#### **UNITED STATES**



NUCLEAR REGULATORY COMMISSION

REGION II SAM NUNN ATLANTA FEDERAL CENTER 61 FORSYTH STREET SW SUITE 23785 ATLANTA, GEORGIA 30303-8931

October 25, 2004

Carolina Power and Light Company ATTN: Mr. James Scarola Vice President - Harris Plant 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 05000400/2004005

Dear Mr. Scarola:

On September 25, the US Nuclear Regulatory Commission (NRC) completed an inspection at your Shearon Harris reactor facility. The enclosed integrated inspection report documents the inspection findings, which were discussed on September 30, 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 of significance were identified. However, a licensee-identified violation, which was determined to be of very low safety significance, is listed in Section 4OA7 of this report. If you contest this non-cited violation, 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 Senior Resident Inspector at the Shearon Harris facility.

# CP&L

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) components of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at Web site at <u>http://www.nrc.gov/reading-rm/adams.html</u> (the Public Electronic Reading Room).

Sincerely,

# /**RA**/

Paul E. Fredrickson, Chief Reactor Projects Branch 4 Division of Reactor Projects

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

Enclosure: NRC Inspection Report 05000400/2004005 w/Attachment: Supplemental Information

cc w/encl: (See page 3)

### CP&L

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# U. S. NUCLEAR REGULATORY COMMISSION

# **REGION II**

Docket No:	50-400
License No:	NPF-63
Report No:	05000400/2004005
Licensee:	Carolina Power and Light Company
Facility:	Shearon Harris Nuclear Power Plant, Unit 1
Location:	5413 Shearon Harris Road New Hill, NC 27562
Dates:	June 27, 2004 - September 25, 2004
Inspectors:	<ul> <li>R. Musser, Senior Resident Inspector</li> <li>C. Welch, Acting Senior Resident Inspector</li> <li>P. O'Bryan, Resident Inspector</li> <li>S. Vias, Senior Reactor Inspector (Section 1R12)</li> <li>J. Austin, Resident Inspector (Section 1R04, 1R15, 40A2)</li> <li>P. Van Doorn, Senior Reactor Inspector (40A2)</li> </ul>
Approved by:	P. Fredrickson, Chief Reactor Projects Branch 4 Division of Reactor Projects

# SUMMARY OF FINDINGS

IR 05000400/2004-005; 6/27/2004 - 09/25/2004; Shearon Harris Nuclear Power Plant, Unit 1; Routine Integrated Report.

The report covered a three-month period of inspection by resident inspectors and a regional senior reactor engineer. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

### A. Inspector-Identified and Self-Revealing Findings

None

# B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. The violation and corrective action tracking number are listed in Section 40A7.

# **REPORT DETAILS**

### Summary of Plant Status

The unit began the inspection period at rated thermal power, and operated at or near rated power for the entire inspection period.

# 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

# 1R01 Adverse Weather Protection

a. Inspection Scope

Preparations for possible severe weather from a hurricane and several tornado watches (two actual weather samples) were reviewed during the period. On September 3, 2004, prior to the onset of Hurricane Frances, preparations were reviewed to ensure that the adverse weather conditions would neither initiate a plant event or prevent a system, structure, or component from performing its design safety function. The review included a site walkdown, discussion with plant staff, and review of Procedure AP-300, "Severe Weather Response." Additionally, actions taken by the site, in accordance with Procedure AP-300, for tornado watches issued for the local area on September 7 and 8, were also reviewed.

b. Findings

No findings of significance were identified.

### 1R04 Equipment Alignment

a. Inspection Scope

### Partial System Walkdowns:

The inspectors performed the following three partial system walkdowns, while the indicated structures, systems and components (SSCs) were out-of-service for maintenance and testing:

- A residual heat removal (RHR) train with B RHR train out-of-service (OOS) on July 7.
- A emergency diesel generator (EDG) with B EDG OOS on July 14.
- B emergency service water (ESW) train with A ESW train OOS on August 17.

To evaluate the operability of the selected trains or systems under these conditions, the inspectors reviewed valve and power alignments by comparing observed positions of valves, switches, and electrical power breakers to the procedures and drawings listed in the attachment.

# Complete System Walkdown;

The inspectors conducted a detailed review of the auxiliary feedwater system (AFW) to verify the system was properly aligned and to assess the systems material condition. The review included a full system walkdown and reviews of action reports (ARs), work orders, the system health report, Maintenance Rule information, operability evaluations, the safety system unavailability performance indicator, and an interview with the system engineer. To determine the system was correctly aligned and capable of fulfilling its safety function, the inspectors reviewed the Final Safety Analysis Report (FSAR), the Technical Specifications (TS), Operations Surveillance Test OST-1411, "Auxiliary Feedwater Pump Operability Test;" Operating Procedure OP-137, "Auxiliary Feedwater System Operating Procedure;" Design Bases Document, DBD-114, "Auxiliary Feedwater System;" and system flow diagrams.

b. Findings

No findings of significance were identified.

- 1R05 Fire Protection
- a. Inspection Scope

### Routine Fire Zone Inspections

For the 15 areas identified below, the inspectors reviewed the licensee's control of transient combustible material and ignition sources, fire detection and suppression capabilities, fire barriers, and any related compensatory measures, to verify that those items were consistent with FSAR Section 9.5.1, Fire Protection System, and FSAR Appendix 9.5.A, Fire Hazards Analysis. The inspectors walked down accessible portions of each area and reviewed results from related surveillance tests, to verify that conditions in these areas were consistent with descriptions of the applicable FSAR sections. Documents reviewed are listed in the attachment.

- 236' auxiliary feedwater, charging/safety injection pump areas and component cooling water pump area (1-A-3-PB), the 236' residual heat exchanger areas (1-A-34-RHRA and 1-A-34-RHRB), and the 236' tank area (1-A-3-TA) in the reactor auxiliary building
- 261' electrical penetration areas (1-A-EPA and 1-A-EPB) and charcoal filter areas (1-A-4-CHFA and 1-A-4-CHFB)
- 236' mechanical penetration (scalloped) area (1-A-3-MP)
- Switchgear room A (1-A SWBRA)
- Switchgear room B (1-A-SWGRB)
- 236' south west corridor of the reactor auxiliary building (1-A-3-COR)
- Main control room (12-A-CR)

- Computer room, process instrument control cabinets, and control-rod-drive circuit cabinets (12-A-CRC1)
- Turbine building (TB)
- 261' north aisle way motor control centers (1-A-4-COME,1A-35SA & 1A-35SB)
- Vital battery room B (1-A-BATB)
- Cable spreading room B (1-A-CSRB)
- 261' boric acid tank and batch processing area (1-A-4-COMB)
- 261' south electrical penetration area (1-A-EPA)
- 261' chiller area (1-A-4-CHLR)

### Annual Fire Drill Review

To evaluate the readiness of the licensee's personnel to prevent and fight fires, the inspectors observed fire brigade performance during an unannounced fire drill in the "C" CSIP Room on August 1, 2004.

b. Findings

No findings of significance were identified.

### 1R06 Flood Protection Measures

a. Inspection Scope

### External Flooding;

The inspectors performed the annual review of the licensee's ability to cope with and mitigate external floods. The inspection was accomplished by review of the licensee's external flooding analyses; described in sections 2.4, Hydrologic Engineering; 2.4.10, Flooding Protection Requirements; and 3.4, Water Level (Flood) Design of the Final Safety Analysis Report (FSAR); a site area walkdown; during which a selection of storm drains were inspected for debris that could impede site drainage; and by review of digital photographs of safety-related electrical cables and their associated support structures located in the underground cable vaults. The inspector reviewed FSAR section 8.3.1.2.37, Underground Raceway Design; to ascertain if the electrical cables are suitable for wet applications.

#### Internal Flooding

The inspectors reviewed the licensee's internal flooding analyses for postulated piping failures and selected the reactor auxiliary building 190 and 236 foot elevations for detailed review to verify that the area configurations, features, and equipment functions were consistent with the descriptions and assumptions used in FSAR Section 3.6A.6, Flooding Analysis, and in the supporting basis documents listed in the Attachment. Risk significant components located on the 236 foot elevation include the auxiliary feedwater pumps, the component cooling water pumps, and the charging/safety injection pumps. Risk significant components on the 190 foot elevation include the containment spray

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and residual heat removal pumps. The inspectors reviewed the operator actions credited in the analysis, to verify that the desired results could be achieved using the plant procedures listed in the Attachment. The inspection constituted one sample for internal flooding of two risk significant areas.

The inspectors also reviewed AR 136106 to verify that the licensee was identifying issues in this area and had implemented or planned appropriate corrective actions.

b. Findings

No findings of significance were identified.

# 1R11 Licensed Operator Regualification

a. Inspection Scope

On August 16, 2004, the inspectors observed licensed-operator performance during simulator training for crew C, to verify that operator performance was consistent with expected operator performance, as described in Licensed Operator Requalification Simulator Examination Scenario DSS-030. This training tested the operators' ability to respond to a steam generator tube leak. The inspectors focused on clarity and formality of communication, the use of procedures, alarm response, control board manipulations, group dynamics and supervisory oversight. The inspectors observed the post-exercise critique to verify that the licensee had identified deficiencies and discrepancies that occurred during the simulator training.

The inspectors reviewed the following ARs associated with this area to verify that the licensee was identifying issues and had implemented or planned appropriate corrective actions.

- AR 135444, Unsat EAL Event Classification During Simulator Evaluation
- AR 136745, Failure to Correctly Classify an UE During Simulator Exercise
- AR 136704, Unsat EAL Classification During Evaluated Scenario

### b. Findings

No findings of significance were identified.

### 1R12 Maintenance Effectiveness

#### a. Inspection Scope

### **Routine Maintenance Effectiveness**

The inspectors reviewed the follow-up actions for selected maintenance issues related to the A emergency service water (ESW) screen wash, and reviewed the performance history of the screen wash to assess the effectiveness of the licensee's maintenance activities.

The inspectors reviewed problem identification and resolution actions for these issues in accordance with site procedures and the requirements of 10 CFR 50.65(a)(1) and (a)(2), "Requirements for Monitoring the Effectiveness of Maintenance."

The inspectors reviewed the following ARs associated with the ESW system to verify that the licensee was identifying issues and had implemented or planned appropriate corrective actions.

- AR 97963, "A ESW Screen Wash Pump Thrust Bearing Locknut Backwards"
- AR 135129, "Failure of A ESW Screen Wash System."

This inspection focused on the following attributes: appropriate work practices, identifying and addressing common cause failures, scoping in accordance with 10 CFR 50.65(b), characterizing reliability issues (performance), charging unavailability (performance), trending key parameters (condition monitoring), 10 CFR 50.65(a)(1) or (a)(2) classification and reclassification, and appropriateness of performance criteria for SSCs/functions classified (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs/functions classified (a)(1).

#### **Biennial Periodic Evaluation**

The inspector reviewed the licensee's Maintenance Rule periodic assessment, "Harris Nuclear Plant - Maintenance Rule Cycle 11, Periodic (a)(3) Assessment, January 3, 2002 through June 30, 2003, for Maintenance Rule Implementation while on-site the week of June 28, 2004. The report was issued to satisfy paragraph (a)(3) of 10 CFR 50.65, and covered the period as indicated. The inspection was to determine the effectiveness of the assessment and that it was issued in accordance with the time requirement of the Maintenance Rule and included evaluation of: balancing reliability and unavailability, (a)(1) activities, (a)(2) activities, and use of industry operating experience. To verify compliance with 10 CFR 50.65, the inspector reviewed selected Maintenance Rule activities covered by the assessment period for the following Maintenance Rule systems and equipment:

- Auxiliary Feedwater (3065),
- Post Accident Hydrogen (2075),
- Rod Control (1065),

- Instrument Air (6135),
- Civil structures.

During the inspection, the inspectors reviewed selected plant work order data, the site guidance implementing procedure, discussed and reviewed relevant corrective action issues (NCRs), reviewed generic operations event data, online work week scheduling, and discussed issues with cognizant system engineers. Operational event information was evaluated by the inspectors in its use in Maintenance Rule functions. The inspectors selected work orders, Maintenance Rule assessments, and other corrective action documents of systems recently removed from 10 CFR 50.65 a(1) status and those in a(2) status for some period to assess the justification for their status. The documents were compared to the site's Maintenance Rule program criteria, and the Maintenance Rule a(1) evaluations and rule related data bases. Specific procedures and documents reviewed are listed in the attachment to this report.

b. Findings

No findings of significance were identified.

# 1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the licensee's risk assessments and the risk management actions for the plant configurations associated with the four activities listed below. The inspectors verified that the licensee performed adequate risk assessments, and implemented appropriate risk management actions when required by 10CFR50.65(a)(4). For emergent work, the inspectors also verified that any increase in risk was promptly assessed, and that appropriate risk management actions were promptly implemented.

- Emergent work on 'A' normal service water pump the week of July 12.
- Emergent work on 'A' normal service water pump the week of July 19.
- Planned maintenance on 'A' EDG the week of September 13.
- Emergent work on the 'B' motor-driven auxiliary feedwater pump motor over current relay on September 14.

The inspectors reviewed the following action requests associated with this area to verify that the licensee was identifying issues and had implemented or planned appropriate corrective actions.

- AR 136230, Inadequate Risk Assessment of Tornado Watch
- AR 137339, Risk Assessment Not Performed

### b. Findings

No findings of significance were identified.

## 1R14 Operator Performance During Non-Routine Evolutions and Events

### a. Inspection Scope

The inspectors attended the pre-evolution briefs and observed performance of the following infrequently performed evolutions. The inspections focused on command and control, communications, procedure and TS adherence, use of self-checking and peer checking techniques, and as applicable oversight of contractor personnel.

- EST-223, "Insitu Main Steam Safety Valve Testing Using Assist Device."
- EST-702, "Moderator Temperature Coefficient EOL."

### b. Findings

No findings of significance were identified.

# 1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the operability evaluations associated with the seven issues listed below, which affected risk significant systems or components, to assess as appropriate: (1) the technical adequacy of the evaluations; (2) the justification of continued system operability; (3) any existing degraded conditions used as compensatory measures; (4) the adequacy of any compensatory measures in place, including their intended use and control; and (5) where continued operability was considered unjustified, the impact on TS limiting conditions for operations (LCOs) and the risk significance. In addition to the reviews, discussions were conducted with the applicable system engineer regarding the ability of the system to perform its intended safety function.

- AR 117085, Motor Driven Auxiliary Feedwater (MDAFW) pump may be rendered inoperable, if the MDAFW pump is stopped or the flow control valves are throttled after an actuation when Steam Generator levels have been restored.
- AR 131173, A Chiller Reaches Administrative Limit of 54 Amps.
- WR156745, Control room air handlers reached OST-1131 action levels for vibration on August 1.
- AR 132130, Boraflex degradation of BWR fuel storage racks in "A" and "B" spent fuel pools.
- AR 134764, HNP/RNP Shutdown Boron Requirements.
- AR 135743, "Incorrect rated secondary fuse in installed in MCC cubicle."
- AR 135763, "Incorrect model fuse installed in MCC cubicle 1B21SB-12A.

# b. Findings

No findings of significance were identified.

# 1R19 Post-Maintenance Testing

### a. Inspection Scope

For the five post-maintenance tests listed below, the inspectors witnessed the test and/or reviewed the test data, to verify that test results adequately demonstrated restoration of the affected safety functions described in the FSAR and TS. The tests included the following:

- OPT-1511, "Emergency Diesel Generator Overspeed Trip Test Modes 1-6" after maintenance on the B Emergency Diesel Generator on July 15.
- OST-1087, "Motor Driven Auxiliary Feedwater Pumps Full Flow Test Quarterly Interval Mode 1" after maintenance on valve 1AF-31.
- OST-1215, "Emergency Service Water System Operability Train B Quarterly Interval Modes 1-2-3-4;" (Partial) following replacement of solenoid FSE-SW-B65SB for air operated valve 1SW-118.
- OST-1076, "Auxiliary Feedwater Pump 1B-SB Operability Test Quarterly Interval Modes 1-4;" (Partial) and PIC-E070, "Pulsemaster Computer Driven Relay Calibration," following replacement of the B motor driven auxiliary feedwater pump motor B phase over current relay.
- OST-1013, "1A-SA Emergency Diesel Generator Operability Test Monthly Interval Modes 1-2-3-4-5-6;" (Partial) after maintenance on the A Emergency Diesel Generator on September 15.

The inspectors reviewed the following ARs associated with this area to verify that the licensee was identifying issues and had implemented or planned appropriate corrective actions.

- AR 137829, EDG-A Load Gain Adjustment As-Left Value Out-of-Spec
- AR 135892, 1SW-118 Closed Too Slow During OST-1010
- AR 137631, 1DLO-5 Guide Ring Set Different Than Test Data Report
- AR 138416, RFO-12 MSSV Test Failures

# b. Findings

No findings of significance were identified.

#### 1R20 Refueling and Outage Activities

### a. Inspection Scope

### **Refueling Activities**

The inspectors observed licensee personnel conduct receipt inspection activities for a sample of new fuel shipments in accordance with Fuel Management Procedure FMP-106, "New Fuel Receipt Inspection and Storage Location Verification." The inspection was performed to verify inspection personnel identified foreign material concerns, questionable indications on the fuel bundles, and tripped accelerometers. The inspectors verified proper foreign material controls were being observed and that new fuel was being stored as specified in Procedure FMP-106.

### b. Findings

No findings of significance were identified.

#### 1R22 <u>Surveillance Testing</u>

a. Inspection Scope

For the seven surveillance tests identified below, the inspectors witnessed testing and/or reviewed test data, to verify that the SSCs involved in these tests satisfied the requirements described in the TS and the FSAR, and that the tests demonstrated that the SSCs were capable of performing their intended safety functions.

- OST 1011, "Auxiliary Feedwater System Operability Test, Monthly Interval Mode 1-4" on July 12
- MST I0238, "Containment Pressure (P-0952) Operational Test"
- OST-1093\*, "CVCS/SI System Operability Train B Quarterly Interval Modes 1-4"
- EPT-250, "A Train ESW Flow Verification/Balance"
- EST-702, "Moderator Temperature Coefficient EOL"
- EST-212\*\*, "Type C Local Leak Rate Test;" Attachment 47 for 1FP-347.
- EST-223\*, "Insitu Main Steam Safety Valve Testing Using Assist Device."

\*This procedure included inservice testing requirements.

\*\* This procedure included testing of a large containment isolation valve.

On August 25, 2004, the inspectors observed the annual full activation test of the ANS sirens from the licensee's computer console. The alert and notification system (ANS) is identified in 10CFR50.47(b)(5) as a risk significant emergency planning standard. Test results were reviewed with station personnel and verified acceptable in accordance with established acceptance criteria (>90% pass) defined in Procedure EPM-400, "Public Notification and Alerting System."

The inspectors verified procedures were in place to conduct backup route alerting in a timely manner for the effected zones containing the three sirens that failed during the test (E10, 69, 72) and the one siren (19) that was not tested.

The inspectors reviewed the following ARs associated with this area to verify that the licensee was identifying issues and had implemented or planned appropriate corrective actions.

- AR 135756, Annual Full Volume Siren Tests Failures
- AR 137057, Minimum Staffing for Call in Test not Met
- b. <u>Findings</u>

No findings of significance were identified.

- 4. OTHER ACTIVITIES
- 4OA1 Performance Indicator Verification
- a. Inspection Scope

For the performance indicator (PI) listed below, the inspectors sampled licensee submittals for the period from January 1, 2004 through June 30, 2004. To verify the accuracy of the PI data reported during that period, the inspectors compared the licensee's basis in reporting each data element to the PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Rev. 2.

### Reactor Safety Cornerstone

Reactor Coolant system Leakage PI

The inspectors reviewed licensee event reports, records of inoperable equipment, and Maintenance Rule records, to verify that the licensee had adequately accounted for functional failures that the subject systems had experienced during the previous four quarters. The inspectors also reviewed the number of hours those systems were required to be available and the licensee's basis for identifying functional failures.

b. Findings

No findings of significance were identified.

### 4OA2 Identification and Resolution of Problems

### a. Inspection Scope

### Annual Sample Reviews

### <u>AR 124873</u>

The inspectors performed an in-depth review of AR 124873, Turbine Driven Auxiliary Feedwater (TDAFW) Pump Governor Failed to Control During Engineering Periodic Test EPT-283, to verify that conditions adverse to quality were addressed in a manner commensurate with the safety significance of the issue. The inspectors reviewed the actions taken to verify that the licensee adequately addressed the following attributes:

- Complete, accurate, and timely identification of the problem.
- Evaluation and disposition of operability and reportability issues.
- Consideration of previous failures, extent of condition, generic or common cause implications.
- Prioritization and resolution of the issue commensurate with its safety significance.
- Identification of the root cause and contributing causes of the problem.
- Identification and implementation of corrective actions commensurate with the safety significance of the issue.

### <u>AR 110923</u>

The inspector selected AR 110923 for review. This AR involved whether 10 CFR 50.59 and Generic Letter (GL) 91-18 requirements had been met for long standing clearances (up to five years old) and whether these problems had been corrected in a timely fashion. The AR was reviewed to verify that the licensee had appropriately evaluated the clearances and initiated appropriate corrective actions. The inspectorss evaluated the AR, associated procedures, the licensee evaluation, the clearance list, revised system impact review forms, and the FSAR.

b. Findings and Observations

No findings of significance were identified.

### 4OA3 Event Follow-up

(Closed) Licensee Event Report (LER) 50-400/2004-001: 'A' Containment Hydrogen Analyzer Inoperable. The inspectors reviewed the licensee's actions associated with LER 50-400/2004-001. The 'A' containment hydrogen monitor was not operable from November 17, 2003 to February 9, 2004 due to a maintenance error. On November 17, 2003 a maintenance technician inadvertently reversed two electrical leads in the 'A' containment hydrogen analyzer control circuitry. The error remained undetected until February 9, 2004. Corrective actions were described in AR 117670. The LER provided

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an accurate description of the event and follow-up actions. The enforcement aspects of the event are discussed in Section 4OA7. This LER is closed.

### 4OA6 Meetings, Including Exit

On September 30, 2004, the inspectors presented the inspection results to Mr. Scarola and other members of his staff. The inspectors stated that although proprietary information was reviewed during the inspection period, the proprietary information would not be included in the inspection report.

### 4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a non-cited violation.

TS 3.6.4.1 requires that two independent containment hydrogen monitors be operable. Contrary to this requirement, the 'A' containment hydrogen monitor was not operable from November 17, 2003 to February 9, 2004 due to a maintenance error. On November 17, 2003 a maintenance technician inadvertently reversed two electrical leads in the 'A' containment hydrogen analyzer control circuitry. The error remained undetected until February 9, 2004. The finding was determined to be of very low safety significance (Green) since it did not contribute to the likelihood of core damage and is not important in-terms of the large early release frequency (LERF). The finding, associated with the human performance attribute of the barrier integrity cornerstone, was more than minor because it affected the barrier integrity cornerstone objective of providing reasonable assurance that physical design barriers provide protection from radionuclide releases and other hazards caused by accidents or events. Since this issue has been entered into the corrective action program (AR 117670), this violation is being treated as a non-cited violation (NCV), consistent with Section VI.A of the NRC Enforcement Policy.

ATTACHMENT: SUPPLEMENTAL INFORMATION

# SUPPLEMENTAL INFORMATION

# **KEY POINTS OF CONTACT**

Licensee personnel

D. Braund, Superintendent, Security

J. Briggs, HNP, Superintendent, Environmental and Chemical Dave Corlett, Supervisor - Licensing/Regulatory Programs Dave

J. Caves, Supervisor - Licensing/Regulatory Programs

F. Diya, Manager - Engineering

R. Downey, Maintenance Rule Coordinator

R. Duncan, Director - Site Operations

W. Gurganious, Manager - Nuclear Assessment

K. Heffner, Licensing Engineer

E. McCartney, Training Manager

G. Miller, Maintenance Manager

T. Morton, Manager - Support Services

T. Natale, Manager -Outage and Scheduling

T. Pilo, Supervisor - Emergency Preparedness

J. Scarola, Vice President Harris Plant

G. Simmons, Superintendent - Radiation Control

E. Wills, Operations Manager

B. Waldrep, General Manager Harris Plant

M. Wallace, Licensing Specialist

J. Yadusky, Lead Engineer, Licensing, Harris Nuclear Plant

NRC personnel

P. Fredrickson, Chief, Reactor Projects Branch 4

# LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Opened</u>

None

Opened and Closed

None

Closed

05000400/2004-001-00 LER

'A' Containment Hydrogen Analyzer Inoperable (Section 40A7)

Discussed

None

Attachment

# LIST OF DOCUMENTS REVIEWED

# 1R04 Equipment Alignment

# Partial System Walkdown

Residual Heat Removal system:

- Procedure OP-111, "Residual Heat Removal System,"
- Drawing 2165-S-1324, "Simplified Flow Diagram LATER Systems

Emergency Diesel Generator system:

- Procedure OP-155, "Diesel Generator Emergency Power System,"
- Drawing 2165-S-0633 S03, "Simplified Flow Diagram Emergency Diesel Generator 1A-SA and 1B-SB Starting Air System Unit 1", and Drawing 2165-S-0633 S04, "Simplified Flow Diagram Emergency Diesel Generator 1A-SA and 1B-SB Fuel Oil and Drainage Systems Unit 1,"

Emergency Service Water system:

- Procedure OP-139, "Service Water System,"
- Drawing 2165-S-0547, "Simplified Flow Diagram Circulating and Service Water Systems

### Complete System Walkdown

- Procedure OP-137, Auxiliary Feedwater System Operating Procedure
- Surveillance Test -1411, Auxiliary Feedwater Pump Operability Test
- Design Basis Document -Auxiliary Feedwater System DBD-114. "LATER"
- Drawing 2165-S-0544, "Simplified Flow Diagram Feedwater", Revision 39
- Drawing 2165-S-0545, "Simplified Flow Diagram Condensate and Air Evacuation", Revision 52
- FSAR section 10.4.9

### 1R05 <u>Fire Protection</u>

### Procedures:

- results from FPT-3205, "Fire Detector Functional Test Local Fire Detector Panel 5 12 Month Interval"
- results from FPT-3206, "Fire Detector Functional Test Local Fire Detector Panel 6 12 Month interval"
- results from FPT-3207, "Fire Detector Functional Test Local Fire Detector Panel 7 12 Month Interval"
- results from FPT-3151, "Fire Extinguisher Inspection: Auxiliary Building Monthly Interval"
- results from OPT-3010, "Fire Hose Service Test Various Intervals"
- results from FPT-3425, "Fire Damper Inspection 18 Month Interval RAB 286 Elevation"

- results from FPT-3426, "Fire Damper Inspection 18 Month Interval RAB 236 Elevation and 261 Elevation Modes: All"
- results from FPT-3550, "Fire Penetration Seal Visual Inspection 18 Month Interval"

# 1R06 Flood Protection Measures

## Calculations:

- Appendix I to the HNP Probabilistic Safety Assessment, "Internal Flooding Analysis"
- Calculation #PRA-F/E-4, "RAB Unit 1 Elevation 190' & 216' Flood Analysis"
- Calculation #PRA-F/E-5, "RAB Unit 1Elevation 236 Compartment Flood Analysis"
- Calculation #PRA-F/E-6, "RAB Unit 1Elevation 261 Compartment Flood Analysis"
- Calculation #PRA-F/E-7, "RAB Unit 1Elevation 286 Compartment Flood Analysis"
- Calculation #PRA-F/E-8, "RAB Unit 1Elevation 305 Compartment Flood Analysis"

# Procedures:

- AOP-022, "Loss of Service Water"
- OP-139, "Service Water System"

# 1R12 Maintenance Effectiveness Review

- FSAR section 9.2.1, "Service Water Systems"
- NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants"
- ADM-NGGC-0101, "Maintenance Rule Program"

# (Biennial) Documents Reviewed

# MR - Corrective Action Program Documents

MR Functional Failures for systems 3065, 1065, 2075, and 6135 the following report documents were reviewed:

- MR Scoping and Performance Criteria
- MR Event Log Report
- MR Performance Summary
- MR 18 Month Unavailability Trend
- Corrective Maintenance Work Orders (MWO)
- Action Requests (AR)
- System Scoping Review
- MR Functional Failures
- MR Plant Level Events
- MR (a)(1) Systems

- MR Expert Panel Meeting Minutes
- 04-05, 3/25/04
- 03-08, 10/1/03
- MR Monthly Report
- January & February 2004
- March 2004
- April 2004
- MR SSCs Monitored for Unavailability
- MR System Health Indicator Panel
- Equipment Performance Priority List
- Equipment Performance Action Plan

# Administrative Procedures

- ADM-NGGC-0101, Maintenance Rule Program, Revision 17
- EGR-NGGC-0351, Condition Monitoring of Structures, Revision 12

### Miscellaneous

- H-ES-03-01, Harris Engineering Functional Area Assessment, 4/23/2003
- Significant Adverse Condition Investigation Reports
- Engineering Changes (EC) Reports

# 1R13 Maintenance Risk Assessments and Emergent Work Evaluation

- WCM-001, On-Line Maintenance Risk Management
- 1R15 Operability Evaluations
  - OST-1131, "Control Room Area HVAC ISI Test Quarterly Interval, All Modes"
  - FSAR Section 6.4, "Habitability Systems"
  - FSAR Section 6.6, "Inservice Inspection of Class 2 and 3 Components"
- 1R19 Post Maintenance Testing
  - Set Point Document 2166-S-302
  - Work Order 00613672,1B-SB-3 B phase O/C Relay Replacement.
  - Work Order 00599841, Perform MPT-I0018 ASCO Environmental Qualified Solenoid Valve Replacement.
- 1R22 <u>Surveillance Testing</u>
  - EPM-400, "Public Notification and Alerting System."
  - PLP-201, "Emergency Plan."
  - Shearon Harris Nuclear Power Plant Site-Specific Offsite Radiological Emergency Preparedness Alert and Notification System Quality Assurance Verification, April 23, 1990.
  - NUREG-0654 / FEMA-REP-1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.
  - Chatham County Emergency Plan, Part 2, Section IV.
  - Siren and Mobile Route Alerting card K-2 Moncure Fire Department
  - AR 00135756, Annual Full Volume Siren Test Failures
  - Lee County Operating Guide for the Harris Plant Siren System Quickpanel Jr.

Operation.

- Calculation HNP-F/NFSA-0127, Analytic Determination of EOL MTC Uncertainty •
- Application PLP-106, Technical Specification Equipment List Program and Core Operating • Limits Report.