors reviewed risk-ranking of Structures, Systems, and Components (SSC)s that have the potential to leak contaminated liquid to groundwater and evaluated the licensee's program for periodic inspection of the high-priority SSCs. The inspectors also reviewed licensee corrective actions taken to address a deficiency in the implementation of the GPI identified as a result of Temporary Instruction (TI) 2515/173, Review of the Implementation of the Industry Ground Water Protection Voluntary Initiative. In NRC Inspection Report 2010-003, the inspectors noted that the licensee had not completely implemented the requirements of NEI 07-07 Objective 1.2, Site Risk Assessment in that no risk-ranking of



SSCs had been performed. The inspectors evaluated an engineering report created to address this deficiency and noted that a risk-ranking has been completed.

Problem Identification and Resolution Inspectors reviewed selected Corrective Action Program (CAP) documents in the area of liquid and gaseous effluent processing and release. The inspectors assessed the licensee's ability to identify and resolve issues in accordance with procedure NMP-GM-002-001, Corrective Action Program Instructions, Ver. 27.0.

The inspectors evaluated radwaste system operation, effluent processing activities, and groundwater protection efforts against requirements and guidance documented in the following: 10 CFR 20; 10 CFR 50 Appendix I; ODCM; UFSAR Section 11; Regulatory Guide (RG) 1.21, Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants; RG 1.109, Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purposes of Evaluating Compliance with 10 CFR Part 50 Appendix I; and Technical Specification (TS) Section 5. Procedures and records reviewed during the inspection are listed in Sections 2RS6, 2RS7, and 4OA1 of the Attachment.

b. Findings

No findings were identified.

2RS7 Radiological Environmental Monitoring Program (REMP)

a. Inspection Scope

REMP Implementation The inspectors observed routine sample collection and surveillance activities as required by the licensee's environmental monitoring program. The inspectors noted the material condition and operability of airborne particulate filter and iodine cartridge sample stations and observed collection of weekly air samples at selected monitoring locations. The inspectors checked environmental thermoluminescent dosimeters at selected sites for material condition. The inspectors discussed Land Use Census results, changes to the ODCM, and sample collection/processing activities with environmental technicians and licensee staff.

The inspectors reviewed the 2010 and 2011 Radiological Environmental Operating Reports, the 2011 Annual Radioactive Effluent Report, an audit of the Georgia Power Environmental Laboratory, results of the 2011 interlaboratory cross-check program, and procedural guidance for environmental sample collection and processing. The inspectors also reviewed the last two calibration records for selected environmental air sample flowmeters. The inspectors evaluated environmental measurements for consistency with licensee effluent data, radionuclide concentration trends, and adequacy of detection instrument sensitivity. The inspectors evaluated recent groundwater monitoring results, 10 CFR 50.75(g) decommissioning files, and the SSC inspection program as part of IP 71124.06.

Meteorological Monitoring Program The inspectors observed a weekly surveillance on the primary meteorological tower and local data collection equipment. The inspectors observed the physical condition of the tower and its instrumentation and discussed equipment operability and maintenance history with licensee staff. The inspectors evaluated transmission of locally generated meteorological data to other licensee groups such as emergency operations personnel and main control room operators. For the meteorological measurements of wind speed, wind direction, and temperature, the inspectors reviewed the last two calibration records for applicable tower instrumentation. The inspectors also evaluated measurement data recovery for 2011.

Identification and Resolution of Problems The inspectors reviewed Condition Reports (CR)s in the areas of radiological environmental monitoring and meteorological tower maintenance. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with procedure NMP-GM-002, Corrective Action Program, Ver. 12.0. The inspectors also evaluated the scope of the licensee's corporate audit program and reviewed recent assessment results.

The inspectors evaluated REMP implementation and meteorological monitoring against the requirements and guidance contained in: 10 CFR Part 20; TS Section 5.0; ODCM; RG 4.15, Quality Assurance for Radiological Monitoring Programs (Normal Operation) - Effluent Streams and the Environment; the Branch Technical Position, An Acceptable Radiological Environmental Monitoring Program – 1979; UFSAR Chapter 2; and RG 1.23, Onsite Meteorological Programs (1972). Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

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

a. Inspection Scope

Radioactive Material Storage The inspectors walked down indoor and outdoor areas inside the protected area as well as the Waste Separation and Temporary Storage Facility and Sealand Storage Facility. During the walk-downs, the inspectors observed the physical condition and labeling of storage containers and the radiological postings for satellite radioactive material storage areas. The inspectors also reviewed the licensee's radwaste procedures for routine surveys and waste storage.

Radioactive Waste System Walkdown, Characterization and Classification The inspectors walked down accessible sections of the liquid and solid radwaste systems to assess material condition and conformance of equipment with system design diagrams. This included the indoor portion of the Radwaste Building containing storage tanks, the unused equipment area, the Unit 2 Radwaste Control Room, and the outdoor Resin Processing Pad Areas for Units 1 and 2. The inspectors discussed the function of radwaste components with the radwaste operator. The inspectors discussed possible

Enclosure

changes to the radwaste processing systems with radwaste staff. The processes for the dewatering of resins, spent resin tank recirculation, resin sampling, and transfer of resins from the Processing Pads to the shipping casks and temporary storage casks were reviewed and discussed with the resin processing contractor.

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

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

Identification and Resolution of Problems The inspectors reviewed selected CRs in the area of radwaste/shipping, as well as the results of a self-assessment. The inspectors evaluated the licensee's ability to identify and resolve the issues in accordance with procedure NMP-GM-002-001, "Corrective Action Program Instructions", Ver. 27.0.

Radioactive material and waste storage activities were reviewed against the requirements of 10 CFR Part 20. Radwaste processing activities and equipment configuration were reviewed for compliance with the licensee's Process Control Program and UFSAR Chapter 11. Waste stream characterization analyses were reviewed against regulations detailed in 10 CFR Part 20, 10 CFR Part 61, and guidance provided in the Branch Technical Position on Waste Classification (1983). Transportation program implementation was reviewed against regulations detailed in 10 CFR Part 20, 10 CFR Part 71 (which requires licensees to comply with DOT regulations in 49 CFR Parts 107, 171-180, and 390-397), as well as the guidance provided in NUREG-1608. Training activities were assessed against 49 CFR Part 172 Subpart H. Documents reviewed are listed in section 2RS8 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 performance indicators (PIs) listed below to verify the accuracy of the data reported for Hatch Unit 1 and Unit 2. 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: Mitigating Systems

- Residual Heat Removal System
- High Pressure Injection System
- Emergency AC Power System

The inspectors reviewed raw PI data collected between September 2011 and August 2012 for the Mitigating Systems 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 April 2011 through June 2012. For the assessment period, the inspectors reviewed electronic dosimeter alarm logs and CRs related to controls for exposure significant areas. Documents reviewed are listed in section 4OA1 of the Attachment.

Public Radiation Safety Cornerstone The inspectors reviewed the Radiological Control Effluent Release Occurrences PI results for the Public Radiation Safety Cornerstone from April 2011 through June 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/ODCM issues. The inspectors also reviewed licensee procedural guidance for collecting and documenting PI data. Documents reviewed are listed in the Attachment.

###### b. Findings

No findings were identified.

## 4OA2 Problem Identification and Resolution (71152)

### .1 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 473701, "C" main control room air conditioner tripped during tagout restoration

Review of Operator Workarounds: The inspectors performed a detailed review of the Operator Work Arounuds List to verify the full extent of the issues were identified, appropriate evaluations were performed, and appropriate corrective actions were specified and prioritized.

#### b. Findings and Observations

Introduction: A self-revealing Green NCV of Hatch Unit 1 and Unit 2 Technical Specification 5.4. Procedures, was identified on June 21, 2012, when the "C" main control room air conditioning unit tripped due to loss of power when the licensee operated an electrical breaker outside of procedural guidance.

Description: On June 21, 2012, the licensee was restoring clearance, 1-DT-12-1Z41-00168(004), for the Hatch "A" main control room air conditioning unit in order to return that air conditioning unit to service following planned maintenance. Per the clearance restoration, the normal supply breaker to the 600 volt bus 1R24S029 was required to remain in the open position. Licensee procedure NMP-AD-003, Equipment Clearance and Tagging, Ver. 16.1, section 6.20.2.4 provides the steps for removing a tagout which include removing the tag and placing or verifying the component is in the required position. Instead of verifying the 1R24S029 normal supply breaker was maintained in its required open position after removing the tag, the licensee inappropriately closed the normal supply breaker. The closing of the normal supply breaker resulted in the automatic de-energizing of the 600 volt bus, 1R24S029, due to a protective interlock that prevents the simultaneous closure of both the 1R24S029 alternate supply breaker

Enclosure

(which was already closed) and the 1R24S029 normal supply breaker (which was improperly being closed). The loss of power to 600 volt bus, 1R24S029, also caused the loss of electrical power to the running "C" main control room air conditioning unit. The licensee entered this issue into their corrective action program as CR 473701. The licensee took actions to troubleshoot the loss of power to the "C" main control room air conditioning unit, restored power, and restarted the unit in approximately three hours.

Analysis: Failure to restore "A" main control room air conditioner tagout clearance in accordance with the tag removal list on June 21, 2012, was a performance deficiency. Specifically, tagout 1-DT-12-1Z41-00168(004) required the normal supply beaker for 1R24S029 to be maintained open but was improperly positioned closed instead. This performance deficiency was more-than-minor because it adversely affected the Human Performance attribute of the Barrier Integrity Cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclides caused by accidents or events. The inspectors evaluated the finding in accordance with IMC 0609, Attachment 4, Initial Characterization of Findings, using Table 2 Cornerstones Affected by Degradation Condition or Programmatic Weakness. The finding affected the barriers cornerstone. Further evaluation was performed using IMC 0609 Appendix A, The Significance Determination Process (SDP) for Findings At-Power. Based on Appendix A, Exhibit 3 – Barrier Integrity Screening Questions, the finding represented a degradation of the radiological barrier function provided for the control room and therefore screened as Green. The inspectors determined this finding has a cross-cutting aspect in the Work Practices component of the Human Performance Area because the licensee did not communicate the human error prevention technique of holding an adequate pre-job brief for the restoration of the electrical portion of the tagout. (H.4(a))

Enforcement: Hatch Unit 1 and Unit 2 Technical Specification 5.4.1 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 1.c requires administrative procedures for equipment control (e.g., locking and tagging). Procedure NMP-AD-003, Equipment Clearance and Tagging, Ver. 16.1, section 6.20.2.4, requires in part that when removing a tagout the licensee remove the tag and then place or verify the component is in the required position. Contrary to the above, on June 21, 2012, after removing the tag on the 1R24S029 normal supply breaker per tagout 1-DT-12-1Z41-00168(004) the licensee did not verify the 1R24S029 normal supply breaker was open as required by the tagout, but instead placed the breaker in the closed position. This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy because it was of very low safety significance and was entered into the licensee's corrective action program as CR 473701. NCV 05000321,366/2012004-04; "Failure to follow clearance procedures for returning the "A" main control room air conditioning unit to service following maintenance."

4OA5 Other Activities.1 Quarterly Resident Inspector Observations of Security Personnel and Activitiesa. Inspection Scope

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 Operation of an Independent Spent Fuel Storage Installation (ISFSI) (IP 60855.1)a. Inspection Scope

The inspectors performed a walkdown of the ISFSI on site (reference docket 72-036) and monitored the activities associated with the dry fuel storage campaigns which completed July 27, August 17, and September 7, 2012. The inspectors reviewed changes made to the ISFSI programs and procedures including associated 10 CFR 72.48 screens and evaluations to verify that changes made were consistent with the license or Certificate of Compliance. The inspectors reviewed records to verify that the licensee has recorded and maintained the location of each fuel assembly placed in the ISFSI. The inspectors also reviewed surveillance records to verify that daily surveillance requirements were performed as required by technical specifications. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

.3 (Discussed) NRC Temporary Instruction (TI) 2515/187, Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns, and NRC TI 2515/188, Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdownsa. Inspection Scope

Inspectors accompanied the licensee on a sampling basis, during their flooding and seismic walkdowns, to verify that the licensee's walkdown activities were conducted using the methodology endorsed by the NRC. These walkdowns are being performed at all sites in response to a letter from the NRC to licensees, entitled "Request for

Enclosure

Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident,” dated March 12, 2012 (ADAMS Accession No. ML12053A340).

Enclosure 3 of the March 12, 2012, letter requested licensees to perform seismic walkdowns using an NRC-endorsed walkdown methodology. Electric Power Research Institute (EPRI) document 1025286 titled, “Seismic Walkdown Guidance,” (ADAMS Accession No. ML12188A031) provided the NRC-endorsed methodology for performing seismic walkdowns to verify that plant features, credited in the current licensing basis (CLB) for seismic events, are available, functional, and properly maintained.

Enclosure 4 of the letter requested licensees to perform external flooding walkdowns using an NRC-endorsed walkdown methodology (ADAMS Accession No. ML12056A050). Nuclear Energy Industry (NEI) document 12-07 titled, “Guidelines for Performing Verification Walkdowns of Plant Protection Features,” (ADAMS Accession No. ML12173A215) provided the NRC-endorsed methodology for assessing external flood protection and mitigation capabilities to verify that plant features, credited in the CLB for protection and mitigation from external flood events, are available, functional, and properly maintained.

b. Findings

Findings or violations associated with the flooding and seismic walkdowns, if any, will be documented in future reports.

.4 Temporary Instruction (TI) -2515/182 - Review of the Implementation of the Industry Initiative to Control Degradation of Underground Piping and Tanks, Phase 1

a. Inspection Scope

Leakage from buried and underground pipes has resulted in ground water contamination incidents with associated heightened NRC and public interest. The industry issued a guidance document, Nuclear Energy Institute (NEI) 09-14, “Guideline for the Management of Buried Piping Integrity,” (ADAMS Accession No. ML1030901420), to describe the goals and required actions (commitments made by the licensee) resulting from this underground piping and tank initiative. On December 31, 2010, NEI issued Revision 1 to NEI 09-14, “Guidance for the Management of Underground Piping and Tank Integrity,” (ADAMS Accession No. ML110700122), with an expanded scope of components which included underground piping that was not in direct contact with the soil and underground tanks. On November 17, 2011, the NRC issued TI-2515/182 “Review of the Industry Initiative to Control Degradation of Underground Piping and Tanks,” to gather information related to the industry’s implementation of this initiative.

The inspectors reviewed the licensee’s programs for buried pipe and underground piping and tanks in accordance with TI-2515/182 to determine if the program attributes and completion dates identified in Sections 3.3 A and 3.3 B of NEI 09-14, Revision 1 were contained in the licensee’s program and implementing procedures. For the buried pipe

Enclosure



and underground piping program attributes, with completion dates that had passed, the inspectors reviewed records to determine if the attribute was in fact complete and to determine if the attribute was accomplished in a manner which reflected good or poor practices in program management.

b. Observations

The licensee's buried piping and underground piping and tanks program was inspected in accordance with paragraphs 03.01.a through 03.01.c of TI-2515/182 and was found to meet all applicable aspects of NEI 09-14 Revision 1, as set forth in Table 1 of the TI.

Based upon the scope of the review described above, Phase I of TI-2515/182 was completed.

c. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On October 26, 2012, the resident inspectors presented the inspection results to Mr. Dennis Madison and other members of the Hatch staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

4OA7 Licensee-Identified Violations

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

- 10 CFR 55.53 (f) (2), Conditions of Licenses, states, in part, that, before resumption of functions authorized by a license issued under this part, an authorized representative of the facility licensee shall certify that the licensee has completed a minimum of 40 hours of shift functions under the direction of an operator or senior operator, as appropriate, and in the position to which the individual will be assigned. The 40 hours must have included a complete tour of the plant and all required shift turnover procedures. Contrary to the above, the facility licensee reinstated four inactive licensed operators to an active status and allowed them to perform licensed operator duties even though these operators had not completed a plant tour with an operator or senior operator, as appropriate. Each of the four operators subsequently completed a plant tour while being accompanied by an operator or senior operator, as appropriate. The inspectors determined that the violation was not greater than very low safety significance (Green) because the operators were otherwise qualified and other qualified operators were in the control room at the time these individuals stood watch. This issue was entered in the licensee's corrective action program as CR 475600.

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  
D. Hines, Engineering Design Manager  
C. Lane, Engineering Director  
K. Long, Operations Director  
M. Madigan, Outage and Scheduling Director  
D. Madison, Hatch Vice President  
T. Moorer, Director of Environmental Affairs, Chemistry, and Radiological Services  
R. Mullins, Senior Engineering Corporate Supervisor  
S. Tipps, Principal Licensing Engineer  
D. Vineyard, Plant General Manger

### **LIST OF ITEMS OPENED AND CLOSED**

#### **Opened & Closed**

05000321,366/2012004-01	NCV	Failure to follow transient combustible control requirements within the site's intake structure. (1R05)
05000321,366/2012004-02	FIN	Licensed Operator Requalification Annual Operating Test Administration Issues. (1R11)
05000321,366/2012004-03	NCV	Failure to establish adequate preventative maintenance for the safety related main control room air conditioning units. (1R12)
05000321,366/2012004-04	NCV	Failure to follow clearance procedures for returning the A main control room air conditioning unit to service following maintenance. (4OA2)

#### **Discussed**

05000321,366/2515/187	TI	Inspection of Near-Term Task Force Recommendation 2.3 Flooding Walkdowns (4OA5.3)
05000321,366/2515/188	TI	Inspection of Near-Term Task Force Recommendation 2.3 Seismic Walkdowns (4OA5.3)

## LIST OF DOCUMENTS REVIEWED

### **Section 1R01: Adverse Weather Protection**

#### Other

E.I Hatch Individual Plant Examination of External Events  
Unit 2 Final Safety Analysis Report Section 2.4-3

#### Procedures

34AB-Y22-002-0, Naturally Occurring Phenomena

#### Condition Report

517150

### **Section 1R04: Equipment Alignment**

#### Procedures

34SO-E21-001-2, Core Spray System, Ver. 22.17

34SO-E11-010-1, Residual Heat Removal System, Ver. 39.1

#### Drawings

H26018, H16329, H16330

### **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, Ver. 1.2

34AB-X43-001-1, Fire Procedure, Ver. 10.25

42SV-FPX-024-0, Fire Hose Stations – Appendix B Areas, Ver. 3.2

10AC-MGR-022-0, Plant Housekeeping and Material Condition, Ver. 5.4

#### Drawings

A-43965 sheet 103A/B, Unit 2 Pre-Fire Plan High Pressure Coolant Injection Pump Room Reactor Building Below Elevation 130'-0

A-43965 sheet 102A/B, Unit 2 Pre-Fire Plan CRD Pump Room Reactor Building Below Elevation 130'-0

A-43965 sheet 100A/B, Unit 2 Pre-Fire Plan RCIC Pump and Turbine Room Reactor Building Below Elevation 130'-0

A-43965 sheet 27A/B, Pre-Fire Plan Intake Structure

A-43965 sheet 99A/B, Unit 2 Pre-Fire Plan NE RHR and Core Spray Pump Room Reactor Bldg Below Elevation 130'-0

### **Section 1R11: Licensed Operator Regualification Program and Licensed Operator Performance**

Drill Scenario: LR-SG-50914-08

### **Section 1R12: Maintenance Effectiveness**

System Health Report –W33 System – 2nd quarter 2012

System Health Report – Z41 System – 2nd quarter 2012

W33 Maintenance Rule (MR) Scoping Manual Documents

W33 MR Performance Criteria

Z41 Maintenance Rule (MR) Scoping Manual Documents  
Z41 MR Performance Criteria  
NMP-ES-002, System Monitoring and Health Reporting, Ver. 15.0

Condition Reports

359189, 348589, 434606, 195542

Technical Evaluations

283047

Corrective Action Reports

195351, 195542, 192335

**Section 1R13: Maintenance Risk Assessments and Emergent Work Control**

Condition Reports

485354

Procedures

90AC-OAM-002, Scheduling Maintenance, Ver. 4.4

Other

Equipment Out of Service calculations 6/30/12-7/6/12  
Equipment Out of Service calculations 7/14/12-7/20/12  
Equipment Out of Service calculations 7/28/12-8/3/12  
Equipment Out of Service calculations 8/11/12-8/17/12  
Equipment Out of Service calculations 8/25/12-8/31/12  
Control Room Logs

**Section 1R15: Operability Evaluations and Functionality Assessments**

Procedures

NMP-AD-012, Operability Determinations and Functional Assessments, Ver. 6.0  
NMP-AD-012, Operability Determinations and Functional Assessments, Ver. 11.1  
34SV-T48-001-2, Reactor Building to Suppression Chamber Vacuum Relief System Operability,  
Ver. 48, completed August 2.

Condition Reports

497729

Other

Control room logs  
Operating Experience Smart Sample 2012/02

**Section 1R18: Plant Modifications**

SNC416415, Unit 2 A emergency diesel generator plant service water heat exchanger  
discharge valve overridden open  
SNC362042, Install accelerometers for vibration monitoring of unit 1 two stage safety relief  
valves

**Section 1R19: Post-Maintenance Testing**Work Orders

416247, 416160, 417365, 417365, 352543, 378215

Procedures

34SV-R43-001-2, Diesel Generator 2A Monthly Test, Ver. 27.4  
34SO-E11-010-1, Residual Heat Removal System, Ver.19.1

Condition Reports

479693, 481731,

**Section 1R22: Surveillance Testing**Procedures

34SV-SUV-019-1, Surveillance Checks, Ver. 36.2  
34SO-G11-013-1, Drywell and Reactor Building Sumps System, Ver. 14.0  
34SV-SUV-019-1, Surveillance Checks, Ver. 36.2  
NMP-GM-005-GL03, Attachment 2, pre job brief agenda, Ver. 14  
34SO-E11-010-2, residual heat removal system operation, Ver. 39.1  
34SV-E41-002-1, high pressure coolant injection pump operability, Ver. 27  
31EO-EOP112-1, primary containment control, Ver. 2  
31EO-PCG-001-1, primary containment gas control, Ver. 2  
34SO-G11-013-1, Drywell and Reactor Building Sumps System

**Section 1EP6: Drill Evaluation**

EP Exercise Narrative and Timeline for drill conducted July 18, 2012.  
Drill event notification forms from drill conducted July 18, 2012.

**Section 2RS6: Radioactive Gaseous and Liquid Effluent Treatment**Procedures, Guidance Documents, and Manuals

NMP-GM-002, "Corrective Action Program Instructions", Ver. 26.0  
NMP-EN-002, "Radiological Groundwater Protection Program", Ver. 5.0  
ODCM, Ver. 22, February 2009  
64CH-SAM-028-0, "Releases Via Planned and Unplanned Routes: Sampling and Analysis", Ver. 7.0  
64CH-RPT-007-0, "Gaseous Effluents Reports", Ver. 4.0  
64CI-OCB-001-0, "Main Stack Radiation Monitoring", Ver. 5.16  
64CI-OCB-003-1, "Recombiner Building Vent Radiation Monitoring", Ver. 6.1  
64CH-RCL-006-0, "Gamma Isotopics and Reports", Ver. 9.0

Data

64CH-QCX-001-0, HPX-0564, Interlaboratory cross checks; 2<sup>nd</sup> quarter 2011- 8/31/11,  
4<sup>th</sup> quarter 2011- 3/14/12  
NMP-EN-002, Actions for Potential Groundwater Contamination Events, 4/22/10  
Groundwater trending data, 2006-6/2012  
425SV-T48-003-1, Standby Gas Treatment Filter Train Surveillance Unit 1, 01-03-12, 11/28/00  
64CH-RPT-007-0, Gaseous Effluents: Discharge Permit, 5/22-5/29/2012, 5/29-6/5/2012  
Updated 50.75(g) table

Annual Radioactive Effluent Release Report for 2011 & 2012  
64CH-RPT-006-0, Liquid Effluent Release Report: Discharge Permit 3/2012

CRs

TE 466344, Recombiner Building Ventilation Effluent System Flowrate Measurement Chart Recorder inoperable  
CR 102778, When performing set point change of Service Water Effluent Radiation Monitor 1D11-K, the screen is very difficult to read  
CR 348802, FDST discharge to river stopped due to "radwaste effluent high radiation" alarm  
TE 51138, Radwaste Effluent Radiation Recorder, 2D11R001 contains aluminum electrolytic capacitors  
CR 459243, 2G11-R045 off scale high

**Section 2RS7: Radiological Environmental Monitoring Program (REMP)**

Procedures and Guidance Documents

ENV-611, "Radiochemistry Interlaboratory Comparison Program", Rev. 8  
ENV-935, Annual Land Use Census, Rev. 11  
ENV-940, Collection and Handling of Air Particulate and Iodine Cartridge Samples, Rev. 10  
AG-HPX-07-0401, "Protected Area Excavation and Modification, Waste Sampling and Disposal Guidelines", Ver. 4.0  
64CH-ENV-001-0, "Meteorological Stations", Ver. 14.2  
NMP-EN-002, "Radiological Groundwater Protection Program", Ver. 5.0  
NMP-GM-002, "Corrective Action Program", Ver. 12.0

Records and Data

2012 Annual Radiological Environmental Operating Report  
2010 Annual Radiological Environmental Operating Report  
2011 Annual Radioactive Effluent Report  
R-2744291H-001, 2011 Plant Hatch Meteorological Report  
HNP 5-Mile Radiological Sample Map 2011  
Letter from James R. Wallace to Mr. Gregory D. Elmore, Site Risk Assessment, 10/29/10  
Letter from M.P. Jones to Ms. Mary Beth Lloyd, Hatch Nuclear Plant-Land Use Survey, 2/8/12  
Southern Nuclear Operating Company, Response to NRC URI, 7/25/12 and 8/2/12  
Results of Environmental Cross Check Program, GPC Environmental Lab, First Quarter 2012  
Interlaboratory Crosscheck Sample Results Documentation, 9/16/10  
HNP Rotameter Air Flow Correction Chart, 5/29/12, 10/24/11, 4/25/11, 10/11/10  
Primary Meteorological Tower Instrument Calibration Packages; 10m Wind Speed, 10m Wind Direction, 10m Ambient Temperature, 60m Wind Direction, 60m Wind Speed, 60m Delta-T, 100m Wind Direction, 100m Wind Speed, 100m Delta-T; 8/5/11 and 1/23/12

CAP Documents

CFO 11-148, GPC Environmental Laboratory Audit Report, 6/10/11  
ELQA-1101, Internal Audit Report, GPC Environmental Laboratory, 11/1/11  
CR 487176  
CR 339115  
CR 331902  
CR 409865

**Section 2RS8: Radioactive Material Processing and Transportation****Procedures, Instructions, and Reports**

NMP-GM-002-001, "Corrective Action Program Instructions", Ver. 27.0  
 NMP-HP-405, "Shipment of Radioactive Waste and Radioactive Material," Ver. 1.0  
 62RP-RAD-011-0, "Shipment of Radioactive Material," Ver. 12.6  
 62RP-RAD-042-0, "Solid Radwaste Scaling Factor Determination and Implementation", Ver. 6.1  
 62RP-RAD-050-0, "Operation Of The Waste Separation And Temporary Storage Facility And Sealand Storage Facility", Ver. 2.0  
 62RP-RAD-023-0, "Resin Packaging and Classification", Ver. 7.3  
 Lesson Plan G11-RW-LP-02901, "Radwaste Systems", Ver. 3.0  
 Annual Radioactive Effluent Release Reports for 2011  
 Solid Radioactive Waste Process Control Program (PCP)  
 HNP-2-FSAR-11, Radioactive Waste Management (FSAR for Radwaste)  
 HNP Shipper Qualification Status Reports, 06/25/2012  
 MDC 1101985501 (SNC106118) installed flanges to the G11-F019/F020 valves.  
 U2 CUPS Resin Scaling Factors for 2012, 02-21-2012  
 2012 Waste Stream Scaling Factor Summary, 01/31-2102  
 2012 U1 Torus Filter Scaling Factor Work Sheet, 05/08/212  
 Fleet Oversight Audit of Health Physics, August 11, 2011

**Shipping Records**

Shipment 11-4021, DAW, LSA  
 Shipment 11-6002, CUPS Resin, Type B(U)  
 Shipment 12-1014, Steam Relief Valves, SCO-II  
 Shipment 12-4021, U1 Torus Filters, LSA II  
 Shipment 12-5006, CPS Resin, Low Specific Activity II  
 Shipment 12-5007, CPS Resin, Low Specific Activity II

**CAP Documents**

CR 340850, Admin Controls on RADIS software  
 CR 359057, Electronic components in waste  
 CR 453343, Holes in Type A Shipping Container  
 CR 113937, Electronic components in waste  
 CR 111038, >2 mr/hr @RCA boundary  
 CR 385768, ALARA Suggestion for Radwaste  
 CR 486510, Radioactive Material Control (NRC Inspector identified)

**Section 4OA1: Performance Indicator Verification****Procedures and Guidance Documents**

00AC-REG-005-0, "Preparation and Reporting of NRC PI Data", Ver. 6.1

**Records and Data Reviewed**

RWP 11-0058, Dry Cask Loading and Transport to ISFSI, Rev. 0  
 List of ED dose rate alarms >1 R/hr, April 2011 – June 2012  
 List of ED dose alarms, April 2011 – June 2012

**Condition Reports**

192432, 363399, 453569

**Section 40A2: Problem Identification and Resolution**Procedures

31GO-OPS-014-0, Annunciator and Plant Component Control, Ver. 2.2

NMP-OS-006, Operations Performance Indicators, Ver. 11.1

DI-OPS-61-1196, Control and Tracking of Operator Work-Arounds, Ver. 4.0

Condition Reports

CR 473701

Other

Tagout 1-DT-12-1Z41-00168(004)

**Section 40A5: Other Activities**Procedure

42FH-ERP-014-0, Fuel Movement, Ver. 18.0

52GM-F18-151-0, Hi-Storm System Site Transportation, Ver. 2.1

51GM-MNT-063-0, Excavation Activity Requirements, Rev. 2.0

NEI 09-14 Underground Pipe Program Inspection Plan, Rev. 1.0

NMP-ES-036, Underground Pipe and Tanks Monitoring Program, Rev. 9.0

NMP-ES-036-001, Underground Pipe and Tanks Monitoring Program Implementation, Rev. 6.0

NMP-ES-036-002, Underground Pipe and Tanks Monitoring Program Health Reports and Program Notebooks, Rev. 5.0

Condition Report

512389, 513075

37912

38433

331979

560589

2010200464

Other

Docket 72-36 10 CFR 72.212 Report

Fuel Assembly Certification Datasheets

Fuel Movement Sheets

NMP-GM-003-F04, Self-Assessment Final Report (Focused Self Assessment), Rev. 1.0

HNP Underground Pipe & Tanks Health Report 2012 1<sup>st</sup> Quarter

HNP Underground Pipe & Tanks Health Report 2012 2<sup>nd</sup> Quarter

2012 Check-In Self Assessment, Rev. 9/2012