



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET SW SUITE 23T85
ATLANTA, GEORGIA 30303-8931**

April 25, 2002

Carolina Power & 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 50-400/01-06**

Dear Mr. Scarola:

On March 30, 2002, the Nuclear Regulatory Commission (NRC) completed an inspection at your Shearon Harris reactor facility. The enclosed report documents the inspection findings which were discussed on April 4, 2002, 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.

No findings of significance were identified.

In accordance with 10 CFR 2.790 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 <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Brian R. Bonser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

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

Enclosure: Inspection Report

cc w\encl: (See page 2)

cc w/encl:

Terry C. Morton, Manager
Performance Evaluation and
Regulatory Affairs CPB 9
Carolina Power & Light Company
Electronic Mail Distribution

Robert J. Duncan II
Director of Site Operations
Carolina Power & Light Company
Shearon Harris Nuclear Power Plant
Electronic Mail Distribution

Benjamin C. Waldrep
Plant General Manager--Harris Plant
Carolina Power & Light Company
Shearon Harris Nuclear Power Plant
Electronic Mail Distribution

James W. Holt, Manager
Support Services
Carolina Power & Light Company
Shearon Harris Nuclear Power Plant
Electronic Mail Distribution

John R. Caves, Supervisor
Licensing/Regulatory Programs
Carolina Power & Light Company
Shearon Harris Nuclear Power Plant
Electronic Mail Distribution

William D. Johnson
Vice President & Corporate Secretary
Carolina Power & Light Company
Electronic Mail Distribution

John H. O'Neill, Jr.
Shaw, Pittman, Potts & Trowbridge
2300 N. Street, NW
Washington, DC 20037-1128

Mel Fry, Director
Division of Radiation Protection
N. C. Department of Environmental
Commerce & Natural Resources
Electronic Mail Distribution

Peggy Force
Assistant Attorney General
State of North Carolina
Electronic Mail Distribution

Public Service Commission
State of South Carolina
P. O. Box 11649
Columbia, SC 29211

Chairman of the North Carolina
Utilities Commission
P. O. Box 29510
Raleigh, NC 27626-0510

Robert P. Gruber
Executive Director
Public Staff NCUC
P. O. Box 29520
Raleigh, NC 27626

Linda Coleman, Chairman
Board of County Commissioners
of Wake County
P. O. Box 550
Raleigh, NC 27602

Gary Phillips, Chairman
Board of County Commissioners
of Chatham County
Electronic Mail Distribution

Distribution w/encl: (See page 3)

Distribution w/encl:
 John Goshen, NRR
 RIDSNRRDIPMLIPB
 PUBLIC

OFFICE	DRP/RII	DRP/RII	DRP/RII				
SIGNATURE	GMacDonald:vg	JBrady	BHagar				
NAME	gm	jb	bh				
DATE	4/23/2002	4/19/2002	4/19/2002				
E-MAIL COPY?	YES NO	YES NO	YES NO				

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

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

Report No: 50-400/01-06

Licensee: Carolina Power & Light (CP&L)

Facility: Shearon Harris Nuclear Power Plant, Unit 1

Location: 5413 Shearon Harris Road
New Hill, NC 27562

Dates: December 30, 2001 - March 30, 2002

Inspectors: J. Brady, Senior Resident Inspector
R. Hagar, Resident Inspector
G. MacDonald, Senior Project Engineer (Sections 1R17 & 1R04)

Approved by: B. Bonser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000400-01-06, on 12/30/2001 - 03/30/2002, Carolina Power & Light, Shearon Harris Nuclear Power Plant, Unit 1. Baseline integrated resident inspection report.

The inspection was conducted by resident inspectors and a senior project engineer. The significance of most findings is indicated by their color (green, white, yellow, red) using IMC 0609 Significance Determination Process (SDP). Findings for which the SDP does not apply are indicated by No Color or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at <http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/index.html>.

A. Inspector Identified Findings

No findings were identified during this inspection period.

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 appear reasonable. This violation is listed in Section 40A7 of this report.

Report Details

Summary of Plant Status

At the beginning of the inspection period, the unit was in Mode 5, following the steam generator replacement outage. Reactor startup began on January 2. A manual reactor trip was inserted on January 2 due to a failed feedwater regulating bypass valve. The unit was restarted on January 4 and was synchronized to the grid. The unit achieved full power on January 6. The unit operated at 100% of rated thermal power until February 1, when power was reduced to 49% to repair a condensate booster pump seal. The unit returned to 100% on February 3 and remained there for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R04 Equipment Alignment

a. Inspection Scope

Partial Walkdown

For the three systems identified below, the inspectors reviewed the identified plant documents to determine correct system lineup, and observed equipment to verify that the system was correctly aligned:

A charging/safety injection pump with B charging/safety injection pump out of service on January 30

- Procedure OP-107, Chemical and Volume Control System
- Procedure OP-110, Safety Injection System
- Drawing 2165-S-1305, Simplified Flow Diagram Chemical & Volume Control System
- Drawing 2165-S-1308, Simplified Flow Diagram Safety Injection System

A Containment Spray while the B train was out of service on February 19

- Procedure OP-112, Containment Spray System
- Drawing 2165-S-0550, Simplified Flow Diagram Containment Spray System

A Emergency Diesel Generator while the B train was out of service on February 20

- Procedure OP-155, Diesel Generator Emergency Power System
- Drawing 2165-S-563, Simplified Flow Diagram Diesel Fuel Oil System, Unit 1

- Drawing 2165-S-633S01, Simplified Flow Diagram Emergency Diesel Generator Lube Oil and Air Intake & Exhaust System - Unit 1
- Drawing 2165-S-0633S02, Simplified Flow Diagram Emergency Diesel Generator 1A-SA & 1B-SB Jacket Water System Unit 1
- Drawing 2165-S-0633S03, Simplified Flow Diagram Emergency Diesel Generator 1A-SA & 1B-SB Fuel Oil and Drainage Systems Unit 1
- Drawing 2165-S-0633S04, Simplified Flow Diagram Emergency Diesel Generator 1A-SA & 1B-SB Starting Air System Unit 1

Complete Walkdown

The inspectors performed a complete system review of the non-emergency diesel generator Alternating Current (AC) system. To determine the correct system lineup, the inspectors reviewed those plant procedures, drawings, and the Final Safety Analysis Report (FSAR) sections identified below:

- Procedure OP-156.02, AC Electrical Distribution
- Drawings as listed in Attachment 1
- System Description 156, Plant Electrical Distribution System
- Design Basis Document -202, Plant Electrical Distribution System
- FSAR section 8, Onsite Power Systems
- Procedure OP-169, Containment Cooling and Ventilation

The inspectors examined system components and their configuration to identify any discrepancies between the existing system equipment lineup and the correct lineup. In addition, the inspectors reviewed the following outstanding maintenance work requests on the system to determine whether any condition described in those work requests could adversely impact current system operability:

<u>Work Request #</u>	<u>Subject</u>
WO 00089343	UVTXSA/1731
WO 00145892	1A-SA-12 Inspect wire at door
WO 00161187	1A-SA-12 Door fasteners broken
WO 00145903	1B-SB-5 Inspect wire at door
WO 00192939	T1/1731 Target 2

The inspectors reviewed the following Action Requests (ARs) to verify that the licensee had properly identified and resolved AC electrical distribution system equipment alignment problems that could cause initiating events or impact mitigating system availability:

<u>#</u>	<u>Subject</u>
00044487	Breaker 1&4A33-SA white light problem on pump shutdown
00055091	WC-3 Chiller tripped on overload
00027506	Siemens RLN/RLNF breaker MOC switch improper actuating arm
00049420	Containment Penetration Protection

Also, the inspectors examined the following Operating Experience (OE) reports, ARs, and operator workarounds (OWA) that were related to the AC electrical distribution system, to verify that the licensee had properly assessed those reports and, where applicable, had initiated appropriate actions to incorporate the lessons learned from those reports:

<u>Reference #</u>	<u>Subject</u>
00032184	Cutler Hammer control switch failure
00032188	5HK ABB Breaker would not open
00028070	Siemens RLN/RLNF breaker MOC switch arm doesn't meet specifications
OWA 253	3 6.9 KV motors give ground fault alarm when starting
OWA 264	DC ground test on A-SA 125VDC Battery Charger gives A-SA EDG alarm

Furthermore, the inspectors reviewed the January 17, 2002, report of 6.9 KV AC distribution system and 480 V AC distribution system health, compiled for the Harris Nuclear Plant (HNP) periodic system review program, to determine whether any identified conditions could adversely impact system operability and, if so, whether the licensee was appropriately addressing those conditions.

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

<u>AR Number</u>	<u>Subject</u>
00027506	Siemens RLN/RLNF breaker MOC switch improper actuating arm
00028070	Siemens RLN/RLNF breaker MOC switch arm doesn't meet specifications

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Within the areas identified below, the inspectors observed the following to determine whether any conditions adversely affected fire protection defense-in-depth features:

- transient combustible materials and welding or cutting;
- the physical condition of the fire detection devices, and reviewed results of the following procedures:
 - FPT-3206, Fire Detector Functional Test Local Fire Detector Panel 6, 12 Month Interval, performed August 16, 2001
 - FPT-3207, Fire Detector Functional Test Local Fire Detector Panel 7, 12 Month Interval, performed March 12, 2001
 - FPT-3205, Fire Detector Functional Test Local Fire Detector Panel 5, 12 Month Interval, performed September 5, 2001
- the physical condition of the automatic suppression system (where used);
- the availability and general condition of portable fire extinguishers and reviewed results of the following procedure:
 - FPT-3151, Fire Extinguisher Inspection: Auxiliary Building Monthly Interval, performed January 15, 2002
- the physical condition of manual suppression systems, including fire hoses and hose stations, and reviewed results of procedure OPT-3010, Fire Hose Service Test Various Intervals, performed January 17, 2000 (required every three years)
- the material condition of electrical raceway fire barrier systems, and fire doors;
- the condition of ventilation fire dampers, and reviewed results of procedure FPT-3425, Fire Damper Inspection 18 Month Interval, performed August 29, 2001;
- the material condition of the structural steel fire-proofing (where used);
- the physical condition of seals in accessible electrical and piping penetrations; and
- the adequacy of compensatory measures, where degraded features were identified.

The inspected areas included the following:

- A switchgear room
- B switchgear room
- cable spreading room
- A chiller area
- B chiller area
- control room

During the unannounced fire drill in the A charging/safety injection pump room on February 21 the inspectors evaluated the timeliness, skill, and equipment utilization of the fire brigade.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalificationa. Inspection Scope

The inspectors observed licensed operator requalification simulator examinations for crew E on March 5. This observation included emergency operating procedure (EOP) and abnormal operating procedure (AOP) scenarios. The scenarios tested the operators' ability to mitigate steam generator tube ruptures, small break loss of coolant accidents, and anticipated transients without scrams (ATWS). The inspectors focused on clarity and formality of communication, use of procedures, alarm response, control board manipulations, group dynamics and supervisory oversight. The training was done utilizing Exercise Guide DSS-013, and DSS-019.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementationa. Inspection Scope

For the equipment issues described in the ARs listed below, the inspectors reviewed the licensee's implementation of the Maintenance Rule (MR)(10 CFR 50.65) with respect to the characterization of failures, the appropriateness of the associated MR a(1) or a(2) classification, and the appropriateness of either the associated MR a(2) performance criteria or the associated MR a(1) goals and corrective actions:

<u>AR Number</u>	<u>Subject</u>
46236	Air Handler 13A-SB failed during normal operations
52068	Service water control valve to chiller would not modulate
53878	Containment pre-entry purge exhaust valve leak rate failure
52336	1CS-7 charging isolation failure to shut on pressurizer level less than 17%
54982	Trip of 1B-SB battery charger during charger swap
53945	Reactor makeup water counter failure

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 used by the licensee to manage risk for the plant configurations associated with the following planned activities:

- Plant startup, system outages on A train RHR and CCW, and emergent work for week of 1/5 - 11, 2002 involving two orange risk days
- Work activities for week of 1/12 - 18 involving resetting the A MSR relief valve with an air compressor out of service on 1/13.
- Work activities for week of 2/2 - 8 involving a down power to 50% and system outages on A emergency service water and A emergency diesel generator
- Work activities for week of 2/9 - 16 involving the changing of scheduled charging system and chilled water system outages, and emergent work on air handler 16B for the process instrumentation control cabinet room.
- Work activities for week of 3/2-8 involving planned activities and emergent work on the C charging/ safety injection pump and the 1A-SA chiller expansion tank isolation valve.

The inspectors reviewed the emergent work activities, to verify that any increase in risk was promptly assessed, and that any required risk management actions were implemented. The inspectors observed whether licensee actions were appropriate to minimize the probability of initiating events, maintain the functional capability of mitigating systems, and maintain barrier integrity.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-routine Plant Evolutions

a. Inspection Scope

During the non-routine evolutions identified below, the inspectors reviewed the operating crew's performance and plant indications, to verify that operator response was in accordance with the associated procedures and training:

<u>Non-routine evolution</u>	<u>Date</u>	<u>Associated procedure(s)</u>
Down-power to approximately 49% power to repair a seal leak on the B condensate booster pump	2/1	GP-6, Normal plant Shutdown from Power Operation to Hot Standby (Mode 1 to Mode 3)
Return to 100% power after condensate booster pump repair	2/3	GP-5, Power Operation (Mode 2 to Mode 1)

The inspectors reviewed the post-trip review for the reactor trip that occurred from 7% power on January 2 to determine if it properly evaluated operator and equipment performance. The post-trip review was performed per procedure OMM-004, Post-Trip/Safeguards Actuation Review, and approved on January 2. The inspectors also reviewed a revised post-trip review, which was subsequently modified to more accurately address equipment and operator performance that led to a post-trip cooldown and resulted in the need to close the main steam isolation valves. The inspectors reviewed the following ARs associated with the reactor trip to gain a complete picture of the cause of the trip and performance following the trip:

<u>AR Number</u>	<u>Subject</u>
53348	Steam Generator Water Level Control Problems on Bypass valves
55407	Additional Data Required for Post-trip review

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

For the operability evaluations described in the ARs listed below, the inspectors evaluated the technical adequacy of the evaluations, to ensure that operability was properly justified and the subject component or system remained available, such that no unrecognized increase in risk occurred:

<u>AR Number</u>	<u>Subject</u>
AR 53461	TDAFW Controller Setpoint determined in EST-230
AR 53780	Steam generator wide range instrumentation
AR 55075	B charging safety injection pump seal leakage
AR 54526	Wrong grease in air handlers AH-28B and AH-5B

b. Findings

No findings of significance were identified.

1R16 Operator Work-Arounds

a. Inspection Scope

The inspectors reviewed the work-around items listed below to determine whether the functional capability of the related system or human reliability in responding to an initiating event was affected. The inspectors specifically considered whether the work-around affected the operators' ability to implement abnormal or emergency operating procedures.

<u>Number</u>	<u>Description</u>
274	Reactor Coolant Pump (RCP) standpipe auto-fill feature for number 3 seal will not work for all RCPs. (AR 53892)
275	Feedwater regulating valve bypass flow control valve will not work in automatic. (AR 53386)
277	Pressurizer Relief Tank will not maintain pressure requiring frequent manual pressurization (AR 53526)

The inspectors reviewed the cumulative effects of the operator work-arounds to determine whether those effects could increase an initiating event frequency, affect multiple mitigating systems, or affect the ability of operators to respond in a correct and timely manner to plant transients and accidents. The inspectors also reviewed the licensee's cumulative assessment of operator work-around items dated March 11 to determine whether their assessment had adequately evaluated the cumulative affect of these items.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

Changes to the Startup Test Program

The licensee made changes to the planned startup test program developed for the steam generator replacement / power uprate (SGRP/PUR) refueling outage. The licensee deleted a load swing/reject test from the test program. The inspectors reviewed the following documents to verify that the testing deletion did not compromise post modification testing verification of the secondary heat removal, steam generator (SG) water level control and steam and feedwater isolation safety functions:

- Procedure PLP-632T, Temporary Procedure for Power Ascension Test Program After RFO-10 Refueling Outage Steam Generator Replacement & Power Uprate Modifications
- Procedure EPT-848T, Temporary Procedure for Steam Generator Water Level Control Test
- Procedure EPT-849T, Load Swing/Reject Test
- Procedure EPT-120, Stroke Timing of the Main and Bypass Feedwater Regulating Valves
- Modification ESR 94-0001, Steam Generator Replacement and Power Uprate, Revisions 0, 3, and 6
- Modification ESR 00-00262, Steam Generator Replacement / Power Uprate Instrumentation Changes, Revision 2
- Modification ESR 00-00405, Feedwater Regulating Bypass Valve Solenoid Discharge Tubing
- Plan for Simulator Testing and Simulator Test Results dated 8/3/01 for S/G Level, Reactor Trip, Main Steam Isolation Valve Closure, and Load Swings performed for SGRP / PUR
- Westinghouse Report WCAP-14778, CP&L Harris Nuclear Plant Steam Generator Replacement Project Uprating Analysis and Licensing Project NSSS Engineering Report, Revision 1
- Final Safety Analysis Report Sections 14.2.12.2.17, 14.2.12.2.18 and 15.2.2
- NRC Safety Evaluation Related to Office of Nuclear Reactor Regulation Amendment 107 to Facility Operating License NPF-63 CP&L Shearon Harris Nuclear Power Plant, Docket No. 50-400

Feedwater Bypass Valve Post Modification Testing

Since the January 2, 2002 manual reactor trip was caused by a failed feedwater regulating bypass valve (FRBV), the inspectors reviewed the post modification / component testing performed prior to the initial startup following refueling outage 10 to determine if the post modification testing adequately verified FRBV safety functions. The following documents were reviewed:

- Licensee Event Report 50-400/2002-001-00, Reactor Trip Due To Main Feedwater Regulating Valve Bypass Valve Failure
- AR 53386, C FRBV Failed Shut With Manual / Auto Station Demand at 100 percent
- AR 53348, Diverging S/G Level Oscillations During Startup While on Feedwater Regulating Bypass Valve in Auto Between 5-8 percent
- Work Orders for initial component testing (00104339-01, 00195712-01)
- As Left response time test data for FRBVs from PM-I0054, Air Operated Valve Diagnostic Testing Procedure
- Completed FRBV stroke timing test results from EPT-120, Stroke Timing of the Main and Bypass Feedwater Regulating Valves
- Curves from January 3, 2002 Manual Reactor Trip Review Package for S/G Levels, Feedwater Flow, and FRBV position
- Westinghouse Report WCAP-14778, CP&L Harris Nuclear Plant Steam Generator Replacement Project Uprating Analysis and Licensing Project NSSS Engineering Report, Revision 1

- Drawing 1364-007227, 3 IN 1500 LB BW CS VLV and Pneumatic Schematic
- Process Instrumentation and Control Scaling Calculations, SC-N-145, and SC-N-142
- Drawing 108D803 Sheet 17, Feedwater Control Process Control Block Diagram
- Drawing 108D803 Sheet 34, Feedwater Control Process Control Block Diagram

a. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

For the post-maintenance tests listed below, the inspectors reviewed the test procedure and either witnessed the testing and/or reviewed test records to determine whether the test was adequate for the scope of the maintenance work performed and demonstrated that the affected equipment was functional and operable:

<u>Test Procedure</u>		
<u>Number</u>	<u>Title</u>	<u>Related maintenance task</u>
EPT-33; EPT-443	Emergency Safeguards Sequencer System Test; Emergency Safeguards Sequencer Relay Trend and Analysis	Replace B emergency safeguards sequencer relays 2-6 and 2-30
MST-I0038	Delta T/Tavg Loop (T-0422) Calibration	Replace instrumentation comparator card for TS-01RC-0422CW
OST-1119	Containment Spray Operability Train B Quarterly Interval	Maintenance on valve 1CT-71
OST-1073	1B-SB Emergency Diesel Generator Operability Test Monthly Interval	Maintenance on B diesel
OST-1093	CVCS/SI System Operability Train B Quarterly interval	Maintenance on the C charging /safety injection pump
OST-1411	Auxiliary Feedwater pump 1X-SAB Operability Test Quarterly interval Modes 1,2,3	Maintenance on turbine-driven auxiliary feedwater pump trip / throttle valve

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities

a. Inspection Scope

Refueling outage 10 began during the previous inspection period and ended on January 6, 2002.

For changes in the unit's operational modes, the inspectors reviewed licensee activities on a sampling basis to verify that TS requirements and prerequisites from procedures GP-002, Normal Plant Heatup from Cold Solid to Hot Subcritical, Mode 5 to Mode 3; GP-004, Reactor Startup, Mode 3 to Mode 2; and GP-005, Power Operation, Mode 2 to Mode 1, were met prior to the mode changes. Prior to reactor startup the inspectors examined the spaces inside the containment building to verify that debris had not been left which could affect performance of the containment sumps, and that performance of procedure OST-1081, Containment Visual Inspection When Containment Integrity Is Required, was adequate. Following reactor physics testing completed in accordance with procedure PLP-632T, Temporary Procedure for Power Ascension Testing Program After R10 Refueling Outage, Steam Generator Replacement & Power Uprate Modifications, the inspectors reviewed the test results to verify that core operating limit parameters were consistent with the design.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

For the surveillance tests listed below, the inspectors examined the test procedure and either witnessed the testing and/or reviewed test records to determine whether the scope of testing adequately demonstrated that the affected equipment was functional and operable:

<u>Procedure Number</u>	<u>Title</u>
MST-I0206	Refueling Water Storage Tank Level (L-0992) Operational Test
OST-1008*	1A-SA RHR Pump Operability Quarterly Interval
MST-I0047	Nuclear Instrumentation System Power Range N44 Calibration
OST-1124	Train B 6.9kv Emergency Bus Undervoltage Trip Actuating Device Operational Test and Contact Check

EST-220** Type C LLRT of Containment Purge Exhaust Penetration (M-58)

OST-1211 Auxiliary Feedwater Pump 1A-SA Operability Test Quarterly Interval

*This procedure included inservice testing requirements.

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

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the temporary modifications described in Engineering Service Request 01-00228, Temporary Modification for FS-01CC-7001B-SB, to determine whether the modification was properly installed, the modification did not affect system operability, the drawings and procedures were appropriately updated, and the post-modification testing was satisfactorily performed.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed an emergency preparedness drill conducted on February 21 to verify licensee self-assessment of classification, notification, and protective action recommendation development.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA3 Event Follow-up

(Closed) LER 2002-001-00, Reactor Trip Due to Main Feedwater Regulating Valve Bypass Valve Failure. The inspectors reviewed the licensee's actions associated with the reactor trip from 7% power that occurred on January 2. The inspectors observed

plant parameters for mitigating systems and fission product barriers, evaluated performance of systems and operators, and confirmed proper classification and reporting of the event. The personnel performance aspects were reviewed in section 1R14 above. No findings of significance were identified.

4OA5 Other

(Closed) URI 50-400/01-05-03, Failure to properly terminate a lug in the control circuit of motor operated valve 1RH-39. A performance deficiency associated with incorrect control circuit wire lug termination led to the failure of 1RH-39 to open when attempting to open the valve to initiate shutdown cooling. The significance determination process risk assessment determined that the performance deficiency was very low significance (Green). The dominant accident sequences in the risk analysis were steam generator tube rupture (SGTR) and small break loca (SBLOCA). The risk for the SGTR was mitigated by the fact that the valve could be manually operated inside containment under SGTR conditions. For the SBLOCA case, the risk was mitigated by the ability to refill the RWST enabling continued high pressure injection using the charging /safety injection pump (CSIP), as well as continued availability of secondary heat removal. Because this issue was self-disclosing and was very low safety significance, it is addressed in section 4OA7.

4OA6 Meetings, including Exit

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Scarola, Vice President - Harris Plant, and other members of licensee management at the conclusion of the inspection on April 4. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. Proprietary information was reviewed but none is included in this report.

.2 Annual Assessment Meeting Summary

Subsequent to the end of the inspection period, on April 11, 2002, the NRC Region II Division of Reactor Projects Branch 4 Branch Chief and the Senior Resident Inspector assigned to the Harris Nuclear Plant, met with Carolina Power and Light, to discuss the NRC's Reactor Oversight Process (ROP) and the Harris Plant annual assessment of safety performance for the period of April 1, 2001 - December 31, 2001. The major topics addressed were: the NRC's assessment program, the results of the Harris Plant assessment, and the NRC's Agency Action Matrix. Attendees included Harris Plant site management, members of site staff, one local official, two members of the public, and one news media person.

This meeting was open to the public. Information used for the discussions of the ROP is available from the NRC's document system (ADAMS) as accession number

ML020600179. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). The information presented by the licensee at the meeting is included as Attachment 2.

4OA7 Licensee Identified Violations

The following findings of very low significance were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as non-cited violations (NCV).

If you deny this NCV should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to Regional Administrator, Region II; the Director, Office of Enforcement, United States Regulatory Commission, Washington, DC 20555-0001, and the NRC Resident Inspector at the Shearon Harris Facility.

<u>NCV Tracking Number</u>	<u>Requirement Licensee Failed to Meet</u>
50-400/01-06-01	The failure to properly terminate a lug in the control circuit of motor operated valve 1RH-39 during performance of modification PCR 7167 (work order 94-AJLP1) was considered a violation of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings. This failure to follow work instructions is documented in the licensee's corrective action program as AR 48376 (Green).

PARTIAL LIST OF PERSONS CONTACTED

Licensee

D. Alexander, Nuclear Assessment Manager
G. Attarian, Harris Engineering Support Services Manager
J. Caves, Licensing Supervisor
C. Burton, Director Site Operations
R. Duncan, Harris Plant General Manager
J. Eads, Emergency Preparedness Supervisor
R. Field, Regulatory Affairs Manager
T. Hobbs, Operations Manager
J. Holt, Major Projects Manager
M. Munroe, Training Manager
T. Natale, Outage and Scheduling Manager
J. Scarola, Harris Plant Vice President
P. Summers, Environmental & Radiation Control Manager
B. Waldrep, Maintenance Manager

NRC

B. Bonser, Chief, Reactor Projects Branch 4
J. Goshen, Harris Project Manager, NRR

ITEMS OPENED, CLOSED, AND DISCUSSEDOpened and Closed

50-400/01-06-01	NCV	Failure to properly terminate a lug in the control circuit of motor operated valve 1RH-39 (Section 40A7)
-----------------	-----	--

Closed

50-400/2002-001-00	LER	Reactor Trip due to main Feedwater Regulating Valve Bypass Valve Failure (Section 1R14, 40A3)
--------------------	-----	---

50-400/01-05-03	URI	Failure to properly terminate a lug in the control circuit of motor operated valve 1RH-39 (Section 40A5)
-----------------	-----	--

List of Documents Reviewed

Section 1R04

Power Distribution and Motor Data Drawings

480 V Emergency MCC 1A21-SA
2166-B-041 sheet 172S01
2166-B-041 sheet 172S02
2166-B-041 sheet 172S03

480 V Emergency MCC 1A32-SA
2166-B-041 sheet 176S01
2166-B-041 sheet 176S02

480 V Emergency MCC 1A23-SA
2166-B-041 sheet 174S01
2166-B-041 sheet 174S02

480 V Emergency MCC 1A36-SA
2166-B-041 sheet 184S01
2166-B-041 sheet 184S02

480 V Emergency MCC 1A35-SA
2166-B-041 sheet 173S01
2166-B-041 sheet 173S02
2166-B-041 sheet 173S03
2166-B-041 sheet 173S04

480 V Emergency MCC 1&4A33-SA
2166-B-041 sheet 177S01

480 V Emergency MCC 1A31-SA
2166-B-041 sheet 175S01
2166-B-041 sheet 175S02
2166-B-041 sheet 175S03

6900 V Emergency Bus 1A-SA
2166-B-041 sheet 45

480 V Emergency Bus 1A2-SA
2166-B-041 sheet 126

480 V Emergency Bus 1A3-SA
2166-B-041 sheet 127

AC Power Distribution Drawing PD-5165-BC-0001

480 V Emergency MCC 1B23-SB
2166-B-041 sheet 180S01
2166-B-041 sheet 180S02

480 V Emergency MCC 1B32-SB
2166-B-041 sheet 182S01
2166-B-041 sheet 182S02

480 V Emergency MCC 1B31-SB
2166-B-041 sheet 181S01
2166-B-041 sheet 181S02
2166-B-041 sheet 181S03

480 V Emergency MCC 1B36-SB
2166-B-041 sheet 186S01
2166-B-041 sheet 186S02

480 V Emergency MCC 1B35-SB
2166-B-041 sheet 179S01
2166-B-041 sheet 179S02
2166-B-041 sheet 179S03

480 V Emergency MCC 1&4B33-SB
2166-B-041 sheet 183S01

480 V Emergency MCC 1B21-SB
2166-B-041 sheet 178S01
2166-B-041 sheet 178S02
2166-B-041 sheet 178S03

6900 V Emergency Bus 1B-SB
2166-B-041 sheet 46

480 V Emergency Bus 1B2-SB
2166-B-041 sheet 131

480 V Emergency Bus 1B3-SB
2166-B-041 sheet 132