



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

Report Nos: 50-269/85-12, 50-270/85-12 and 50-287/85-12

Licensee: Duke Power Company
422 South Church Street
Charlotte, N.C. 28242

Facility Name: Oconee Nuclear Station

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

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

Inspection Conducted: May 13 - June 10, 1985

Inspectors: C. N. Burger, for
J. C. Bryant

7/16/85
Date Signed

C. N. Burger, for
M. K. Sasser

7/16/85
Date Signed

C. N. Burger, for
L. P. King

7/16/85
Date Signed

Approved by: H. C. Dance
H. C. Dance, Section Chief
Division of Reactor Projects

7/16/85
Date Signed

SUMMARY

Scope: This routine, unannounced inspection entailed 234 resident inspector hours on site in the areas of operations, surveillance, maintenance, inspector followup items, and followup of events.

Results: Of the five areas inspected, no items of noncompliance or deviations were identified.

REPORT DETAILS

1. Licensee Employees Contacted

*M. S. Tuckman, Station Manager
J. N. Pope, Superintendent of Operations
T. Barr, Superintendent of Technical Services
J. T. McIntosh, Superintendent of Station Services
T. Owen, Superintendent of Maintenance
*R. Bond, Compliance Engineer
*T. C. Matthews, Technical Specialist

Other licensee employees contacted included technicians, operators, mechanics, security force members, and staff engineers.

Resident inspectors

J. C. Bryant
*M. K. Sasser
L. P. King

*Attended exit interview.

2. Exit Interview

The inspection scope and findings were summarized on June 7, 1985, with those persons indicated in paragraph 1 above.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

3. Licensee Action on Previous Enforcement Matters

Not inspected

4. Unresolved Items

Unresolved items were not identified on this inspection.

5. Inspector Followup Items

(Closed) Inspector Followup Item 50-269/84-23-01, Inadequate spent fuel pool procedure. The licensee has implemented a new procedure for installation or removal of gamma scanner equipment in the spent fuel pools. The procedure's intent is to ensure the necessary precautions when moving heavy loads near or over spent fuel. Additionally, the existing procedure for gamma scanner operations has been revised, adding the Technical Specification requirement that no loads in excess of 3000 lbm shall be moved over spent fuel. The resident inspectors reviewed these procedures.

(Closed) Inspector Followup Item 50-270/85-10-05; Verification of refueling surveillance tests. The resident inspectors completed a review of surveillances required for Unit 2 on a refueling frequency and determined that all surveillances were completed as required.

(Closed) Inspector Followup Item 50-269/83-33-03, Resolution of reliability of the Lee gas turbines. Following the 1983 Keowee outage, the Lee gas turbine reliability task force was formed to review problems experienced with the turbines during the outage. The task force recommended a number of changes. All short term changes have been implemented.

(Closed) Inspector Followup Item 50-269/83-19-02, Equipment CERTS. This item was closed in inspection report number 85-06.

6. Plant Operations

The inspectors reviewed plant operations throughout the reporting period to verify conformance with regulatory requirements, Technical Specifications (TS), and administrative controls. Control room logs, shift turnover records and equipment removal and restoration records were reviewed routinely. Interviews were conducted with plant operations, maintenance, chemistry, health physics and performance personnel.

Activities within the control rooms were monitored on an almost daily basis. Inspections were conducted on day and on night shifts, during week days and on weekends. Some inspections were made during shift change in order to evaluate shift turnover performance. Actions observed were conducted as required by Section 3.18 of the station directives. The complement of licensed personnel on each shift inspected met or exceeded the requirements of TS. Operators were responsive to plant annunciator alarms and were cognizant of plant conditions.

Plant tours were taken throughout the reporting period on a routine basis. The areas toured included the following:

- Turbine Building
- Auxiliary Building
- Units 1, 2, and 3 Electrical Equipment Rooms
- Units 1, 2, and 3 Cable Spreading Rooms
- Station Yard Zone within the Protected Area
- Standby Shutdown Facility
- Keowee Hydro Station

During the plant tours, ongoing activities, housekeeping, security, equipment status, and radiation control practices were observed.

Unit 1 operated at essentially full power throughout the report period.

Unit 2 began the report period at 72% power, as limited by steam generator levels, and continued at that power level throughout the reporting period. The unit will be shut down in the near future for a

planned 13 day outage. The purpose of this outage is to attempt mechanical pulse cleaning of the steam generators in order to be able to increase the power level to 100% following the outage. In addition, the 2B1 reactor coolant pump seals will be replaced.

Unit 3 operated at essentially full power throughout the report period.

No violations or deviations were identified.

7. Surveillance Testing

The surveillance tests listed below were reviewed and/or witnessed by the inspectors to verify procedural and performance adequacy.

The completed tests reviewed were examined for necessary test prerequisites, instructions, acceptance criteria, technical content, authorization to begin work, data collection, independent verification where required, handling of deficiencies noted, and review of completed work.

The tests witnessed, in whole or in part, were inspected to determine that approved procedures were available, test equipment was calibrated, prerequisites were met, tests were conducted according to procedure, tests were acceptable and systems restoration was completed.

Surveillances witnessed in whole or in part are as follows:

PT/0/A/260/16	Keowee hydro emergency start test
PT/0/A/150/09	Reactor building personnel hatch $\pm 0'$ ring seal leak rate test.
PT/3/A/600/12	Turbine driven emergency feedwater pump performance test

Completed surveillances reviewed are as follows:

PT/3/A/800/03	All rods out boron comparison at power
PT/0/A/205/01	Weekly reactor coolant flow data
PT/0/A/800/30	Weekly core power distribution comparison
PT/0/B/302/16	Review and control of incore instrumentation signals

No violations or deviations were identified.

8. Maintenance Activities

Maintenance activities were observed and/or reviewed during the reporting period to verify that work was performed by qualified personnel and that approved procedures in use adequately described work that was not within the skill of the trade. Activities, procedures and work requests were examined to verify proper authorization to begin work, provisions for fire, cleanliness, and exposure control, proper return of equipment to service, and that limiting conditions for operation were met.

Maintenance work witnessed in whole or in part was as follows:

WR 97290B Addition of Restraining Braces in SSF Cabinets
 WR 90514C Set trip Setpoint on RC Makeup Pump, Unit 3
 WR 51091D Disassemble and inspect SSF-CCW-267
 WR 55155A Perform hydrogen system annual instrument calibration
 WR 21559B Troubleshoot reactor building normal sump level readings,
 trains A and B do not agree

No violations or deviations were identified.

9. Unit 3 - Brief Loss of Low Pressure Service Water (LPSW)

At 8:37 a.m., on May 29, 1985, Unit 3 nuclear control operators (NCO's) received notice on the alarm typewriter that 3A LPSW pump suction valve was not fully open. On checking the control panel, they found that the valve indicated an intermediate position. A nuclear equipment operator (NEO) was dispatched to verify valve position. At 8:39 a.m., an alarm was received that LPSW header pressure was low. The NCO immediately started 3B LPSW pump and pressure was restored. According to control room gauges, LPSW header pressure never dropped down to zero, and no adverse effects were noted on equipment requiring LPSW.

The NEO reported that the local pump stop switch apparently had inadvertently been pushed by a mechanic who placed a ladder against the column on which the switch was mounted. Piping installation is in progress in the area. LPSW pump B was left in service while the work is in progress.

The licensee had previously noted the vulnerability of some local control switches and is in the process of obtaining protective shields for them. Construction workers will receive additional training on care to be taken in the operating plant.

No violations or deviations were identified.

10. Verification of Surveillance Tests

During the performance of an inspection of the unit 2 startup from refueling the resident inspectors encountered difficulty in determining that all refueling surveillances had been completed prior to unit startup. These difficulties were due in part to the inspectors' unfamiliarity with the licensee's computer system for monitoring surveillances, PMRPT, but also due to the fact that documentation of that system does not clearly define its use.

The inspectors did succeed in verifying that all surveillances had been completed as required (see section 5, inspector followup items). There were no violations identified. However, listed below are several findings of those problems contributing to the difficulties of completing this inspection.

- a. Nuclear station directives do not indentify or cross reference which surveillances are performed to meet specific TS requirements, making it difficult to determine if all surveillances have been completed, in compliance with TS.
- b. Many of the surveillances performed to satisfy TS requirements are performed on a more frequent basis than that required by TS. This is more than adequate but was hard to follow when looking at surveillances required at a specific interval, such as refueling.
- c. Errors in the PMRPT program were discovered which resulted in some TS required surveillances not showing up on the printouts. Their omission added to auditing difficulties.

The station management has initiated steps to improve the documentation and use of the PMRPT program for monitoring the status of surveillances. These steps include: a detailed cross reference of TS versus the station surveillances, instructions to users to update the PMRPT status on a more timely basis, and revisions to station directives to more accurately define the program. The resident inspectors will follow these changes during future inspections.

11. Review of Licensee Event Reports

The following licensee event reports have been closed based upon evaluation and verification by inspection of the documented corrective actions:

(Closed) LER 50-269/85-02, Reactor trip on high RC pressure all six intercept valves closed for unknown reasons. The problems were found in an electrical circuit of the EHC system and repaired.

(Closed) LER 50-269/84-04, Exceeding of RCS cooldown rate. The operator training package has been implemented to improve the training on TS requirements.