



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

January 27, 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 05000321/2011005, 05000366/2011005, AND 07200036/2011001

Dear Mr. Madison:

On December 31, 2011, U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your Edwin I. Hatch Nuclear Plant, Units 1 and 2. The enclosed integrated inspection report documents the inspection results, which were discussed on January 24, 2012, with Mr. Sonny Barger and other members of your staff.

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

Two NRC identified findings of very low safety significance were identified during this inspection period. These findings were determined to involve violations of NRC requirements. Additionally, the NRC determined that a traditional enforcement Severity Level IV violation occurred. This traditional enforcement violation was identified with the associated finding. Further, licensee-identified violations which were determined to be of very low safety significance are listed in this report. The NRC is treating these violations as non-cited violations (NCVs), in accordance 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 the Hatch.

The enclosed report also documents a noncompliance for which the NRC is exercising enforcement discretion in accordance NRC Enforcement Guidance Memorandum (EGM) 07-004, "Enforcement Discretion For Post-Fire Manual Actions Used as Compensatory Measures for Fire Induced Circuit Failures." The noncompliance involved a failure to ensure that one train of systems necessary to achieve and maintain hot shutdown conditions was free of fire damage, as required by 10 CFR Part 50, Appendix R, Section III.G.2. The NRC is not taking

enforcement action for the noncompliance because it meets the criteria of EGM 07-004. In this case, the NRC concluded that (1) Southern Nuclear Operating Company entered the noncompliance into its corrective action program by September 6, 2007, and implemented appropriate compensatory measures; and (2) Southern Nuclear Operating Company completed corrective actions associated with noncompliances involving operator manual actions by March 6, 2009. Regarding compensatory measures, inspectors determined that the operator manual actions in place during the period of noncompliance met the criteria of IP 71111.05T for acceptable compensatory measures. Based on the above corrective actions, and in accordance with NRC EGM 07-004, the NRC will also refrain from including the noncompliance in the Agency Action Matrix.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, 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 the NRC's document 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/**

James A. Hickey, 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 05000321/2011005, 05000366/2011005, 07200036/2011001  
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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/RA/

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w/Attachment: Supplemental Information

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Letter to Dennis R. Madison from James A. Hickey dated January 27, 2012

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT  
05000321/2011005, 05000366/2011005, AND 07200036/2011001

Distribution w/encl:

C. Evans, RII EICS (Part 72 Only)

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**U. S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

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

License Nos.: DPR-57 and NPF-5

Report Nos.: 05000321/2011005, 05000366/2011005, AND  
07200036/2011001

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Edwin I. Hatch Nuclear Plant

Location: Baxley, Georgia 31513

Dates: October 1 – December 31, 2011

Inspectors: E. Morris, Senior Resident Inspector  
D. Hardage, Resident Inspector  
M. Bates, Senior Operations Engineer (1R11.2)  
R. Carrion, Senior Reactor Inspector (4OA5.5)  
L. Dymek, Reactor Inspector (4OA5.4)  
J. Montgomery, Reactor Inspector (4OA5.3)

Approved by: James A. Hickey, Chief  
Reactor Projects Branch 2  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000321/2011-005, 05000366/2011-005, 07200036/2011001; 10/01/2011-12/31/2011;  
Edwin I. Hatch Nuclear Plant, Units 1 and 2, Performance Indicators, Other Activities

The report covered a three-month period of inspection by the resident inspectors, one senior reactor inspection, one senior operations engineer, and two reactor inspectors. The inspectors identified two violations that are documented in this report. The significance of most findings is indicated by their color (great than Green, or Green, White, Yellow, Red); the significance was determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP).

### Cornerstone: Mitigating Systems

- Green. The NRC identified a Green non-cited violation (NCV) of 10 CFR Part 50, Appendix R, Section III.G.2, for the licensee's failure to protect one of the redundant trains of cables, located in the same fire area (FA), needed to achieve post-fire safe shutdown (SSD) from fire damage for multiple fire areas for Unit 1. Upon discovery, the licensee entered this item into their corrective action program as Condition Report (CR) 100755. As corrective actions, the licensee had implemented modifications to eliminate the need for local operator manual actions (OMAs) to achieve SSD. However, the inspectors discovered that, for FZ 0014K, the modifications did not adequately eliminate reliance on local OMAs to achieve SSD. The licensee entered this condition into the corrective action program as CR 364483. At the time of the exit meeting, the licensee planned to reroute affected cables out of the affected FA.

The licensee's failure to protect one train of cables and equipment necessary to achieve post-fire SSD from fire damage for fire areas designated in the fire protection program as meeting 10 CFR 50 Appendix R, Section III.G.2, is a performance deficiency. This finding is more than minor because it is associated with the reactor safety mitigating system cornerstone attribute of protection against external events (i.e., fire). Failure to protect safe shutdown cables and equipment from fire damage affects the reactor safety mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors used NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," and determined the finding was of very low safety significance (Green). Inspectors determined that no cross cutting aspect was applicable to this performance deficiency because this finding was not indicative of current licensee performance. (Section 4OA5.3)

### Cornerstone: Barrier Integrity

- Severity Level IV. An NRC-identified Severity Level IV non-cited violation of 10 CFR 50.9, "Completeness and Accuracy of Information," was identified when the licensee failed to include all applicable reporting codes on licensee event report (LER) 2-2011-001, "Primary Containment Isolation Penetration Exceeded Overall Allowable



Technical Specification Leakage Limits.” Specifically, the circumstances identified in LER 2-2011-001 met the conditions to be reported under 10 CFR 50.73(a)(2)(v)(C), a condition which could have prevented the fulfillment of the safety function of systems that are needed to control the release of radioactive material, but was not. The licensee issued a revision to LER 2-2011-001 to correct this violation. This violation was entered into the licensee’s corrective action program as CR 371298.

Failure to identify all the applicable reporting codes when submitting an LER to the Commission is a performance deficiency. Because this violation was determined to have the potential for impacting the NRC’s ability to perform its regulatory function, it was evaluated using the traditional enforcement process. The inspectors reviewed the NRC Enforcement Policy and determined this finding was a Severity IV violation based on example 6.9.d.10., which states, “A failure to identify all applicable reporting codes on a Licensee Event Report that may impact the completeness or accuracy of other information (e.g., performance indicator data) submitted to the NRC.” No cross-cutting aspect was assigned, because traditional enforcement violations are not screened for cross-cutting aspects. (Section 4OA1)

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

## REPORT DETAILS

### Summary of Plant Status

Unit 1 began the inspection period at or near 100% Rated Thermal Power (RTP). The unit operated at or near 100% RTP during this inspection period.

Unit 2 began the inspection period at or near 100% RTP. On October 22, the unit was shutdown to perform planned maintenance on safety relief valve pilots. On October 24, the unit was being restarted when operators inserted a manual reactor scram due to intermediate range nuclear instruments A and C experiencing erratic indication. The unit was restarted on October 28, and achieved 100% RTP on November 3. On December 15 the unit was shutdown to perform planned maintenance on safety relief valve pilots. The unit was restarted on December 19, and achieved 100% RTP on December 25. The unit operated throughout the remainder of the inspection period at or near 100% RTP.

### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

#### 1R01 Adverse Weather

##### a. Inspection Scope

Seasonal Readiness Review for Cold / Freezing Weather Conditions: The inspectors performed a review of the licensee's readiness to cope with freezing weather. The inspectors performed walk downs to verify that equipment was in place to mitigate the potential impacts from freezing conditions. The inspectors reviewed licensee procedure DI-OPS-36-0989, "Cold Weather Checks" and 52PM-MEL-005-0, "Cold Weather Checks," to verify actions were taken by the licensee to prepare for upcoming winter conditions. Documents reviewed are listed in the Attachment.

##### b. Findings

No findings were identified.

#### 1R04 Equipment Alignment

##### a. Inspection Scope

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

operating procedure to the actual position. Documents reviewed are listed in the Attachment.

- Unit 2 'B' train of plant service water system while 'A' train was out of service for maintenance, October 3 through October 5
- Unit 1 'B' train of plant service water system while 'A' train was out of service for maintenance, October 31
- Unit 1 reactor core isolation cooling system while the high pressure coolant injection system was out of service for maintenance, November 7

b. Findings

No findings were identified.

1R05 Fire Protection

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 emergency diesel generator rooms 2A and 2C, fire area 2403 & 2407
- Unit 2 4160 VAC emergency switchgear rooms 2E, 2F, and 2G, fire area 2404, 2408, & 2409
- Unit 1, intake structure, fire area 0501
- Unit 1, service water valve pit 1B, fire area 1602
- Unit 1, emergency diesel generator rooms 1A and 1C, fire area 1411 & 1403

b. Findings

No findings were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors performed inspections of three below grade pull boxes that contain safety-related cables. The inspectors also reviewed condition reports (CRs) to verify the licensee was identifying and resolving problems in accordance with their corrective action program. Documents reviewed are listed in the Attachment.

- PB1-AN, pull box located between emergency diesel generator building and intake
- PB1-AO, pull box located between emergency diesel generator building and intake

- PB1-U, pull box located near Unit 1 condensate storage tank

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification

.1 Resident Quarterly Observation

a. Inspection Scope

On October 4, the inspectors observed the performance of licensee simulator scenario LR-SE-001111-01.1, which included a loss of 2A 600 volt alternating current buss, a loss of main feedwater, power instabilities, an anticipated transient without a scram, a loss of all high pressure coolant 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.

b. Findings

No findings were identified.

.2 Annual Review of Licensee Regualification Examination Results

a. Inspection Scope

On December 22, 2011, the licensee completed administering the annual regualification operating test and biennial written examination, which is required to be administered to all licensed operators in accordance with 10 CFR 55.59(a)(2). The inspectors performed an in-office review of the overall pass/fail results of the individual operating tests and the crew simulator operating tests. These results were compared to the thresholds established in Manual Chapter 609, Appendix I, "Operator Regualification Human Performance Significance Determination Process."

b. Findings

No findings were identified.

## 1R12 Maintenance Effectiveness

### a. Inspection Scope

The inspectors reviewed the following one sample 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 (WO), 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 and 2 turbine system, N30, N31, & N32

### b. Findings

No findings were identified.

## 1R13 Maintenance Risk Assessments and Emergent Work Evaluation

### a. Inspection Scope

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

- Week of October 17 – October 22, including Unit 2 shutdown for scheduled safety relief valve pilot replacement, Unit 1 hydrogen oxygen analyzer electrolytic capacitor replacement, and electric driven fire pump scheduled maintenance.
- Week of October 23 – October 28, including Unit 1 plant service water piping inspection, Unit 2 intermediate range nuclear instrumentation troubleshooting repairs, and replacement of offsite power Eastman line disconnect within the switchyard.
- Week of November 5 – November 11, including Unit 1 high pressure core injection system outage, replacement of switchyard disconnects 179463, 179469, and 179471, Unit 1 alternate RPS power supply repairs, Unit 2 manual reactor scram functional test, and Unit 2 control rod 38-07 troubleshooting.
- Week of November 14 – November 18, including Unit 1 reactor core isolation cooling pump maintenance, 1D plant service water pump preventive maintenance, and Unit 2 C emergency diesel generator testing.
- Week of December 12 – December 16, including Unit 1 B residual heat removal pump scheduled maintenance, C emergency diesel generator testing, Unit 2

shutdown & cooldown for safety relief valve replacement, and B diesel fire pump maintenance.

b. Findings

No findings were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following four operability evaluations and compared the evaluations to the system requirements identified in the Technical Specifications (TS) and the Final Safety Analysis Report 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.

- Excavation of plant service water, core spray, and reactor core isolation cooling piping near Unit 1 condensate storage tank, CR 356327
- Unit 1 plant service water division II reactor building through wall leak, CR 364491
- Primary containment isolation feedwater check valve, 2B21-F077B, failed to meet surveillance test criteria, CR 364764
- Abnormalities found during inspection of two 4 kilovolt breakers, CR 374184

b. Findings

No findings were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

For the following four 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 114828, Replace Unit 2 C plant service water pump and motor, October 7
- WO 331389, Repack electric fire pump, October 18
- WO 336358, Replace electrolytic capacitors Unit 1 hydrogen oxygen analyzer, October 20
- WO 341926, Repair Unit 2 C intermediate range monitor instrument, October 27

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities

a. Inspection Scope

The inspectors performed the inspection activities described below for two separate Unit 2 safety relief valve pilot maintenance outages October 22 – October 28, and December 15 – December 19. The inspectors confirmed that, when the licensee removed equipment from service, the licensee maintained defense-in-depth commensurate with the outage risk control plan for key safety functions and applicable TS and that configuration changes due to emergent work and unexpected conditions were controlled in accordance with the outage risk control plan. Documents reviewed are listed in the Attachment. Inspection activities included:

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

b. Findings

No findings were identified.

## 1R22 Surveillance Testing

### a. Inspection Scope

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

#### Surveillance Tests

- 34SV-R43-001-2, "Diesel Generator 2A Monthly Test"
- 57SV-SUV-107-1, "Analog Transmitter Trip System Panel 1H11-P921 Relay Replacement with Functional Test & Calibration"
- 34SV-SUV-016-2, "Cold Shutdown Valve Operability"

#### In-Service Test

- 34SV-E11-001-1, "Residual Heat Removal Pump Operability" (1B residual heat removal pump)

### b. Findings

No findings were identified.

## Cornerstone: Emergency Preparedness

## 1EP6 Drill Evaluation

### 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 / Evolution conducted on October 12



b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors reviewed a sample of the licensee submittals for the PIs listed below to verify the accuracy of the data reported. The PI definitions and the guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Rev. 6 and licensee Procedure 00AC-REG-005-0, "Preparation and Reporting of NRC PI Data," were used to verify procedure and reporting requirements were met.

Cornerstone: Mitigating Systems

- Safety System Functional Failures
- High Pressure Injection System
- Heat Removal System
- Cooling Water Systems

The inspectors reviewed raw PI data collected between June, 2010 and September 2011 for the Mitigating System 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 LERs issued during the referenced time frame were also reviewed. Documents reviewed are listed in the Attachment.

b. Findings

Introduction: An NRC-identified Severity Level IV non-cited violation of 10 CFR 50.9, "Completeness and Accuracy of Information," was identified when the licensee failed to include all applicable reporting codes on licensee event report 2-2011-001.

Description: On April 5, 2011, the licensee identified a violation of Technical Specification 3.6.1.1, "Primary Containment," during the Unit 2 refueling outage due to primary containment isolation valves 2T48F309 and 2T48F324 exceeding "as-found" local leak rate requirements. This resulted in a leak rate through penetration 2T23X205 that was greater than the overall allowable leakage ( $L_a$ ) required by HNP-2 technical specification for primary containment operability. The licensee documented this issue in LER 2-2011-001. The licensee identified this LER was required to be submitted pursuant to the requirement of 10 CFR 50.73(a)(2)(ii)(A) and no other requirements. However, the condition identified on April 5, 2011 also required reporting as an LER under 10 CFR 50.73(a)(2)(v)(C) for a condition which could have prevented the fulfillment of the safety function of systems that are needed to control the release of

radioactive material. Specifically, primary containment penetration test results which exceed the  $L_a$  value results in a loss of the primary containment safety function. Failure to identify all the applicable reporting codes in LER 2-2011-001 is a violation of 10 CFR 50.9, which requires information provided to the Commission by a licensee be complete and accurate in all material respects. Because a 10 CFR 50.9 violation has the potential for impacting the NRC's ability to perform its regulatory function, this violation was evaluated using the traditional enforcement process. The inspectors reviewed the NRC Enforcement Policy and determined this finding screened as a Severity Level IV violation based on the similarity to example 6.9.d.10. This violation was entered into the licensee's corrective action program as CR 371298. Although the failure to identify a safety system functional failure in LER 2-2011-001 also resulted in the licensee failing to include this safety system functional failure when reporting quarterly PI data, after including the previously non-reported data the PI color remained Green.

Analysis: Failure to identify all the applicable reporting codes when submitting an LER to the Commission is a performance deficiency. Because this violation was determined to have the potential for impacting the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process. The inspectors reviewed the NRC Enforcement Policy and determined this finding was a Severity IV violation based on example 6.9.d.10., which states, "A failure to identify all applicable reporting codes on a Licensee Event Report that may impact the completeness or accuracy of other information (e.g., performance indicator data) submitted to the NRC." This failure to identify a safety system functional failure in LER 2-2011-001 also resulted in the licensee failing to include this safety system functional failure when reporting quarterly PI data, which is also a performance deficiency. This second performance deficiency was screened for non-traditional enforcement in accordance with IMC 0612 Appendix B. The significance of the second performance deficiency screened as minor, because although the performance deficiency related to a PI, the inclusion of the previously non-reported loss of safety function did not result in the PI exceeding a color threshold. No cross-cutting aspect was assigned, because traditional enforcement violations are not screened for cross-cutting aspects.

Enforcement: 10 CFR 50.9 requires in part that information provided to the Commission by a licensee be complete and accurate in all material respects. Contrary to the above on June 10, 2011, the licensee failed to provide complete and accurate information to the Commission when submitting LER 2-2011-001, because the LER did not identify the applicable reporting code of 10 CFR 50.73(a)(2)(v)(C) for a condition which could have prevented the fulfillment of the safety function of systems that are needed to control the release of radioactive material. The licensee submitted a revision to LER 2-2011-001 on December 9, 2011 to correct this violation. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program as CR 371298, this violation is being treated as a non-cited violation consistent with the NRC Enforcement Policy. NCV 05000366/2011005-01, "Failure to identify all the applicable reporting codes when submitting an LER."

## 4OA2 Identification and Resolution of Problems

### .1 Daily Screening of Corrective Action Items

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and in order to 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 375140, Contamination of greater than 400 square feet during draining of Unit 2 torus

#### b. Findings and Observations

No findings were identified.

### .3 Semi-Annual Trend Review

#### a. Inspection Scope

The inspectors performed a review of the licensee's corrective action program and associated documents to identify trends which could indicate the existence of a more significant safety issue. The review was focused on repetitive equipment issues, but also considered the results of inspector daily CR screening, licensee trending efforts, and licensee human performance results. The review nominally considered the six month period of July 2011 through December 2011 although some examples extended beyond those dates when the scope of the trend warranted. The inspectors compared and contrasted their results with the results contained in the licensee's quarterly trend reports. Corrective actions associated with a sample of the issues identified in the licensee's trend reports were reviewed for adequacy. The inspectors also evaluated the trend reports against the requirements of the licensee's corrective action program as specified in licensee Procedure NMP-GM-002, "Corrective Action Program," and 10 CFR 50, Appendix B. Documents reviewed are listed in the Attachment.

b. Findings and Observations

No findings were identified.

4OA3 Event Follow-up

.1 (CLOSED) LER 05000366/2011-002-0, Corrosion-Induced Binding Results in Multiple Safety Relief Valves Setpoint Drift

a. Inspection Scope

The inspectors reviewed this LER for performance deficiencies and/or violations of regulatory requirements. Additionally, discussions were held with Operations, Engineering and Licensing staff members to understand the details surrounding this issue. This condition was documented in the licensee's corrective action program as CR 334250. LER 05000366/2011-002-0 is closed.

b. Findings

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

.2 Unit 2 manual reactor scram during startup

a. Inspection Scope

The inspectors responded to the control room on October 24, 2011, in response to a manual reactor scram on Unit 2. The inspectors verified licensee actions were performed in accordance with site operating procedures. The inspectors also verified the cause of the scram was understood, reviewed chart recorders and operating logs, and attended event response meetings.

b. Findings

No findings were identified.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

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

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

b. Findings

No findings were identified.

.2 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 campaign which completed December 9. 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 (Closed): Unresolved Item (URI) 05000321, 366/2006006-01, Local Operator Actions in Lieu of Cable Protection for a Fire Area Subject to the Requirements of III.G.2

a. Inspection Scope

During the triennial fire protection inspection (TFPI) in 2006 (NRC Inspection Report 05000321, 366/2006006), the NRC documented that cables and equipment of redundant SSD trains located in the same fire areas (FAs)/fire zones (FZs) had not been protected from potential fire damage by one of the methods specified in 10 CFR 50, Appendix R, Section III.G.2. Examples of this issue applied to FZ 0014K, EL 130' 0" Working Floor and HP Area. The NRC concluded that the lack of cable protection could result in de-energizing or losing remote control over post-fire safe shutdown (SSD) equipment and systems, such as ventilation equipment and valves important to achieving and/or maintaining post-fire SSD conditions. In lieu of meeting Appendix R, Section III.G.2, the licensee relied on operator manual actions (OMAs) outside the main control room (MCR) to recover from these potential adverse effects.

Federal Register notice dated March 6, 2006 (71 FR 11169) withdrew proposed rulemaking related to OMAs, and stated that, for cases involving feasible manual actions, licensees would be eligible for enforcement discretion if they initiated corrective actions within six months of the issue date of the notice, and completed all corrective actions within three years (i.e., by March 6, 2009). The licensee initiated condition report

(CR) 100755 to enter the OMAs used in lieu of meeting Appendix R, Section III.G.2 into their corrective action program. Inspection Report 05000321, 366/2006006 stated that the licensee planned to either submit exemption requests to 10 CFR 50, Appendix R for any unapproved OMAs, or implement modifications to eliminate reliance on OMAs. The report further stated that URI 05000321, 366/2006006-001 was opened to monitor OMA resolution for Units 1 and 2. Inspectors' reviewed corrective actions taken by the licensee and other related information to assess the adequacy of the actions to address these URIs.

b. Findings

Introduction: The inspectors identified a Green NCV of 10 CFR Part 50, Appendix R, Section III.G.2, for the licensee's failure to protect one of the redundant trains of cables, located in the same FA, needed to achieve post-fire SSD from fire damage for multiple fire areas for Unit 1. The licensee had not protected the cables by one of the methods specified in Appendix R, Section III.G.2. Instead, the licensee relied on OMAs outside the MCR in lieu of protecting the cables, to achieve post-fire SSD.

Description: During the 2006 TFPI at Hatch Nuclear Plant, inspectors discovered that, for multiple fire areas, the licensee relied on OMAs in lieu of the cable protection required by 10 CFR 50, Appendix R, Section III.G.2. These OMAs directed operators to perform actions such as restarting station battery chargers to ensure power remains available to credited components, and manually opening a valve to ensure adequate cooling was available for the credited diesel generator. The details of the FAs and functions affected are detailed in IR 05000321, 366/2006006. During this time, licensees that were inappropriately relying on post-fire OMAs to address fire-induced circuit failures had been granted enforcement discretion to allow licensees an opportunity to bring themselves back into compliance with the existing regulations. As stated in the Federal Register notice dated March 6, 2006 (71 FR 11169), licensees were given until March 6, 2009 to complete corrective actions associated with noncompliance's involving OMAs. Inspectors noted that the licensee planned to perform modifications to eliminate all non-compliant OMAs for Unit 1 and Unit 2. Based on this, inspectors opened a URI in NRC Inspection Report 05000321, 366/2006-006 to monitor the licensee's resolution of this issue.

On March 6, 2009, in a letter to NRC the licensee requested an extension of the enforcement discretion period for Hatch Unit 1, from March 6, 2009 to March 17, 2010, so that modifications could be completed on that unit. This extension request did not apply to Unit 2, as all planned modifications had already been completed for that unit. In a letter dated April 23, 2009, the NRC denied the licensee's request for extension of the enforcement discretion period for Unit 1. Therefore, the non-compliant OMAs that had not been eliminated by March 6, 2009 were subject to inspection under the Reactor Oversight Process (ROP).

The inspectors reviewed the modifications that the licensee completed. The inspectors also noted that the licensee maintained appropriate compensatory measures in the affected FAs, until the modifications were completed. However, inspectors discovered that, for FZ 0014K (Working Floor-Control Building 130' Elev.), the modification did not

adequately eliminate reliance on OMAs to achieve SSD. For a postulated fire in FZ 0014K that causes a LOOP, operators are directed to re-energize Division 2 Station Service Battery Chargers, in order to ensure that power remains available to credited SSD components. Originally, operators would perform an OMA to re-energize the chargers. A modification was implemented to install switches in the MCR, so that operators could remotely re-energize the chargers. However, cables for the battery charger switches were routed through FZ 0014K, leaving them susceptible to being impacted by a fire which also causes a LOOP. This would result in operators having to perform an OMA to manually re-energize the battery chargers, which does not meet the requirements specified in Appendix R, Section III.G.2. The licensee entered this condition into the corrective action program as CR 364483. The licensee planned to reroute affected cables out of the affected FA.

Inspectors reviewed this finding against NRC enforcement guidance documents to determine to what extent enforcement discretion was applicable. For Unit 1, inspectors determined that enforcement discretion was not applicable to this finding based on the fact that the licensee did not meet the criteria published in the Federal Register (71 FR 11169), which withdrew OMA rulemaking March 6, 2006. This notice provided enforcement discretion for three years, ending March 6, 2009, to allow completion of corrective actions. However, for Unit 2, inspectors determined that enforcement discretion was applicable, based on the fact that the licensee met the criteria published in the Federal Register (71 FR 11169), and completed all corrective actions prior to March 6, 2009.

Analysis: Failure to protect one train of cables and equipment necessary to achieve post-fire SSD from fire damage for fire areas designated in the fire protection program as meeting Appendix R, Section III.G.2, is a performance deficiency. This finding is more than minor because it is associated with the reactor safety mitigating system cornerstone attribute of protection against external events (i.e., fire). Failure to protect safe shutdown cables and equipment from fire damage affects the reactor safety mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The NRC evaluated this finding in accordance with NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process." This finding affected multiple fire areas for Hatch Unit 1.

The inspectors determined that this finding was in the Post Fire safe shutdown (SSD) category. Using a significance determination process (SDP) Phase 1 screening, inspectors determined that a Phase 2 screening was required. This determination was based on the initial quantitative screening resulting in a change in CDF value of greater than  $1 \times 10^{-6}$ . Using the Phase 2 assessment tools, inspectors screened the finding to very low safety significance (Green). This determination was made by using bounding, conservative assumptions, and was also due, in part, to the relatively low number of ignition sources that impact damage targets of interest. Inspectors determined that no cross cutting aspect was applicable to this performance deficiency because this finding was not indicative of current licensee performance.

Enforcement: 10 CFR Part 50.48(b)(1) requires that all nuclear power plants licensed to operate prior to January 1, 1979, must satisfy the applicable requirements of 10 CFR Part 50, Appendix R, Section III.G. Appendix R, Section III.G.2, applies to the ability to achieve and maintain hot shutdown from the MCR during a fire. It states, in part, that where cables or equipment, including associated non-safety circuits that could prevent operation, or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one of three means of protecting cables to ensure that one of the redundant trains is free of fire damage shall be provided. The three acceptable methods described in Appendix R, Section III.G.2 for maintaining one of the redundant trains in the same fire area free of fire damage are based on the use of physical barriers, spatial separation, and fire detection and an automatic fire suppression system. Appendix R, Section III.G.2, does not allow the use of OMAs in lieu of protection.

Contrary to the above, the licensee did not meet the requirements of 10 CFR Part 50, Appendix R, Section III.G.2. Specifically, the licensee did not protect the cables of redundant systems necessary to achieve and/or maintain hot shutdown conditions from the MCR from fire damage by one of the means described in 10 CFR Part 50 Appendix R, Section III.G.2 (i.e., use of spatial separation, passive fire barriers, and fire detection and an automatic fire suppression system). Lack of cable protection could result in de-energizing or losing remote control over post-fire SSD equipment and systems such as battery chargers and valves important to achieving and/or maintaining post-fire SSD conditions. This condition has existed since initial plant startup. Upon discovery, the licensee entered this item into their corrective action program as CR 100755. Additionally, the licensee has implemented modifications to eliminate the need for OMAs.

For Hatch Unit 1, because this finding is of very low safety significance, this violation is treated as an NCV consistent with Section 2.3.2 of the NRC Enforcement Policy: NCV 05000321/2011005-02, "Cables for Fire Safe Shutdown Not Protected In Accordance With 10 CFR 50," Appendix R, Section III.G.2.

For Hatch Unit 2, because the licensee met the criteria published in the Federal Register (71 FR 11169) and NRC Enforcement Guidance Memoranda (EGM) 07-004, "Enforcement Discretion For Post-Fire Manual Actions Used as Compensatory Measures for Fire Induced Circuit Failures," the NRC is exercising enforcement and reactor oversight process (ROP) discretion for this issue in accordance with NRC EGM 07-004. Specifically, the licensee completed corrective actions associated with noncompliances involving operator manual actions prior to March 6, 2009, to comply with the existing regulations.

URI 05000321, 366/2006006-01, "Local Operator Actions in Lieu of Cable Protection for a Fire Area Subject to the Requirements of III.G.2," is now closed.



.4 (Closed) URI 05000366/2010009-01 "Acceptability of Liquid Filled Transformers in Fire Areas 2017 and 2019"

a. Inspection Scope

The NRC triennial fire protection inspection in 2010 (documented in NRC Inspection Report 05000321/2010009 and 05000366/2010009) identified a URI associated with fire areas containing medium voltage and high current transformers insulated with a combustible silicone based di-electric fluid. In 1986 the licensee requested a generic exemption to the requirements of Section III.G.2.a, of 10 CFR 50, Appendix R, for separation of redundant cable and equipment by 3-hour fire barriers for these fire areas. In Section 1.3 of the Hatch Nuclear Power Station (NPS) Fire Protection Program, entitled "Basis for the Fire Protection Program," several Safety Evaluation Reports (SERs) were specifically cited. Among those cited was the January 1987 Safety Evaluation in which it stated that: "Where fire area boundaries are not wall-to-wall, and floor to ceiling boundaries with all penetrations sealed to the fire rating required of the boundaries, licensees must perform an evaluation to assess the adequacy of fire boundaries in their plants to determine if the boundaries will withstand the hazards associated with the area." It also stated in part; "that the licensee is to retain the analyses for subsequent NRC audits." During the inspection the licensee could not provide the inspectors with documentation of sufficient detail and rigor to demonstrate the adequacy of the fire barrier boundaries. The licensee initiated condition reports (CRs) 201000869, 201015004, 2010115915 and 2010115986. Subsequently, in February 2011 the licensee submitted revised documentation updating the Fire Hazards Analysis and Calculation SMNH 94-060, "Fire Protection Data System (FPDS)," to include the fire loading for silicone based di-electric fluid. In August 2011, the licensee submitted a Documentation of Engineering Judgment, DOEJ-HRSNC320254-M001, "Evaluation of Dow Corning 561 Transformer in Plant Hatch Switchgear Rooms." On the week of August 30, 2011, inspectors again went to the Hatch NPS to verify field conditions and assess the fire barriers and fire hazards of the switchgear rooms. Based upon review and verification of the information provided by the licensee for these switchgear areas, the inspectors confirmed that the fire barrier boundaries were adequate to withstand the fire hazards associated with the area(s).

b. Findings

No findings were identified.

This URI is closed.

.5 On-Site Fabrication of Components and Construction of an ISFSI (60853)

a. Inspection Scope

The inspectors conducted a review of licensee and vendor activities in preparation for the concrete placement for the northwest quadrant of the Independent Spent Fuel Storage Installation (ISFSI) pad extension upon which the Holtec HI-STORM 100 vertical storage modules will be sited to house spent fuel generated by the licensee. The

inspectors walked down the construction area of the ISFSI pad and examined the rebar installation and verified that the rebar size, spacing, splice length, and concrete coverage on the top, side, and bottom complied to licensee-approved drawings, specifications, procedures, and other associated documents and that compliance to applicable codes, the Certificate of Compliance (CoC), and Technical Specifications (TSs) was met. The inspectors also evaluated the concrete formwork installation for depth, straightness, and horizontal bracing and verified the overall dimensions and orientation for compliance to the licensee-approved drawings. The inspectors interviewed licensee and contract personnel to verify knowledge of the planned work. The inspectors also observed concrete delivery, placement, and vibration of the ISFSI slab and observed tests for concrete slump and air content, temperature measurements, and the collection/preparation of cylinder samples for compression tests to verify that the work was implemented according to approved specifications and procedures. Later, when the 7-day and 28-day compression tests were completed by the independent laboratory, the inspectors reviewed the results to verify that the acceptance criteria were met.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On January 24, 2012, the resident inspectors presented the inspection results to Mr. Sonny Barger and other members of your staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

4OA7 Licensee-Identified Violations

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

- On July 5, 2011, a licensee-identified violation of Unit 2 TS 3.4.3 was discovered. TS section 3.4.3 requires 10 of 11 safety relief valves (SRV's) to be operable during Mode 1, 2, and 3. Contrary to this requirement it was identified during bench testing that eight safety relief valves failed to lift at the required technical specification setpoint, and therefore were inoperable when Unit 2 was in Mode 1, 2, and 3. The cause for the SRV's failing to lift within the required setpoint was due to corrosion induced bonding between the pilot disc and seating surface. This condition was documented in CR 334250. Analysis showed that with the SRV's lifting at the as-found bench test setpoints the SRV's still would have maintained reactor coolant system pressure below the TS safety limit requirements. Therefore, this finding was determined to be of very low safety significance (Section 4OA3.2)

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee personnel

B. Anderson, Health Physics Manager  
S. Barger, Plant Manager  
G. Brinson, Maintenance Manager  
V. Coleman, Chemistry Manager  
M. Crosby, Engineering Programs Manager  
B. Duval, Site Support Manager  
B. Hulett, Engineering Design Manager  
C. Lane, Engineering Director  
D. Madison, Hatch Vice President  
J. Merritt, Nuclear Security Manager  
K. Underwood, Performance Improvement Supervisor  
R. Varnadore, Operations Manager

#### NRC

David Hardage, Resident Inspector

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

#### Closed

05000366/2011-002-0	LER	Corrosion-Induced Binding Results in Multiple Safety Relief Valves Setpoint Drift (Section 4OA3.1)
05000321,366/2006006-01	URI	Local Operator Actions in Lieu of Cable Protection for a Fire Area Subject to the Requirements of III.G.2 (Section 4OA5.3)
05000366/2010009-04	URI	Acceptability of Liquid Filled Transformers in Fire Areas 1017 and 2019 (Section 4OA5.4)

#### Opened & Closed

05000366/2011005-01	NCV	Failure to identify all the applicable reporting codes when submitting an LER (4OA1)
05000321/2011005-02	NCV	Cables for Fire Safe Shutdown Not Protected In Accordance With 10 CFR 50 Appendix R Section III.G.2 (Section 4OA6.3)

## LIST OF DOCUMENTS REVIEWED

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

#### Procedures

52PM-MEL-005-0, Cold Weather Checks, Ver. 11.10

DI-OPS-36-0989, Cold Weather Checks, Ver. 19.1

#### Condition Report

371553, 371550, 377539, 378439, 377542

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

#### Procedures

34SO-P41-001-2, Plant Service Water System, Ver. 23.2

34SO-P41-001-1, Plant Service Water System, Ver. 32.1

34SO-E51-001-1, Reactor Core Isolation Cooling System, Ver. 26.1

31RS-OPS-001-1, Shutdown from Outside Control Room, Ver. 5.19

34GO-OPS-030-1, Daily Inside Rounds, Ver. 32.0

#### Drawings

D-11001, H-11024, H-26050, H-26051, H16334, H-16335

#### Condition Reports

2010106852, 2010107110, 2010107108, 2011101066

#### Other

Unit 1 Final Safety Analysis Report

Unit 2 Final Safety Analysis Report

### **Section 1R05: Fire Protection**

#### Procedures

E.I. Hatch Fire Protection Fire Hazards Analysis

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

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

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

#### Drawings

A-43966 sheet 18A/B, Unit 2 Pre-Fire Plan Diesel Generator Building Oil Storage Room 2A

A-43966 sheet 19A/B, Unit 2 Pre-Fire Plan Diesel Generator Building Battery Room 2A

A-43966 sheet 20A/B, Unit 2 Pre-Fire Plan Diesel Generator Building Diesel Generator Room 2A

A-43966 sheet 21A/B, Unit 2 Pre-Fire Plan Diesel Generator Building Switchgear Room 2E

A-43966 sheet 22A/B, Unit 2 Pre-Fire Plan Diesel Generator Building Oil Storage Room 2C

A-43966 sheet 23A/B, Unit 2 Pre-Fire Plan Diesel Generator Building Battery Room 2C

A-43966 sheet 24A/B, Unit 2 Pre-Fire Plan Diesel Generator Building Diesel Generator Room 2C

A-43966 sheet 25A/B, Unit 2 Pre-Fire Plan Diesel Generator Building Switchgear Room 2F

A-43966 sheet 26A/B, Unit 2 Pre-Fire Plan Diesel Generator Building Switchgear Room 2G

A-43965 sheet 27A/B, Unit 1 Pre-Fire Plan Intake Structure

A-43965 sheet 49A/B, Unit 1 Pre-Fire Plan Service Water Valve Pit 1B

A-43965 sheet 16A/B, Unit 1 Pre-Fire Plan Diesel Generator Building Diesel Generator Room 1A

A-43965 sheet 8A/B, Unit 1 Pre-Fire Plan Diesel Generator Building Diesel Generator Room 1C

Condition Reports

373686, 371645, 371648, 371646

**Section 1R06: Internal Flood Protection**

Condition Reports

2011107170, 2011106938, 329712, 341636, 341626, 344193, 346804, 348598,

Documents

HNP-2-Final Safety Analysis Report Chapter 9.3.3.2.2.B

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

Drawings

H-13000, H-13001, H-23000, H-23001, H-23011, H-23012

Work Orders

322003, 322000,

**Section 1R07: Heat Sink Performance**

Procedures

42EN-ENG-033-1, PSW Flow Model Data Collection

42IT-TET-012-1, PSW and RHRSW Piping Inspection Procedure

**Section 1R11: Licensed Operator Regualification**

Drill Scenario: LR-SE-00111-01.1

**Section 1R12: Maintenance Effectiveness**

System Health Report –1N30-2N31– 2nd quarter 2011

N32, R20 Maintenance Rule (MR) Scoping Manual Documents

N32, R20 MR Performance Criteria

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

Other

Unit 1 and Unit 2 Control Room Logs

Equipment Out of Service calculations 10/17/11-10/22/11

Equipment Out of Service calculations 10/23/11-10/28/11

Equipment Out of Service calculations 11/5/11-11/11/11

Equipment Out of Service calculations 11/12/11-11/18/11

Equipment Out of Service calculations 12/11/11-12/17/11

Procedures

31GO-OPS-024-0, Outage Safety Assessment, Ver. 1.6

**Section 1R15: Operability Evaluations**

Procedures

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

42EN-PPM-001-2, Unit 2 Plant Performance Data Acquisition, Ver. 0.6  
 42SV-TET-001-2, Primary Containment Periodic Type B & Type C Leakage Tests, Ver 33.0  
 42SV-TET-001, [Local Leak Rate Test] Testing Methodology, Ver. 4.0  
 34SV-B21-006-2, Feedwater Check Valve Operability, Ver. 1.12

Condition Reports  
 365006, 374184

Other  
 Unit 2 control room logs dated 10/24/11 through 10/27/11  
 E.I. Hatch Final Safety Analysis Report

### **Section 1R19: Post Maintenance Testing**

Work Orders  
 114828, 114829, 331389, 336358, 341926

Procedures  
 34SV-P41-001-2, Plant Service Water Pump Operability, Ver.13.0  
 NMP-GM-006, Work Management, Ver. 12.0  
 NMP-MA-014, Post Maintenance Testing, Ver. 1.0  
 95IT-OTM-001-0, Maintenance Work Order Functional Test Guideline, Ver. 5.4  
 57CM-C51-002-0, Source Range Monitor, Intermediate Range Monitor Detector, Drives, and Cable Removal & Installation, Ver. 7.5

CR's  
 362282, 365484, 366575,

### **Section 1R20: Refueling and Outage Activities**

Operating Logs  
 34GO-OPS-001-2, Plant Startup  
 34GO-OPS-003-2, Startup System Status Checklist  
 Outage Equipment Safety Status Checklist Dec 15 – Dec 19  
 31GO-OPS-024-0, Outage Safety Assessment, Ver. 1.6

### **Section 1R22: Surveillance Testing**

Procedures  
 34SV-R43-001-2, Diesel Generator 2A Monthly Test, ver. 27.1  
 57SV-SUV-107-1, [Analog Transmitter Trip System] Panel 1H11-P921 Channel [Functional Test & Calibration] with Relay Replacement, Ver. 2.1  
 34SV-SUV-016-2, Ver. 13.8, Cold Shutdown Valve Operability

Condition Report  
 368724, 368556

### **Section 1EP6: Drill Evaluation**

EP Exercise Narrative and Timeline for drill conducted October 12  
 Drill event notification forms from drill conducted October 12

**Section 40A1: Performance Indicator**

Edwin I. Hatch Nuclear Plant Mitigating Systems Performance Index Basis Document, Ver. E  
 Unit 1 High Pressure Injection System Derivation Report Unavailability Index dated 11/28/11  
 Unit 1 High Pressure Injection System Derivation Report Unreliability Index dated 11/28/11  
 Unit 2 High Pressure Injection System Derivation Report Unavailability Index dated 11/28/11  
 Unit 2 High Pressure Injection System Derivation Report Unreliability Index dated 11/28/11  
 Unit 1 Cooling Water System Derivation Report Unavailability Index dated 11/28/11  
 Unit 1 Cooling Water System Derivation Report Unreliability Index dated 11/28/11  
 Unit 2 Cooling Water System Derivation Report Unavailability Index dated 11/28/11  
 Unit 2 Cooling Water System Derivation Report Unreliability Index dated 11/28/11  
 Unit 1 Heat Removal System Derivation Report Unavailability Index dated 11/28/11  
 Unit 1 Heat Removal System Derivation Report Unreliability Index dated 11/28/11  
 Unit 2 Heat Removal System Derivation Report Unavailability Index dated 11/28/11  
 Unit 2 Heat Removal System Derivation Report Unreliability Index dated 11/28/11  
 Licensee Event Report 2-2011-001

**Section 40A2: Identification and Resolution of Problems****Procedures**

NMP-GM-002, Corrective Action Program, Rev. 12

**Condition Reports**

375140, 365561, 365020, 2010205262, 2010109817, 2009105731

**Other**

CAR 192490 Apparent Cause Report for contamination of greater than 400 square feet during draining of Unit 2 torus  
 2011 Daily Trending documents  
 2011 Specific Trending document  
 2011 Unit 2 Outage Trending document  
 Fall Hazard CR List Feb 10 to Nov 11  
 CAP Trend Summary Report February 2011 through April 2011

**Section 40A3: Event Follow-up****Condition Reports**

334250, 365441, 365484, 365237, 365334, 365391, 365433, 366575, 366838

**Procedures**

34AB-C71-001-2, Scram Procedure, Ver. 11.0

**Other**

E.I. Hatch Nuclear Plant Technical Specifications and Bases  
 E.I. Hatch Unit 1 and Unit 2 Final Safety Analysis Report  
 Unit 2 Control Room Logs dated 10/24/11 – 10/25/11  
 NRC Event Notification #47369  
 LER 05000366/2011-002, Corrosion-Induced Binding Results in Multiple Safety Relief Valves  
 Setpoint Drift

## **Section 40A5: Other Activities**

### **Procedures**

34AB-X43-001-1, Fire Procedure, Rev. 11.15  
 34SO-R42-001-1, 125 VDC and 125/250 VDC System, Rev. 12.10  
 42FH-ERP-014-O, Fuel Movement, Ver 17.14  
 34AB-F18-001-0, Dry Cask Storage and Handling Equipment Abnormal Conditions, Ver. 2.0  
 45QC-QCX-005-0, Concrete Inspection, Revision 0, Edition 5

### **Calculations and Evaluations**

Bechtel BH-GP-00100, Hatch Units 1 & 2 – Fire Induced Failures of Circuits Resulting in  
 LOSP

### **Licensing Basis Documents**

Fire Hazards Analysis and Fire Protections Program,  
 HBR2 Updated FSAR, Appendix 9.5.1A, Fire Hazards Analysis, Rev. 22

### **Drawings**

H-40144, Appendix “R” Raceways Diesel Generator Building (DSL 1A)  
 H-40145, Appendix “R” Raceways Diesel Generator Building (DSL 1B)  
 H-40146, Appendix “R” Raceways Diesel Generator Building (DSL 1C)  
 H-40178, Appendix “R” Raceways Control Bldg. El. 130’-0’  
 H-40179, Appendix “R” Raceways Control Bldg. El. 130’-0’  
 2212-7291, Sheet 1 of 2, Cask Storage Pad – Bottom Reinforcement (Field Drawings by  
 Gerdau), Revision 1  
 2212-7291, Sheet 2 of 2, Cask Storage Pad – Top Reinforcement (Field Drawings by Gerdau),  
 Revision 2  
 7607, Sheet 2, Dry Fuel Storage Project Cask Storage Pad Details, (by Holtec), Revision 7  
 7607, Sheet 3, Dry Fuel Storage Project Grading Sections, (by Holtec), Revision 7

### **List of NCRS Generated as a Result of This Inspection**

364483, Unit 1 DCP for remote operation of ‘B’ Station Service Battery Chargers

### **Worksheets**

1100624101C002, Version 1.0  
 1100624101C003, Version 1.0  
 1100624101C004, Version 1.0  
 1100624101C005, Version 2.0  
 1100624101C006, Version 2.0  
 1100624101C007, Version 2.0  
 1100624101C008, Version 2.0  
 1100624101C009, Version 2.0  
 1100624101C010, Version 1.0  
 1100624101C011, Version 1.0  
 1100624101C013, Version 1.0  
 1100624101C015, Version 2.0  
 1100624101C016, Version 1.0  
 1100624101C017, Version 1.0



1100624101C018, Version 2.0  
1100624101C019, Version 2.0  
1100624101C020, Version 1.0  
1100624101C022, Version 2.0  
1100624101C023, Version 1.0  
1100624101C024, Version 2.0  
1100624101C025, Version 2.0  
1100624101C026, Version 2.0  
1100624101C028, Version 2.0

Other

Letter of certification from cement supplier, Lafarge North America Cement, that cement supplied to concrete supplier, Evans Concrete, meets ASTM C-150 specifications, dated January 7, 2011

7-Day Compressive Test Results of Concrete Samples of ISFSI pad by AMEC, an independent materials testing laboratory

28-Day Compressive Test Results of Concrete Samples of ISFSI pad by AMEC, an independent materials testing laboratory