



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30303

JUN 1 1984

Report No.: 50-261/84-15

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 Date: May 1-4, 1984

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

Inspector: L. H. Jackson 5-31-84  
Date Signed

Approved by: C. M. Upright 5/31/84  
C. M. Upright, Section Chief  
Division of Reactor Safety  
Date Signed

SUMMARY

Scope: This special, unannounced inspection involved 28 inspector-hours on site in the areas of preplanning and quality assurance activities associated with steam generator replacement.

Results: Of the area inspected, no violations or deviations were identified.

## REPORT DETAILS

### 1. Persons Contacted

- H. R. Banks, Corporate Quality Assurance Manager
- D. Baur, Project QA/QC Specialist
- \*G. P. Beatty, H. B. Robinson, Project Manager
- D. Crook, Specialist, Document Control
- F. Eckert, Senior Scheduler
- \*F. M. Gilman, Project Specialist, Regulatory Compliance
- \*R. L. Miller, Project Engineer, Construction
- D. Morgan, General Manager
- \*C. H. Mosley, Jr., Manager, Corporate QA
- L. McKensie, Principal Engineer, QA
- \*M. J. Reid, Construction Project Manager
- D. Roberts, Training Instructor
- D. Sayre, Senior Surveillance Specialist
- \*J. C. Sturdavant, Technician, Regulatory Compliance
- E. Upchurch, Welding Engineer
- \*A. R. Wallace, Director, Onsite Nuclear Safety
- \*C. L. Wright, Senior Specialist, Regulatory Compliance
- \*H. J. Young, Director, Corporate QA/QC

Other licensee employees contact included six construction craftsmen, three technicians, and eight office personnel.

NRC Resident Inspector

\*S. P. Weise

\*Attended exit interview.

### 2. Exit Interview

The inspection scope and findings were summarized on May 4, 1984, with those persons indicated in paragraph 1 above. The inspector informed the licensee that one apparent violation had been identified during the inspection. ASME Boiler and Pressure Vessel Code, Section IX, paragraph QW-201, Manufacturer's or Contractor's Responsibility, requires each manufacturer or contractor to qualify the Welding Procedure Specification by welding test coupons and testing specimens (as required in this code) and recording welding data and test results in a document known as a Procedure Qualification Record (PQR).

The licensee acknowledged the inspection finding, but pointed out that they disagreed with the inspector's findings as discussed in paragraph 5c. This matter was discussed by telephone on May 7, 1984, with CP&L corporate office personnel. Based on additional clarification provided during this discussion, the CP&L corporate quality assurance manager was informed by

Region II management that steam generator welding activities did not appear to violate the ASME Code.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Preplanning of Complex Construction Activities (35053B)

This inspection was performed to determine whether the QA program for complex construction activities associated with the replacement of steam generators identified problem areas which required specific preplanning to assure adequate control and whether specified preplanning requirements were implemented before the activity was started.

a. Inspection Requirements

The inspector held discussions with licensee personnel responsible for preplanning activities associated with the replacement of steam generators and other safety related work to be accomplished during this outage. These discussions were intended to confirm that:

- Necessary procedures were developed and appear to be adequate for the expected complexity of the work.
- Special training of craft personnel in complex work activities has or will be conducted.
- QC/QA personnel are properly trained in inspection requirements.
- Staffing for construction and QC/QA personnel provide adequate coverage for activities affecting quality.
- Equipment and necessary backup equipment has been provided in cases where continuity of the activity is important to assure quality.
- QC/QA inspection hold points are identified at critical steps.
- QA surveillance of contractor activities is conducted and controlled in an effective manner.

The inspector confirmed that the licensee has developed a Critical Path Method (CPM) for schedule of work activities based on data gained during hands on experience while working with another utility during their replacement of steam generators.

Within this area, no violations or deviations were identified.

b. Review of Program

The inspector reviewed the following:

- (1) Corporate Quality Assurance Manual, R6
  - (a) Section 6, Instructions, Procedures, Drawings and Document Control
  - (b) Section 7, Indoctrination and Training
  - (c) Section 8, Construction Site Work Control
  - (d) Section 16, Quality Assurance Audits
- (2) H. B. Robinson - Unit No. 2 Steam Generator Repair Report
- (3) Technical Procedures
  - (a) TP-SGR-50A, R0, Edge Preparation Feedwater Nozzle Remnant
  - (b) TP-SGR-52C, R0, Edge Preparation Miscellaneous
  - (c) TP-SGR-54A, R0, Channel Head Cutting
  - (d) TP-SGR-1A, R2, New Steam Generator Handling
- (4) Procedures Administrative Manual
 

Chapter 4, R1, Procedures Preparation Standards.

The licensee has established contracts with speciality contractors to provide services in their field of expertise, such as cutting, machining, preheat, welding, post-weld-heat-treatment, nondestructive examination, and insulation. The licensee has or will review and approve all contractors QA manuals. CP&L has overall responsibility for the QA program for replacement of the steam generators. CP&L maintains responsibility to assure implementation of all contractor QA programs. CP&L QA personnel audit and provide surveillance to assure that all activities are conducted in accordance with applicable codes, standards, and regulations.

Within this area, no violations or deviations were identified.



c. Field Inspection

The inspector witnessed a dimensional inspection being performed by crafts to verify concentricity of equipment for machining weld end preparations on feedwater remnants. Review of records in the field and later in construction document control confirmed that hold points were being bypassed. This item was later verified to have been identified by another NRC inspector during the previous week. Appropriate nonconformances, numbers 84/110 and 84/111, had been issued to correct these items.

Discussions with appropriate welding and QA personnel confirmed that Chicago Bridge and Iron Company (CB&I), one of the speciality contractors, had incorporated CP&L qualified welding procedures into the CB&I QA manual without having performed independent welding procedure qualifications. This appeared to violate ASME Boiler and Pressure Vessel Code, Section IX, paragraph QW-201, Manufacturer's or Contractor's Responsibility. The inspector discussed this apparent violation with appropriate personnel within the licensee's organization. The H. B. Robinson Project Manager issued a stop work order at approximately 2:00 p.m. on May 3, 1984, until the matter could be resolved. Discussion within the licensee's organization concluded that the contractor was working under CP&L control and the Project Manager directed that work be resumed at approximately 7:00 p.m. on May 3, 1984.

Subsequent to the inspection on May 7, 1984, the NRC staff verified that H. B. Robinson - Unit 2 Steam Generator Repair Report committed CP&L to ASME Boiler and Pressure Vessel Code Section XI. Paragraph IWA-4300, Welding and Welder Qualifications (including Welding Operators) requires welding procedure specifications be qualified by the owner or repair organization. The licensee's Manager, QA, was notified by telephone on May 7, 1984, that the Region II staff had concluded that ASME Boiler and Pressure Vessel Code, Section XI, was the controlling document and that violation of Section XI had not occurred.

Within this area, no violations or deviations were identified.

d. Training

The inspector held discussions with appropriate personnel, reviewed steam generator replacement training requirements Revision 2, reviewed various lesson plans, attendance records, and viewed a video presentation of the channel head mock-up where crafts were trained to install lead shielding. The inspector confirmed that a program for training crafts and for verification of previous training such as cutting and machinery, cladding strip back and restoration, heavy rigging, and crane operation is required. Specialty contractors are required to demonstrate their expertise on mock-ups, where necessary, to confirm their qualifications.

Within this area, no violations or deviations were identified.

e. Staffing

The inspector held discussions with management personnel in Construction and Quality Assurance to verify that adequate manpower had or will be dedicated to accomplish the repair of H. B. Robinson. These discussions confirmed that adequate contracts have been placed to cover critical work activities during the repair. CP&L has approximately eighty QA/QC personnel on site to perform QA surveillance and QC functions. In addition, (CB&I furnishes their own NDE QC personnel and) CP&L performs final acceptance review of all radiography.

Within this area, no violations or deviations were identified.