



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
SAM NUNN ATLANTA FEDERAL CENTER  
61 FORSYTH STREET SW SUITE 231B5  
ATLANTA, GEORGIA 30303-8931**

July 22, 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 50-400/02-02**

Dear Mr. Scarola:

On June 29, 2002, the Nuclear Regulatory Commission (NRC) completed an inspection at your Shearon Harris facility. The enclosed report documents the inspection findings which were discussed on July 2, 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/index.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 C.B. 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  
4326 Mail Service Center  
Raleigh, NC 27699-4326

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:  
J. Goshen, NRR  
RIDSNRRDIPMLIPB  
PUBLIC

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

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

Enclosure

Report No: 50-400/02-02

Licensee: Carolina Power & Light (CP&L)

Facility: Shearon Harris Nuclear Power Plant, Unit 1

Location: 5413 Shearon Harris Road  
New Hill, NC 27562

Dates: March 31, 2002 - June 29, 2002

Inspectors: J. Brady, Senior Resident Inspector  
R. Hagar, Resident Inspector  
W. Sartor Jr., Senior Emergency Preparedness Inspector (1EP2 -  
1EP6, 40A1.1)  
S. Vias, Senior Reactor Inspector (1R02 and 1R17)  
W. Bearden, Reactor Inspector (1R02 and 1R17)  
W. Crowley, Senior Reactor Inspector (1R02 and 1R17)  
E. Lea, Senior Reactor Inspector (1R11.2)  
K. O'Donohue, Reactor Inspector (1R11.2)

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

Enclosure

## SUMMARY OF FINDINGS

IR 05000400-02-02, on 03/31/2002 - 06/29/2002, Carolina Power & Light, Shearon Harris Nuclear Power Plant, Unit 1. Baseline integrated resident inspection report.

The inspection was conducted by resident inspectors, regional emergency preparedness inspectors, and regional reactor inspectors. No findings of significance were identified. 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

None

B. Licensee Identified Violations

None

## Report Details

The unit operated at 100 % of rated thermal power for the entire inspection period.

### 1. REACTOR SAFETY

#### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity**

#### 1R01 Adverse Weather Protection

##### a. Inspection Scope

The inspectors selected for inspection the following two systems that could be affected by adverse (hot) weather:

- Normal Service Water
- Main Condensate System

For these systems, the inspectors reviewed related licensee activities to verify that protection features were monitored. The inspectors also reviewed section 2.0, Engineering Evaluation Report for Condensate/Feedwater/Feedwater Heaters and section 7.0, Engineering Evaluation Report for Normal and Emergency Service Water of MDES-TR-78704, Balance of Plant Engineering Evaluation Report dated June 17, 2002, to determine whether evaluations performed for the recently implemented power uprate had revealed any problems related to component operation during hot weather.

##### b. Findings

No findings of significance were identified.

#### 1R02 Evaluations of Changes, Tests or Experiments

##### a. Inspection Scope

The inspectors reviewed selected samples of evaluations to verify that the licensee had appropriately considered the conditions under which changes to the facility or procedures could be made, and tests conducted, without prior NRC approval. The inspectors reviewed 20 evaluations. The inspection included review of additional information, such as calculations, supporting analyses and drawings, to determine that the licensee had appropriately concluded that the changes could be accomplished without obtaining a license amendment. The 20 evaluations reviewed are listed in the List of Documents Reviewed.

The inspectors also reviewed samples of design/engineering packages, engineering evaluations, calculations, and procedure changes for which the licensee had determined that evaluations were not required, to verify that the licensee's conclusions to "screen out" these changes were correct and consistent with 10 CFR 50.59. The 14 screened-out changes reviewed are listed in the List of Documents Reviewed.

The inspectors also reviewed the results of the licensee's recent quality assurance audit and reports for engineering activities related to the 10 CFR 50.59 process.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial Walkdown

For the 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 motor-driven auxiliary feedwater pump and the turbine-driven auxiliary feedwater pump with B motor-driven auxiliary feedwater pump out of service on April 22

- Procedure OP-137, Auxiliary Feedwater
- Drawing 2165-S-544, Simplified Flow Diagram Feedwater System Unit

B train emergency service water with A train out of service on April 29

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

A train high head safety injection with B train out of service on May 23

- Procedure OP-110, Safety Injection System
- Drawing 2165-S-1308 Simplified Flow Diagram Safety Injection System

A train emergency service water with B train out of service on June 12

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



b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

For the areas identified below, the inspectors reviewed a set of fire-protection-related attributes, to determine whether any conditions adversely affected fire protection defense-in-depth features. The inspected areas included:

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

For these areas and for the attributes listed below, the inspectors either observed the attribute in the plant and/or reviewed results from performance of the identified plant procedure(s). The inspected attributes and procedures included:

- transient combustible materials;
- any welding or cutting being performed in the area;
- the physical condition of the fire detection devices, and/or results from procedures:

FPT-3205 Fire Detector Functional Test Local Fire Detector Panel 5 12 Month Interval performed September 5, 2001

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 6, 2002

- the physical condition of the automatic suppression system (where used);
- the availability and general condition of portable fire extinguishers, and/or results from FPT-3151 Fire Extinguisher Inspection: Auxiliary Building Monthly Interval performed March 26, 2002, and May 16, 2002;

- the physical condition of manual suppression systems, including fire hoses and hose stations, and/or results from 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;
- the material condition of the fire door(s);
- the condition of ventilation fire dampers, and/or results from 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/or results from FPT-3550 Fire Penetration Seal Visual Inspection 18 Month Interval performed May 30, 2002; and
- the adequacy of compensatory measures, where degraded features were identified.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors reviewed the licensee's internal flooding analysis, and selected the reactor auxiliary building 190-foot elevation for detailed review. That elevation includes both residual heat removal pumps and both containment spray pumps. For that elevation, the inspectors reviewed the licensee's analysis of the effects of flooding resulting from postulated piping failures, as described in the following documents, to determine whether that analysis contained reasonable assumptions and conclusions based on the current plant configuration:

- FSAR section 3.6A.6, Flooding Analysis
- Appendix I to the HNP Probabilistic Safety Assessment Internal Flooding Analysis
- Calculation #PRA-F/E-4, RAB Unit 1 Elevation 190' & 216' Flood Analysis

To verify that the procedures for coping with flooding can be used to achieve the desired actions, the inspectors reviewed procedure AOP-022, Loss of Service Water and OP-139, Service Water System

The inspectors performed a field walk-down of the selected area to determine whether the physical configuration of the area was consistent with the assumptions in the documents.

The inspectors reviewed Action Request (AR) 31044, Emergency service water intake structure potential flooding condition, to determine whether the licensee identified and implemented appropriate corrective actions:

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

To determine the licensee's approach to heat exchanger performance monitoring, the inspectors reviewed the following documents:

- PLP-620, Service Water Program (Generic Letter 89-13)
- EPT-163, Generic Letter 89-13 Inspections
- Licensee Generic Letter 89-13 responses

The inspectors reviewed results of the 1B-SB charging/safety injection pump gear oil cooler heat exchanger performance inspection conducted on October 25, 2001, using procedure EPT-163, to verify that:

- potential fouling situations were identified and corrected;
- inspection results were appropriately categorized against pre-established acceptance criteria;
- the frequency of inspection was sufficient to detect degradation prior to loss of heat removal capability below design basis values; and
- the licensee had developed acceptance criteria for its bio-fouling controls.

The inspectors reviewed photographs of the service water side of the heat exchanger taken during the inspection but did not physically observe the inside of the heat exchanger.

In addition, the inspectors reviewed AR 50768, Service Water System Performance, which investigated a trend of increased fouling of the service water system heat exchangers, to determine whether the licensee had identified appropriate corrective actions.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

.1 Simulator Training Observation

a. Inspection Scope

The inspectors reviewed licensed operator requalification simulator training for crew C on April 30 and May 1. This observation included emergency operating procedure (EOP) and abnormal operating procedure (AOP) scenarios. The scenarios tested the operators' ability to respond to a loss of ultimate heat sink, a steam generator tube leak, a loss of an instrument bus, and a component cooling water leak. 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 completed using Exercise Guides EOP-SIM-17.56 and INPO-AOP-17.03.

b. Findings

No findings of significance were identified.

.2 Annual Operating Test Results

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the biennial written examination, the individual job-performance-measure operating tests, and the simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee during calendar year 2002.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

For the equipment issues described in the ARs listed below, the inspectors reviewed the licensee's implementation of the Maintenance Rule (10 CFR 50.65) with respect to the

characterization of failures, the appropriateness of the associated a(1) or a(2) classification, and the appropriateness of either the associated a(2) performance criteria or the associated a(1) goals and corrective actions:

<u>AR Number</u>	<u>Subject/Description.</u>
52462	Failure of reactor makeup water flow to the boric-acid blender
54450	Failure of 1SW-1055 to modulate position in response to a control signal
56873	Core exit thermocouple TE-01RE-0032SBW failed
49928	Reactor auxiliary building emergency exhaust system dampers AV-D11 & D33 failure to close
56276	Failure of chilled water expansion tank isolation valve 1CH-1398
60873	Reactor vessel level indication system train A functional 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:

- Work activities for week of 3/31 - 4/6 involving emergent work on turbine digital electro-hydraulic control and the venting of air out of a check valve located in the refueling water storage tank line to the charging/safety injection pump suction header.
- Work activities for week of 4/22 - 4/26 involving B motor-driven auxiliary feedwater pump breaker maintenance and pump discharge pressure control valve outage maintenance.
- Work activities for week of 6/1 - 6/7 involving A train residual heat removal/ A train component cooling system outages.

The inspectors reviewed the emergent work activities listed below, as described in the referenced Work Orders (WOs) and/or ARs, 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.

<u>WO Number</u>	<u>Subject/Description</u>
WO 268746	Turbine-driven auxiliary feedwater pump inboard shaft seal loose
WO 278390	1B-SB Emergency diesel generator overspeed trip will not reset

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/Description</u>
56692	High particle count in the C charging safety injection pump and speed changer
60584	Internal corrosion of water-filled differential pressure units on Barton flow indicating switches, as reported under 10CFR21
60991	Emergency service water through-wall pipe leak

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors evaluated design change packages for 11 modifications, to verify that the modifications did not degrade system availability, reliability, or functional capability. These modifications affected the Initiating Events, Mitigating Systems, and Barrier Integrity cornerstones. The inspectors verified inspection procedure attributes such as:

- energy requirements can be supplied by supporting systems;
- materials and replacement components were compatible with physical interfaces;



- replacement components were seismically qualified for the application;
- code and safety classification of replacement system, structures, and components were consistent with design bases;
- modification design assumptions were appropriate;
- post-modification testing established operability;
- failure modes introduced by the modification were bounded by existing analyses;
- and appropriate procedures or procedure changes had been initiated.

For selected modification packages, the inspectors conducted walk downs to verify that the as-built configuration accurately reflected the design documentation.

Documents reviewed included procedures, engineering calculations, modifications, work orders, site drawings, corrective action documents, applicable sections of the living Updated Final Safety Analysis Report, supporting analyses, Technical Specifications, and design basis documentation. The major documents reviewed are listed in the List of Documents Reviewed.

b. 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 identified 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>
OST-1077 and	Auxiliary Feedwater Valves Operability Test Quarterly Interval	Preventive maintenance on B motor-driven auxiliary feedwater pump discharge pressure control valve 1AF-34
OST 1311	Auxiliary Feedwater Valves Remote Position Indication Test	



OP-137	Auxiliary Feedwater System Section 5.5, Manual Operation of the Turbine-driven AFW Pump	Perform maintenance on inboard mechanical shaft seal.
OST-1093	CVCS/SI System Operability Train B Quarterly Interval	Complete oil system flush of pump, speed changer, and motor
OST-1020	Remote Shutdown Monitoring and Accident Monitoring Instrumentation Channel Check Monthly Interval Modes 1-2-3	Adjusted 5-volt power supply and replaced the central processing unit on the reactor vessel level indication system
OST-1073	1B-SB Emergency Diesel Generator Operability Test Monthly Interval Modes 1-2-3-4-5-6	Replaced 2 leaking shuttle valves in the diesel generator's overspeed trip control circuit
OST-1215	Emergency Service Water System Operability Train B Quarterly Interval Modes 1-2-3-4	Replace stuffing box packing on the Train B emergency service water pump

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

For the surveillance tests listed below, the inspectors examined the identified 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>Number</u>	<u>Title</u>
MST-I0140	Delta T/Tavg Loop (T-0412) Operational Test
MST-E0010	1E Battery Weekly Test
OST-1073*	1B-SB Emergency Diesel Generator Operability Test Monthly Interval
OST-1122	Train A 6.9 KV Emergency Bus Undervoltage Trip Actuating Device Operational Test and Contact Check Modes 1-6
OST-1118	Containment Spray Operability Train A Quarterly Interval

\*This procedure included inservice testing requirements.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the temporary modification described in Engineering Service Request 02-005, Modify Alarm Cards for Reactor Coolant Pump B & C Standpipe Level Alarm, to determine whether the modification was properly installed, the modification did not affect system operability, drawings and procedures were appropriately updated, and post-modification testing was satisfactorily performed.

b. Findings

No findings of significance were identified.

**Cornerstone: Emergency Preparedness**

1EP2 Alert Notification System Testing

a. Inspection Scope

The inspectors reviewed the testing program for the alert and notification system (ANS), which comprised 81 pole-mounted sirens within the ten-mile emergency planning zone. The testing program involved bi-weekly silent tests, quarterly tests, and an annual full volume test. The inspectors also reviewed maintenance records to ascertain the effectiveness and timeliness of repairs when siren problems were identified.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization (ERO) Augmentation Testing

a. Inspection Scope

The inspectors reviewed the documentation supporting the maintenance and testing of the licensee's emergency response organization augmentation system.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

The inspectors reviewed changes to the Emergency Plan and the emergency action levels (EALs) to determine whether any of the changes decreased the effectiveness of the Emergency Plan. The current Emergency Plan was Revision 43. The review was performed against 10CFR50.54(q).

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies

a. Inspection Scope

The inspectors evaluated the efficacy of licensee programs that addressed weaknesses and deficiencies in emergency preparedness. Items reviewed included exercise and drill critique reports and the licensee's Drill & Exercise Corrective Action Status Report. No emergency declarations had been made since the last inspection of this program area (conducted in June 2000).

b. Findings:

No findings of significance were identified.

1EP6 Drill Evaluation

a. Inspection Scope

On April 16 the inspectors observed an emergency preparedness drill to verify licensee self-assessment of classification, notification, and protective action recommendation development. The drill simulated a reactor coolant system leak that escalated into a loss-of-coolant accident, coincident with an unisolable leak from a steam generator due to a partially open safety valve. Although the drill did not simulate a release of radioactive materials, the scenario did include conditions that would satisfy the licensee's criteria for declaring an Alert, a Site Area Emergency, and a General Emergency. The inspectors monitored the licensee's activities related to classifying the simulated accident, notifying appropriate offsite agencies, and developing and communicating appropriate protective action recommendations. Following the drill, the inspectors also reviewed the licensee's self-assessment of their performance during the drill.

b. Findings

No findings of significance were identified.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator (PI) Verification

##### .1 Initiating Events, Mitigating Systems, and Barrier Integrity Cornerstones

##### a. Inspection Scope

The inspectors verified the PIs listed in the table below, to determine their accuracy and completeness against requirements in Nuclear Energy Institute (NEI) 99-02, Regulatory Assessment Performance Indicator Guideline.

Cornerstone: Initiating Events		
<i><u>Performance Indicator</u></i>	<i><u>Verification Period</u></i>	<i><u>Records Reviewed</u></i>
Unplanned Scrams	2 <sup>nd</sup> quarter, 2001, through 1 <sup>st</sup> quarter, 2002	<ul style="list-style-type: none"> <li>• Licensee Event Reports</li> <li>• NRC Inspection Reports</li> <li>• Monthly Operating Reports</li> <li>• operator logs</li> <li>• licensee power history curves</li> </ul>
Scrams with Loss of Normal Heat Removal		
Unplanned Power Changes		

Cornerstone: Mitigating Systems		
<i><u>Performance Indicator</u></i>	<i><u>Verification Period</u></i>	<i><u>Records Reviewed</u></i>
Safety System Unavailability, Residual Heat Removal	2 <sup>nd</sup> quarter, 2001, through 1 <sup>st</sup> quarter, 2002	<ul style="list-style-type: none"> <li>• records of inoperable equipment</li> <li>• Maintenance Rule event logs</li> <li>• equipment tagout records</li> </ul>
Safety System Unavailability, Auxiliary Feedwater		

Cornerstone: Barrier Integrity		
<i><u>Performance Indicator</u></i>	<i><u>Verification Period</u></i>	<i><u>Records Reviewed</u></i>
Reactor Coolant System Specific Activity	2 <sup>nd</sup> quarter, 2001, through 1 <sup>st</sup> quarter, 2002	• plant chemistry data
Reactor Coolant System Leakage		• operator logs

The inspectors also 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/Description</u>
55035	NRC Emergency Planning Key Performance Indicator Missed Performance Opportunity
53811	Saving Unavailability Time by Scheduling Concurrent System Outages
49486	Potential Trend in Quality of Information Sent to NRC

## .2 Emergency Preparedness Cornerstone

### a. Inspection Scope

The inspectors reviewed licensee records to determine whether the submitted PI values (through the first quarter of 2002) were calculated in accordance with the guidance contained in Section 2.4 (Emergency Preparedness Cornerstone) of NEI 99-02. The inspectors assessed the accuracy of the following PIs related to emergency preparedness:

- Drill/Exercise Performance, assessed through review of a sample of drill records (aggregate value for the past eight quarters was 94.0 percent);
- Emergency Response Organization (ERO) Drill Participation, assessed through review of the training records for the 36 individuals assigned to key positions in the ERO as of the end of the first quarter of 2002 (value was 97.2 percent); and
- Alert and Notification System reliability, assessed through review of a sample of the licensee's records of siren tests conducted from July 1, 2001, to March 31, 2002 (value was 98.6 percent).

### b. Findings

No findings of significance were identified.

## 4OA2 Identification and Resolution of Problems

### a. Inspection Scope

The inspectors performed an in-depth review of the issue described in AR 54450, in accordance with inspection procedure 71152. The subject AR described the inoperability of an essential services chilled water chiller due to the failure of a service water flow valve to modulate. The licensee classified this issue as a Significant Adverse Condition, because this failure was a Maintenance Rule Functional Failure that caused the number of failures for the chiller to exceed the established performance criteria. This issue affected the Mitigation Systems cornerstone, in that it involved the reliability of safety-related equipment.

During this review, the inspectors determined whether:

- identification of the problem was complete and accurate;
- the problem was identified in a timely manner;
- the licensee properly classified and prioritized resolution;
- the licensee evaluated and dispositioned operability and reportability issues;
- the licensee considered extent of condition, generic implications, common causes, and previous occurrences; and
- corrective actions were completed in a timely manner.

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up

(Closed) LER 50-400/2001-004-00, "Reactor Coolant Loops Mode 4 Technical Specification Violation". This LER reported a violation of Technical Specification (TS) 3.4.1.3 that occurred on December 25, 2001, during Refueling Outage 10. The plant entered Operational Mode 4 from Operational Mode 3 without satisfying TS 3.4.1.3 requirements for having steam generator wide range level greater than 74% (actual values were A-72.4%, B-72.5%, C-72.4%). TS 3.4.1.3 had been revised for steam generator replacement to require monitoring of wide range level instead of narrow range level in Mode 4. However, the TS still allowed a minimum steam generator narrow range level limit of 30% if the wide range level instrumentation was inoperable. Narrow range level was above 30% during this period (A-58%, B-56%, C-58%). Because the wide range level was operable and the narrow range level was above the minimum, the inspectors concluded that this violation had no safety significance and, in accordance with the guidance in Manual Chapter 0610\*, was minor.

4OA6 Meetings, including Exit

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Scarola, Site Vice President, and other members of licensee management at the conclusion of the inspection on July 2. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

**SUPPLEMENTAL INFORMATION  
PARTIAL LIST OF PERSONS CONTACTED**

Licensee

D. Alexander, Nuclear Assessment Manager  
G. Attarian, Harris Engineering Support Services Manager  
R. Bassett, Acting Emergency Preparedness Supervisor  
J. Caves, Licensing Supervisor  
R. Duncan, Director Site Operations  
T. Hobbs, Operations Manager  
J. Holt, Site Support Services Manager  
J. Laque, Maintenance 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, Harris Plant General Manager

NRC

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

**ITEMS OPENED, CLOSED, AND DISCUSSED**

Closed

50-400/2001-004-00	LER	Reactor Coolant Loops Mode 4 Technical Specification Violation (Section 40A3)
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## LIST OF DOCUMENTS REVIEWED

### Engineering Service Requests (ESR) - Modifications [R017B]

<u>Document No.</u>	<u>Title</u>
ESR 99-00273	Pressurizer Safety Valve Capacity Document Changes
ESR 99-00407	Installation of Flow Balancing Orifices in [High Head Safety Injection] System
ESR 00-00253	Sequencer Timer Technical Specification Change
ESR 00-00326	Abandonment of Unnecessary Monitors
ESR 01-00170	Add Trend Capability for [Service Water Differential Pressure] across [Component Cooling Water] Heat Exchangers
ESR 01-00171	PP-1E211-18 Breaker Discrepancy
ESR 01-00191	Full Power Operation at Reduced [Feedwater] Temperature Analysis
ESR 01-00205	Tube Leak in Containment AH-37 Cooling Coil
ESR 01-00222	[Auxiliary Feedwater] Accident Analyses Determination for [the Turbine-Driven Auxiliary Feedwater] Flow Controller
ESR 01-00231	Delta Temperature/[Average Temperature]. Loop Scaling, TE-432D
ESR 01-00405	Feed Regulating Bypass Valves Solenoid Discharge Tubing

### Screened Out Engineering Evaluations (10 CFR 50.59) [R02]

<u>Document No.</u>	<u>Title</u>
APP-A2, Rev 14	Auxiliary Control Panel
EST-230, Rev. 0	Determination of Turbine Driven Auxiliary Feedwater Pump Differential Pressure Controller Set Point
GP-009, Rev. 31	Refueling Cavity Fill, Refueling and Drain of the Refueling Cavity, Modes 5-6-5
OMM-001	Off Normal Audit, May 2001 for 1CS-8
OP-116, Rev. 20	Fuel Pool Cooling and Cleanup
OP-149, Rev. 21	Fire Protection
OST-1506, Rev. 10	[Reactor Coolant System] Isolation valve Leak Test - 18 Month Interval, Modes 3 & 4
OST-1823, Rev. 17	1A-SA Emergency Diesel Generator Operability Test, 18 Month Interval, Modes 1 through 6 and Defueled
ESR 99-00273	Pressurizer Safety Valve Capacity Document Changes
ESR 01-00066	AH-82 Diffuser Modification



ESR 01-00170	Add Trend Capability for [Service Water Differential Pressure] across [Component Cooling Water] Heat Exchangers
ESR 01-00171	PP-1E211-18 Breaker Discrepancy
ESR 01-00205	AH-37 Tube Leak in Containment Cooling Coil
ESR 01-00231	Delta Temperature/[Average Temperature]. Loop Scaling, TE-432D

### Safety Evaluations [R02]

<u>Document No.</u>	<u>Title</u>
01-1513	'B' [Emergency Service Water] Strainer Control in "Hand"
AOP-010, Rev. 19	Feedwater Malfunctions Procedure
AP-013, Rev. 25	Plant Nuclear Safety Committee Procedure
ESR 99-00407	Installation of Flow Balancing Orifices in HHSI System
ESR 00-00326	Abandonment of Unnecessary Monitors
ESR 00-00253	Sequencer Timer Technical Specification Change
ESR 01-00087	[Charging/Safety Injection Pump] Recirculation Flow Path Change
ESR 01-00191	Full Power Operation at Reduced [Feedwater] Temperature Analysis
ESR 01-00222	[Auxiliary Feedwater] Accident Analyses Determination for [the Turbine-Driven Auxiliary Feedwater] Flow Controller
ESR 01-00405	Feed Regulating Bypass Valves Solenoid Discharge Tubing
ESR 02-00005	Modify Alarms Cards for [Reactor Coolant Pump trains] B&C Standpipe Level Alarm
FSAR 5.4.7	[Residual Heat Removal System] Operation from Main Control Room
FSAR (various sections)	FSAR Changes to Support New 10 CFR 50.59 Rule
FSAR 9.2.1.2	[Emergency Service Water Pump Operation
OP-134.01, Rev. 15	Feedwater System Procedure
ORT-8001, Rev 4	Digital Electro-Hydraulic Computer System Dynamic Simulation Test
OST-1825, Rev. 12	Safety Injection: [Engineered Safety Feature] Response Time, Train A, 18 Month Interval on a Staggered Test Basis, Modes 5-6
PLP-106, Rev. 27	[Technical Specification] Equipment List Program and Core Operating Limits Report
PLP-114, Rev. 14	Relocated [Technical Specification] and Design Basis Requirements Procedure

PLP-632T, Rev. 1                      Power Ascension Testing Program After RFO-10 Refueling  
Outage

Licensee Procedures and Documents [R02 & R17B]

<u>Document No.</u>	<u>Title</u>
REG-NGGC-0002, Rev. 4	10 CFR 50.59 and Other Regulatory Evaluations
REG-NGGC-0010, Rev. 4	10 CFR 50.59 Reviews
EGR-NGGC-0011, Rev. 5	Conduct of Engineering Products Review
EGR-NGGC-0005, Rev. 17	Engineering Change
AR 64082	[10CFR]50.59 [Unreviewed Safety Question Determination] did not meet expectations for review performed for PLP- 632T
AR 29316	10CFR50.59 Evaluation Quality Improvements
AR 02915	Pressurizer [Safety Relief Valve] Capacity
HNP-F/NFSA-0061	HNP Cycle 10 Changes to Plant Parameters Document
WO 88589 05	Install [High Pressure Safety Injection] Flow Orifice 2SI2- 585B-1
WO 88589 11	Install [High Pressure Safety Injection] Flow Orifice 2SI2- 725B-1
Final Safety Analysis Report (FSAR) (including Amendment 50)	
Technical Specifications, Amendment 107	

Licensee Assessment Documents [R02 & R17B]

<u>Document No.</u>	<u>Title</u>
AR 28644-02	Self Assessment of Engineering Product Quality