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

Report Nos. 50-269/81-07, 50-270/81-07, and 50-287/81-07

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

Facility Name: Oconee

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

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

Inspection at Oconee site near Seneca, South Carolina

Inspectors: Frank Jape — F. Jape — 4/27/81 Date Signed

Frank Jape for — W. Orders — 4/27/81 Date Signed

Jape for — D. Myers — 4/27/81 Date Signed

Approved by: Paul Kellogg for — J. C. Bryant, Section Chief, RRPI Branch — 4/29/81 Date Signed

SUMMARY

Inspection on March 10 through April 10, 1981

Areas Inspected

This routine inspection involved 355 resident inspector-hours on site in the areas of operational safety verification, monthly surveillance observation, monthly maintenance observation, startup test program following refueling, review of LER's, followup of previous inspection findings, TS compliance and training program.

Results

Of the eight areas inspected, no violations or deviations were identified in five areas; three violations were found in three areas (Violation - Failure to follow instruction for cable repairs - Unit, 3 paragraph 5; Violation - Missed TS surveillance requirements - Units 1, 2 and 3 paragraph 6; Violation - Emergency power breakers misaligned, Unit 2, paragraph 7).

DETAILS

1. Persons Contacted

Licensee Employees

*J. E. Smith, Station Manager
*J. M. Davis, Superintendent of Maintenance
*J. N. Pope, Superintendent of Operations
*T. E. Cribbe, Licensing Engineer
*H. R. Lowery, Acting Superintendent of Operations

Other licensee employees contacted included 10 operations shift supervisors, three I&E supervisors, three unit coordinators, four I&E technicians, six maintenance foremen, eight maintenance craftsmen, 20 licensed operators, 10 non-licensed operators, five performance technicians, three I&E support engineers, and two office personnel.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were discussed on March 27 and April 3, 1981 and were summarized on April 9, 1981 with those persons indicated in Paragraph 1 above. The Violations described in paragraphs 5, 6 and 7 were discussed and acknowledged by licensee management. Other items addressed during the summary meeting were also acknowledged by licensee management. Actions to resolve the inspection findings were discussed and assigned for followup by licensee personnel.

3. Licensee Action on Previous Inspection Findings

a. (Closed) Violation (269/80-38-01), Failure to Follow Radwaste Procedure.
The licensee had initiated changes to procedure OP/O/B/1104/43 as stated in DPC's response letter, dated March 6, 1981. However, the licensee decided to rewrite all radwaste procedures including OP/O/B/1104/43, en masse. This had delayed approval of the procedure in question. To resolve this matter, a change to OP/O/B/1104/43 was made and approved on March 7, 1981.

b. (Closed) Infraction (287/80-26-01), Failure to Comply with TS 3.14, Shock Suppressor. The inspector verified corrective actions, as described in DPC's response dated December 23, 1980, have been implemented.

c. (Closed) Infraction (270/80-29-01), Failure to Follow Procedure Surveillance Procedure. Licensee's corrective actions, delineated in DPC's letter to NRC dated December 23, 1980, were verified as complete.

d. (Open) Infraction (287/80-25-01), Failure to Comply with TS 3.7. Corrective actions described in a letter to NRC from DPC, dated November 26, 1980, were reviewed. Five items were indicated, four of these have been completed and the fifth is under review. The incomplete item involves a change to the pre-heatup checklist procedure, following discussion of this matter, the licensee indicated a letter of explanation will be submitted to the NRC.

e. (Closed) Infraction (287/80-25-02), Failure to Properly Administrate a Procedure Change. Licensees corrective actions described in DPC's letter to NRC, dated November 26, 1981 have been verified.

f. (Closed) Infraction (269/80-28-01), Failure to Maintain Material Accountability and Traceability. Administative changes and other corrective actions described in DPC's response to NRC, dated October 3, 1980 have been verified as complete.

g. (Closed) Infraction (296/80-28-02), Failure to Use Proper Procedure for Letdown Filter Cask Unloading. Plant modifications and administrative changes, as described in DPC's response to NRC, dated October 3, 1980 have been verified as complete.

h. (Closed) Violation (287/81-02-03), Failure to Comply with TS 3.12.3. Corrective actions described in DPC's letter to NRC, dated March 20, 1981 have been verified.

i. (Closed) Infraction (270/80-29-01), Failure to Follow Periodic Test Procedure. Corrective actions described in DPC's letter to NRC, dated December 23, 1980, were verified.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or deviations. New unresolved items identified during this inspection are discussed in paragraphs 7, 13, 14, 15, and 16.

5. Damaged Unit-3 Emergency Power Switching Logic Cables

Six Unit 3 emergency power switching logic cables were discovered to be damaged due to heat and moisture on March 2, 1981. The Unit was at cold shutdown, preparing to restart following a refueling - maintenance outage, at the time of discovery. Cognizant personnel were assembled to formulate a repair plan prior to reactor startup.

Representatives from operations, performance, licensing and I&E agreed on the following repair plan and sequence:

a. Pull six new cables, but do not remove old cables from the tray. The six new cables would be draped beside the cable trays.

b. Prepare new cables for terminations.

c. Declare Standby Bus 1, phase C and Standby Bus 2, phase B voltage signals to Units 2 and 3 emergency power switching logic inoperable. Perform appropriate surveillance per technical specifications.

d. Terminate new cables, remove old cables from trays and secure new cables in the trays.

e. Restore power to the circuits and test for operability.

Work progressed as outlined, but portions of the existing cables were removed from the cable tray by the workmen, on March 3-4, 1981, contrary to instructions. Failure to follow instructions is considered to be a violation of TS 6.4.1.e.

The damaged portions of cables were not removed from their cable tray or otherwise disturbed.

Deviation from the planned work sequence was revealed at a meeting on 3/4/81. The cognizant engineers reported that the affected circuits were technically inoperable. A test of the affected circuits was conducted to verify operability.

The affected circuits were then properly removed from service to complete repairs and restore the system to normal. Terminations were completed and restoration testing completed at 1404 hours on March 5, 1981.

Failure to follow instructions is a violation of TS 6.4.1.e. and applies to Unit 3 (287/81-07-07).

6. Operational Safety Surveillance

The frequency and type of surveillance to be applied to unit equipment and conditions are specified in Technical Specification (TS) 4.1. Several new items were added by Amendments 92/92/89, issued on January 28, 1981. The inspector reviewed plant records and interviewed plant supervision and operators to determine compliance with these new requirements. The findings are summarized below:

a. Emergency Feedwater Flow Indicators

A check is required monthly and a calibration on a refueling (RF) frequency.

Records reviewed and interviews revealed the monthly check was not completed in February for all three Units as required. The calibration, due on Unit 3 only, was completed prior to restart from the RF outage.

b. PORV and Safety Valve Position Indicator

A check is required monthly and a calibration on a RF frequency. Records reviewed and interviews revealed that the monthly check was not performed in February for all three Units. Also, the calibration,due on Unit 3 only, was not performed.

Unit 3 was returned to service on March 13, 1981. Following discussion of this new TS surveillance the licensee prepared and issued IP/O/A/200/31A, Pressurizer Valve Monitor Calibration on March 26, 1981.

c. Emergency Feedwater Pump Automatic Start and Automatic Valve Actuation Feature.

A functional test is required on a RF frequency. An instrument string functional test was performed on Unit 3 prior to restart from the RF outage. This test is not due on Unit 1 and 2. The TS requirement was satisfied.

d. RCS Subcooling Monitor

A functional test is required on a RF frequency. The test was due on Unit 3 only and was computed on schedule. The test was incorporated into the Zero Power Physic Test Program. This TS requirement was satisified.

In summary, part of item a and all of item b. were not met. Failure to perform surveillance is a violation of TS 4.1, Table 4.1-1 Items 49 and 50 and applies to Units 1, 2, and 3. (269, 270, 287/81-07-01)

7. On-site Power Supply Operability

Technical Specification (TS) 3.7.1 requires two sources of on-site power be operable during power operation to provide for continuing availability of Engineered Safety Feature (ESF) Systems. Inherent in the definition of operability of this system is the ability to transfer between either source automatically should the selected source become degraded. This emergency power switching is explained in FSAR section 8.2.3.3.5.d.c. The ESF systems are powered through the main feeder buses (MFB) from either the unit startup transformer (preferred source) or from the standby buses (back up supply).

On 3/27/81 the Resident Inspector determined that the automatic transfer of the main feeder buses to the standby buses of Unit 2 was unavailable. The MFB to SB Bus breaker controllers in the control room were in the manual rather than the automatic position as specified in OP/2/A/1107/02 Normal Power Lineup. The reactor operator was notified immediately and the power system was promptly returned to normal. The licensee determined that the condition developed during breaker alignments for PT/2/A/251/10 Auxiliary Service Water Pump Performance Test, performed on March 26, 1981. An

operator mistakenly positioned the MFB to SB Bus breakers in manual instead of the auto position.

T.S. 3.7.2(a) allows one of the two onsite power supples to be inoperable for 72 hours provided the alternate source is verified operable within one hour and every eight hours thereafter. By not realizing that one of the onsite supplies was inoperable the licensee failed also to meet the action statement of the Limiting Condition for Operation.

This failure to meet a T.S. Limiting Condition for Operation (3.7.1(b)) where the appropriate Action Statement (3.7.2.(a)) was not satisfied is a violation and applies to Unit 2 (270/81-07-02).

In addition to the inoperability of the onsite power system the failure of shift personnel to realize the potentially serious degraded mode is another issue of concern. The degraded mode existed for more than 20 hours and was clearly indicated in the control room by two Statalarms labeled "MFB to SB Bus Auto Transfer Blocked". Control room operators should have interpreted these alarms during one of the three shift turnovers which transpired as a routine part of the duties of the operator at the control board as described in Station Directive (S.D) 3.1.3. The shift turnovers as described in S.D.3.1.8 require the on-coming reactor operator to tour the control room so an evaluation of the plant status can be made at the beginning of each shift. The technique of these turnovers is considered ineffective as evidenced by the above stated oversite. The licensee has committed to evaluating shift turnover practices. The resident inspectors will consider the issue of ineffective turnover practices an Unresolved Item (269, 270, 287/81-07-06) until the results of the licensee evaluation are considered.

8. Pressurizer Safety Valve Test Program

Technical Specification 4.1.2 requires pressurizer safety valves to be tested at a specified frequency. The program established by DPC at Oconee to fulfill this requirement was examined and found to be in compliance.

The safety valves are removed at the specified frequency and replaced with another valve that has been tested. Testing and setpoint adjustments are performed at the Wyle Laboratories in Huntsville, Alabama. The responsible engineer issues the Work Request for valve removal and replacement. Work at the station is done using MPO/A/1200/7, Pressurizer Relief Valve Removal and Replacement. Testing at Wyle Laboratories is done using TP 1009, Steam Set Pressure and Leakage Testing of Spring-Operated Safety Valves.

Test results from 1974 to present were examined for all three units. The inspector had no questions with the test program or implementation of the program.

Within the areas examined, no violations or deviations were identified.

9. Non-Licensed Training

A review of the training program, established for non-licensed technical personnel at Oconee, was performed to assess the adequacy of the program and the documentation. The program provides general station training, occupational training (formal and on-the-job training) and periodic retraining.

General station training includes station administrative controls, quality assurance policies and procedures, radiological health and safety, industrial safety and first aid, housekeeping and fire prevention, emergency plan and procedures, station security plan and procedures, and use of protective clothing.

Occupational training consists of three interrelated segments; formal job training, on-the-job training and special training. Formal job training consists of instruction in the basic principles and practices related to the assigned position and consistent with existing knowledge level. On-the-job training consists of demonstrations, instruction and supervised practice of job related activities. Special training is afforded in those areas not normally entailed in formal job training, such as on-site vendor instruction.

A summary of technical training rendered to licensee personnel during 1980 is detailed below by discipline:

MECHANICAL MAINTENANCE

952.0	Manhours Conducted By Station
5040.0	Manhours - Basic - Training Center
2542.0	Manhours COnducted By Vendors
8534.0	Total Manhours

INSTRUMENT AND ELECTRICAL

5399.0	Manhours Conducted By Station
7680.0	Manhours - Basic - Training Center
508.0	Manhours Conducted By Vendor
13587.0	Total Manhours

HEALTH PHYSICS

693.0	Manhours Conducted By Station
13480.0	Manhours - Basic - Training Center
966.0	Manhours Conducted By Vendor
15139.0	Total Manhours

CHEMISTRY

30.0	Manhours Conducted By Station
2920.0	Manhours - Basic - Training Center
2662.0	Manhours Conducted By Vendors
5612.0	Total Manhours

A review of the periodic retraining required by the established programs and a cursory inspection of applicable training files reveals apparent adequacy of both retraining and training documentation. Discussions with Oconee training personnel revealed that the Oconee Nuclear Station Training Plan is currently being revised to entail greater detail of program specifies.

The inspector will review the new plan when issued to assess compliance with current requirements.

Within the areas inspected, no violations or deviations were identified.

10. Operational Safety Verification

The inspector reviewed plant operations throughout the report period, March 10 thru April 10, 1981 to verify conformance with regulatory requirements, technical specifications and administrative contorls. Control room logs, shift supervisors logs, shift turnover records and equipment removal and restoration records for the three units were continually perused. Interviews were conducted with plant operations, maintenance, chemistry, health physics, and performance personnel on day and night shifts.

Activities within the control rooms were monitored during all shifts and at shift changes. Actions and activities observed were conducted as prescribed in Section 3.08 of the Station Directives. The complement of licensed personnel on each shift met or exceeded the minimum required by Technical Specification 6.1.1.3.

Plant tours were taken throughout the reporting period on a continual basis. The areas toured include but are not limited to 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

Keowee Hydro Station

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

Oconee Unit 1 operated at virtually 100% full power for this reporting period with no major problems.

Oconee Unit 2 remained limited to 74% power due to an inoperable reactor coolant pump until a forced shutdown on March 14. The ensuing forced outage was twelve days in duration, involved repair of the crippled reactor coolant pump and repair of a partially breeched reactor coolant pump electrical penetration. The unit started up on March 26 and operated at virtually full power with no major problems until a reactor trip at 0109 hours on April 1. The cause of the trip was determined to be a high moisture separator drain tank level due to a tank dump valve failure. No major problems were encountered during or subsequent to the event thus the unit was restarted and operated at virtually full power the remainder of the reporting period.

Oconee Unit 3 completed a prolonged refueling outage on March 12. Zero power physics testing and power escalation testing were successfully completed with little operational difficulty aside from a reactor trip from 40% power at 1040 hours on March 16 due to loss of EHC control power. The unit was subsequently restarted, power escalation testing was completed and the unit has operated at virtually full power throughout the remainder of the reporting period.

11. Monthly Maintenance Observation

Maintenance activities were observed and reviewed throughout the inspection period to verify that activities were accomplished using approved procedures, or the activity was within the skill of the trade, and the work was done by qualified personnel. Where appropriate, limiting conditions for operation were examined to ensure that while the equipment was removed from service the TS requirements were satisfied. Acceptance criteria used for this review were as follows:

- Station Directives 3.3.1, 3.3.2, 3.3.5, 3.3.11, and 3.3.15.
- Administrative Policy Manual, Sections 3.3 and 4.7.
- Technical Specifications

Maintenance activities observed were as follows:

a. RCP electrical penetration testing, repairing and restoring to service - Unit 2.

b. Damaged emergency power switching logic cables repairs and restoration - Unit 3.

c. CBAST pump repair and post maintenance testing - Unit 3.

d. Vital bus inverter blue ribbon connector checkout - Unit 1.

e. Keowee Hydro Station inspection and maintenance of ACB's, time delay relays and overcurrent relays.

f. RCP visual examination for evidence of lighter than normal vibrations - Unit 3.

Within the areas inspected, no violations or deviations were identified except for Item B above. This item is discussed in paragraph 5 of this report.

12. Surveillance Observation

The surveillance tests detailed below were analyzed and/or witnessed by the inspector to ascertain procedural and performance adequacy.

The completed test procedures examined were analyzed for embodiment of the necessary test prerequisities, preparations, instructions, acceptance criteria and sufficiency of technical content.

The selected tests witnessed were examined to ascertain that current written approved procedures were available and in use, that test equipment in use was calibrated, that test prerequisities were met, system restoration completed and test results were adequate.

The selected procedures perused attested conformance with applicable Technical Specifications, they appeared to have received the required administrative review and they apparently were performed within the surveillance frequency prescribed.

Procedure	Title
IP/O/A/301/35	Source Range & Intermediate Channel Test
IP/3/A/305/3A	RPS Channel Channel A Out-live Test
PT/O/A/150/08C	Personnel Hatch O Ring Test
PT/O/A/600/15	Control Rod Movement Test
PT/O/A/600/10	RCS Leak Test
PT/O/A/230/01	RM Check
PT/O/A/610/17	Operability Test of 4160 Breakers
IP/O/B/340/2	Control Rod Power Supply
PT/O/A/170/5	Penetration Room Ventilation Test

The inspector employed one or more of the following acceptance criteria for evaluating the above items:

10 CFR
ANSI N18.7
Oconee Technical Specifications
Oconee Station Directive
Duke Administrative Policy Manual

Within the areas inspected no items of noncompliance or deviations were identified.

13. Heat Tracing Circuit Failure

During a routine station tour the inspector discovered that heat tracing circuits 51-4 and E51-4 were both out of service. Local alarms in the

Auxiliary Building were activated. These heat tracing circuits service piping on HP-15 (non-safety related piping), but based on control room drawings, the circuits appeared to service piping in the discharge flowpath of the Concentrated Boric Acid Storage Tank (CBAST) pumps. The CBAST flowpath heat tracing was required to be operable per Technical Specification (TS) 3.2.1. The inspector notified the shift supervisor at 1540 hours on March 16, 1981 of the apparent TS violation. The CBAST flowpath was determined to be open by pumping water from the CBAST pumps through the suspect piping.

Licensee I&E personnel and resident inspectors reviewed system piping diagram OM 2339-10 that showed a detailed view of the area covered by each heat tracing circuit in question. Based on the review it was determined after several hours an operable heat tracing circuit did cover the TS required piping. The review also revealed a conflict between control room drawings and I&E "as-built' drawings. The licensee committed to correct this conflict by using the detailed piping drawings in the control room.

The licensee will repair the two defective circuits and verify that heat tracing does exist per the "as-built" drawings on the CBAST flowpath during the next outage that provides access to the piping.

A forced shutdown for repair of the circuits was not required because no T.S. violation existed. It was apparent to inspectors that the licensee had not evaluated the loss of the two heat tracing circuits relative to TS requirements. Several means were available to alert the licensee to the nature of the condition:

- The controlling procedures for unit startup OP/3/A/1102/01 ENCL 4.2 requires that heat tracing on the CBAST system be operable prior to criticality.

- Primary auxiliary operator turnover sheets require heat tracing alarm panel review and logging of local alarms. Unit supervisors review these logs each shift.

- A heat tracing trouble alarm (Statalarm #1704/28) alerts operators of circuit failures and reflashes for each additional failure. The control room alarm response manual requires the operator to verify that a backup circuit exists when he is notified that a safety-related circuit has failed.

- The shift supervsors office maintains copies of outstanding work requests (WR). A review of the WR revealed that two priorty 3 WR #00846 dated 9-29-80 and #00849 dated 9-30-80 had been issued on the subject circuits.

It is of concern to the resident inspectors that this potentially serious condition could exist for approximately five months. A factor that contributes to this problem is the implementation of the precritical checklist of OP/3/A/1102/01 which appears inadequate in assuring that all safety-related

systems are operable prior to criticality because no system exists for the periodic review of outstanding work requests.

Though there appears to be no violation at this time previous indication that the unit was in potential violation of a TS was not realized by the licensee. The administrative handling of this issue was inadequate, therefore, resident inspectors will carry the issue of not reviewing of outstanding work requests as an Unresolved Item (269, 270, 287/81-07-05), until a review of the licensees ongoing program to improve this area can be made.

14. RPS Instrument Accuracies

Babcock and Wilcox letter to Duke Power Company dated February 6, 1981 advised the licensee of a matter which involved certain safety-related instrument errors which were found larger than previously assumed in FSAR analyses. A study performed by B&W concluded that the power-imbalance safety limits for Technical Specifications may be exceeded by about 2-3% imbalance and 0.6% FP for all plants due to increased instrument string errors. A preliminary study by B&W revealed that concerns identified in the safety assessment are not felt to require immediate remedies because adequate string error margins exist to permit safe plant operation for current fuel cycles.

The licensee is currently awaiting the results of plant specific evaluations being performed by B&W for the Oconee units. The corrective actions, if required, would be a minor reduction in trip setpoints. The resident inspectors will consider the issue of RPS setpoint reduction an Unresolved Item (269, 270, 287/81-07-03) pending the outcome of the ongoing B&W evaluation.

15. Licensed Personnel Familiarization with Modifications, TS Amendments and Selected Procedure Changes

Discussions and interviews with RO's and SRO's were conducted by the inspector to determine their knowledge of recently installed modifications, TS amendments and selected procedure changes. It appears that their knowledge of procedure changes is adequate, but knowledge of modifications is not as comprehensive as expected. In some instances when a modification had been installed on one unit, but not the others, personnel assigned to that unit have an understanding, but the personnel assigned to the other units do not.

Generally a brief concise description of a modification is prepared and routed through a reading file for all operating personnel to review. At times, due to leave or other absenses, the operators and supervisors do not complete their review of the reading file in a timely manner.

The purpose of Station Directive 2.5.1, Training, is to maintain employees qualified and responsive to all functions of the station. This directive establishes a program to keep personnel familiar with plant systems and

changes thereof. However, full and adequate implementation appears to be lacking. Station Directive 4.4.1. "Station Modification Familiarization" requires maintenance personnel to be aware of modifications in order for them to perform their job functions properly. This directive does not refer to licensed personnel. The requalification program incorporates TS amendments, modifications, and procedure changes into the training program, but this is often not timely.

This area of concern was discussed with licensee management who indicated a program would be developed to properly keep licensed personnel up to date. This item has been designed as an Unresolved Item (269, 270, 287/81-07-04) until the newly developed program can be reviewed.

16. Followup on LER's and Inspector Findings

When attempting to followup on corrective actions described in LER's and previous inspection findings, the inspector often finds that licensee personnel responsible for carrying out the actions do not have the LER's or licensee reponse letters available to them. Hence, the inspector must review and describe the actions to the licensee in order to determine if the actions have been implemented. Often the actions taken are different than presented in the LER or inspection finding response letter and at times these actions may be only partically completed.

This issue was discussed with licensee management who indicated that a review could be conducted to correct the finding. Until a programatic change is available for inspector review, this item is designated an Unresolved Item (269, 270, 287/81-07-06).

17. 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 incidents 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-269/80-31	RPS Flux/Flow Trip Setpoint Incorrectly Reset
RO-269/80-34	EWST Level Indicator Failure
RO-269/80-36	EWST and Part of HPSW Removed from Service
RO-269/80-37	CBAST Pump Declared Inoperable
RO-269/80-38	Loss of Keowee Overhaul Power Path

RO-269/80-39	Fire Detector String Removed from Service OTSG Leak
RO-269/80-40	OTSG Leak
RO-269/81-01	Steady State Tilt Limit Exceeded
RO-269/81-02	DID Inverter Input Fuse Blown
RO-269/81-03	DID Inverter DC Input Fuse Blown
RO-269/81-04	Loss of EWST Level Indication
RO-269/81-05	Leaking LPI Check Valve
RO-270/80-21	TDEFW Auto Start Circuit
RO-270/80-25	HPI Pump Inoperable
RO-270/80-26	CBAST Pump Failure
RO-270/81-02	Penetration EMV-2 Failed to Hold SF6.
RO-287/80-11	SG Cracked Studs on Manway Cover
RO-287/80-12	CBAST Sampling Frequency Exceeded
RO-287/80-14	Deficiencies in Monthly Fire Fuse Inspection
RO-287/80-15	BWST Level Instrument Inoperable
RO-287/80-16	Fire Detector String B-2 Inoperable
RO-287/80-17	Fire Detector String 8 Inoperable
RO-287/80-18	TDEFW Pump Oil Sump Empty
RO-287/80-19	CRD Breaker Delay in Tripping
RO-287/80-20	Fire Barrier Break - Unit 3 Cable Room
RO-287/81-01	Polar Crane Moved Over Fuel Transfer Canal with RV Head Removed
RO-287/81-02	Apparent Corrosion Wastage of RCP Closure Studs
RO-287/81-03	Over-Pressurization of BSG Secondary Side

18. Reactor Building Electrical Penetration Repair

The degraded electrical penetration on the Unit 2 reactor building previously addressed in I&E inspection report 50-287/81-04 has been repaired. Unit 2 was shutdown on March 14, 1981 for the repair of a reactor coolant pump and the EMV-2 penetration. A cracked insulator on the reactor building side of the dual boundary penetration was discovered to have been the source of SF6 gas leakage. The defective insulator was replaced and tested. The integrity of the penetration boundaries was verified by the inspectors through the review of acceptance criteria for the completed test procedure PT/O/A/0150/20. The cracked insulator was the failure mode suspected by the licensee when the depressurized penetration was first discovered.

The subject penetration has temporarily been placed on an increased surveillance test program before being returned to the routine quarterly schedule.

19. Unit 3 Post-Refueling Testing

The inspector witnessed the control rod drop time tests under hot conditions and confirmed the computer recorded times were acceptable and met Technical Specification (TS) 4.7.1. The inspector ensured that all test prerequisites were signed-off and reviewed operator logs to confirm prerequisite testing

was completed. Instrumentation calibration dates were verified acceptable and instrumentation check-outs of records and scaler-timers were witnessed.

The inspector observed initial criticality for Unit 3 cycle 6. Starting from an initial configuration of control rod groups 1 through 6 withdrawn to their upper limits, group 7 withdrawn to 85% and the part length rods withdrawn to 37.5%, a feed and bleed mode of operation of the primary coolant was initiated to deborate to criticality. Before reaching criticality the feed and bledd operation was halted and normal make-up and letdown with full pressurizer spray flow was continued to assure uniform mixing of the boron in the reactor coolant system.

Ultimately, additional withdrawnal of group 7 rods was initiated to obtain criticality. The measured all-rods-out-critical-boron concentration was 1463 ppm. This was within the acceptance band for the predicted valve of 1422 ppm.

Immediately after obtaining criticality the licensee confirmed adequate overlap of source-range and intermediate-range nuclear instruments. This test and part of the test to determine sensible heat, the upper limit for zero-power physics test, were observed on March 12, 1981 by the inspector. Portions of following phases of physics testing (TT/3/A/711/06) were witnessed or reviewed by the inspector during the day and evening shifts:

1. Differential Boron Worth Measurements
2. Inverse Multiplication Plots to Criticality
3. Confirmation of Core Symentry by Rod Swap
4. Group Rod Worths
5. Negative Temperature Coefficient Measurements
6. Ejected Rod Worth Measurements
7. Verification of RCS Subcooling Monitor

The inspected observed portions of the power escalation testing TT/3/A/811/06 that followed the Zero Power Physics Testing and had no questions.

Throughout the testing program the inspector observed adequate coordination between the test director and operations personnel, technical staffing was sufficient during the off-normal shifts and the test log was maintained and accurately reflected testing activities. Of the areas inspected no violations were identified.

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

MAY 0 7 1981

Duke Power Company
ATTN: W. O. Parker, Jr.
Vice President, Steam Production
P. O. Box 2178
Charlotte, NC 28242

Gentlemen:

Subject: Report Nos. 50-269/81-07, 50-270/81-07 and 50-287/81-07

Reference is made to the subject inspection reports, covering an inspection on March 10 - April 10, 1981, which was transmitted to you by my letter of May 1, 1981.

Enclosed is a revised page of the Notice of Violation. Please replace the original with the corrected copy.

Sincerely,

R. C. Lewis

R. C. Lewis, Acting Director
Division of Resident and
Reactor Project Inspection

Enclosure:
Corrected Copy of Enclosure 1
(Notice of Violation)

cc: J. E. Smith, Station Manager

MAY 0 7 1981

APPENDIX A

NOTICE OF VIOLATION

Duke Power Company
Oconee Units 1, 2 and 3

Docket Nos. 50-269, 270, & 287
License Nos. DPR-38, 47, & 55

As a result of the inspection conducted on March 10, - April 10, 1981, and in accordance with the Interim Enforcement Policy, 45 FR 66754 (October 7, 1980), the following violations were identified.

A. Technical Specification 6.4.1.e requires the station to be operated and maintained in accordance with procedures.

Contrary to the above, on March 4, 1981, licensee maintenance personnel did not follow instructions for repair of emergency power switching logic cables in that the cables were removed from cable trays without proper authorization or notification. Removal of these cables from their cable trays caused them to be inoperable.

This is a Severity Level V Violation (Supplement I. E.) and applies to Oconee Unit 3.

B. Technical Specification 4.1 specifies the frequency and type of surveillance to be applied to equipment for plant operation.

Contrary to the above, two monthly surveillance checks and one refueling surveillance calibration added to the Technical Specification by amendment 92/92/89, effective January 28, 1981, were not performed on schedule.

This is a Severity Level V Violation (Supplement I. E.) and applies to Oconee Units 1, 2 and 3.

C. Technical Specification 3.7.1(b) requires two independent emergency power paths be operable whenever the reactor is heated above 200 F. Planned removal of one power path is permitted provided certain tests are performed as specified in Technical Specification 3.7.2.

Contrary to the above, the underground power path through transformer 2CT4 was removed from service through an error in breaker alignment, and remained misaligned for at least 20 hours. The required surveillance tests were not performed during this period as specified by Technical Specification 3.7.2.

This is a Severity Level IV Violation (Supplement I.C.) and applies to Oconee Unit 2.

Pursuant to the provisions of 10 CFR 2.201, you are hereby required to submit to this office within twenty-five days of the date of this Notice, a written statement or explanation in reply, including: (1) admission or denial of the alleged