



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

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Report Nos.: 50-269/93-27, 50-270/93-27, and 50-287/93-27

Licensee: Duke Power Company
422 South Church Street
Charlotte, NC 28242

Docket Nos.: 50-269, 50-270,
and 50-287

License Nos.: DPR-38, DPR-47,
and DPR-55

Facility Name: Oconee 1, 2, and 3

Inspection Conducted: October 18-22, 1993

Inspector: D. W. Jones
D. W. Jones

11/12/93
Date Signed

Approved by: Thomas R. Decker
T. R. Decker, Chief
Radiological Effluents and Chemistry Section
Radiological Protection and Emergency Preparedness Branch
Division of Radiation Safety and Safeguards

11/15/93
Date Signed

SUMMARY

Scope:

This routine, announced inspection was conducted in the areas of meteorological monitoring, control room emergency ventilation systems, audits, and followup on previously identified issues.

Results:

One Inspector Followup Item (IFI) was identified regarding revision of procedures for automating restoration of data bases in computers which control radiation monitoring systems (Paragraph 5).

The meteorological instrumentation had been adequately maintained and the meteorological monitoring program had been effectively implemented (Paragraph 2).

The licensee had complied with the operational and surveillance requirements for the control room emergency ventilation systems. A modification to replace portions of the systems ductwork was scheduled for January-February 1994 (Paragraph 3).

The licensee had implemented an effective program for conducting audits of station activities (Paragraph 4).

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *B. Barron, Station Manager
- D. Berkshire, Senior Scientist, Radiation Protection
- *E. Brown, Scientist, Radiation Protection
- *J. Hampton, Vice President
- *B. Jones, Manager, Chemistry
- E. Lampe, Scientist, Radiation Protection
- K. Louvin, System Engineer, System Engineering
- *M. Patrick, Manager, Regulatory Compliance
- *S. Perry, Licensing Coordinator, Regulatory Compliance
- *S. Spear, General Supervisor, Radiation Protection
- M. Thorne, Supervising Scientist, Radiation Protection

Other licensee employees contacted included engineers, technicians, and office personnel.

Nuclear Regulatory Commission

- P. Harmon, Senior Resident Inspector
- *L. Keller, Resident Inspector
- K. Poertner, Resident Inspector

*Attended exit interview.

2. Meteorological Monitoring Program (84750)

Section 2.3.3.2 of the Final Safety Analysis Report (FSAR) described the operational and surveillance requirements for the meteorological monitoring instrumentation. Near real-time meteorological data were required to be collected, summarized, and stored by the Operator Aid Computer (OAC) system. Weekly equipment calibration and maintenance checks and semiannual calibration checks were required to be performed by prescribed station procedures.

The inspector reviewed the procedures listed below and determined that they included provisions for performing the required surveillances on the meteorological monitoring instrumentation.

- IP/O/B/1601/03 "Meteorological Equipment Checks"
- IP/O/B/1601/011 "Teledyne Geotech Series 21 Wind Speed Module Channel Calibration"
- IP/O/B/1601/012 "Teledyne Geotech Series 21 Model 21.21-1 Wind Direction Processor Channel Calibration"
- IP/O/B/1601/014 "Teledyne Geotech Platinum RDT T/Delta T Processor Channel Calibration"

The inspector reviewed records of weekly calibration checks performed on September 30, October 7 and 14, 1993, and semiannual calibrations of wind speed, wind direction and air temperature instrumentation performed during April 1992, October 1992, and May 1993. The inspector determined that the calibration checks and calibrations were performed in accordance with the above procedures and at the required frequency.

The inspector visited the Control Room and the licensee's cognizant engineer accessed, for the inspector, the current meteorological data through the OAC system. The inspector determined that the meteorological instrumentation were then operable and that data for wind speed, wind direction, air temperature, and precipitation were being collected as described in the FSAR.

Based on the above reviews and observations, it was concluded that the meteorological instrumentation had been adequately maintained and that the meteorological monitoring program had been effectively implemented.

No violations or deviations were identified.

3. Control Room Emergency Ventilation Systems (84750)

Technical Specifications (TSs) 3.15 and 4.12 described the operational and surveillance requirements for the Control Room emergency ventilation systems. The common Control Room for Units 1 and 2 and the Unit 3 Control Room each had a dedicated system. Each system had two separate trains which included outside air booster fans with prefilters, HEPA filters and activated charcoal filters. When the reactors were above hot shutdown conditions the systems were required to be capable of maintaining a positive pressure within the Control Room, and both outside air booster fans and both filter trains within a system were required to be operable. Action statements were provided for conditions in which one or both trains were inoperable. Operability tests of the systems were required to be performed quarterly. The operability tests included external visual inspection, air flow measurements, pressure drop measurements across the filters, one hour operation of the fans, and functional testing of all louvers. On a refueling frequency, the licensee was required to demonstrate that the systems could maintain a positive pressure in the Control Rooms and to perform leak tests on the HEPA filters and the charcoal filters. The leak testing media were specified as DOP for the HEPA filters and freon for the charcoal filters.

The inspector toured the plant areas in which the ventilation systems for the Units 1 and 2 common Control Room and the Unit 3 Control Room were located. The licensee's cognizant system engineer located and identified, for the inspector, the major components of the systems, including the fans, filter banks, dampers, and the associated ductwork from the air intakes to the control room air conditioning systems. The inspector observed that the accessible components were well maintained structurally and that there was no physical deterioration of the ductwork sealants on either system. The licensee indicated that the

ductwork had deteriorated in an inaccessible ventilation shaft between the ventilation equipment room and the Units 1 and 2 common Control Room, and that a modification was planned to replace that ductwork. This issue is further discussed below.

The inspector reviewed the procedures listed below and determined that they included provisions for performing the above operability and performance tests at the required frequencies. The acceptance criteria specified in those procedures for the test results were consistent with the TS requirements.

PT/1&2/A/0110/05A	"Control Room Filter System Test"
PT/3/A/0110/05A	"Control Room Filter System Test"
PT/1&2/A/0110/15	"Control Room Pressurization"
PT/3/A/0110/15	"Control Room Pressurization"
PT/1&2/A/0170/03	"Control Room Pressurization System Test"
PT/3/A/0170/03	"Control Room Pressurization System Test"

The inspector also reviewed selected records for the above tests and determined that the tests were being performed at least at the required frequencies. Generally the test results indicated that the equipment either met the acceptance criteria or was repaired and restored to operable status within the allotted time specified in the TSs. During a test performed on June 24, 1993, the licensee found that emergency ventilation system for the Units 1 and 2 common Control Room could not maintain a positive pressure in the control room. The system was declared inoperable and, pursuant to TS 3.15.2 b, a 30 day Limiting Condition for Operation (LCO) was entered. During the LCO, the licensee discovered that the ductwork in a ventilation shaft had become disconnected at a joint in the ductwork and that the pressurized air was escaping from the emergency ventilation system. The joint was temporarily repaired and on July 2, 1993, the system was declared operable. The LCO was then exited, based on test results which indicated that the acceptance criteria were met. A modification was developed to replace the ductwork in the ventilation shaft with ductwork of higher quality. That modification was scheduled for January-February 1994.

Based on the above reviews and observations, the inspector concluded that the licensee had complied with the above operational and surveillance requirements for the Control Room emergency ventilation systems.

No violations or deviations were identified.

4. Audits (84750)

TSs 6.1.3.4 and 6.1.3.5.d required the licensee to perform audits of station activities, under the cognizance of the Nuclear Safety Review Board, and to forward the audit reports to licensee management within 30 days of completion of each audit. The audits were required to encompass, in part, the following: the conformance of station operation to provisions contained within the TSs and applicable facility operating

license conditions; the performance, training and qualifications of the station staff; the Offsite Dose Calculation Manual and implementing procedures; the Radiological Environmental Monitoring Program and the results thereof; the Process Control Program and implementing procedures for solidification of radioactive wastes; and the performance of activities required by the Quality Assurance Program for effluent and environmental monitoring.

The inspector reviewed the report for Departmental Audit NG-93-04(ON), dated March 18, 1993. The audit was conducted during the period March 1-17, 1993, by the licensee's Quality Verification Department. The scope of the audit included the chemistry and radiation protection programs. The audited areas within those programs included, in part, procedure adherence and adequacy, radwaste processing, laboratory quality control, and equipment calibration. The number and characterization of the substantive issues identified by the audit were as follows: five findings, three follow-up items, seven observations, and three recommendations. Pursuant to the licensee's auditing procedures, findings required documented corrective actions and each identified issue was tracked for completion of warranted follow-up actions through the Problem Investigation Process. The inspector determined that the audit was of sufficient scope and depth to identify existing problems and that corrective actions were taken for the identified findings. The audit results were well documented and reported to facility management in a timely manner.

Based on the above reviews, it was concluded that the licensee had implemented an effective program for conducting audits of station activities.

No violations or deviations were identified.

5. Followup on Previously Identified Issues (92701)

(Closed) Unresolved Item 50-269, 270, 287/93-14-01: Inoperable Unit 3 Turbine Building Sump (TBS) radiation monitor. On March 8, 1993, the licensee discovered that the sample pump for 3-RIA-54 was not running and that the sample line flow instrument was incorrectly indicating that the sample flow was normal. The licensee had determined that the sample line flow indicator had been plugged with debris from the sump and that the debris had held the flow indicator's sensor in the open position preventing a no flow alarm in the Control Room when the sample pump was not running. During this inspection, the licensee's progress in resolving this problem was reviewed. The licensee had developed a modification to install an additional strainer in the sample line to prevent debris from entering the flow indicator switch and that modification was scheduled to be completed by October 29, 1993. This item is closed.

(Closed) Violation 50-269, 270, 287/93-14-02: Failure to follow Control Room surveillance procedure. On March 12-14, 1993, the licensee failed to follow the Control Room daily surveillance procedure, in that, on

those dates the licensee indicated on the Control Room surveillance logs that the Unit 2 ventilation system radiation monitor met the "required condition," as specified in the procedure, of being "on scale," which signified that the monitor was operable. The monitor was, in fact, inoperable on those dates and indicated a zero count rate. The licensee's letter of response to the violation, dated June 18, 1993, indicated that their corrective action for the stated violation was to revise procedures PT/1,2,3/A/600/01 (Periodic Instrument Surveillance) to instruct the operator to monitor radiation monitor count rates as being greater than zero. During this inspection, the referenced procedure was reviewed by the inspector and found to have been revised as was indicated in the licensee's letter of response. This item is closed. However, as described in NRC Inspection Reports 50-269, 270, 287/93-10 and 93-14, the zero count rate was displayed in the Control Room because the operational instruction data base for the computer which controlled the radiation monitoring system was not fully restored following maintenance work on the monitoring system. Previously the data bases for the monitoring systems were restored by manual entries. During this inspection, it was found that those data bases have now been stored on computer diskettes in order to automate restoration of the data and to prevent personal errors by manual entries. The licensee indicated that their procedures for restoration of data bases in computers which control radiation monitoring systems will be revised to stipulate that data bases will be restored from diskettes rather than by manual entries and that the data bases must be verified to be correct before the monitoring system can be returned to service. Revision of those procedures will be tracked as an Inspector Followup Item (IFI 50-269, 270, 287/93-27-01).

6. Exit Interview

The inspection scope and results were summarized on October 21, 1993, 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.

<u>Item Number</u>	<u>Description and Reference</u>
50-269, 270, 287/93-27-01	IFI - Revision of procedures for automating restoration of data bases in computers which control radiation monitoring systems (Paragraph 5).