



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

Report No. 50-269/82-29, 50-270/82-29, and 50-287/82-29

Licensee: Duke Power Company  
P. O. Box 2178  
Charlotte, NC 28242

Facility Name: Oconee Nuclear Station

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

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

Inspection at Oconee Nuclear Station near Seneca, South Carolina

Inspector: T. R. Collins

7/23/82  
Date Signed

Approved by: K. P. Barr  
K. P. Barr, Section Chief  
Technical Inspection Branch  
Division of Engineering and Technical Programs

7/23/82  
Date Signed

SUMMARY

Inspection on July 12-16, 1982

Areas Inspected

This routine, unannounced inspection involved 33 inspector-hours on site in the areas of radiation protection, shipment of radioactive material, personnel dosimetry, portable instrument calibrations, respiratory protection program, contamination of primary demineralizer water header, health physics controls of Unit 3 refueling outage, posting, labeling and control, and review of licensee event reports.

Results

Of the nine areas inspected, no violations or deviations were identified in nine areas.

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*J. Ed Smith, Station Manager
- \*T. B. Owen, Superintendent of Technical Services
- \*J. N. Pope, Superintendent of Operations
- \*C. T. Yongue, Station Health Physicist
- C. L. Harlin, Projects and Training Coordinator
- \*D. L. Davidson, Associate Health Physicist
- J. A. Long, Support Functions Coordinator
- B. A. Murphree, Health Physics Administrative Supervisor
- S. E. Spear, Health Physics Supervisor
- J. E. Owens, Health Physics Supervisor
- J. J. Sevic, Station Biologist
- \*L. Benge, Associate Chemist
- D. P. Rochester, Station Chemist
- R. Brown, Chemistry Coordinator
- \*T. C. Matthews, Technical Specialist
- \*R. C. Adams, Inspection and Enforcement Engineer
- \*J. J. McCool, Quality Assurance Representative
- \*R. P. Rogers, Licensing Engineer

Other licensee employees contacted included four technicians, three security force members, and two office personnel.

#### Other Organizations

Rad Services, Inc.  
Numanco

#### NRC Resident Inspector

- \*W. T. Orders
- \*D. P. Falconer

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on July 16, 1982, with those persons indicated in paragraph 1 above. The inspector discussed the cross contamination of the primary demineralizer water header in the Auxiliary Building with licensee management. The station manager acknowledged the inspector's concerns of the demineralizer water system. The inspector informed licensee management that this incident would be left as an unresolved item pending further evaluation (see paragraph 15).

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations. New unresolved items identified during this inspection are discussed in paragraph 15.

5. Inspector Follow-up Items

(Closed) 79-33-01 (INF) Liquid Release in Excess of 10 CFR 20 Values. The inspector discussed this with a licensee representative and concluded that the sewage treatment sump was inside the restricted area but outside the radiation controlled area and that routine patrols by security personnel were being performed. The inspector had no further questions.

(Open) 80-BU-10 (IFI) Contamination of Non-Radioactive System. The inspector discussed this with licensee personnel and stated that IE Bulletin 80-10 requires that if a non-radioactive system becomes contaminated, a 10 CFR 50.59 Safety Evaluation will be performed if the system is considered necessary for continued operation. The 10 CFR 50.59 Safety Evaluation must consider the level of contamination (i.e., concentration and total curie inventory) and any potential releases (either routine or accident) of radioactivity to the environment. The relationship of such releases to the radioactive effluent limits of 10 CFR 20 and the facility's Technical Specifications and to the environmental radiation dose limits of 40 CFR 190 must also be evaluated. The record of the Safety Evaluation must set forth the basis and criteria on which the determination was made. The inspector stated that this evaluation would be inspected upon the next routine inspection.

6. Licensee Event Reports (LER's)

Reportable Occurrence RO-287/82-05 (Closed) Spent Fuel Pool Ventilation Fans not operable during movement of fuel. The inspector reviewed the licensee's corrective action which incorporated a revision to prevent the movement of fuel, stating specifically what equipment should be tagged when the Spent Fuel Pool Fans or associated circuits are tagged out. The inspector concluded this appeared to be adequate and had no further questions.

Reportable Occurrence RO-269/82-21 (Closed) Proper valve line up for release of Laundry and Hot Shower Tank's (LHST's). The inspector reviewed the licensee's corrective action which incorporated revision to all appropriate procedures to specify proper valve line ups for the release of LHST's. The inspector concluded this appeared to be adequate and had no further questions.

7. Posting, Labeling and Control

The inspector reviewed the licensee's posting, and control of radiation areas, high radiation areas, airborne radioactivity areas, contamination areas, radioactive materials areas, and the labeling of radioactive material during tours of the Auxiliary Building, Reactor Building, and Turbine Building. No discrepancies were observed. The inspector also performed independent surveys of Radiation Control Zones (RCZ's) to determine proper labeling and posting of RCZ's. The inspector concluded that posting, labeling and control appeared to be adequate and had no further questions.

8. Notification and Reports

- a. The inspector reviewed the licensee's records to determine if radiation exposure data had been provided to terminated employees as required by 10 CFR 19.13(d). The inspector reviewed the first quarter of 1982 terminated employees and verified that each employee had been sent a letter regarding his radiation exposure history. The inspector had no further questions.
- b. The inspector discussed with a licensee representative the reporting requirements of 10 CFR 20.402, 403, 405, and 408 and reviewed plant records. No deviations were identified.

9. Surveys

The inspector selectively reviewed records of radiation, contamination and airborne radioactivity surveys performed in July 1982, of the Unit 3 Reactor Building (Containment) and discussed the survey results with licensee representatives and observed the work in several active work areas to verify that the licensee was following the regulatory requirements of 10 CFR 20.103, 201(b) and 401(b). The inspector concluded that proper surveys were being performed and had no further questions.

10. Respiratory Protection Program

The inspector reviewed and discussed the licensee's respiratory protection program with licensee representatives on issuance of respirators, MPC-hour controls, inspection of respirators, training of personnel and respiratory medical qualification. The inspector concluded upon his review that the respiratory protection program appeared to be adequate and had no further questions.

11. Posting of Notices

10 CFR 19.11 requires, in part, that each licensee post current copies of 10 CFR 19 and 10 CFR 20 or, if posting of the documents is not practicable, the licensee may post a notice which describes the document and states where it may be examined. 10 CFR 19.11 further requires that copies of any Notice

of Violation involving radiological working conditions be conspicuously posted within two working days after receipt of the documents from the Commission. The inspector observed the posting of notices required by 10 CFR 19.11 and had no further questions.

12. Shipment of Radioactive Material

On July 15, 1982, the inspector observed a radioactive waste shipment, number ONS-82-276, being loaded for shipment to Chem Nuclear Systems, Inc. (CNSI) for burial. The waste shipment was low specific activity (LSA) compacted waste involving 47 55-gallon drums and three wooden boxes. The inspector concluded after his review of the Radioactive Shipment Record (RSR) and independent radiation surveys of the shipping vehicle and packages that the radioactive waste shipment appeared to meet 10 CFR 71 and 40 CFR Department of Transportation (DOT) requirements.

13. Instruments and Equipment

The inspector observed a variety of radiological instruments (portable survey instruments, portal monitors, personnel friskers) in use and available for use. The inspector checked calibration stickers, performed battery checks for selected portable instruments in operating plant and response checked selected portable instruments for proper operation. The inspector discussed the radiation survey instrument calibration program with licensee representatives. The inspector had no further questions.

14. Personnel Frisking

The inspector observed workers in the change room performing personnel frisking of themselves after exiting the Unit 3 containment RCZ. The inspector concluded after his review and observations that the workers were adequately frisking themselves using the proper techniques. The inspector had no further questions.

15. Contamination of the Primary Demineralized Water Header

On July 9, 1982, two personnel, upon exiting the Radiation Control Area, determined they were contaminated. Health Physics was contacted and it was determined that the demineralized water hose and portable demineralizer where the two personnel were working were contaminated. Further surveys revealed that approximately 200 square feet of ground near the Unit 3 Reactor Building were also contaminated. Health Physics personnel set up an adequate Radiation Control Zone (RCZ) around this area until the soil and gravel could be removed. The licensee removed approximately 4800 lbs. of soil and gravel in nine 55 gallon drums and stored it for future radioactive waste shipment for burial. The licensee determined the cause of the contamination to be from the primary demineralized water (DW) header near the CNSI mobile solidification system. The licensee immediately tagged all valves associated with the DW system, "closed" restricting use of DW.

Additionally, the licensee began flushing the demineralized water lines to remove the radioactivity. However, this flushing will take some time to remove the entire residual remaining in the DW System. The licensee also has revised all appropriate procedures to begin sampling DW System on a periodic frequency. The inspector concluded the licensee's corrective action was adequate and that further investigation to determine the cause of the contaminated primary DW header should continue until the actual cause has been identified. The inspector informed licensee management that this incident would remain as an unresolved item pending final evaluation and determination of the cause of the contaminated DW System (269/270/287-82-29-01).