



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

October 21, 2010

Mr. Christopher L. Burton  
Vice President  
Carolina Power and Light Company  
Shearon Harris Nuclear Power Plant  
P. O. Box 165, Mail Code: Zone 1  
New Hill, North Carolina 27562-0165

**SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT - NRC INTEGRATED  
INSPECTION REPORT 05000400/2010004**

Dear Mr. Burton:

On September 30, 2010, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Shearon Harris reactor facility. The enclosed integrated inspection report documents the inspection results, which were discussed on September 30, 2010 with you 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.

Based on the results of this inspection, no findings were identified.

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 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/**

Randall A. Musser, Chief  
Reactor Projects Branch 4  
Division of Reactor Projects

Docket Nos.: 50-400  
License No.: NPF-63

Enclosure: NRC Inspection Report 05000400/2010004  
w/Attachment: Supplemental Information

October 21, 2010

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Shearon Harris Nuclear Power Plant

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Enclosure

Letter to Christopher L. Burton from Randall A. Musser dated October 21, 2010

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT - NRC INTEGRATED  
INSPECTION REPORT 05000400/2010004

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-400

License No.: NPF-63

Report No.: 05000400/2010004

Licensee: Carolina Power and Light Company

Facility: Shearon Harris Nuclear Power Plant, Unit 1

Location: 5413 Shearon Harris Road  
New Hill, NC 27562

Dates: July 1, 2010 through September 30, 2010

Inspectors: J. Austin, Senior Resident Inspector  
P. Lessard, Resident Inspector

Approved by: Randall A. Musser, Chief  
Reactor Projects Branch 4  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000400/2010004; July 1, 2010 – September 30, 2010; Shearon Harris Nuclear Power Plant, Unit 1; Routine Integrated Report.

The report covered a three month period of inspection by resident inspectors. No findings were identified during this inspection period.

A. NRC-Identified and Self-Revealing Findings

None

B. Licensee-Identified Violations

None

## REPORT DETAILS

### Summary of Plant Status

Unit 1 operated at or near Rated Thermal Power (RTP) for the entire inspection period.

#### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

#### 1R01 Adverse Weather Protection

##### .1 Readiness For Impending Adverse Weather Condition

###### a. Inspection Scope

On September 30, 2010, a tornado warning was issued for the plant area and inspectors reviewed the licensee's overall preparations/protection for impending adverse weather conditions. The inspectors walked down areas of the plant susceptible to high winds, including the licensee's emergency alternating current (AC) power systems. The inspectors evaluated the licensee staff's preparations against the site's procedures and determined that the staff's actions were adequate. During the inspection, the inspectors focused on plant specific design features and the licensee's procedures used to respond to specified adverse weather conditions. The inspectors also toured the plant grounds to look for any loose debris that could become missiles during a tornado. The inspectors evaluated operator staffing and accessibility of controls and indications for those systems required to control the plant. Additionally, the inspectors reviewed the Updated Final Safety Analysis Report (UFSAR) and performance requirements for systems selected for inspection, and verified that operator actions were appropriate as specified by plant specific procedures. Specific documents reviewed during this inspection are listed in the attachment.

###### b. Findings

No findings were identified.

#### 1R04 Equipment Alignment

##### .1 Quarterly Partial System Walkdowns

###### a. Inspection Scope

The inspectors performed three partial system walkdowns of the following risk-significant systems:

- "B" Emergency Diesel Generator (EDG) while it was protected to support elevated risk activities in the switchyard on August 12, 2010;

- “B” Essential Services Chilled Water (ESCW) while it was protected to support a planned maintenance outage on “A” ESCW on August 18, 2010;
- “A” Emergency Service Water (ESW) pump and structure while it was protected to support planned maintenance on “B” ESW Intake Screens on July 29, 2010.

The inspectors selected these systems based on their risk-significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, applicable portions of the UFSAR, Technical Specification (TS) requirements, outstanding work orders, condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program (CAP) with the appropriate significance characterization. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Quarterly Resident Inspector Tours

a. Inspection Scope

The inspectors conducted six fire protection walkdowns which were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- “A” Diesel, 261’ Elevation
- “A” Diesel, 280’ and 292’ Elevation
- Steam Tunnel
- Rod Control Cabinet Room
- Reactor Auxiliary Building (RAB), 286’ Elevation, Process Instrumentation Cabinet (PIC) Rooms “A” and “B” and Cable Vault
- RAB, 261’ Elevation, Boric Acid Batching, Access Hall to Fuel Pool Cooling System Heat Exchanger, Demineralizer and Filter Areas

The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and had implemented

adequate compensatory measures for out of service, degraded or inoperable fire protection equipment, systems, or features in accordance with the licensee's fire plan. The inspectors selected fire areas based on their overall contribution to fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the plant's ability to respond to a security event. Using the documents listed in the attachment, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed, that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's CAP.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification Program

.1 Quarterly Review

a. Inspection Scope

On August 20, 2010, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator requalification examinations to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems and training was being conducted in accordance with licensee procedures. The scenario tested the operators' ability to respond to a reactor coolant pump seal leak, followed by an anticipated transient without scram and then a loss of coolant accident was evaluated. The inspectors evaluated the following areas:

- Licensed operator performance
- Crew's clarity and formality of communications
- Ability to take timely actions in the conservative direction
- Prioritization, interpretation, and verification of annunciator alarms
- Correct use and implementation of abnormal and emergency procedures
- Control board manipulations
- Oversight and direction from supervisors
- Ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements.

The inspectors reviewed the following Action Request (AR) associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #417043, Licensed Operator Continuing Training Crew Unsuccessful on Session 10-05 Evaluated Scenario

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors assessed two performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the CAP with the appropriate significance characterization. Documents reviewed are listed in the attachment. The inspectors evaluated degraded performance issues involving the following two risk significant components:

- AR #408514, "B" (1SP-222) Steam Generator Sample Valve, Containment Isolation Valve Failed to Stroke;
- AR #409420, "B" Train Hydrogen Analyzer not responding.

The inspectors focused on the following attributes:

- Implementing appropriate work practices;
- Identifying and addressing common cause failures;
- Scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule;
- Characterizing system reliability issues for performance;
- Charging unavailability for performance;
- Trending key parameters for condition monitoring;
- Ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification; and
- Verifying appropriate performance criteria for structures, systems, and components (SSCs)/functions classified as (a)(2) or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the five maintenance and emergent work activities affecting risk-significant equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- Plant risk evaluated for Pressurizer Power Operated Relief Valve (PORV) Block Valve (1RC-117) being closed, as a result of potential leakage from PORV 1RC-118 on July 7, 2010. Risk remained green;
- Plant risk evaluated for removing "B" ESW and EDG from service for inspection of "B" ESW Suction line on July 31, 2010. Risk remained green;

- Elevated risk activity of heavy lift in the vicinity of offsite power supply lines on August 18, 2010;
- Unplanned unavailability of "A" High Head Safety Injection System on August 19, 2010;
- Plant risk evaluated for emergent failure of "B" Air Compressor on August 11, 2010. Risk remained green.

These activities were selected based on their potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

The inspectors reviewed the following AR associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #417271, Risk Management During Crane Operation

b. Findings

No findings were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors selected the following four potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and UFSAR to the licensee's evaluations, to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors also reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the attachment.

- AR #413629, Potential Negative Trend in Electros witch Failures;
- AR #412705, "B" Emergency Service Water Main Reservoir Intake Screens Corroded;
- AR #412719, Main Control Board Switch for 1RH-69 (Residual Heat Removal

- Recirculation Valve) Sticks in the Shut Position;
- AR #422193, “A” Containment Spray Eductor Flow; Flow Found Low out of Band during Testing.

b. Findings

No findings were identified.

1R18 Plant Modifications

a. Inspection Scope

The following engineering design package was reviewed and selected aspects were discussed with engineering personnel:

- Engineering Change #73321, Temporary Modification to Disable 1SW-179 (Chemical and Volume Control System (CVCS) Chiller Condensers “A” Supply Isolation Valve) in the Shut Position.

This document and related documentation were reviewed for adequacy of the associated 10 CFR 50.59 safety evaluation screening, consideration of design parameters, implementation of the modification, post-modification testing, and relevant procedures, design, and licensing documents were properly updated. The inspectors observed ongoing and completed work activities to verify that installation was consistent with the design control documents. This temporary modification replaced 1SW-179 with 1SW-180 (CVCS Chiller Condensers “B” Supply Isolation Valve) as the normal Emergency Service Water supply valve for the CVCS Chiller Condensers.

The inspectors reviewed the following AR associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #408665, 1SW-180 Jerky Operation During OST-1215

b. Findings

No findings were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors reviewed the following seven post-maintenance (PM) activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

<u>Test Procedure</u>	<u>Title</u>	<u>Related Maintenance Activity</u>	<u>Date Inspected</u>
OST-1042	Seismic Monitoring Operability Monthly Interval	Work Order (WO) #1785474 Tape Will Not Move Without Assistance	July 13, 2010
OST-1215	Emergency Service Water (ESW) System Operability Train "B" Quarterly Interval	WO #1753154, 1SW-247 (ESW return HDR to BNSW) and 130 (AFWPP 1B SW HDR) were Failed Closed to Support Maintenance	August 4, 2010
OST-1214	ESW System Operability Train "A" Quarterly Interval	WO #1752762, Maintenance was performed on BKR for 1SW-39 (NSW Supply to ESW HDRA) Valve MOV	August 12, 2010
OPT-1512	Essential Services Chilled Water (ESCW), Turbopak Units Quarterly Inspection/Checks Modes 1-6	WO #1056170, "A" ESCW Needs Refrigerant	August 20, 2010
OST-1093	Chemical and Volume Control System (CVCS) and Safety Injection System Operability Train "B" Quarterly Interval Modes 1-4	WO #1496509, PM-M0014, Limitorque Inspection on 1CS-753 ("B" CSIP Miniflow Valve)	August 31, 2010
OST-1076	"B" Motor Driven Auxiliary Feedwater (MDAFW) Pump Operability Test Quarterly Interval Modes 1-4	WO #1626177, Replace "B" Auxiliary Feedwater (AFW) Control Fuses, and Pump Suction and Discharge Pressure Cards	September 1, 2010
OST-1007	CVCS and Safety Injection System Operability Train "A" Quarterly Interval Modes 1-4	WO #1753481, MPT-E0024, Molded Case Circuit Breaker (Safe Shutdown) Test	September 13, 2010

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following: the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing, and test documentation was properly evaluated. The inspectors evaluated the activities against TS and the UFSAR to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with post-maintenance tests to determine whether the licensee was identifying problems and entering them in the CAP and that the problems were being corrected commensurate with their importance to safety. Documents reviewed are listed in the attachment.

The inspectors reviewed the following AR associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #417643, "A" ESCW Chiller 25 Relay Not Functioning Properly

b. Findings

No findings were identified.

1R22 Surveillance Testing

.1 Routine Surveillance Testing

a. Inspection Scope

For the six surveillance tests below, the inspectors observed the surveillance tests and/or reviewed the test results for the following activities to verify the tests met TS surveillance requirements, UFSAR commitments, inservice testing requirements, and licensee procedural requirements. The inspectors assessed the effectiveness of the tests in demonstrating that the SSCs were operationally capable of performing their intended safety functions.

- MST-I0001, Train "A" Solid State Protection System Actuation Logic and Master Relay Test on July 15, 2010;
- MST-I0126, Main Steamline Pressure, Loop 1 (P-0475), Operational Test on July 21, 2010;
- OST-1215, ESW System Operability Test Train "B" Quarterly Interval (partial test), completed on July 7, 2010;
- OST-1094, Sequence Block Circuit and Containment Fan Cooler Testing Train "A" Quarterly Interval on July 15, 2010;
- OST-1000, Power Range Heat Balance, Emergency Response Facility Information System (ERFIS) On-Line Calculation, Daily Interval Model 1 on July 10, 2010;
- OST-1038, Sampling, Chemical Addition and Main Steam Drain System Valve Test Quarterly Interval on July 16, 2010.

b. Findings

No findings were identified.

.2 In Service Testing (IST) Surveillance

a. Inspection Scope

The inspectors reviewed the performance of OST-1056, Containment Ventilation Isolation Valve In Service Testing Quarterly Interval Modes 1–6 on September 21, 2010, to evaluate the effectiveness of the licensee's American Society of Mechanical Engineers (ASME) Section XI testing program for determining equipment availability and reliability. This surveillance satisfies the IST requirements for the following components in the containment ventilation system:

- 1CP-3, Normal Purge Discharge Containment Isolation Valve
- 1CP-6, Normal Purge Inlet Containment Isolation Valve
- 1CP-5, Normal Purge Discharge Containment Isolation Valve
- 1CP-9, Normal Purge Discharge Containment Isolation Valve
- 1CB-6, Vacuum Relief "B" Train Containment Isolation Valve
- 1CB-2, Vacuum Relief "A" Train Containment Isolation Valve

The inspectors evaluated selected portions of the following areas:

- Testing procedures and methods;
- Acceptance criteria;
- Compliance with the licensee's IST program, TS, selected licensee commitments, and code requirements.

b. Findings

No findings were identified.

.3 Reactor Coolant System Leak Detection Inspection Surveillance

a. Inspection Scope

The inspectors observed and reviewed the test results for a reactor coolant system leak detection surveillance, OST-1026, Reactor Coolant System (RCS) Leakage Evaluation, Computer Calculation, Daily Interval, Modes 1-2-3-4, on August 31, 2010. The inspectors observed in plant activities and reviewed procedures and associated records to determine whether: effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing; acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis; plant equipment calibration was correct, accurate, and properly documented; and the calibration frequency were in accordance with TSs, the UFSAR, procedures, and applicable commitments; applicable prerequisites described in the test procedures were satisfied; test frequencies met TS requirements to demonstrate operability and reliability; tests were performed in accordance with the test procedures and other applicable procedures; test data and results were accurate, complete, within limits, and valid; equipment was returned to a position or status required to support the performance of its safety functions; and all problems identified during the testing were appropriately documented and dispositioned in the CAP. Documents reviewed are listed in the attachment.

The inspectors reviewed the following AR associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #419317, RCS Unidentified Leakage Trigger Point 1 Exceeded

b. Findings

No findings were identified.

## 1EP6 Emergency Planning Drill Evaluation

### a. Inspection Scope

The inspectors observed an emergency preparedness drill conducted on August 10, 2010, to verify licensee self-assessment of classification, notification, and protective action recommendation development in accordance with 10 CFR 50, Appendix E. The drill scenario response required actions to address Reactor Coolant System (RCS) leakage, component cooling water pump failure, loss of ERFIS, increasing containment pressure, residual heat removal pump failure and breach of fission product barriers.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #416729, Technical Support Center (TSC) Shift Technical Advisor Position not Filled for Drill;
- AR #416290, TSC Drill Enhancement Item;
- AR #416433, Insufficient Equipment to Perform Emergency Planning Duties;
- AR #416435, Staffing for Drills did not meet Minimum Requirements in Operational Support Center (OSC); and
- AR #416437, OSC Drill Improvement Items.

### b. Findings

No findings were identified.

## 4. OTHER ACTIVITIES

### 4OA1 Performance Indicator (PI) Verification

#### a. Inspection Scope

To verify the accuracy of the PI data reported to the NRC, the inspectors compared the licensee's basis in reporting each data element to the PI definitions and guidance contained in Nuclear Energy Institute (NEI) Document 99-02, Regulatory Assessment Performance Indicator Guideline.

#### Mitigating Systems Cornerstone

- Mitigating Systems Performance Index, Emergency AC Power
- Mitigating Systems Performance Index, Heat Removal System
- Mitigating Systems Performance Index, High Pressure Injection System

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI) performance indicators listed above for the period from the third quarter 2009 through the second quarter 2010. The inspectors reviewed the licensee's operator narrative logs, issue reports, MSPI derivation reports, event reports and NRC Integrated Inspection reports for the period to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the

change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator. Specific documents reviewed are described in the attachment to this report.

The inspectors reviewed the following ARs associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #272817, Annual Review of MSPI Basis Document;
- AR #381672, "B" Sequencer Load Block 5 Actuation During Clearance Removal;
- AR #356430, AFW Missed Unavailability Reporting;
- AR #361899, "B" MDAFW Pump Discharge And Suction Pressure Card Calibration Is Required;
- AR #401638, Steam Supply Segment Unavailability Reporting;
- AR #363501, "B" EDG Fuel Oil Day Tank Supply Valve Failed Post Maintenance Testing;
- AR #380543, Unplanned Inoperability of "B" EDG; and
- AR #322952, Volume Control Tank Outlet Isolation Valve Control Relay Failed Continuity Check.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems

.1 Routine Review of items Entered Into the Corrective Action Program

a. Inspection Scope

To aid in the identification of repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed frequent screenings of items entered into the licensee's CAP. The review was accomplished by reviewing daily AR reports.

b. Findings

No findings were identified.

.2 Annual Sample: Review of Operator Workarounds (OWAs)

a. Inspection Scope

The inspectors evaluated the licensee's implementation of their process used to identify, document, track, and resolve operational challenges. Inspection activities included, but were not limited to, a review of the cumulative effects of the OWAs on system availability and the potential for improper operation of the system, for potential impacts on multiple systems, and on the ability of operators to respond to plant transients or accidents. The inspectors performed a review of the cumulative effects of OWAs. The documents listed in the attachment were reviewed to accomplish the objectives of the inspection procedure. The inspectors reviewed both current and historical operational challenge

records to determine whether the licensee was identifying operator challenges at an appropriate threshold, had entered them into their CAP and proposed or implemented appropriate and timely corrective actions which addressed each issue. Reviews were conducted to determine if any operator challenge could increase the possibility of an Initiating Event, if the challenge was contrary to training, required a change from long-standing operational practices, or created the potential for inappropriate compensatory actions. Daily plant and equipment status logs, degraded instrument logs, and operator aids or tools being used to compensate for material deficiencies were also assessed to identify any potential sources of unidentified operator workarounds.

The inspectors reviewed the following AR associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- AR #396711, Harris Nuclear Plant (HNP) Operator Work Arounds Key Performance Indicator (KPI) Yellow

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 reviews and inspection activities.

b. Findings

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

On September 30, 2010, the inspectors presented the inspection results to Mr. Burton and other members of the licensee staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection period.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensee personnel**

C. Burton, Vice President Harris Plant  
J. Caves, Supervisor, Licensing/Regulatory Programs  
H. Curry, Manager, Nuclear Oversight  
J. Dills, Manager, Operations  
J. Dufner, Manager, Engineering  
K. Harshaw, Manager, Outage and Scheduling  
K. Henderson, Plant General Manager  
G. Kilpatrick, Training Manager  
M. Parker, Superintendent, Radiation Protection  
J. Robinson, Superintendent, Environmental and Chemistry  
T. Slake, Superintendent, Security  
J. Warner, Manager, Support Services

#### **NRC personnel**

R. Musser, Chief, Reactor Projects Branch 4, Division of Reactor Projects, Region II

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Opened and Closed

None

Discussed

None

## LIST OF DOCUMENTS REVIEWED

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

#### Procedures

- AP-300, Severe Weather
- AP-301, Seasonal Weather Preparations and Monitoring

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

#### Partial System Walkdown

Emergency Diesel Generator system:

- Procedure OP-155, Diesel Generator Emergency Power System,
- Drawing 2165-S-0633, Simplified Flow Diagram Emergency Diesel Generator System

Essential Services Chilled Water system:

- Procedure OP- 148 Essential Services Chill Water System,
- Drawing 2165-S-0998, Simplified Flow Diagram Essential Services Chill Water System

Service Water system:

- Procedure OP-139 Service Water System,
- Drawing 2165-G-0412, Simplified Flow Diagram Emergency Service Water Systems

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

- FPP-001, Fire Protection Program Manual
- FPP-004, Transient Combustible Control
- FPP-013, Fire Protection – Minimum Requirements, Mitigating Actions and Surveillance Requirements
- FPP-012-02-RAB261, Reactor Auxiliary Building Elevation 261 Fire Pre-Plan, A30, Steam Tunnel
- FPP-012-04-DBG, Diesel Generator Building Fire Pre-Plan, D01, Diesel Generator Room “A”, Elevation 261’, Exhaust Silencer Room, Elevation 292’
- FPP-012-04-DBG, Diesel Generator Building Fire Pre-Plan, D04, Diesel Generator “A” HVAC Duct Area, Elevation 280’
- FPP-012-04-DBG, Diesel Generator Building Fire Pre-Plan, D05, Diesel Generator “A” HVAC Area, Elevation 292’
- FPP-012-04-DBG, Diesel Generator Building Fire Pre-Plan, D02, Diesel Generator “A” Fuel Oil Day Tank Enclosure
- FPP-012-04-DBG, Diesel Generator Building Fire Pre-Plan, D03, Diesel Generator Room “A” Air Starting Units, Electrical Room and Unit 2 “A” Electrical Room, Elevation 261’
- FPP-012-02-RAB286, Reactor Auxiliary Building Elevation 286 Fire Pre-Plan, A41,

- PIC Room "A"
- FPP-012-02-RAB286, Reactor Auxiliary Building Elevation 286 Fire Pre-Plan, A43, PIC Room "B"
- FPP-012-02-RAB305-324, Reactor Auxiliary Building Elevations 305 and 324 Fire Pre-Plan, A50, Rod Control Cabinet Room
- FPP-012-02-RAB261, Reactor Auxiliary Building Elevation 261 Fire Pre-Plan, A20, Boric Acid Batching Area
- FPP-012-02-RAB261, Reactor Auxiliary Building Elevation 261 Fire Pre-Plan, A22, Demineralizer and Filter Area
- FPP-012-02-RAB261, Reactor Auxiliary Building Elevation 261 Fire Pre-Plan, A23, Access Hall to Fuel Pool Cooling System Heat Exchanger Area

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

- NUMARC 93-01, Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants
- ADM-NGGC-0101, Maintenance Rule Program

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

- OMP-003, Outage Shutdown Risk Management
- WCM-001, On-line Maintenance
- ADM-NGGC-0006, Online Equipment Out of Service (EOOS) Models for Risk Assessment

#### **Section 1R15: Operability Evaluations**

- OPS-NGGC-1305, Operability Determinations

#### **Section 1R18: Plant Modifications**

- ISI-801, Inservice Testing of Valves
- WO #687398, 1SW-180, Open and Inspect
- WO #687399, 1SW-179, Disconnect, Reconnect, Set Up and Test
- Inservice Testing Records for 1SW-180 and 1SW-179
- Valve Reference Parameters, 1SW-180
- DBD-128, Service Water System, Traveling Screens and Screen Wash System, Waste Processing Building Cooling Water System
- OP-139, Service Water System
- Drawing 2165-S-0547, Simplified Flow Diagram Circulating and Service Water Systems, Sheet 1
- EGR-NGGC-0005, Engineering Change

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

- FSAR 9.3.4, Chemical and Volume Control System
- Drawing 2165-S-1304, Simplified Flow Diagram Chemical and Volume Control System
- LP-P-2150B, Auxiliary Feedwater Pump "B" Discharge Pressure Loop Calibration

- LP-P-2250B, Auxiliary Feedwater Pump “B” Suction Pressure Loop Calibration

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

- OPS-NGGC-1303, Independent Verification
- WO 01677766, Perform MST-I0001 Train "A" SSPS Logic/Master Relay Test
- WO 01150425, Perform MPT-E0005 On Spare Reactor Trip Breaker
- MPT-E0005, Westinghouse Breaker Model DS-416
- OMM-024, Managing Liquid Waste Production
- Regulatory Guide 1.45, Reactor Coolant Pressure Boundary Leakage. Detection Systems

### **Section 40A1: Performance Indicator Verification**

- NEI 99-02, Regulatory Assessment Performance Indicator Guideline
- Calculation HNP-F/PSA-0068, NRC Mitigating System Performance Index Basis Document for Harris Nuclear Plant
- Control Wiring Diagram 2166-B-401 1790, Valve Overload & Torque Switch Bypass Relays
- Control Wiring Diagram 2166-B-401 0245, Volume Control Tank Outlet Isolation Valve
- Control Wiring Diagram 2166-B-401 0831, Auxiliary Transfer Panels

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

- CAP-NGGC-0200, Corrective Action Program