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

Report Nos. 50-269/80-38, 50-270/80-34 and 50-287/80-32

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

Facility Name: Oconee Units 1, 2 and 3

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

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

Inspection at Oconee Nuclear Station

Inspectors _____ _____
W. T. Orders Date Signed

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F. Jape Date Signed

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D. C. Myers Date Signed

Approved by C. Julian 2/11/81
C. Julian, Acting Section Chief, Date Signed
RONS Branch

SUMMARY

Inspection on December 1 to December 31, 1980

Areas Inspected

This routine inspection involved 264 inspector-hours on site in the areas of plant operations, security, raiological controls, licensee event reports (LERs), licensee action on previous inspection items, licensee action on IE Bulletins and Circulars and maintenance.

Results

Of the 7 areas inspected, no violations or deviations were identified in 6 areas; 1 violation was found in 1 area ; (Failure to follow procedures, see paragraph 8).

DETAILS

1. Persons Contacted

*J. E. Smith, Station Manager
*J. M. Davis, Superintendent of Maintenance
*J. R. Pope, Superintendent of Operations
*T. B. Owen, Superintendent of Technical Services
*R. T. Bond, Licensing and Project Engineer
*J. Brackett, Senior QA Engineer
*T. Cribbe, Licensing Engineer

Other licensee employees contacted included 6 technicians, 12 operators, 4 mechanics, 6 security force members, and 4 office personnel.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on January 7, 1980, with those persons indicated in paragraph 1 above. During the meeting, the violation, and unresolved items were discussed. Licensee representatives acknowledged their understanding of the items.

3. Licensee Action on Previous Inspection Items

(Closed) Noncompliance (287/80-26-02) Failure of PT 3/A/0230/06 to require venting of the LPI pump prior to starting for testing. The inspector verified the corrective actions specified in the licensee response of December 23, 1980 by reviewing changes to applicable tests.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations. New unresolved items identified during this inspection are discussed in paragraphs 5.b(1) and 5.b.(7.)

5. Review of Plant Operations

Unit one continued at full power (FP) until 1028 on December 19 when power was reduced to 88% FP due to a steam leak on the 1D2 Heater Drain Pump. Repairs were completed and a return to FP made. A second power reduction occurred at 0235 on December 16 for a suspected tube leak on the "A" OTSG. The tube leak was verified at 0.1 gpm. Power operation continued at 90% F P to minimize leakage. Inspectors are monitoring release calculations of the condensate air ejectors.

Unit two was restarted on December 5 after a scheduled outage for unit modifications. A reactor trip from 10% FP occurred during the startup resulting from a feedwater oscillation. The plant responded normally and

subsequently restarted and ascended to FP on December 8. Two power reductions occurred during the period: On December 20 power was decreased to 60% due to mechanical complications on the 2B HP1 pump.

The Unit returned to FP on December 22 and on December 28 power was reduced to 78% FP due to pressure fluctuations on the 2B2 RCP seals. The unit returned to FP on December 29 after seal pressures stabilized.

Unit 3 has continued operation at 50% FP since November 26 to delay the end of core life into December for scheduling purposes. The unit was shutdown at 0109 on December 6 for a scheduled 71 day refueling outage. Inspectors monitored shutdown operations and independently verified shutdown parameters. Refueling operations are ongoing.

a. Shift logs and facility records

The inspectors reviewed the records listed below and discussed various entries with operations personnel to verify compliance with technical specifications (TS) and licensee's administrative procedures.

- Shift Supervisor's Logs
- Operator's Logs
- Removal and Restoration Logs
- Shift Turnover Checklists
- Control Room Status Board

In addition to these record reviews, the inspectors independently verified selected safety-related equipment tag-outs. The reviews found the above records satisfactory.

b. Facility Tours and Observations

Throughout the inspection period facility tours were conducted to observe operations and maintenance activities in progress. The tours encompassed the following areas:

- Perimeter fence
- Turbine Building
- Control Rooms
- Electrical Switchgear Rooms
- Auxiliary Building
- Battery Rooms
- Reactor Building
- Interim Waste Building

During these tours the following observations were made:

(1) Monitoring Instrumentation and Alarms

The following instrumentation was observed to verify that indicated parameters were in accordance with technical specifications for current operational modes:

- Equipment operating status
- Area radiation monitors
- Reactor Power level
- Water storage tank levels

System annunicator panels were monitored and inspectors verified operator cognizance through questioning the cause of selected alarms and the requirements for clearing off-normal condition alarms. The review identified the following item: on December 10 at 1530, Unit 2 Emergency feed water pump (EFWP) turbine auxiliary oil pump overload statalarm was activated. The alarm would not clear. An operator checked the input breaker and thermal overload relay and found both in satisfactory condition for the pump. A priority 2 work request was initiated to diagnose an apparent Statalarm problem. After investigation by technicians it was determined that a relay in the oil pump control circuitry was shorted, however it was not known at this time that the automatic start feature of the Turbine driven (EFWP) was lost. Not until 1755 on December 11 was the automatic start feature discovered to be inoperable. At this time the work request was upgraded to priority one. Approximately 26 hours of a 60 hour limiting condition for operation had passed before the condition was properly assessed. Inspector investigation revealed that the Alarm Response Manual for the affected alarm (SA2708#50) does not alert the operator to the fact that the aux oil pump directly affects the operability of the TDEFWP. Subsequent discussions with the licensee resulted in the licensee acknowledging the condition and a statement that the alarm response manual would be reviewed and changed to alert operators to alarms affecting operability of safety-related equipment.

Unresolved item: Verify licensee actions to review and change the alarm response manual. (270/80-34-01)

(2) Shift Staffing

The inspectors verified by spot checks on day, night and evening shifts that the operating shift staffing was in accordance with technical specifications and IEB-79-05C.

(3) Plant Housekeeping and Conditions

Storage of material and components, and cleanliness conditions of various areas throughout the facility were observed to determine whether safety or fire hazards exist. There was a notable level of cleanliness in the auxiliary building resulting from a concerted licensee effort to reduce the contaminated areas and improve the appearance of this area.

(4) Fire Protection

Fire extinguishers and fire fighting equipment were observed to be unobstructed and were inspected for operability. The inspector also verified by review of logs that sufficient compensatory action was taken by the licensee when fire monitoring detectors were inoperable.

(5) Radiation Areas

Radiation control zones were observed to verify proper identification and implementation. These observations included the review of stepoff pad conditions, disposal of contaminated clothing, and area posting. The following observations were made:

(a) Considerable effort has been made by the licensee to reduce the size and number of contaminated areas in the auxiliary building. The effort shows improvement in this area.

(b) Work practices in radiation areas were observed for compliance to Station Directives and ALARA principles. On December 9 the inspectors discussed with the licensee an issue of conflicting radiation posting of the Unit one waste drumming room. One entrance to the area was posted as a High Radiation - Contaminated Area and the access in use for loading of empty storage drums was posted - High Radiation Area only. The Health Physics Supervisor was contacted immediately and after a review of area surveys and other access posting the issue was resolved. The posting of high radiation area was correct and the improperly posted access sign was corrected. An extensive review of other radiation area posting indicated that this incident was an isolated case. The inspector had no further questions on the issue.

(6) Surveillance Testing

The inspectors observed the performance of surveillance procedures IP/0/A/305/3 and IP/2/A/305/3, RPS channel tests. The tests were analyzed by the inspectors to ascertain procedural and performance adequacy, that test equipment in use was calibrated, that test prerequisites were met, that system restoration was completed, and that test results were

adequate. ANSI N18.7 was used as a guide in evaluating testing. No problems were identified.

(7) Maintenance Activities

On December 17 the inspector observed technicans performing procedure MP/C/A/2001/3 CRD BREAKER TIMING TESTS. Upon reviewing the procedure the inspector found that no sign-offs had been made for prerequisites and initial conditions and the associated work request appeared to be incomplete in that shift supervisor signature for authorization to start work was missing. The red tag isolation required by the work request had not been issued. The inspector notified the maintenance supervisor. The licensee then verified that prerequisites and initial conditions were as specified in the procedure and sufficient isolation existed to safely perform the work. The licensee reinstructed the technicians performing the work in the use of procedures and, in subsequent conversations with inspectors, ensured him that an increased effort in meeting the procedural administrative requirements would occur. The safety issue of the missing red tags will be carried as an unresolved item until the inspector can review all of the documents associated with the work in question.

Unresolved item: Review work requests associated with MP/0/A/2001/3 to determine if a safety violation exists. (287/80-32-01)

6. Review of Licensee Event Reports

The inspector performed an in-office review of nonroutine event reports to verify that the report details met license requirements, identified the cause of the event, described corrective actions appropriate for the identified cause, and adequately addressed the event and any generic implications. In addition, the inspector examined selected operating and maintenance logs, and records and internal incident investigation reports. Personnel were interviewed to verify that the report accurately reflected the circumstances of the event, that the corrective action had been taken or responsibility assigned to assure completion, and that the event was reviewed by the licensee, as stipulated in the Technical Specifications. The following event reports were reviewed:

Report Number	Title
RO-269/80-25	Keowee Unit 2 Failed to Start From Control Room
RO-269/80-26	B HP Service Water Pump - Motor Cooler Leak
RO-269/80-27	CRD G7 Dropped
RO-269/80-28	EWST Level
RO-269/80-30	RB Cooler 1B Inoperable

RO-269/80-32	Isolation of Keowee Overhead Transmission Path
RO-269/80-33	Fire Detector String Removed from Service
RO-270/80-11	2B HPI Pump Inoperable
RO-270/80-12	CBAST Pump Inoperable
RO-270/80-13	CBAST Pump Inoperable
RO-270/80-14	CBAST Pump Removed from Service for Maintenance
RO-270/80-15	2LP21 Inoperable
RO-270/80-16	CBAST Pump Inoperable
RO-270-80-17	CBAST Pump Inoperable
RO-270/80-18	West Pent. Room Ventilation System Inoperable
RO-270/80-19	RC Leakage Into CC System from 2A Letdown Cooler
RO-270/80-20	2FDW-103 Inoperable
RO-270/80-22	Fire Barrier Penetrations
RO-270/80-24	2B HP1 Pump Inoperable
RO-287/80-11	Cracked Studs on OTSG Primary Manway
RO-287/80-13, Rev 1	RB Spray Suppressor Inoperable

No violations were identified in this area.

7. Review of IE Bulletins and Circulars

The DPC response to IEB 80-23 dated November 24, 1980 provided alternate means to incorporate the specified resistance checks of subject Valcor solenoids. The licensee technically justified their position in the response.

The response as written was unacceptable to IE Region II after thorough review.

Subsequent discussions between the licensee, the resident inspector and IE:HQ reached a satisfactory conclusion on December 5, with the following resolution. The licensee will install fuses in the power supply to those subject solenoids that when failed in a shorted mode could remove the control power to the Motor driven emergency feedwater pumps in lieu of measuring coil resistance changes of all the subject valves. Weekly surveillance as specififed in the response is acceptable for all valves.

This Bulletin will remain open pending verification of the installation of fuses in the power supplies to the Valcor solenoids.

8. Radioactive Liquid Waste Spill

On November 21, 1980, at approximately 2205, an estimated 30 gallons of contaminated water was accidentally expelled from an Oconee radioactive waste condensate demineralizer vent valve, during a spent resin line back flush. The water covered an area of approximately 120 square feet on the roof slab of the interim radioactive waste building, and ran down a wall contaminating the wall and floor below. When water was discovered running down the wall, the back-flush was terminated and the spill was contained.

Decontamination of the area was initiated promptly, the spill was contained within the radwaste building, the safe operation of the station per se was not

jeoporadized, and no personnel injuries or contamination resulted. In evaluating the incident, the inspector interviewed the responsible individual, reviewed the procedure used during the incident, operating procedure OP/0/B/1104/43, and surveyed the physical configuration of the equipment. The operational evolution which ultimately resulted in the spill was the purging of a resin transfer line with air in an attempt to blow any resin in the line into the condensate demineralizer. This particular activity is not entailed within OP/0/B/1104/43. While the purge activity was ongoing, the condensate demineralizer vent valve was opened to allow the vessel to be drained. It was during these simultaneous events that the spill occurred.

In final analysis, the incident resulted from performing activities which were not controlled by the applicable procedure. Moreover, the procedure does not embody the complement of activities necessary to complete a resin transfer. Performing operations or maintenance activities not entailed in adequate written, approved, procedures and/or employing inadequate procedures in the performance of these activities violates Technical Specification 6.4.1 which requires that the station be operated and maintained in accordance with current written approved procedures. This is a Violation and is applicable to Unit one.