



UNITED STATES  
 NUCLEAR REGULATORY COMMISSION  
 REGION II  
 101 MARIETTA STREET, N.W.  
 ATLANTA, GEORGIA 30303

Report No.: 50-261/84-23

Licensee: Carolina Power and Light Company  
 411 Fayetteville Street  
 Raleigh, NC 27602

Docket No.: 50-261

License No.: DPR-23

Facility Name: H. B. Robinson

Inspection Dates: June 11 - July 10, 1983

Inspection at H. B. Robinson site near Hartsville, South Carolina

Inspectors:

*S. Weise* 7/12/84  
 S. Weise Date Signed

*D. O. Myers for* 7/13/84  
 P. Bemis Date Signed

*A. K. Hardin* 7/12/84  
 A. K. Hardin Date Signed

Approved by: *Dennis O. Myers for* 7/13/84  
 P. R. Bemis, Section Chief Date Signed  
 Division of Reactor Projects

SUMMARY

Areas Inspected

This routine, unannounced inspection involved 88 resident inspector-hours onsite in the areas of technical specification compliance, plant tour, operations performance, reportable occurrences, housekeeping, site security, surveillance activities, maintenance activities, quality assurance practices, radiation control activities, IE Notice followup, TMI action item review, enforcement action followup, steam generator replacement activities, onsite review committee activities, and in-office review of inspector identified items.

Results

Of the 16 areas inspected, no violations or deviations were identified in 13 areas; one violation was found in three areas. No apparent deviation was found in any area.

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## REPORT DETAILS

### 1. Persons Contacted

- \*G. P. Beatty, Jr., Manager, Robinson Nuclear Project Department
- \*R. E. Morgan, General Manager
- +J. Curley, Manager, Technical Support
- +F. Gilman, Project Specialist, Regulatory Compliance
- F. Lowery, Unit 2 Operations Supervisor
- +W. Crawford, Manager, Operations and Maintenance
- R. Chambers, Maintenance Supervisor - I&C/Electrical
- +\*C. Wright, Specialist, Regulatory Compliance
- +S. Crocker, Manager, Environmental and Radiation Control
- W. Gainey, Mechanical Maintenance Supervisor
- +\*J. Benjamin, Project Engineer - Operations
- \*M. J. Reid, Construction Project Manager
- \*H. P. Beane, QA/QC Surveillance Supervisor
- \*R. L. Miller, Senior Engineer - Construction
- +A. R. Wallace, Director, Onsite Nuclear Safety
- +W. Brown, Senior Specialist - Fire Protection
- +R. Barnett, Principal Specialist - Maintenance
- +B. Meyer, Project Specialist - Radiation Control

Other licensee employees contacted included construction craftsmen, technicians, operators, mechanics, security force members, and office personnel.

\*Attended exit interview of June 15, 1984

+Attended exit interview of June 27, 1984

### 2. Exit Interview

The inspection scope and findings were summarized on June 15 and 27, 1984, with those persons indicated in paragraph 1 above. The violation examples were acknowledged by the licensee. Investigation into all the events had not been completed by the licensee, although corrective actions were in progress. At no time during this inspection was written material provided to the licensee by the inspectors.

### 3. Licensee Action on Previous Inspection Findings

(Closed) Violation 261/84-09-05. The inspectors reviewed CP&L response dated May 25, 1984, and held discussions with appropriate maintenance and regulatory compliance personnel. Corrective actions appear adequate.

(Closed) Violation 261/84-03-05. The inspectors reviewed CP&L response dated April 25, 1984, and engineering surveillance procedures EST-016 Revision 2, EST-019 Revision 1, EST-022 Revision 2, EST-023 Revision 1, EST-024 Revision 1, and EST-025 Revision 1. Corrective actions appear adequate and complete.

## 4. Unresolved Items

Unresolved items were not identified during this inspection.

## 5. Technical Specification (TS) Compliance (71707, 61726, and 61700)

- a. During this reporting interval, the inspectors verified compliance with selected limiting conditions for operation (LCOs) and reviewed results of selected surveillance tests. These verifications were accomplished by direct observation of monitoring instrumentation, valve positions, switch positions, and review of completed logs and records. The licensee's compliance with selected LCO action statements was reviewed as they happened.
- b. The inspectors completed the review of the licensee's program for conducting TS-required surveillances. The review was performed to ensure that test procedures were technically adequate and properly approved and that surveillances were conducted at proper frequencies, met acceptance criteria, and were properly reviewed. Test failures, if encountered, were reviewed for reportability and acceptability of corrective actions. The following surveillance tests were reviewed for procedural adequacy:

- OST-302 - "Service Water System Component Test", Rev. 2, effective date 5/15/84
- OST-908 - "Component Cooling System Component Test", Rev. 3, effective date 3/1/84
- OST-151 - "Safety Injection System Component Test", Rev. 4, effective date 3/16/84
- OST-403 - "Diesel Fuel Oil Transfer Pumps Test", Rev. 2, effective date 1/6/84
- OST-603 - "Unit 2 Motor Driven Fire Water Pump and Unit 2 Engine Driven Fire Water Pump", Rev. 0, effective date 8/12/83

The following completed surveillance tests were reviewed for acceptability:

- OST-302 - "Service Water System Component Test", Rev. 2, dated 3/1/84. Test run on 5/24/84
- OST-401 - "Emergency Diesel", Rev. 3, dated 1/6/84. Test run on 6/4, 6/5, and 6/11/84.
- OST-908 - "Component Cooling System Component Test", Rev. 3, dated 3/1/84. Test run on 5/16/84.

- OST-603 - "Unit 2 Motor Driven Fire Water Pump and Unit 2 Engine Driven Fire Water Pump", Rev. 0, dated 8/12/83. Test run 6/10/84.

No violations or deviations were identified.

## 6. Plant Tour

- a. The inspectors conducted plant tours periodically during the inspection interval to verify that monitoring equipment was recording as required, equipment was properly tagged, operations personnel were aware of plant conditions, and plant housekeeping efforts were adequate. The inspectors determined that appropriate radiation controls were properly established, excess equipment or material was stored properly, and combustible materials was disposed of expeditiously. During tours the inspectors looked for the existence of unusual fluid leaks, piping vibrations, pipe hanger and seismic restraint abnormal settings, various valve and breaker positions, equipment clearance tags and component status, adequacy of fire fighting equipment, and instrument calibration dates. Some tours were conducted on backshifts. The inspectors performed major flowpath valve lineup verifications and system status checks on the following systems:
- (1) Emergency Diesel Generator "B" and auxiliaries
  - (2) Spent fuel cooling system
- b. During a tour of the diesel generator rooms on the afternoon of June 19, 1984, the inspectors found significant oil on the "A" diesel generator frame and on the side of the diesel nearest the governor. The oil appeared to have been sprayed out of a flange on the exhaust manifold. The inspectors discussed this condition with the licensed operator who performed the "A" diesel generator surveillance test the previous night, and determined that he had noted the spraying oil and smoke, but that it had stopped before it became necessary to shut down the engine. No maintenance work request was initiated to either clean up the oil or to identify the source of the oil spray. Subsequent licensee investigation had not determined the source of the oil by the end of the inspection period. Licensee housekeeping and maintenance procedures require that nonconforming equipment conditions be identified by work request for correction, and that oil spills be cleaned up at the end of the activity or the end of the shift, whichever comes first. Several shifts had elapsed, with attendant auxiliary operator and fire protection technician tours, when the inspectors discovered the oil spill. Subsequent discussions, however, indicated that the oil had built up slowly over the period following the test. Licensee supervision agreed to emphasize prompt housekeeping action to appropriate plant personnel. Failure to implement deficiency identification procedures, with respect to the diesel oil problem, is a further example of the violations discussed in paragraph 7.b (261/84-23-01).

- c. During a tour of the auxiliary building on June 24, 1984, the inspectors observed three individuals (MC-1037, 1208, and 1297) exiting the pipe alley. The pipe alley was posted as a high contamination area and had a step off pad at the exit. The workers were observed placing unbagged tools used in pipe alley on the floor area on the uncontaminated side of the step off pad. This activity was stopped by the inspectors and licensee health physics personnel were summoned. The licensee made appropriate surveys of the tools and the potentially contaminated floor area. Results indicated the floor and step off pad were not contaminated. The workers involved were conducting activities in pipe alley under radiation work permit (RWP) 2404. Standard instruction #2 of the RWP requires workers to bag all tools and equipment at step off pad when exiting a contaminated area. Failure to implement requirements of the RWP is a further example of the violation in paragraph 7.b (261/84-23-01). Licensee supervision indicated that the individuals involved would be barred from the radiation control area until they successfully completed supplemental general employee training.

7. Plant Operations Review (71707, 52703, and 92700)

- a. The inspectors, periodically during the inspection interval, reviewed shift logs and operations records including data sheets, instrument traces, and records of equipment malfunctions. This review included control room logs, maintenance work requests, auxiliary logs, operating orders, standing orders, jumper logs, and equipment tagout records. The inspectors routinely observed operator alertness and demeanor during plant tours. During abnormal events, operator performance and response actions were observed and evaluated. The inspectors conducted random off-hours inspections during the reporting interval to assure that operations and security remained at an acceptable level. Shift turnovers were observed to verify that they were conducted in accordance with approved licensee procedures.
- b. On June 21, 1984, with the plant in cold shutdown and defueled, an engineered safety feature (ESF) actuation occurred from the high containment pressure protection logic. The diesel generators started, and selected pumps and valves operated as required. No safety injection flow occurred due to plant conditions and equipment clearances. The licensee identified this event as four-hour reportable and properly notified the NRC. Further investigation into the event determined that the actuation occurred due to calibration activities by separate maintenance crews in the Safeguards Racks and at containment pressure instruments in the field. These activities affected two channels in the two-out-of-three logic. Licensee operating procedures for control of activities affecting Safeguards Racks instruments forbid having separate maintenance crews working in Safeguards Racks or on instruments in the field unless the same channel is involved. Deviations from this policy require Maintenance Supervisor or Operations Supervisor approval. Two crews on separate instrument channels were allowed to conduct calibration activities without appropriate controls

and attendant management approval. This failure to implement procedures constitutes a violation (261/84-23-01). The licensee will submit an LER describing this ESF actuation.

8. Physical Protection (71707)

The inspectors verified by observation and interview during the reporting interval that measures taken to assure the physical protection of the facility met current requirements. Areas inspected included the organization of the security force, the establishment and maintenance of gates, doors, and isolation zones in the proper condition, that access control and badging was proper, that search practices were appropriate, and that escorting and communications procedures were followed. No violations or deviations were identified.

9. Steam Generator Replacement Activities (37701)

The inspectors reviewed activities associated with installation of the steam generator (S/G) blowdown containment isolation valves and preparations for hydrostatic testing of "A" S/G secondary side.

- a. The inspectors observed transfer, staging, and installation of several S/G blowdown containment isolation valves over about a week's period. During transfer of valve 1931B, the inspectors observed minor damage in that a filter-regulator metal port plug was missing and wiring to the solenoid was damaged. This valve and the other valves were conditionally released pending resolution of receipt inspection discrepancies. The damage noted by the inspectors was done during handling, but appeared to be an isolated instance. Valve 1931B was subsequently placed in a hold status due to welding discrepancies identified by the licensee. Installation procedures and post-installation testing and turnover requirements appeared adequate to identify the discrepancies prior to system startup. The inspectors observed portions of valve fitup, rigging, and weld preparation activities. Additionally, the inspectors verified that fire watch requirements were met. No violations or deviations were identified.
- b. The inspectors reviewed the draft procedure for hydrostatic testing of "A" steam generator secondary side and held discussions with appropriate engineering, construction, and operations personnel. The inspectors reviewed test precautions, hydro pump capacity, relief valve capacity, valve lineups, and physical setup of the test control locations. The inspectors pointed out several minor valve lineup inconsistencies and a lack of definitive guidance to the individual controlling test pressure on action to be taken should S/G temperature drop below 120°F. Licensee personnel made appropriate procedural changes in response to these items.

## 10. Licensee Event Report (LER) and Followup (92700)

The inspectors reviewed the following LERs to verify that the report details met license requirements, identified the cause of the event, described appropriate corrective actions, adequately assessed the event, and addressed any generic implications. Corrective action and appropriate licensee review of the below events was verified. When licensee identified violations were noted, they were reviewed in accordance with the enforcement policy. The inspectors had no further comments.

<u>LER</u>	<u>Event</u>
83-05 and Rev. 1 83-33	Service Water Booster Pumps Inoperable Frozen Instruments

## 11. Onsite Review Committee (40700)

The inspectors attended, as an observer, several plant nuclear safety committee meetings to observe conduct of the meetings, verify that Technical Specification requirements for membership, review process, frequency, and qualifications were met, and to confirm that recommended corrective actions are being completed. Meeting minutes for prior 1984 meetings were reviewed to confirm that decisions/recommendations were reflected in the minutes. Licensee actions on action items, reportable occurrences, and violations are routinely monitored by the inspectors. No violations or deviations were identified.

## 12. TMI Action Items

## a. I.D.2, Plant Safety Parameters Display System (SPDS)

The inspectors reviewed NRC Generic Letter 82-33 and CP&L responses dated April 15 and August 24, 1983, and March 29, 1984, concerning SPDS design, installation, and training. CP&L has developed a generic specification for the SPDS which includes an Emergency Response Facility Information System (ERFIS) which can be adapted to all CP&L's nuclear sites. An architect-engineer firm has been selected, and CP&L awarded a contract in May 1984. CP&L does not desire an NRC pre-implementation review. NRC order dated February 21, 1984, requires the licensee to submit a safety analysis and an implementation plan for SPDS to the NRC in December 1984. This item will remain open.

## b. II.A.1.2, Emergency Response Facilities

The inspectors reviewed CP&L letters dated April 9, October 4, and December 6, 1982, and March 22, April 15, and August 24, 1983, and NRC correspondence dated December 17, 1982, and January 3, 1984. The licensee has submitted their radiation shielding analysis for the combined Technical Support Center (TSC) and Emergency Operating Facility (EOF) and facility habitability and location information. The combined EOF/TSC building was begun in October 1982 and is currently

over ninety percent complete. Emergency communications capability has not yet been transferred from the separate interim TSC and interim EOF, also located onsite. The building ventilation system with HEPA filters is installed except for the associated radiation monitor. Installation of an emergency diesel generator for backup power to the facility is scheduled to commence in July 1984. Security modifications to integrate the TSC with the plant security system are scheduled for completion in May 1985. The interim TSC/EOF facilities will be used during the emergency exercise scheduled for August 1984. NRC Order dated February 21, 1984, requires that the licensee provide a date when the combined EOF/TSC will be fully functional in December 1984. This item will remain open.

13. Review of IE Notices (IENs) (92717)

The inspectors verified that IENs had been received onsite and reviewed by cognizant licensee personnel. Selected applicable IE Notices were discussed with licensee personnel to ascertain the licensee's actions on these items. Licensee action on the following IENs was reviewed by the inspector and are closed.

IE Notices

82-11	83-38
82-12	83-59
83-02	83-67
83-04	83-76
83-08	83-81
83-18	83-82
83-33	83-83
83-34	
83-35	

14. In-Office Review of Inspector Identified Items

The following items were evaluated by the Reactor Safety, Radiation Safety and Safeguards, and Reactor Projects regional staff. Based on this review and the results of the latest Resident and Region based inspection activities in the affected functional areas, the following inspector identified items were determined to require no additional specific followup and are closed.

82-39-03	Provide Training to Ambulance Squad Members
82-39-06	Improve Controls for News Release Coordination
82-39-08	Improve Utilization of the OSC
82-39-10	Provide for Effective Utilization of the Accident Assessment Team
82-39-11	Improve Means for Contamination Control in the Mobile Lab