



UNITED STATES  
ATOMIC ENERGY COMMISSION  
DIRECTORATE OF REGULATORY OPERATIONS  
REGION II - SUITE 818  
230 PEACHTREE STREET, NORTHWEST  
ATLANTA, GEORGIA 30303

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RO Inspection Report No. 50-269/73-7

Licensee: Duke Power Company  
Power Building  
422 South Church Street  
Charlotte, North Carolina 28201

Facility: Oconee Unit 1  
Docket No.: 50-269  
License No.: DPR-38  
Category: B2

Location: Seneca, South Carolina

Type of License: B&W, PWR, 2568 MW(t)

Type of Inspection: Routine, Unannounced

Dates of Inspection: June 20-21, 1973, July 19, 1973

Dates of Previous Inspection: June 10-17, 1973

Principal Inspector: F. Jape, Reactor Inspector  
Facilities Test and Startup Branch

Accompanying Inspectors: Robert F Warnick 7-16-73  
R. F. Warnick, Reactor Inspector Date  
Facilities Test and Startup Branch  
C. E. Murphy 7/17/73  
C. E. Murphy, Chief Date  
Facilities Test and Startup Branch

Other Accompanying Personnel: N. C. Moseley, Director

Principal Inspector: Frank Jape 7-16-73  
F. Jape, Reactor Inspector Date  
Facilities Test and Startup Branch

Reviewed By: C. E. Murphy 7/17/73  
C. E. Murphy, Chief Date  
Facilities Test and Startup Branch

7911270-688

## SUMMARY OF FINDINGS

I. Enforcement ActionA. Violations

Certain of your activities conducted under AEC Operating License No. DPR-38 appear to be in violation with license requirements as indicated below:

1. Violations considered to be of Category II severity are as follows:

- a. Paragraph 50.54(i) of 10 CFR 50 specifies that manipulation of the controls of a facility shall be under control of a licensed operator.

Contrary to the above, an unlicensed maintenance technician manipulated the control rods while performing miscellaneous test procedure "Check of Safety and Shim Control Rod Actuators for Frictional Binding." (Details, paragraph 5.b.(3))

- b. Paragraph 50.59(b) of 10 CFR 50 requires a documented safety evaluation of the basis for the determination that a change of the facility does not involve an unreviewed safety question.

Contrary to the above, written safety evaluations were not prepared for modifications of the following safety related equipment:

- (1) RCP Oil Drain System.
- (2) Turbine Bypass Control Modification.
- (3) Feedwater Flow-Turbine Trip.
- (4) Electrical Auxiliary Transfer.
- (5) CRD Motor Fault Time Delay.

(Details, paragraph 3)

- c. Criterion II of Appendix B to 10 CFR 50 requires the establishment of a QA program consistent with the work schedule.

Contrary to the above, the Nuclear Safety Review Committee (NSRC) agenda contained a list of eighteen items which dated from November 1971 to January 1973 which had not been acted upon. (Details, paragraph 6)

- d. Criterion V of Appendix B to 10 CFR 50 states, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

Contrary to the requirements of this criterion:

- (1) Implementation of the following safety related design changes were not as prescribed by applicable station instructions:

- (a) Control Rod Drive Gas Vent Piping.
- (b) RCP Oil Drain System.
- (c) Turbine Bypass Control Modification.
- (d) Feedwater Flow-Turbine Trip.
- (e) Electrical Auxiliary Transfer.
- (f) CRD Motor Fault Time Delay.

(Details, paragraph 3)

- (2) Implementation of safety related tests was not as prescribed by applicable station procedures and instructions. The following miscellaneous test procedures had not been properly classified as safety related and assigned an alpha-numeric designation as required by paragraph 4.4.4.2 of the Administrative Policy Manual for Operational Quality Assurance (APM/NS), to assure proper reviews and approvals:

- (a) 4160 v Bus Transfer Time Test.
- (b) Emergency Feedwater Pump Functional Test.
- (c) Check of Safety and Shim Control Rod Actuators for Frictional Binding.
- (d) Auto Transfer from 1T to CT1 Transformer Without Generator Lockout.
- (e) Inspection of Retainer Nuts on ES Valves.
- (f) Hydro of RC-48.
- (g) Shuffling Control Components in Spent Fuel Pool.

(Details, paragraph 5.b)

- (3) The following miscellaneous test procedure was revised and the revisions were not processed as

required by paragraph 4.4.6.1 of the APM/NS:

Emergency Feedwater Pump Functional Test.

(Details, paragraph 5.b.(2))

- (4) The following miscellaneous test procedure did not provide adequate instructions and limits for conduct of the test:

Check of Safety and Shim Control Rod Actuators for Frictional Binding.

(Details, paragraph 5.b.(3))

- (5) The following miscellaneous test procedure did not receive the proper approval or review as required by paragraph 4.3.2.2.8 of the APM/NS:

Inspection of Retainer Nuts on ES Valves.

(Details, paragraph 5.b.(5))

- e. Criterion VI of Appendix B to 10 CFR 50 requires documents and changes thereof that affect quality to be reviewed and approved.

Contrary to the above, revisions to miscellaneous test procedure "Emergency Feedwater Pump Functional Test" were made without approval and review as required by APM/NS, paragraphs 4.4.2.2.3 and 4.4.6.1(c) and (g). (Details, paragraph 5.b.(2))

- f. Criterion XI of Appendix B to 10 CFR 50 states, in part, that test procedures incorporate design requirements and acceptance limits.

Contrary to the above, miscellaneous test procedure "4160 v Bus Transfer Time Test" did not provide acceptance limits or applicable design documents such that the test coordinator could determine whether or not the test had been successful. (Details, paragraph 5.b.(1))

- g. Criterion XIV of Appendix B to 10 CFR 50 requires that the operating status of safety related components be identified.

Contrary to the above, following performance of miscellaneous test procedure "Auto Transfer from 1T to CT1 Transformer without Generator Lockout," the status of the emergency start relays was not verified. (Details, paragraph 5.b.(4))

- h. Criterion XVI of Appendix B to 10 CFR 50 requires that conditions adverse to quality be promptly identified and corrected.

Contrary to the above, there is apparently no formal method for assuring that the superintendent be made aware of unusual events and abnormal occurrences so that these may be assigned for prompt investigation and correction.

(Details, paragraph 9)

- i. Technical Specification 6.1.2.1, "Station Review Committee," specifies the functions and responsibilities of the Station Review Committee (SRC).

Contrary to the requirements of this technical specification:

- (1) The SRC failed to have a quorum in attendance at its meetings on June 7, 1973, and June 8, 1973. (Details, paragraphs 4.c and 5.b.(2))
- (2) The SRC failed to review new procedures and proposed revisions to safety related procedures. This is recorded in the SRC minutes of March 29, April 5, 10, 16, 19, 25, 27 and 30, May 8 and 22, and June 15, 1973. Miscellaneous test procedures "4160 v Bus Transfer Time Test" and "Shuffling Control Components in Spent Fuel Pool" were not reviewed by the SRC. (Details, paragraphs 4.e.(2), 5.b.(1), and 5.b.(7))
- (3) The SRC failed to review station operation and safety considerations. Specifically, the minutes of the SRC did not reflect that the SRC had reviewed:  
(a) the oil fire on RCP 1A1; and (b) the premature lifting of the main steam relief valves. (Details, paragraph 4.e.(2))

- j. Technical Specification 6.2.2 specifies that the superintendent shall cause the SRC to perform a review and prepare a written report for any abnormal occurrences and unusual events.

Contrary to the requirements of this technical specification, as determined from discussions with the staff and from available documentation, it was not evident that the superintendent caused the following incidents to be reviewed.

- (1) Abnormal Occurrence - Leak in Incore Instrumentation Line.
- (2) Unusual Event - Oil Fire at RCP-1A1
- (3) Engineered Safeguard Valve CF-1 not fully open.
- (4) Engineered Safeguard Valves BS-1 and -2 failed to open.

Failure to do so appears to be a violation of Technical Specification 6.2.2. (Details, paragraph 4.e.(3))

- k. Technical Specification 6.5, "Station Operating Records," specifies the required records to be retained at the station.

Contrary to the above, the minutes of the NSRC meetings held since January 30, 1973, were not available at the station. (Details, paragraph 6)

2. Violations considered to be of Category III severity are as follows:

Criterion XVII of Appendix B to 10 CFR 50 requires certain records to be maintained as evidence of activities affecting quality.

Contrary to the above, accurate records were not available regarding the performance of miscellaneous test procedures "Emergency Feedwater Pump Functional Test" and "Inspection of Retainer Nuts on ES Valves." (Details, paragraphs 5.b.(2) and 5.b.(5))

B. Safety Items

None

II. Licensee Actions on Previously Identified Enforcement Matters

These matters were not inspected.

III. New Unresolved Items

73-7/1 Main Steam Relief Valve Popping Upon Trip From 15%  
Reactor Power

(Details, paragraph 8)

IV. Status of Previously Reported Unresolved Items

These items were not inspected.

V. Design Changes

None

VI. Unusual Occurrences

None

VII. Other Significant Findings

None

VIII. Management Interview

At the conclusion of the inspection on June 21, 1973, a management interview was held to discuss the findings of the inspection. Those in attendance included:

Duke Power Company (DPC)

E. D. Powell - Assistant Vice President, Steam Production  
J. E. Smith - Plant Superintendent  
J. W. Hampton - Assistant Superintendent  
P. H. Barton - Manager, Technical and Nuclear Services  
S. E. Nabow - Oconee Project Engineer  
L. E. Summerlin - Staff Engineer  
D. C. Holt - Assistant Nuclear Test Engineer

The following was discussed:

Murphy opened the management interview by stating that this inspection had been brought about because of the assigned

inspectors' concern for the conduct of operations at Oconee. He reminded DPC management that these concerns had been expressed during previous management interviews and had been reflected in the enforcement correspondence. He stated that a few areas had been inspected during this inspection but that they had been selected to provide indicators of the functioning of the manager at control systems and quality assurance programs. He advised Powell and Smith that the results of the inspection had not been good. Numerous violations and deficiencies had been detected. The violations enumerated in Section I were then discussed in detail; then weaknesses and other observed discrepancies were also discussed.

At the conclusion of the discussion relating to the deficiencies that had been observed by the inspectors, Murphy advised Powell and Smith that the numerous apparent violations of the regulations indicated that the inspectors' concerns appeared to be well founded and that the management control systems and the quality assurance program did not appear to be functioning properly and that these areas needed strengthening. He also stated that because of the large number of deficiencies observed, another such inspection would be conducted in the near future and would include the areas just inspected as well as other areas.

Murphy then discussed the several levels of enforcement action available to Regulatory Operations. He stated that preferably the licensee would conduct his operations in a manner that would comply with the regulations and no enforcement action would be required. If, however, the inspections revealed the continuing violations of the AEC regulations, then the inspectors would have no choice but to recommend that the level of enforcement action be raised.

Regulatory Operations would expect during future inspections to see a real turnaround in the quality of operations. In order to achieve such a turnaround, DPC might want to consider such actions as follows:

- A. A renewed effort on the part of the station staff and particularly on the part of supervision and management to obtain improved compliance both with DPC requirements and with the AEC regulations.
- B. A more conservative attitude toward the accurate classification of occurrences and events by both the station staff and the corporate staff.



- C. More accurate reviews, evaluations, documentation and reporting of these items. To accomplish this will require that a method be developed to assure that reportable occurrences are detected and that management is advised of the occurrences.
- D. More frequent and effective audits.
- E. Better communication between the station staff and the corporate staff including more timely communication.
- F. Additional technical support of the station staff.
- G. More participation by the corporate management to assure that these steps are accomplished.

Murphy stated that these actions should not be construed as all that might be necessary to achieve an acceptable level of operation but were those areas that had been highlighted by the inspection as needing corrective action.

Smith and Powell agreed the inspections had indicated numerous apparent violations and stated that they were aware of the need for corrective actions in each of the areas inspected. They further advised the inspectors that they would implement such changes as were needed to prevent recurrence of violations of the types revealed by the inspection. Smith also specifically agreed to review the operation of the main steam relief valves to determine if their operation was as had been calculated.

The inspection findings were also discussed by Moseley, Murphy and Jape in a corporate management meeting held on July 19, 1973. Those in attendance were:

Duke Power Company (DPC)

Carl Horn, Jr. - President  
B. B. Larker - Executive Vice President  
W. S. Lee - Senior Vice President, Engineering and Construction  
A. C. Thies - Senior Vice President, Production and Transmission  
E. D. Powell - Assistant Vice President, Operations

Thies concurred that significant deficiencies had been identified during the inspection and both he and Horn stated that actions would be implemented to correct the observed deficiencies and their causes.