



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
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April 28, 2000

EA 99-272

Carolina Power & Light Company
ATTN: Mr. Dale E. Young
Vice President
H. B. Robinson Steam Electric Plant
Unit 2
3581 West Entrance Road
Hartsville, SC 29550

SUBJECT: NRC INTEGRATED INSPECTION REPORT NO. 50-261/00-02

Dear Mr. Young:

This refers to the inspection conducted on March 5, 2000, through April 1, 2000, at the Robinson facility. The enclosed report presents the results of this inspection.

During the four weeks covered by this inspection period, our inspectors found that your staff generally took a safety conscious approach to the activities conducted at the Robinson plant.

Within the scope of the inspection, no violations or deviations 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 placed in the NRC Public Document Room.

Sincerely,

IRAI

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

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

Enclosure: (See page 2)

CP&L

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

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

Report No: 50-261/00-02

Licensee: Carolina Power & Light (CP&L)

Facility: H. B. Robinson Unit 2

Location: 3581 West Entrance Road
Hartsville, SC 29550

Dates: March 5 - April 1, 2000

Inspectors: B. Desai, Senior Resident Inspector
A. Hutto, Resident Inspector
G. MacDonald, Senior Project Engineer, Region II
(Section O7.2)
R. Gibbs, Senior Reactor Inspector, Region II
(Section O7.2)

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

Enclosure

EXECUTIVE SUMMARY

H. B. Robinson Steam Electric Plant, Unit 2
NRC Inspection Report 50-261/00-02

This integrated inspection included aspects of licensee operations, maintenance, engineering, and plant support. The report covers a four-week period of resident inspection and a corrective action inspection conducted by regional and resident inspectors.

Operations

- The inspectors identified an enhancement to the procedure for plant cooldown to add administrative controls for use of caution tags to prevent inadvertent operation of containment sump recirculation valves (Section O7.1).
- The corrective action program remains effective. Self assessments generated twelve percent of the condition reports/action requests and were considered a strength. The operating experience program was effectively implemented into routine plant operation and was a strength. Condition report/action request classification, root cause determination, and corrective action closeout were satisfactorily performed and met procedural requirements (Section O7.2).

Maintenance

- Maintenance activities were conducted in accordance with applicable work documents and procedures. Personnel were properly trained and knowledgeable of their assignments (Section M1.1).
- No problems were identified during observed surveillances. Completed surveillance test packages demonstrated acceptable test results (Section M2.1).

Engineering

- A completed engineering service request package was reviewed and determined to meet procedural requirements (Section E1.1).

Plant Support

- Radiological controls and security were properly conducted. Areas observed in the radiological control area were appropriately posted and secured (Section R1.1).
- Radiological controls utilized for five path maintenance in the seal table room were effective. The total dose projected for the work was approximately 60 mrem, and the actual total dose received by personnel totaled 27 mrem (Section R1.2).

Report Details

Summary of Plant Status

Robinson Unit 2 operated at or near 100 percent power for the majority of the inspection period. Power was reduced to 50 percent on March 18 for turbine valve testing and condenser tube leak troubleshooting. Power was returned to 100 percent on March 19.

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

The inspectors conducted frequent control room tours to verify proper staffing, operator attentiveness and communications, and adherence to approved procedures. The inspectors routinely attended operations turnover meetings, management review meetings, and plan-of-the-day meetings to maintain awareness of overall plant operations. Operator logs, Condition Reports (CR), and instrumentation were routinely reviewed. Plant tours were conducted to verify operational safety and compliance with Technical Specifications (TS), as well as to assess plant housekeeping. In general, the inspectors concluded that the conduct of operations was risk informed, professional, and safety-conscious.

O2 Operational Status of Facilities and Equipment

O2.1 Safety System Walkdown (71707)

The inspectors conducted a walkdown of the 230 (kilovolt) switchyard system to assess the general condition of system components, including labeling, to verify that system components matched the system drawings and station operating procedures, and to assess switchyard work and access control. During the walkdown there was maintenance activity being performed by the transmissions department within the switchyard. The inspectors accompanied the switchyard system engineer during the walkdown.

The material condition of the system was found to be good and no housekeeping deficiencies were noted. Access control to the switchyard was well controlled. Prior management approval was obtained by the transmissions crew as required before starting work. The inspectors found the system to be appropriately maintained and

capable to perform its safety function. The inspectors also reviewed the applicable sections of the Updated Final Safety Analysis Report (UFSAR) and TS, and identified no discrepancies. A review of the Maintenance Rule database was also performed and the inspectors found that the appropriate performance criteria data were being collected and trended.

O2.2 Clearance Walkdown (71707, 62707)

The inspectors verified proper implementation of clearance 00-033 during a walkdown on March 22, 2000. The clearance was to isolate the number 1 auto transformer bank to allow scheduled testing by the transmissions group. The inspectors verified that the electrical breakers and control switches were aligned appropriately to provide an adequate boundary for the scheduled testing activity. No discrepancies were identified during inspection of the clearance. The inspectors verified that the clearance was implemented in accordance with applicable procedures.

O7 Quality Assurance In Operations

O7.1 Operations Procedures (71707)

The inspectors reviewed plant procedure GP-07, "Plant Cooldown from Hot Shutdown to Cold Shutdown," Revision 53, to assess administrative controls in place to prevent a loss of reactor coolant when the reactor coolant system (RCS) is aligned in the residual heat removal mode. During this review of plant procedure GP-07, the inspectors noted that the procedure appropriately required administrative tags to be placed on residual heat removal (RHR) system valves that are maintained closed to preclude inadvertent opening and a loss of RCS water to the refueling water storage tank. However, the inspectors noted that containment sump recirculation valves SI-860A, SI-860B, SI-861A, and SI-861B, though maintained closed as required by procedure, did not have any administrative controls to prevent inadvertent operation. Inadvertent opening of the valves could result in the draining of the RCS into the containment sump and a loss of RHR.

The licensee initiated a procedure change form to enhance procedure GP-07 to add administrative controls in the form of caution tags to valves SI-860A, SI-860B, SI-861A, and SI-861B prior to the next scheduled refueling outage.

O7.2 Effectiveness Of Licensee Controls In Identifying, Resolving and Preventing Problems

a. Inspection Scope(40500)

Problem Identification

The licensee's effectiveness in the area of problem identification was assessed through a review of program data on CR / Action Request (AR) generation history, self

assessments, the operating experience program, voided CRs, and discussions with site personnel to determine if identified issues were being entered into the corrective action system for resolution.

The following documents were reviewed:

- Nuclear Assessment Section Assessment R-MA-99-01, Maintenance Assessment
- H. B. Robinson Site Wide Common Cause Analysis of Condition Reports, July - September 1999
- Maintenance Self Assessment MNT 99-83
- Self Assessment Program Self Assessment 98-02
- Self Assessment Program Self Assessment 99-11
- Self Assessment 99-93, Station Blackout Program
- Self Assessment 98-27, Equipment Qualification
- Self Assessment 98-05, Corrective Action program
- Self Assessment 99-13, Corrective Action Program

The following voided CRs were reviewed:

9900043	99000357	9900865	9901663	9900263
9900055	9900408	9900894	9901721	9900669
9900059	9900536	9901205	9901859	9901552
9900201	9900602	9901335	9901935	9902143

Problem Resolution

The licensee's effectiveness in the area of problem resolution was assessed through a review of corrective action program status data, discussion with site personnel, and through review of CRs/ARs and ESRs to determine if CR/AR classification, root cause determination and identified corrective actions were appropriate for the indicated problems. In order to incorporate risk into the assessment, the inspectors selected CRs/ARs for review from the three systems with the highest contribution to core damage frequency; component cooling water, service water, and the emergency diesel generators.

The following corrective action documents were reviewed:

Significant Adverse CRs/ARs

11051	10641	12277	12535	12474
12264	11119	10587	11568	11603
10804	12294	12827	13087	11491
12266	12954	9802196		

Adverse CRs/ARs

11128	11140	11162	12620	12001
11450	11352	11874	12546	12593
12828	11023	10934	11793	10783
12892	12933	12392	9801884	9802186
9802350	9802364	9802405	9802158	9802639
9900372				

b. Observations and FindingsProblem Identification

The inspectors reviewed procedure CAP-NGGC-0202, "Operating Experience Program," Revision 0, held discussions with the Operating Experience (OE) coordinator and reviewed action requests for seven OE items. The OE items reviewed were correctly screened for applicability and dispositioned. The inspectors considered the OE program at Robinson to be a strength. OE action items are effectively assigned and completed and pertinent OE is communicated during shift turnover, pre-job and pre-test briefings, and management meetings.

In December 1999, the licensee integrated the CR database into Passport, the new database management system. The inspectors reviewed CR/AR generation data during this transition period and compared it to the similar period during the previous year to determine if the new Passport system presented an impediment to the initiation of CRs. No significant change in CR generation numbers were noted with the new and old database and the inspectors concluded that the new Passport system has not had an adverse impact on CR initiation.

Nine licensee self assessments were reviewed and the inspectors determined that the self assessments were thorough and critical. The self assessments were effective in identifying issues and weaknesses and the inspectors noted that CRs/ARs were generated for all identified issues to document the findings. During 1999, 106 licensee self assessments were completed, and all but one assessment was completed within the calendar quarter of the originally scheduled date. The 1999 CR/AR generation data showed that over 12 percent of the 2195 CRs/ARs were generated as a result of licensee self assessments. The inspectors considered self assessments to be a strength.

Problem Resolution

For the CRs/ARs reviewed, the inspectors determined that CR/AR classification was adequate. Corrective actions were appropriate for the identified problems and actions were assigned and closed out in accordance with the requirements of procedure CAP-NGGC-0200, "Corrective Action Program," Revision 1. Where actions were assigned to an engineering service request (ESR), the inspectors verified that the ESR provided a fix appropriate for the problem and that the ESR corrective actions were completed. For the significant adverse CRs/ARs reviewed, the inspectors determined that root cause was correctly determined and corrective actions including corrective actions to prevent

recurrence were appropriate for the identified problems. The completion and closeout of the significant CRs/ARs reviewed was satisfactory.

For the voided CRs reviewed, the inspectors identified no items which were inappropriately voided. Most of the items reviewed were transferred to other corrective action documents. The inspectors requested the last ten ARs voided under the new Passport database and noted that there was no reason documented in the database for the voided ARs. The licensee reviewed the voided ARs since the initiation of the Passport database and determined that of the 40 items which had been voided, 38 were duplicate entries in the database and the remaining 2 items were not adverse conditions and should have been voided. The inspectors concluded that voided CRs/ARs had been correctly dispositioned.

c. Conclusions

The corrective action program remains effective. Self assessments generated twelve percent of the condition reports/action requests and were considered a strength. The operating experience program was effectively implemented into routine plant operation and was a strength. Condition report/action request classification, root cause determination, and corrective action closeout were satisfactorily performed and met procedural requirements.

II. Maintenance

M1 Conduct of Maintenance

M1.1 Observation of Maintenance Activities (62707)

The inspectors observed all or portions of the following Work Request/Job Orders (WR/JOs):

- WR/JO 00-ABHJ1, Investigate Problem With "A" Service Water Booster Pump
- WR/JO AAKG 012, Perform "B" Emergency Diesel Inspection - Semi-Annual
- WR/JO 99-ADDQ1, Repair Support For "B" EDG Muffler

The inspectors found that the maintenance observed was properly approved and was included in the plan of the day. The inspectors also found that the work was performed thoroughly, and with the work package present and in use. Accompanying documents such as procedures and supplemental work instructions were properly followed. Personnel were properly trained and knowledgeable of their assignments. The inspectors noted that supervisors and system engineers monitored the jobs on a frequent basis.

M2 Maintenance and Material Condition of Facilities and Equipment**M2.1 Surveillance Testing (61726)**

The inspectors reviewed test package documentation and observed performance of all or portions of the following surveillance tests:

- OST-251-1, "RHR Pump "A" and Components Test (Quarterly)," Revision 13
- OST-252-1, "RHR Component Test - Train "A" (Quarterly)," Revision 7
- EST-010, "Containment Personnel Airlock Leakage Test (Semiannual)," Revision 19

No problems were identified during observed surveillances. Completed surveillance test packages demonstrated acceptable test results.

III. Engineering**E1 Conduct of Engineering****E1.1 Review of Engineering Service Requests (ESR) (37551, 40500)**

The inspectors reviewed ESR package 99-00067, "Operability Determination - RHR-753A/B Weight" and determined that the ESR was prepared and the necessary 10 CFR 50.59 evaluation was performed in accordance with plant procedures. There were no discrepancies identified.

IV. Plant Support**R1 Radiological Protection and Chemistry (RP&C) Controls****R1.1 General Comments (71750)**

The inspectors periodically toured the radiological control area (RCA) during the inspection period. Radiological control practices were observed and discussed with radiological control personnel including RCA entry and exit controls, survey postings, locked high radiation area controls, and radiological area material condition. The inspectors concluded that radiation control practices were being conducted in accordance with procedures. The inspectors also toured the radwaste building and found that radwaste storage containers and laundry bags were in good condition and appropriately labeled. In addition, outside radwaste storage areas and structures were properly posted and exhibited correct labeling and effective housekeeping. The inspectors found that housekeeping throughout the plant was effective in maintaining areas free of unnecessary equipment and debris. Relatively few contaminated areas were noted, and posted locked high radiation areas were properly secured against

unauthorized entry.

R1.2 Radiological Controls for Five Path Maintenance in the Containment (71750)

The inspectors observed radiological controls related to maintenance work performed inside the containment vessel (CV) during full power operations. Specifically, the work involved repairs to two, five-path rotary transfer units located in the seal table room inside containment. The highest contact dose rate readings in the area were 2.5 and 2.0 rem per hour; therefore, the potential for significant exposures existed. The inspectors reviewed the radiological work permit (RWP) prepared for the maintenance, and also attended the pre-job briefing conducted by Environmental and Radiation Control (E&RC) personnel.

The inspectors found that the RWP provided radiological condition descriptions consistent with survey data. Task descriptions were comprehensive with the appropriate protective equipment specified for each task. Administrative dose limits and dosimeter alarms were consistent with the expected radiological conditions. The inspectors found the pre-job brief to be well planned and conducted. The briefing was well attended with all key personnel present. Equipment drawings, job-site photos and survey maps were effectively utilized. Good radiological work practices were reviewed during the briefing by E&RC and maintenance personnel. The inspectors concluded that the radiological controls utilized for the five path maintenance were effective. The total dose projected for the work was approximately 60 mrem, and the actual total dose received by personnel totaled 27 mrem.

P8 Miscellaneous Security and Safeguards Issues

- P8.1 (Closed) VIO: 50-261/01014 EA 99-272: The inspectors reviewed the proposed and implemented corrective actions that the licensee had taken to avoid further regulatory concerns with the Access Authorization Program and determined that the corrective actions were acceptable.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on April 14, 2000. The licensee acknowledged the findings presented at the exit meeting. Dissenting comments were not received from the licensee. The licensee did not identify any materials used during the inspection as proprietary information.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

T. Cleary, Operations Manager
J. Clements, Site Support Services Manager
S. Collins, Radiation Protection Superintendent
J. Fletcher, Maintenance Manager
J. Moyer, Director of Site Operations
R. Steele, Outage Management Manager
D. Stoddard, Robinson Engineering Support Services Manager
T. Walt, Plant General Manager
R. Warden, Regulatory Affairs Manager
A. Williams, Training Manager
D. Young, Vice President, Robinson Nuclear Plant

NRC

B. Desai, Senior Resident Inspector
A. Hutto, Resident Inspector

INSPECTION PROCEDURES USED

IP 37551: Onsite Engineering
IP 40500: Effectiveness of Licensee Process To Identify Resolve and Prevent Problems
IP 61726: Surveillance Observations
IP 62707: Maintenance Observation
IP 71707: Plant Operations
IP 71750: Plant Support Activities

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-261/01014 EA 99-272	VIO	Failure To Comply With The Regulations In 10 CFR Part 73 And The Provisions Of The Robinson Physical Security Program Related To The Access Authorization Program In Four Examples (Section P8.1).
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