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

Report No. 50-261/81-08

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

Facility Name: H. B. Robinson Steam Electric Plant

Docket No. 50-261

License No. DPR-23

Inspection at Robinson site near Hartsville, South Carolina

Inspectors: C. Julian for — 3/26/81
S. Weise, Resident Inspector, Robinson — Date Signed

C. Julian for — 5/26/81
J. Skolds, Resident Inspector, V. C. Summer — Date Signed

Approved by: C. Julian — 3/26/81
C. Julian, Acting Section Chief, Division of Resident and Reactor Project Inspection — Date Signed

SUMMARY

Inspection on February 21 - March 10, 1981

Areas Inspected

This routine announced inspection involved 128 resident inspector-hours on site in the areas of technical specification compliance, reportable occurrences, housekeeping, operations performance, quality assurance practices, maintenance activities, site security procedures, radiation control activities, licensee action on previous inspection findings, event followup, IE Bulletin followup, review of IE Circulars and Notices, surveillance activities, review of outstanding items, and TMI Action Plan Category A requirements.

Results

Of the fifteen areas inspected, no items of noncompliance or deviations were identified in thirteen areas; one violation was found in one area (failure to control modification activities, paragraph 5.) and one deviation was found in one area (Failure to keep relief valve position monitor installed as committed, paragraph 13.d).

## DETAILS

1. Persons Contacted

   Licensee Employees

   *R. B. Starkey, Plant Manager
   *H. S. Zimmerman, Manager Technical and Administration
   *M. Page, Project Engineer
   W. Flanagan, Project Engineer
   J. Curley, Engineering Supervisor
   F. Lowery, Operations Supervisor Unit 2

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

   *Attended exit interview

2. Exit Interview

   The inspection scope and findings were summarized on March 16, 1981 with those persons indicated in Paragraph 1 above. Licensee representatives acknowledged their understanding of the findings.

3. Licensee Action on Previous Inspection Findings

   (Closed) Unresolved item 79-24-01-Monitoring teams duties/responsibilities. This item dealt with the qualifications of the personnel performing monitoring duties during an emergency drill. The plan for the emergency drill scheduled for March 11-12, 1981 states that evaluators will be qualified personnel and not trainees as was allowed in previous drills. This item is closed.

   (Closed) Unresolved item 80-19-03-Technical Specification discrepancy. This item documented that Technical Specifications covering Diesel Generator Testing were not the same as standard technical specifications. The comparison was done at IE Headquarters request. Any changes will be originated from IE Headquarters, therefore this item is closed.

   (Closed) Unresolved item 80-19-02-Failure of PCV-1716 to close. This item concerned the failure of PCV-1716 during the performance of PT-2.1. Licensee Event Report 80-18 reported this occurrence. Adequate corrective action was taken to close out LER 80-18. The licensee could not determine when the override switch was placed on override, and therefore must assume it was placed in override during plant operations. However, the plant was in cold shutdown when the condition was discovered and no further operational action was required. This item is closed.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. New unresolved items identified during this inspection are discussed in paragraph 8.b.

5. Event Followup

On January 29, 1981, H. B. Robinson Unit 2 experienced a transient which resulted in a containment isolation signal. When verifying that all required containment isolation valves had shut, the operators discovered that Fire Suppression water containment isolation valve (FP-248) had failed to close. Containment isolation was maintained by the redundant isolation valve FP-249, and FP-248 was closed manually. Investigation into this failure determined that the valve motor breaker had tripped on the isolation signal due to improper setting of the magnetic overload trip. This improper trip setting was common to all four of the Fire Suppression water system containment isolation valve motor breakers, although only one valve failed to operate. Further investigation revealed that, of three separate breaker replacements done on each valve motor circuit to satisfy modification #445, the final replacement was done using the previous breaker installation procedure and no post-modification testing was conducted. Since the second set of breakers used a thermal overload trip and the present breakers use magnetic overloads, use of the previous procedure was improper. Failure to perform post-modification testing on the final breaker installation is not in accordance with plant procedures. This failure to control modification activities constitutes a violation (50-261/81-08-01). This event was reported by Licensee Event Report (LER) 81-06 and bears marked similarity to the improper overcurrent trip setting on the MCC-5 transfer switch reported in LER 80-04. Since the corrective action to prevent further recurrence in LER's 80-04 and 81-06 are essentially the same, the inspector feels that additional action by the licensee is needed to adequately prevent future recurrence.

6. Plant Operations Review

The inspector 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, auxiliary logs, operating orders, standby orders, jumper logs and equipment tagout records. The inspector routinely observed operator alertness and demeanor during plant tours. During abnormal events, operator performance and response actions were observed and evaluated. The inspector 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. The inspector had no further comments.

7. Plant Tour

The inspector 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 inspector determined that appropriate radiation controls were properly established, excess equipment or material was stored properly, and combustible material was disposed of expeditiously. During tours the inspector 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 firefighting equipment, and instrument calibration dates. Some tours were conducted on backshifts. The inspector noted no violations or deviations.

8. Technical Specification Compliance

During this reporting interval, the inspector verified compliance with selected limiting conditions for operation (LCO's) 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 were reviewed as they happened. Findings were acceptable except as noted below:

a. A discrepancy was noted in a comparison of Technical Specifications and plant procedures. Technical Specification 3.3.2.1.a requires that at least 2505 gallons (about 35% tank level) of 30% sodium hydroxide solution be maintained in the spray additive tanks. Plant procedure PLS-7 states that the spray additive tank low level alarm is 33% $\pm$ 1%. After researching this item, the licensee commmitted to revise the low alarm setpoint by April 30, 1981. This is an open item (50-261/81-08-02).

b. While monitoring the daily surveillance to measure safety-related heat tracing currents, the inspector identified the following conditions:

(1) All primary and secondary safety-related heat tracing thermostatic control junction boxes did not have their covers fastened in place. Some contained considerable debris and boric acid. These covers were apparently designed to protect the heat tracing circuitry from adverse environmental conditions, as the cover data plate emphasizes that the cover screws be kept tightly fastened. The inspector questioned the practice of leaving these covers open. The inspector also noted the cover fasteners were time consuming to operate and would result in increased radiation exposure to technicians performing the surveillance because of their locations. The licensee committed to evaluate the need for cover plates and commented that some design changes were being considered from an ALARA standpoint. This is an Unresolved item (50-261/81-08-03.)

(2) The protective armor cable for safety-related heat tracing wiring to the thermostatic control junction boxes was broken on at least six boxes.

(3) In the Boron Injection Tank room, the motor wiring conduit for safety injection valve SIS-870 B for cold leg injection was not fastened to its supports and the flexible protective cable to the motor was broken.

The licensee committed to correct the discrepancies noted in items 2 and 3 above and also the debris and boric acid in and around the thermostatic control junction boxes by May 31, 1981. This item is open (50-261/81-08-04).

9. Physical Protection

The inspector 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.

10. Licensee Event Report (LER) Followup

The inspector reviewed the following LER's 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. The inspector had no further comments.

| LER | EVENT |
|---|---|
| 80-04 | MCC-5 Transfer Switch Trip |
| 80-05 | CCW-626 Staking Problem |
| 80-09 | B Steam Generator Tube Leakage |
| 80-11 | Source Range Channels De-energized |
| 80-18 | Failure of PCV-1716 to Close |
| 80-22 | A and B Steam Generator Tube Leaks |
| 80-23 | Improper Charcoal Refill for Control Room Ventilation |
| 80-26 | Spray Additive Tank Isolated |
| 78-03 | Primary Pressure Exceeding Technical Specification Limit |
| 78-16 | BIT Boron Concentration out of Specification |

11. Followup of IE Bulletins

For the following Bulletins, the inspector verified that the response was timely, included the required information, contained adequate commitments

and that corrective action as described in the written responses was completed.

a. IEB 81-01 Surveillance of Mechanical Snubbers

The inspector reviewed the licensee's response to this Bulletin dated February 18, 1981. No mechanical snubbers are in use at H. B. Robinson. This item is closed.

b. IEB 80-23 Valcor Solenoid Failures

The inspector reviewed the licensee's response to this Bulletin dated December 8, 1980. No such parts or solenoids are in use at H. B. Robinson. This item is closed.

12. Review of IE Circulars and Notices (IEC's and IEN's)

The inspector verified that IE Circulars and Notices had been received onsite and reviewed by cognizant licensee personnel. Selected applicable IE Circulars and Notices were discussed with licensee personnel to ascertain the licensee's actions on these items. The inspector also verified that IE Circulars and Notices were reviewed by the Plant Nuclear Safety Committee in accordance with facility administrative policy. Licensee action on the following IE Circulars and Notices were reviewed by the inspector and are closed.

| IE Circulars | IE Notices | |
|---|---|---|
| 80-03 | 79-17 | 79-34 |
| | 79-31 | 79-35 |
| | 79-32 | 80-06 |
| | 79-33 | |

13. TMI Action Plan Category A Items

a. TAP No. I.C.3, NUREG 0578, Section 2.2.1.a Shift Supervisor Responsibilities. The inspector reviewed plant Administrative Instructions and corporate directives to verify that the four elements of this task have been implemented. No violations or deviations were observed in this area.

b. TAP No. II.6.1., NUREG 0578, Section 2.1.1. Natural Circulation Power Supplies. The inspector verified that the components were powered and qualified as required by this item.

c. TAP No. II.E.4.2, NUREG 0578, Section 2.1.4. Containment Isolation Dependability. The inspector reviewed the manually operated non-essential containment isolation valves and found that the licensee has administratively locked all such valves shut. Modifications have been completed which ensure that isolation valves associated with the below systems remain closed on resetting the containment isolation signal:

1) Steam generator blowdown and sample lines
2) Instrument air
3) Containment atmosphere monitor lines

No violations or deviations were observed in this area.

d. TAP No. II.D.3, NUREG 0578, Section 2.1.3 Valve Position Indication, Relief and Safety Valves

The control room instruments for the safety relief valve vibration monitors for position indication were inspected. These monitors are installed on the valve flanges. The inspection revealed the following concerns:

1) One safety relief valve (V-551A) does not have a vibration monitor accelerometer. The accelerometer was lost during the fall of 1980 refueling outage and a replacement has not been received.

2) All three vibration monitor channels (one for each valve) have continuous low level alarms. The low level alarm is designed to help verify system operability, as a circuit failure should normally result in a low level alarm due to a lower than normal ambient noise level. The continuous alarm condition is a design problem, in that, the background noise at the monitors is lower than the system bandpass filters were designed for. An engineering change is being developed by the system vendor. No compensatory measures are being taken to verify system operability while the low level alarms are not functional.

3) There is no audible annunicator associated with the low level alarms, and no procedure exists for response to the low level alarm condition.

4) The proposed Technical Specifications for surveillance of the vibration monitors requires system testing every refueling outage. The inspector is concerned that this infrequent testing may be inadequate. This is open item (50-261/81-08-05.)

5) Safety grade seismic and environmental qualification of this system has not been completed by the vendor. Qualification of the system is expected by the third quarter of 1981. This was documented in CP&L's letter to the Office of Nuclear Reactor Regulation of December 10, 1980.

The system deficiencies noted in items 1 and 2 above are an item of deviation (50-261/81-08-06). The inspector also requested that the licensee commit to informing the office of Nuclear Reactor Regulation by letter of the existence of the deficiencies noted in items 1 and 2 above, their proposed corrective action, and an anticipated schedule. The licensee postponed this commitment pending Commission clarification of reporting requirements for occurring deficiencies in TMI Action Plan

required equipment for which Technical Specifications have not been issued.

14. Review of Outstanding Items

a. (Open) 79-03-02 Wrong-valve numbers on Containment Spray Q-list drawing. This item documented that four valves had incorrect numbers on the Q-list drawing. The controlled drawings have been corrected, however, in the two years since this minor item was brought to the licensee's attention, no further generic corrective action has been taken.

b. (Closed) 79-07-02-Qualifications for personnel performing verification mapping following fuel loading. This item dealt with an inspector's concerns about who would be allowed to perform core verification and about the desirability of making a videotape. FT- 9.11 has been revised to indicate that personnel from Engineering and QA will perform and review the verification. The procedure also indicates that a videotape is highly desirable, though not required. This item is closed.

c. (Closed) 80-19-01-Revision to PT 2.1. Previously, PT 2.1 did not specifically document that the SI pumps started during the test. PT 2.1 has been revised to document SI pump starting times. This item is closed.

d. (Closed) 79-27-03-X-Y Potter. Previously, the X-Y plotter connection to the Tavg signal from the process computer loaded down the circuit causing an error in the plotted Tavg value. Appendix E to CPL-R-6.0, Refueling Startup Procedures, has been changed to eliminate this error. This item is closed.

e. (Open) 79-30-02-Current Procedure at Waste Evaporator Panel. This item dealt with the fact that there is no method in use to ensure that the correct revision to procedures are used at local stations outside the control room - specifically, the Waste Evaporator Panel. Conversations with plant personnel indicate that different methods have been tried, but none has been totally successful. The licensee intends to establish a controlled set of procedures for the Waste Evaporator Panel. The licensee committed to implement this plan by April 30, 1981. This item will remain open pending future inspection after the implementation date.

f. (Closed) 81-03-01-Anticipated Transient Without Scram. The inspector reviewed the licensee's changes to Abnormal Procedure-2 and Emergency Instruction-14. The licensee's procedural actions resolve the original concerns. This item is closed.