UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8931

April 29, 2002

Carolina Power & Light Company
ATTN: Mr. John W. Moyer
Vice President
H. B. Robinson Steam Electric Plant
Unit 2
3851 West Entrance Road
Hartsville, SC 29550

SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT- NRC INTEGRATED INSPECTION REPORT 50-261/01-06

Dear Mr. Moyer:

On March 30, 2002, the Nuclear Regulatory Commission (NRC) completed an inspection at your Robinson facility. The enclosed report documents the inspection findings which were discussed on April 8, 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) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC web site at http://www.nrc.gov/reading-rm.html (the Public Electronic Reading Room).

Sincerely,

/RA/

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

Docket No.: 50-261
License No.: DPR-23

Enclosure: (See page 2)

Enclosure: Inspection Report 50-261/01-06
w/Attachment

cc w/encl:
T. D. Walt
Director, Site Operations
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant
Electronic Mail Distribution

T. P. Cleary
Plant General Manager
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant
Electronic Mail Distribution

Terry C. Morton, Manager
Performance Evaluation and
Regulatory Affairs CPB 9
Electronic Mail Distribution

Charles T. Baucom, Supervisor
Licensing/Regulatory Programs
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant
Electronic Mail Distribution

B. L. Fletcher III, Manager
Regulatory Affairs
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant
Electronic Mail Distribution

Henry J. Porter, Director
Div. of Radioactive Waste Mgmt.
Dept. of Health and Environmental
Control
Electronic Mail Distribution

R. Mike Gandy
Division of Radioactive Waste Mgmt.
S. C. Department of Health and
Environmental Control
Electronic Mail Distribution

Mel Fry, Director
Division of Radiation Protection
N. C. Department of Environment,
Health and Natural Resources
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

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

Robert P. Gruber
Executive Director
Public Staff - NCUC
P. O. Box 29520
Raleigh, NC 27626-0520

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

Distribution w/encl: (See page 3)

Distribution w/encl:
R. Subbaratnam, NRR
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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-261
License No:	DRP-23
Report No:	50-261/01-06
Licensee:	Carolina Power & Light (CP&L)
Facility:	H. B. Robinson Steam Electric Plant, Unit 2
Location:	3581 West Entrance Road Hartsville, SC 29550
Dates:	December 30, 2001 - March 30, 2002
Inspectors:	B. Desai, Senior Resident Inspector A. Hutto, Resident Inspector M. Scott, Senior Reactor Inspector (Sections 1R02 and 1R17) R. Chou, Reactor Inspector (Sections 1R02 and 1R17) S. Walker, Reactor Inspector (Section 1R02 and 1R17)
Approved by:	B. Bonser, Chief Reactor Projects Branch 4 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000261-01-06, on 12/30/2001 - 03/30/2002, Carolina Power & Light Company, H. B. Robinson Steam Electric Plant, Unit 2. Baseline integrated resident inspection report.

The inspection was conducted by resident inspectors, a senior reactor inspector, and two reactor inspectors. No findings of significance were identified during this inspection. 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

Summary of Plant Status

The unit operated at or near full power for most of the report period with the following exceptions. On January 11, power was reduced to 55 percent for turbine stop valve limit switch troubleshooting and condenser tube repair. The unit was returned to 100 percent power on January 13. On March 8, power was reduced to 65 percent to support additional main condenser tube repair. The unit was returned to 100 percent power on March 10.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R02 Evaluations of Changes, Tests or Experiments

a. Inspection Scope

The inspectors reviewed selected samples of evaluations required by 10 CFR 50.59 to verify that the licensee had appropriately considered the conditions under which changes to the facility or procedures may be made, and tests conducted, without prior NRC approval. The inspectors reviewed evaluations for six changes. 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 six evaluations reviewed are listed in the List of Documents Reviewed in the Attachment.

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 eleven screened out changes reviewed are listed in the List of Documents Reviewed in the Attachment.

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

The inspectors reviewed plant documents including plan-of-the-week, system descriptions (SD), Updated Final Safety Analysis Report (UFSAR), Technical Specifications (TS), and piping and instrument diagrams (P&IDs) to determine correct

system lineup. The inspectors performed three partial system walkdowns to verify proper equipment alignment and to identify any discrepancies that could impact the safety function of the system or could contribute to an initiation of a plant transient.

Partial system walkdowns:

- B Component Cooling Water (CCW) Pump, Emergency Bus E1, and A Emergency Diesel Generator (EDG) with C CCW Pump out-of-service (OOS) for impeller replacement
- Level Indication for CCW Surge Tank with radiation monitor R-17 OOS
- B EDG, Start-up Transformer, and Emergency Bus E2 with the A EDG OOS for scheduled maintenance

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;
- any welding or cutting being performed in the area;
- the physical condition of the fire detection devices;
- the physical condition of the automatic suppression system (where used);
- the availability and general condition of portable fire extinguishers;
- the physical condition of manual suppression systems, including fire hoses;
- the material condition of electrical raceway fire barrier systems;
- the material condition of the fire doors;
- the condition of ventilation fire dampers;
- the physical condition of seals in accessible electrical and piping penetrations;
- the adequacy of compensatory measures, where degraded features were identified.

The inspected areas included the following:

- Turbine Building
- Hydrogen Storage Area
- Hagan Rack Room
- Secondary Control Panel Room
- Chemical Storage and Water Treatment Plant
- Spent Fuel Pool

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors performed a walkdown of fire main piping located in the auxiliary building that could pose a flooding threat to safety related equipment. The inspectors observed the material condition of the piping for any corrosion or degradation that could affect the piping integrity. The inspectors also discussed fire main system maintenance and inspections with the system engineer with regards to the licensee's monitoring of system heath.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

The inspectors observed licensed operator requalification training activities which included simulator scenarios. The training scenario involved a dropped rod and anticipated transient without scram (ATWS). The inspectors assessed licensed operator performance during the scenarios to verify that the crew correctly diagnosed abnormal conditions and that the appropriate emergency operating procedures (EOP) and abnormal operating procedures (AOP) were used. The inspectors observed the effectiveness of command and control demonstrated by the crew. The inspectors reviewed the emergency classification performed by the participating operators. The inspectors reviewed critique notes for the training cycle to verify that areas for improvement were being captured by the licensee's training program.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors assessed the effectiveness of the licensee's maintenance efforts by evaluating several conditions that occurred during the inspection period. The inspection determined the risk significance of the condition, licensee implementation of the maintenance rule (MR) (10 CFR 50.65) with respect to characterization of failures, the appropriateness of the associated MR a(1) or a(2) classification as well as the associated performance criteria, and the utilization of the corrective action program. The specific conditions evaluated by the inspectors included:

- B Instrument air compressor (IAC) failure to maintain pressure
- Radiation monitor failures
- Engine driven fire pump (EDFP) tripping on overspeed

- A Condenser vacuum pump seal leakage
- B Service water booster pump motor 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 for the following plant configurations. The inspectors reviewed the licensee's implementation of MR 10 CFR 50.65 (a)(4) requirements during scheduled and emergent maintenance activities. The licensee evaluated plant risk in accordance with Operations Management Manual OMM-048, Work Coordination and Safety Assessment, during the scheduling of planned and emergent work items. The inspectors reviewed the effectiveness of licensee actions to plan and control scheduled work to minimize overall plant risk while the emergent work items were being addressed. The inspectors reviewed the applicable plant risk profiles, work week schedules, and maintenance work requests associated with the following out of service equipment:

- C Deepwell pump OOS, with B IAC unavailable due to emergent work and reactor protection system testing
- Primary air compressor (PAC), EDFP and B charging pump with emergent nuclear Instrument calibration
- PAC replacement and EDFP OOS during turbine stop valve troubleshooting
- C Main transformer cooling flow OOS during switchyard work
- EDG availability during routine testing

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions

a. Inspection Scope

The inspectors observed operator performance and reviewed operator logs, plant computer data, and control room annunciator panels during a reactor power reduction to 55 percent to support turbine stop valve limit switch troubleshooting and condenser tube leak repair. The inspectors observed the operators' procedure usage, command and control techniques, and adherence to Technical Specification reactor coolant sampling requirements.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors selected operability evaluations affecting the risk significant mitigating systems listed below to assess as appropriate: (1) the technical adequacy of the evaluations; (2) whether continued component or system operability was warranted; and (3) whether other existing degraded conditions were considered as compensatory measures. These reviews were performed for the following:

- Non-conservative steam generator lo-lo level setpoints - Westinghouse NSAL-02-03
- ESR-9500152, HVH 6B Service Water Leak (SI pump room cooler)
- AR 56208, Charging Pump Suction Line Vibrations
- AR 57678, A RCP High Vibrations

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors evaluated design change packages for eleven modifications, in all three cornerstone areas, to verify that the modifications did not degrade system availability, reliability, or functional capability. 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 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 walkdowns 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 UFSAR, supporting analyses, TS, and design basis documentation. The major documents reviewed are listed in the List of Documents Reviewed in the Attachment.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors witnessed the following post maintenance tests (PMT) and/or reviewed the test data to determine if the tests were adequate for the scope of maintenance and if the acceptance criteria and test results demonstrated the operational readiness of the structures, systems and components (SSC) in accordance with plant TS. The activities were selected based on a risk assessment associated with the scheduled or emergent activity.

- OST-908 Component Cooling System Component Test following C pump replacement
- OST 352-2 Containment Spray Component Test - Train B following breaker inspection
- OST-910 Dedicated Shutdown Diesel Generator (Monthly) following scheduled maintenance
- OST-151-2 Safety Injection System Components Test - Pump B (Quarterly) following breaker and motor coupling maintenance.
- OST-201-2 MDAFW System Component Test - Train B, following calibration of discharge pressure switches
- OST-701-8 V12-10 and V12-11 Inservice Valve Test, following instrument air leak repair on containment isolation valve V12-10

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors witnessed the following surveillance tests and/or reviewed test data to verify that the surveillance test results demonstrated that the SSCs were capable of performing their intended safety functions. Specifically, the inspectors considered the following: pre-conditioning, plant risk, appropriate acceptance criteria, adequate test equipment, procedure adherence, completeness of data, adequate test frequency, and configuration control.

- OST-401-2 EDG B Slow Speed Start
- OST-107 Boric Acid Blender Control Valve and Pump Operation (Quarterly)
- MST-021 Reactor Protection Logic Train B at Power
- OST-402-1 EDG A Diesel Fuel Oil System Flow Test
- OST-151-3 Safety Injection System Components Test - Pump C
- OST-302-1 Service Water Pumps A & B Inservice Test

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the following temporary modifications to determine their impact on safety functions. This review included the associated 10 CFR 50.59 screening performed for the modifications against the system design basis, UFSAR and TS as well as the configuration control of the modification to verify that any affected plant documents, such as drawings and procedures were properly controlled.

- ESR 01-00121 Temporary Primary Air Compressor (Instrument Air)
- EC 48775 Reactor Coolant Pump A Temporary Vibration Meter

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed and evaluated the licensee's conduct of a simulator based emergency preparedness drill held on February 26. The drill scenario involved a loss of fission product barrier (fuel cladding) and subsequent ATWS. The inspectors observed the scenario from the simulator control room, the technical support center and the emergency operations center. The inspector's observed performance of the licensee's ability to correctly classify the event, notify state and county authorities of the event, and to formulate the appropriate protective action recommendations. The inspectors also reviewed the post drill critique that was developed by the licensee evaluators.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES [OA]

40A1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors verified the following PIs for accuracy. To verify data for PIs under Mitigating Systems and Initiating Events, the inspectors reviewed control room logs, maintenance rule logs, data reported to NRC, and condition reports. PI data for the period of April through December 2001 was reviewed using the guidance in Nuclear Energy Institute (NEI) 99-02 Regulatory Assessment Performance Indicator Guideline.

Cornerstone	Performance Indicator
Mitigating Systems	Emergency A/C Power System Unavailability High Pressure Injection System Unavailability
Initiating Events	Unplanned Scrams per 7000 Critical Hours Scrams With Loss of Normal Heat Removal

b. Findings

No findings of significance were identified.

40A3 Event Follow-up

(Closed) Licensee Event Report (LER) 50-261/2000-001-00: Manual Reactor Trip Due To Turbine Electro-Hydraulic Control Tubing Failure.

The inspectors reviewed this LER for a reactor trip that occurred on June 21, 2000. The initial inspector review of the uncomplicated reactor trip was documented in NRC Inspection Report 50-261/2000-03, dated July 27, 2000. There were no findings of significance identified.

4OA5 Other

(Closed) TI 2515/146, Hydrogen Storage Locations

The inspectors reviewed the UFSAR and walked down the plant to identify areas where bulk hydrogen gas was stored. The inspectors determined that all bulk hydrogen storage was greater than 50 feet from ventilation intakes, safety related water tanks, and safety-related or risk-significant SSC's.

4OA6 Meetings, Including Exit

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. John Moyer and other members of licensee management on April 08, 2002. The licensee acknowledged the findings presented during the exit meeting.

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

.2 Annual Assessment Meeting Summary

Subsequent to the end of the inspection period, on April 2, 2002, the NRC Region II, Division of Reactor Projects Branch 4 Branch Chief and the Senior Resident Inspector assigned to the Robinson Plant, met with Carolina Power and Light, to discuss the

NRC's Reactor Oversight Process (ROP) and the Robinson Unit 2 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 Robinson Unit 2 assessment, and the NRC's Agency Action Matrix. Attendees included Robinson Unit 2 site management, members of site staff, one local official, and three news media personnel.

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 website at http://www.nrc.gov/reading-rm.html (the Public Electronic Reading Room).

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. Ivey , Operations Manager
C. Martin, Site Support Services Manager
E. Caba, Engineering Superintendent
D. Stoddard, Robinson Engineering Support Services Manager
E. Rothe, Maintenance Manager
T. Walt, Director of Site Operations
R. Steele, Outage Management Manager
T. Cleary, Plant General Manager
W. Farmer, Engineering Superintendent
J. Fletcher, Regulatory Affairs Manager
S. Weiss, Training Manager
J. Moyer, Vice President, Robinson Nuclear Plant
S. Young, Superintendent Security
D. Crook, Supervisor Access Authorization
A.G. Cheatham, Radiation Protection Manager

NRC

Brian Bonser, Branch Chief, DRP, RII
Mark Lesser, Branch Chief, DRS, RII

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-261/2000-001-00	LER	Manual Reactor Trip Due To Turbine Electro - Hydraulic Control Tubing Failure (Section 40A3)
TI 2525/146	TI	Hydrogen Storage Locations (Section 40A5)

Discussed

None

List of Documents Reviewed

1R02 & 1R17

Engineering Service Requests (ESRs) - Modifications

ESR NO.	Title	Screened out
01 00109	Primary Air Compressor Replacement	yes
99-00056	Adjustment of A & B Emergency Diesel Generator Shutdown Mechanism	yes
98 00509	N SW Header Replacement	no
99 00045	DS UPS Battery Mod	no
99 00359	MSIV 1A Check Valve Replacement	yes
00 00027	Improve IB Power to RPS	no
97 00301	Repair Structure for EDG Fuel Oil Storage Tank	yes
00 00200	Recover Maximum Number of Pressurizer Heaters	yes
00 00242	Furmanite Valve AFW-70	yes
99 00354	Damaged Valves SW-739, 740	no
01-00075	AFW-FW-14B Motor Pinion and Worm Shaft Gear Replacement	yes

Screened Out Items, not Changes to the Plant

Number	Title
00 271	Calculation RNP-1/INST-1103, Rev 1, Steam Generator Level EOP Setpoint Parameters
00 751	IST Evaluation 00-010, CCW Pump A & SI Pump C Vibration
00 1272	Sodium Hydroxide (NaOH) Tank Operability
01 680	OP-104, Pressurizer Operations---new section for PZR PORV isolation

Engineering Evaluations

Number	Title
00 1211	Safety Injection Valve SI 861A/B Differential Pressure Reduction
00 1433	SI Pump Room Ventilation

Licensee's Governing Procedures
EGR-NGGC-005, Engineering Change and Engineering Service Requests
REG-NGGC-002, 10 CFR 50.59 and Other Regulatory Evaluation
REG-NGGC-010, 10 CFR 50.59 Reviews

Licensee Assessment Documents

Nuclear Assessment Section Report RR-ES- 00-01 BNAS 00 060, Engineering Functional Area Assessment, November 1, 2000
Conduct of 50.59 rule Implementation Self-Assessment, 3/31/01
H.B. Robinson Steam Electric Plant Unit No. 2, minutes of Meeting PNSC Safety Evaluation Subcommittee - February 1, 2000
CP&L Letter - Review of Unreviewed Safety Question February 11, 1999

1R04
UFSAR Sections 8.3.1, 9.2.1, 9.2.2
ITS Sections 3.5, 3.7, 3.8, 5.0
Plant Drawings G-190199, G-190204A, 5379-376

1R05
UFSAR Section 9.5.1

1R06
Drawing HBR2-8255

1R11
EPP-4, Reactor Trip Response
Emergency Procedure Path I
Emergency Action Level Matrix

1R12
ADM-NGGC-0101, Maintenance Rule Program
Drawing G-190197, G-190200, HBR2-8255
ITS Sections 3.7.7
System Description Fire Protection System
RNP Maintenance Rule Database

1R13
OMM-48, Work Condition and Risk Assessment
OST-401-1, EDG A Slow Speed Start
OP-604, Diesel Generators A and B
NUMARC 93-01

1R14
GP-005, Power Operation
OP-105, Maneuvering the Plant When Greater Than 25% Power
TS SR 3.4.16.2

1R15
EGR NGGC-005, Engineering Service Requests
UFSAR Chapter 3.0, 7.0, 15.0
Drawing 5379-2762

1R17
EGR- NGGC-005, Engineering Service Request
UFSAR Section 3.0,9.0,15.0
Drawing G-190200

1R19
PLP-033, Post Maintenance Testing (PMT) Program

IR22
ITS 3.7.7, 3.7.8
ITS SR 3.3.1-7, Table 3.3.1-1
ITS 3.8.1, 3.8.2
ITS 3.5.2, 3.5.3, 5.5.8
System Description 002, Safety Injection
H.B. Robinson Inservice Testing Database

1R23
Drawings G190200, 5379-1971
AOP-018, Reactor Coolant Pump Abnormal Conditions
APP-001, Miscellaneous NSSS
AR 57678

1EP6
Emergency Preparedness Self Assessment Debrief, Assessment Number: 54207

40A1
REG-NGGC-0009, NRC Performance Indicators