



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
230 PEACHTREE STREET, N.W. SUITE 1217  
ATLANTA, GEORGIA 30303

Report Nos.: 50-269/78-14, 50-270/78-13, 50-287/78-13

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

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

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

Facility Name: Oconee, Units 1, 2 and 3

Inspection at: Oconee Nuclear Plant, Seneca, South Carolina

Inspection conducted: June 12-15, 1978

Inspector: W. W. Peery

Approved by:

*J. W. Hufham*  
J. W. Hufham, Chief  
Environmental and Special Projects Section  
Fuel Facility and Materials Safety Branch

*7/24/78*  
Date

Inspection Summary

Inspection on June 12-15, 1978 (Report Nos. 50-269/78-14, 50-270/78-13 and 50-287/78-13)

Areas Inspected: Radiological environmental monitoring program including management control, quality control of analytical measurements, inspection of environmental monitoring stations, review of environmental monitoring data, review of radiological environmental monitoring procedures and implementation of the monitoring program. The inspection involved 24 inspector-hours onsite by one NRC inspector.

Results: Of the six areas inspected, no items of noncompliance or deviations were identified in five areas; one apparent item of noncompliance was identified in one area (Deficiency) failure to follow Oconee Nuclear Station Procedure HP/O/B/1000/62R, Procedure for Anomalous Environmental Results. 78-14(-13-13)01 (paragraph 8)

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DETAILS I

Prepared by:

W. W. Peery  
W. W. Peery, Radiation Specialist  
Environmental and Special Projects Section  
Fuel Facility and Materials Safety  
Branch

7/20/78  
Date

Dates of Inspection: June 12-15, 1978

Approved by:

J. W. Huftam  
J. W. Huftam, Chief  
Environmental and Special Projects Section  
Fuel Facility and Materials Safety Branch

7/25/78  
Date

1. Persons Contacted

a. Oconee Nuclear Station

\*R. M. Koehler, Acting Manager  
\*R. T. Bond, Licensing and Project Engineer  
\*C. T. Yongue, Station Health Physicist  
\*J. A. Long, Health Physics Supervisor  
S. Morgan, Labman

b. Corporate Office

L. L. Lewis, System Health Physicist

\*Denotes those present during the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (269/77-13, 50-270/77-13 and 50-287/77-13) This item was identified as acceptable in Region II letter of November 11, 1977 in reply to licensee letter dated October 18, 1977.

3. Unresolved Items

No additional unresolved items were identified during this inspection.

4. Management Controls

a. Sections 6.1.1.1, 6.1.2.1(f) and 6.1.3.3(e) of the Technical Specifications contains provisions for the assignment of responsibility to conduct the radiological environmental

monitoring program. Assignment of responsibility has been made to specific organizations and individuals with designation to responsible management and supervision. The inspector determined that the organization and assignments of responsibility apparently afford management control equal to that of the previous program.

- b. Sections 6.1.3.4(a) and 6.1.3.5(a) and (d) provide for audits of the activities under the Technical Specifications. The inspector reviewed the results of licensee audit GS-750.05, dated March 9, 1978, dealing with the radiological environmental monitoring program. The audit apparently provided a method of identifying deficiencies, procedure for recording the results of the audits and followup on deficiencies and provision for reporting results of audits to supervision and management. The inspector had no further questions in this area.

5. Quality Control of Analytical Measurements

The licensee audit described in paragraph 4 above, included the licensee's analytical measurements of environmental samples. In addition, one contractor routinely provides QC data on their program to the licensee. The licensee also performs comparative measurements with EPA and the State of South Carolina. The inspector had no further questions.

6. Implementation of the Environmental Monitoring Program

Environmental Technical Specification 4.11.1, Tables 4.11-1 and 4.11-2 provide requirements for types of sample media, sampling locations and monitoring frequencies. The inspector inspected all of the air particulate and charcoal filter sampling stations with attendant TLDs and numerous other solely TLD stations. The inspector observed the actual collection by a licensee representative of air particulate and charcoal filters, milk, raw and finished water and surface water samples. The inspector compared the sample collection to applicable licensee procedures. The inspector observed that the air particulate charcoal filter station at Clemson University, station number 006, had collected less than the normal volume of sample for the current week (~158 hours vs. 168 hrs.). A licensee representative stated that this was apparently caused by a loss of electrical power due to an electrical storm. He stated that in the past some sample loss at this station had been caused by loss of electrical power due to poor wiring. He stated that the faulty wiring had been corrected. At the time of this inspection, the inspector found all air particulate and charcoal

filter stations apparently operating properly. The TLD at Station 001, Salem, South Carolina was missing. A licensee representative stated that this was apparently the result of theft. The number of missing TLD's in public locations in 1977 was not unreasonable. Through the inspection of monitoring stations for various environmental media, review of the annual environmental monitoring report and laboratory sample analysis results, the inspector determined that the requirements of ETS 4.11.1 apparently have been met in the implementation of the program. Missed samples were minimal and apparently caused by reasons beyond the licensee's control such as non-availability of sample, temporary malfunction of equipment and vandalism, which are accommodated by the ETS.

7. Questions from the Exit Interview of the Last Inspection  
(50-269/77-13, 50-270/77-13 and 50-287/77-13)

- a. Licensee acknowledged inspector comments in regard to timely review of environmental sample results.

A licensee representative stated that environmental sample results are reviewed by a laboratory technician within one week and then by laboratory supervision. The results are also reviewed by an Oconee Nuclear Station environmental technician and the Station Health Physicist. The results were said to have received a complete review for Technical Specifications requirements within three to five weeks. Procedures have been revised and approved to accomplish this. The inspector reviewed the procedural changes and had no further questions.

- b. Licensee agreed to provide calculations comparing slug release results to continuous release results.

The requested information was supplied by the licensee and the inspector had no further questions.

- c. Licensee agreed to furnish additional information on the assumed fluid intake for the standard man, referenced in Oconee internal dose calculations.

A licensee representative stated that Regulatory Guide 1.109 will be followed in making the dose calculations. The inspector had no further questions.

- d. Licensee agreed to modify site procedures for sampling of sediment for radioactivity to agree with the current sedimentation model used.

The Oconee sedimentation sampling procedure had been revised to require that samples be taken to a depth not exceeding one inch. The inspector reviewed the approved revised procedure and had no further questions.

- e. Licensee agreed to clearly define and delineate corporate and plant responsibilities for review of environmental radiological monitoring data and documented trend analysis associated with that review.

Responsibility for review of environmental data has been established as indicated in paragraph c.1. above. A licensee representative assured the inspector that the necessary reviews of data will be performed. In addition, the inspector reviewed an example of trend analysis of the data that is proceduralized and now being done routinely. The inspector had no further questions.

#### 8. Procedures

Technical Specification 6.4.1 states that the station shall be operated in accordance with approved procedures. Approved Procedure HP/O/B/1000/62/R, Procedure for Anomalous Environmental Results, states in Section 4.2 that if the control levels of Reference 2.2 have been exceeded, the Count Room and Environmental Group will notify the Station Health Physicist, the Program and Procedures Function of the General Office Health Physics Staff, and General Office Licensing so that proper notification and reporting may be made to the NRC. The dates/times of these intra company notifications will be documented on Enclosure 5.1 (to the procedure). Reference 2.2 includes activity levels of environmental medium exceeding ten (10) times the control station value. During the period July 12, 1977 to May 24, 1978, the licensee submitted 17 reports to the NRC pursuant to Technical Specification 6.6.2.2a, c, and d. All of these reports, except one, dealt with exceeding the control value by greater than ten times and the one exception dealt with an elevated milk sample result attributed to apparent Chinese test fallout. In reviewing available records, the inspector found Enclosure 5.1 forms executed for only about half of the reports of the anomalous results submitted to the NRC by the licensee. These forms were apparently initiated by the Count Room and Environmental Group and the forms did not document in the space provided that the other three groups, Station Health Physics, Procedures Function of the General Office Health Physics Staff and General Office Licensing had been notified. In addition, Enclosure 5.1 (con't) provides space for "Investigative Action Taken" and "Corrective Action Taken." In reviewing records, the inspector found

Enclosure 5.1 (con't) either nonexistent, blank or marked NA (not applicable). Most of the cases did apparently involve some evaluation and investigation. Failure to follow the procedure apparently did not result in failure to make required reports to the NRC. Licensee representatives were informed that failure to follow procedure HP/O/B/1000/62/R constituted noncompliance (deficiency) with Section 6.4.1 of the Technical Specifications 78-14(-13-13)01. Licensee representatives assured the inspector that the procedure will be completely followed as written, or if a revision of the procedure is considered desirable, the approved revised procedure will be completely followed. The inspector had reviewed, held discussions and evaluated the above mentioned licensee reports dated: July 12, 1977; August 1, 1977; August 18, 1977; August 25, 1977; September 26, 1977; October 31, 1977; November 10, 1977; January 4, 1978; January 25, 1978; February 6, 1978; February 7, 1978 (2); February 13, 1978 (2); February 27, 1978; April 7, 1978 and May 24, 1978. The inspector had no further questions and the matters contained in the reports are considered closed.

9. Reporting Requirements

- a. Amendment 55/55/52/1/30/78 to Oconee Technical Specifications changed the annual operating report requirement to a monthly reporting requirement. The same amendment established an annual report requirement for environmental monitoring in Section 6.6.1.5 of the Technical Specifications. Under the previous reporting requirements of the Technical Specifications, the licensee submitted the 1977 environmental report as a supplement to the 1977 annual operating report. The inspector reviewed the 1977 environmental monitoring report and with the exception of minor discrepancies resolved at the time of the inspection, the inspector had no further questions. The inspector had reviewed and closed licensee nonroutine reports as described in paragraph 8 above.
- b. The inspector reviewed reports for missing data, obvious mistakes, anomalous measurements, observed biases or trends in the data. The licensee has taken followup action on anomalous measurements as evidenced by information contained in nonroutine reports. The licensee has proceduralized trend plotting for the environmental monitoring data. The inspector reviewed the trend plots and had no further questions.

10. Exit Interview

The inspector met with licensee representatives (as shown in paragraph 1) at the conclusion of the inspection on June 15, 1978 and summarized the scope and findings of the inspection.