UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W., SUITE 2900
ATLANTA, GEORGIA 30323-0199

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Report No: 50-261/94-14

Licensee: Carolina Power and Light Company
P. O. Box 1551
Raleigh, NC 27602

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

Facility Name: H. B. Robinson Steam Electric Plant Unit 2

Inspection Conducted: May 2-6, 1994

Inspector: D W Jones 6/3/94
D. W. Jones Date Signed

Approved by: T R Decker 6/3/94
T. R. Decker, Chief Date Signed
Radiological Effluents and Chemistry Section
Radiological Protection and Emergency Preparedness Branch
Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, announced inspection was conducted in the areas of Control Room emergency ventilation, meteorological monitoring, and radioactive effluent monitoring instrumentation.

Results:

One deviation was identified regarding testing and test acceptance criteria for the Control Room emergency ventilation system. The licensee had complied with the operational and surveillance requirements delineated in the Technical Specifications for the Control Room emergency ventilation system but had not met the testing and test acceptance criteria commitments described in the Updated Final Safety Analysis Report for that system (Paragraph 2).

The licensee was collecting the required meteorological data and maintaining the meteorological instrumentation in an operable condition (Paragraph 3).

The licensee had implemented an effective program for maintaining radioactive effluent monitoring instrumentation in an operable condition and for performing the required surveillances to demonstrate their operability (Paragraph 4).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. Adams, Manager, Operations Programs
†*W. Christensen, Supervisor, Environmental and Chemistry
†*D. Crook, Senior Specialist, Regulatory Affairs
†J. Eaddy, Manager, Environmental and Chemistry
†*J. Harrison, Manager, Environmental and Radiation Control Support
R. Hitch, Senior Specialist, Environmental and Chemistry
*K. Jury, Manager, Licensing and Regulatory Programs
*J. Kloosterman, Manager, Mechanical Systems, Technical Support
*M. Millinor, Senior Specialist, Environmental and Chemistry
†*P. Musser, Manager, Engineering Assessment
†*M. Pearson, Plant General Manager

Other licensee employees contacted during this inspection included engineers, technicians, and administrative personnel.

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†*C. Ogle, Resident Inspector
†*W. Orders, Senior Resident Inspector

†Attended entrance interview
*Attended exit interview

2. Control Room Emergency Ventilation (84750)

Technical Specifications (TSs) 3/4.15 described the operational and surveillance requirements for the Control Room Air Conditioning System (CRACS). Sections 6.4 and 9.4.2 of the Updated Final Safety Analysis Report (UFSAR) provided descriptions of the system's design, operational procedures, testing and inspection, and instrumentation. The CRACS included an environmental control system and an air cleaning system. The environmental control system was designed to operate continuously during normal and emergency conditions and to provide heating, ventilation, and cooling. The air cleaning system was designed to actuate by either a safety injection signal or a Control Room radiation monitor alarm and to maintain the Control Room envelope under a positive pressure with respect to adjacent areas during the emergency pressurization mode. The air cleaning system consisted of redundant 100 percent capacity fans and parallel dampers, a prefilter, a high efficiency particulate air (HEPA) filter, a charcoal adsorber filter bed, and a post-HEPA filter. The CRACS was required to be operable during all modes, except cold shutdown, and demonstrated operable by performance of prescribed surveillances at specified frequencies. Those surveillances included monitoring Control Room temperature, actuation and operation of the air cleaning system from the Control Room, Control Room pressure measurements while in the Emergency Pressurization mode, HEPA and

charcoal filter leak testing, air flow measurements, differential pressure measurements across the air filtration unit, charcoal adsorption efficiency testing, and automatic actuation of the air cleaning system by either a safety injection signal or a Control Room radiation monitor alarm. Action statements applicable to various modes were provided for conditions in which one or both safety-related active components or trains were inoperable.

The inspector toured the mechanical equipment room in which the CRACS was located. The major components of the system were located and identified for the inspector by licensee personnel who were cognizant of the system's design and operation. The inspector observed that the components and associated ductwork were well maintained structurally and that there was no physical deterioration of the ductwork sealants.

The inspector reviewed the procedures listed below which related to the required operability and performance tests.

- OMM-008 "Minimum Equipment List and Shift Relief"
- EST-023 "Control Room Emergency Ventilation System"
- OST-163 "Safety Injection Test and Emergency Diesel Generator Auto Start On Loss of Power and Safety Injection and Emergency Diesel Trips Defeat"
- OST-750 "Control Room Emergency Ventilation System"
- OST-924 "Radiation Monitoring System"

The inspector determined that the above procedures included provisions for performing the operability and performance tests required by TS 4.15. Review of selected records of those tests indicated that they had been performed at the required frequencies and that the acceptance criteria had been met. However, the testing and acceptance criteria for test results in two of those procedures (OST-750 and EST-023) were not consistent with the commitments contained in the UFSAR. Sections 6.4 and 9.4.2 of the USFAR specified that during the emergency pressurization mode the Control Room envelope is maintained under a positive differential pressure with respect to adjacent areas and the outdoors and that periodic testing is required to demonstrate that the Control Room is pressurized to a minimum of +⅛ inches of water gage with respect to the outdoors. Procedures OST-750 and EST-023 included provisions for testing the differential pressure between the Control Room and the outdoors but neither of those procedures included provisions for testing the differential pressure with respect to adjacent areas. Furthermore, both procedures indicated that the acceptance criteria for the differential pressure with respect to outdoors was greater than zero rather than a minimum of +⅛ inches of water. The licensee's failure to

include in their performance test procedures, provisions for testing and test acceptance criteria which are consistent with the commitments contained in the UFSAR has been deemed to be deviation from written commitments (DEV 50-261/94-14-01).

Based on the above reviews and observations, it was concluded that the licensee had complied with the above operational and surveillance requirements delineated in TSs for the Control Room emergency ventilation system but had not met the testing and test acceptance criteria commitments described in the UFSAR for that system.

One deviation was identified.

3. Meteorological Monitoring Program (84750)

Section 2.3.3 of the UFSAR described the onsite meteorological monitoring program. The program included measurement of wind speed, direction, and variance at 10 and 60 meter elevations, ambient temperature at the lower elevation, and differential temperature between the upper and lower elevations. A computerized records system was used for collecting and reducing the continuously generated meteorological data and for producing an annual summary of the data. That system included provisions for editing the input data for consistency and eliminating spurious data points. The monitored parameters were displayed on a chart recorder located in the equipment shelter near the meteorological tower and on computer terminals in the Control Room. The program also included provisions for semiannual calibrations of the meteorological instrumentation with standards traceable to the national measurement system. TS 6.9.1.3 stipulated that an annual summary of the meteorological data would either be included in the year-end Radioactive Effluent Release Report or retained in an onsite file.

The inspector reviewed the licensee's "Air Quality Monitoring and Compliance Unit Operation, Maintenance, and Calibration Procedures Manual" and determined that it included instructions for calibrating the meteorological instrumentation semiannually. Selected records for performance of those procedures during 1992 and 1993 were also reviewed by the inspector. Those records indicated that the instrument calibrations had been performed in accordance with the above procedures and at the required frequency. The inspector visited the meteorological equipment shelter and the Control Room and observed that the instrumentation was then currently operable. The 1993 year-end Radioactive Effluent Release Report was also reviewed by the inspector and found to include the required summary of the meteorological data.

Based on the above reviews and observations, it was concluded that the licensee was collecting the required meteorological data and maintaining the meteorological instrumentation in an operable condition.

No violations or deviations were identified.

4. Radioactive Effluent Monitoring Instrumentation (84750)

TSs 3.5.2, 3.5.3, 4.19.1, and 4.19.2 described the operational and surveillance requirements for the liquid and gaseous radioactive effluent monitoring instrumentation. The instrumentation was required to be operable during specified operational modes and demonstrated to be operable by the performance of channel response checks, source checks, channel calibrations, and channel functional tests at specified frequencies. Compensatory actions for inoperable monitors were specified.

The inspector toured the control room and relevant plant areas with a licensee representative to locate and determine the operational status of the following radiation monitors.

- RMS-18 Liquid Radwaste Effluent Line
- RMS-19a Steam Generator Blowdown Effluent Line
- RMS-14c Plant Vent
- RMS-20 Fuel Handling Building Lower Level Exhaust Vent

The instrumentation for the above radiation monitors was found to be operable at the time of the tour.

The inspector reviewed the procedures listed below which related to channel checks, source checks, channel calibrations, and channel functional tests for the above listed monitors.

- OMM-008 "Minimum Equipment List and Shift Relief"
- RST-001 "Radiation Monitor Source Checks"
- EMP-027 "Operation of GA Monitors R-37 and R-19A, B, and C"
- EMP-013 "Operation of R-14 and F-14"
- RST-016 "Calibration of Radiation Monitoring System Monitor R-18"
- RST-017 "Calibration of Radiation Monitoring System, Monitors R-37, and 19A, B, and C"
- RST-012 "Calibration of Radiation Monitoring System, Monitor R-14"
- RST-011 "Calibration of Radiation Monitoring System, Monitors R-12, R-20, and R-21"
- OST-924 "Radiation Monitoring System"
- MST-901 "Radiation Monitoring System"

The inspector determined that the above procedures included provisions for performing the required surveillances in accordance with the relevant sections of the above TSs and at the specified frequency. The inspector also reviewed selected licensee records of performance of channel checks, source checks, channel calibrations, and channel functional tests for the above listed monitors. Those records indicated that the surveillances had been performed in accordance with their applicable procedures.

The inspector also reviewed monthly performance monitoring reports for availability of effluent monitors during January, February, and March of 1994. The reports included a listing of each effluent monitor and the percent of the time that the monitors were operable each month. The average availability of the effluent radiation monitors exceeded 91 percent during those months.

Based on the above reviews and observations, it was concluded that the licensee had implemented an effective program for maintaining radioactive effluent monitoring instrumentation in an operable condition and for performing the required surveillances to demonstrate their operability.

No violations or deviations were identified.

5. Exit Interview

The inspection scope and results were summarized on May 6, 1994, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed above. No dissenting comments were received from the licensee. Proprietary information is not contained in this report.

Item No.	Status	Description and Reference
50-261/94-14-01	Open	DEV - Failure to include in performance test procedures, provisions for testing and test acceptance criteria which are consistent with the commitments contained in the UFSAR (Paragraph 2).