



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report No. 50-261/79-7

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

Facility Name: H. B. Robinson Unit 2

Docket No. 50-261

License No. DPR-23

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

Inspector: *D R Quick for* 5-17-79
C. Julian Date Signed

Approved by: *D R Quick for* 5-17-79
R. D. Martin, Section Chief, RONS Branch Date Signed

SUMMARY

Inspection on April 30 - May 3, 1979

Areas Inspected

This routine unannounced inspection involved 34 inspector-hours onsite in the areas of preparation for refueling, refueling, new fuel receipt, and testing of anchor bolts in response to NRC bulletin 79-02.

Results

Of the four areas inspected, no apparent items of noncompliance or deviations were identified.

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DETAILS

1. Persons Contacted

Licensee Employees

- R. Starkey, Plant Manager
- *W. Crawford, Operating Supervisor
- *B. Garrison, QA Supervisor
- *J. Curley, Engineer Supervisor
- *S. Zimmerman, Maintenance Supervisor
- *J. Hopkins, Nuclear Engineer
- S. Crocker, E&RC Supervisor
- C. Wright, Operations Technician

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on May 3, 1979 with those persons indicated in Paragraph 1 above. In response to the inspector's comments, the licensee representative agreed to the following actions. (See paragraph 7).

- a. Review and revise procedures as necessary to include a check list of Technical Specification related prerequisites for fuel handling.
- b. Review procedure FT-9.11 "Core Map After Refueling" and evaluate the need for specifying the qualifications of the persons performing the procedure and the need for video taping for subsequent independent review.

The inspector noted that a "High Flux At Shutdown" alarm had been bypassed during fuel handling. He stated that although the Technical Specification requirements were met, this is not good operating practice (see paragraph 6).

The inspector discussed with the licensee representatives actions being taken to comply with NRC Bulletin 79-02 and asked to be kept informed of future plans. (see paragraph 8). The inspector also discussed the circumstances of a startup source becoming lodged in a change fixture during the fuel shuffle. The licensee representative agreed to keep the NRC regional office informed of future plans for source replacement before startup for Cycle 7. (see paragraph 6).

3. Licensee Action on Previous Inspection Findings

Unresolved Item 77-18-01: The inspector reviewed data presented by the licensee to demonstrate that failure to account for steam generator blowdown heat loss represents a negligible error in the reactor heat balance calculation. This item is closed.

Unresolved Item 77-18-02: The inspector discussed with the licensee the reasons for the apparent discrepancy between predicted and measured temperature coefficients following the startup for Cycle 5. This item is closed.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Preparation for Refueling

The inspector reviewed the records of the receipt and inspection of new fuel elements to be used in Cycle 7. The data were discussed with a licensee representative, and the records found to be satisfactory. Adequate procedures had been implemented in preparation for refueling.

No deviations or items of noncompliance were identified in this area.

6. Refueling Activities

The inspector observed the fuel shuffle activities in progress from the control room, refueling floor in the containment vessel, and the spent fuel building. Adequate procedural controls were being implemented. Each evolution was performed under the direction of a licensed Senior Reactor Operator, and satisfactory health physics practices were followed.

During the operation, several previously irradiated elements scheduled for recycle were found to be slightly bowed. This necessitated many revisions to the fuel shuffle procedure.

At one point one of the two neutron sources became lodged in an RCC change fixture while being transferred from one fuel bundle to another. The stuck source was finally freed and was retired from further service. No replacement source was immediately available, and at the close of this inspection the licensee was still evaluating whether or not the source would be replaced. The inspector pointed out to licensee representatives that a startup of the reactor with a source configuration other than original design would require careful review to determine if an unreviewed safety question exists. The licensee representatives agreed to keep the NRC regional office informed of future plans in this area.

During the fuel handling operation, source range detector channel N-32 was observed to be rather noisy with occasional spikes. The licensee stated that this was caused by electrical interference from welding machines in the plant. The inspector concluded that the noise was not of sufficient magnitude or frequency to render the channel inoperable during fuel handling.

To preclude spurious alarms, the "Hi Flux at Shutdown" alarm of SRD channel N-32 was bypassed. The channel was still operable for core monitoring, and the redundant channel was capable of providing a containment evacuation alarm. Although these conditions met the Technical Specification requirements, 3.8.1.d, the inspector stated to the licensee representatives that bypassing a SRD alarm during fuel handling is not a good continuing practice. The licensee representatives acknowledged the inspector's concern.

No deviations or items of noncompliance were identified.

7. Refueling Procedures and Logs

Numerous procedures and logs relating to the refueling operation were reviewed. The inspector made the following observations.

- a. Procedure PT 24.0 "HVAC Fans and Filters" was performed during 4/13 - 27/79 to verify operability of the HEPA and charcoal ventilation filters prior to fuel handling as required by Technical Specifications 3.8.2 and 4.12.2.a. The inspector reviewed the data and found it satisfactory. He noted that the record was not complete in that all procedural steps were not yet signed off. The inspector stated that additional steps need to be added to procedure FT-3.0 "Fuel Assembly and Core Component Movement Prerequisites and Periodic Checkoff" to insure that the filter test and all other Technical Specification prerequisites are completed prior to fuel handling. The licensee representatives agreed that appropriate action would be taken, and the inspector stated that this matter will be reviewed at a later inspection (Open Item 79-07-01).
- b. After review of procedure FT-9.11 "Core Map After Refueling", the inspector commented that the procedure should include the required qualifications for the persons performing the procedure and should specify that a video tape of the core map be made for subsequent review. The licensee representatives agreed to review the procedure and make appropriate changes. This item will be reviewed at a later inspection (Open Item 79-07-02).

8. Tests of Anchor Bolts

The inspector discussed with a licensee representative actions being taken in response to NRC bulletin 79-02. The licensee has a test program in progress to inspect all seismic class 1 anchor bolts in the plant. All anchors with a safety factor of less than 10 will be load tested. The inspector witnessed several tests in progress, reviewed the procedures, and requested that the licensee keep the NRC regional office informed of results and future plans. The licensee representative agreed to do this.