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

TELEPHONE (404) 526-4503

RO Inspection Report No. 50-270/72-9

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

Facility Name: Oconee Unit 2
Docket No.: 50-270
License No.: CPPR-34
Category: A3

Location: Oconee County, South Carolina

Type of License: B&W, PWR, 2452 Mw(t)

Type of Inspection: Routine, Unannounced

Dates of Inspection: November 14-17, 1972, and December 12-14, 1972

Dates of Previous Inspection: October 3-6, 1972

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

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

Other Accompanying Personnel: None

Principal Inspector: R F Warnick 11/5/73
R. F. Warnick, Reactor Inspector Date
Facilities Test and Startup Branch

Reviewed by: [signature] 1/3/73
C. E. Murphy, Acting Chief, Facilities Test and Startup Branch Date

SUMMARY OF FINDINGS

I. Enforcement Action

None

II. Licensee Action on Previously Identified Enforcement Matters

A. Violations

The following items are closed:

1. Criterion VI - Failure to Provide Approved Procedures for Electrical Quality Control (See Letter to DPC Dated October 26, 1972, Item 1.a.)

   All procedures for the Oconee Nuclear Station have now been approved by the Vice President, Construction. This has been verified by the inspector and the item is closed. (See Details I, paragraph 2.)

2. Criterion V - Failure to Implement Approved Procedures for Control of Nonconforming Items (See Letter to DPC Dated October 26, 1972, Item 1.b.)

   Procedure Q-1 is being revised to eliminate the conflict of instructions which previously existed between procedures Q-1 and R-2. The inspector reviewed the draft copy which was being circulated for approval. This item is closed. (See Details I, paragraph 3.)

3. Criterion VII - Installation of Cable Without Documentary Evidence That Cable Met Procurement Specification (See Letter to DPC Dated October 26, 1972, Item 2.)

   An electrical QC audit revealed that only one reel of cable out of 659 reels had not been properly released for installation and this one item has since been corrected. When QC documentation is not available at the site, it is obtained by telecopier prior to installation. This item is closed. (See Details I, paragraph 4.)

4. Criterion VI - Failure to Distribute Welding Procedures to Craft Personnel or QC Field Engineers (See Letter to DPC Dated October 26, 1972, Item 3.a.)

   The procedures have been distributed and site personnel instructed relative to timely distribution. This is closed. (See Details I, paragraph 5.)

5. Criterion XIV - Failure to Establish Measures to Indicate the Status of Cable (See Letter to DPC Dated October 26, 1972, Item 4.)

   Procedure S-2 was revised to specify the documentation to be turned over to operations at the time systems and QA documentation are transferred from construction to operations. All Unit 1 cable has been identified and all cable for Units 2 and 3 is identified and appropriately documented by the time of the transfer. This item is closed. (See Details I, paragraph 6.)

6. Criterion VIII - Failure to Follow Procedures Which Resulted in Use of Incorrect Material in Class I Systems (See Letter to DPC Dated October 26, 1972, Item 6.)

   Because the mechanical properties at the design temperature are greater, DPC justified using Grade 316H stainless steel piping components in lieu of Grade 304H stainless steel. This item is closed. (See Details I, paragraph 7.)

7. Criterion XVI - Failure to Identify and Report the Cause of Weld Defects (See Letter to DPC Dated October 26, 1972, Item 7.)

   Specific reporting instructions have been given and the defects have been corrected. This item is closed. (See Details I, paragraph 8.)

8. Criterion XVIII - Failure to Conduct Effective Audits of Electrical QC Activities (See Letter to DPC Dated October 26, 1972, Item 8.)

   Additional audit has been performed and the results reviewed by RO. This item is closed. (See Details I, paragraph 5.)

The following items remain open:

9. Welding Program Deficiencies (See Letter to DPC Dated March 8, 1972, Item 5.)

   DPC stated that their final report on welding deficiencies and improvements in their welding program should be available after December 25 for AEC inspection.

10. Criterion V - Failure to Document Final Inspection of Mechanical Components on Form S-2A as Required by Procedure S-2 (See Letter to DPC Dated December 1, 1972, Item 1.)

    Awaiting response to RO letter.

11. Criterion XIII - Failure to Identify and Perform In-Storage Tests and Inspection (See Letter to DPC Dated December 1, 1972, Item 3.)

    Awaiting response to RO letter.

12. Criterion XV - Failure to Provide for Appropriate Segregation of Nonconforming Material (See Letter to DPC Dated December 1, 1972, Item 4.)

    Awaiting response to RO letter.

13. Failure to Return Unused Welding Rod to the Issuing Station When No Longer Required (See Letter to DPC Dated December 1, 1972, Item 5.)

    Awaiting response to RO letter.

III. New Unresolved Items

None

IV. Status of Previously Reported Unresolved Items

72-8/1 Items inspected during a receiving inspection are not completely documented on form QC-31 (RO Inspection Report No. 50-270/72-8).

This item will be reviewed during a subsequent inspection.

72-8/2 The quality control organization's system for filing quality assurance documentation may not provide adequate retrievability of records (RO Inspection Report No. 50-270/72-8).

This item will be reviewed during a subsequent inspection.

V. Design Changes

None

VI. Unusual Occurrences

None

VII. Other Significant Findings

None

VIII. Management Interview

A management interview was held on December 14, 1972, at the conclusion of the inspection. The following people were in attendance:

D. G. Beam - Project Manager, Construction
D. L. Freeze - Principal Field Engineer
C. B. Aycock - Senior Field Engineer

The status of all previously identified enforcement matters as described in the Summary of Findings was discussed.

During the inspection of November 14-17, the status of previously identified enforcement matters was discussed with Freeze; however, since no new construction items were inspected, no management interview (as such) was held.

Details I

Prepared by: R F Warnick 1-15-73
R. F. Warnick Date
Reactor Inspector
Facilities Test and
Startup Branch

Frank Jape 1-15-73
F. Jape Date
Reactor Inspector
Facilities Test and
Startup Branch

Dates of Inspection: Nov. 14-17 and
Dec. 12-14, 1972

Reviewed by: C E Murphy 1/16/73
C. E. Murphy Date
Acting Chief
Facilities Test and
Startup Branch

1. Individuals Contacted

R. L. Dick - Vice President, Construction
W. H. Owen - Vice President, Design Engineering
W. O. Parker - Assistant Manager, Steam Production Department
K. S. Canady - Nuclear Engineer
J. E. Smith - Plant Superintendent
J. W. Hampton - Assistant Plant Superintendent
O. S. Bradham - Instrument and Control Engineer
D. G. Beam - Project Manager, Construction
D. L. Freeze - Principal Field Engineer
C. B. Aycock - Senior Field Engineer
K. W. Schmidt - Associate Field Engineer, Electrical

2. Failure to Provide Approved Procedures for Electrical Quality Control 1/

The inspector reviewed all existing electrical quality control procedures and verified that all have been approved by the Vice President, Construction.

This previously identified item of noncompliance is closed.

1/ See RO Inspection Report No. 50-270/72-7, Section II, paragraph 9.

3. Failure to Implement Approved Procedures for Control of Nonconforming Electrical Items 1/

The inspector reviewed a draft copy of the recently revised procedure Q-1, "Control of Nonconforming Items." This procedure is now compatible with procedure R-2.

Procedure R-2 allows each inspection procedure to include methods of correcting and documenting nonconformities which are observed during inspections. When a method is not specified in an inspection procedure, procedure R-2 requires that form Q-1A be used to document the nonconformity.

A problem of conflicting instructions had existed because the old procedure, Q-1, required those items which did not conform with QA procedures, field installation procedures, specifications, codes, or design drawings to be documented and reported on the Q-1A form, "Nonconforming Item Report Sheet."

This previously identified item of noncompliance is now closed.

4. Installation of Cable Without Documentary Evidence That Cable Met Procurement Specification 2/

The inspector was informed that all QC field engineers were instructed during a regular staff meeting that whenever cable QC documentation is not available onsite, it is to be obtained by telecopier from DPC's Design Engineering office in Charlotte, North Carolina, prior to using the cable.

DPC's electrical QC conducted an audit on August 22, 1972, to determine the percent of reels of safeguards cables, with jackets other than black, that were available onsite for use without having written approval onsite by DPC's Engineering Department to use these reels. This audit revealed that only one reel out of 659 reels had not been properly released for installation and that one has since been corrected.

The inspector reviewed the audit and there are no further questions. This previously identified item of noncompliance is now closed.

5. Failure to Distribute Welding Procedures to Craft Personnel or QC Field Engineer 3/

All revised welding procedures were issued to the field forces on

1/ See RO Inspection Report No. 50-270/72-7, Section II, paragraph 10.
2/ See RO Inspection Report No. 50-270/72-7, Section II, paragraph 15.
3/ See RO Inspection Report No. 50-270/72-7, Section II, paragraph 2.

September 1, 1972, by the associate field engineer-welding in accordance with DPC's QA Procedure G-1, "Procedure for the Control of Documents."

DPC prepared, approved and issued on October 3, 1972, a QA procedure L-97, entitled "Welding Program, Oconee Nuclear Station." Section 5 of the procedure, entitled "Implementation," requires the welding inspectors and welding foreman to receive training on interpretation and understanding welding procedures.

The welding procedures are now under the control of the QA program and are issued in accordance with QA procedure G-1, "Procedure for the Control of Documents."

This previously identified item of noncompliance is now closed.

6. Failure to Establish Measures to Indicate the Status of Cable 1/

Procedure S-2 (not S-1 as indicated by a typographical error in RO Report Nos. 50-269/72-8, 50-270/72-7, and 50-287/72-5) was revised on November 6, 1972, to specify the documentation that is required to be turned over to Operations at the time systems and QA documentation are transferred from Construction to Operations.

As reported in the previous inspection,1/ the identification of cable at Unit 1 was not always known when systems and the QA documentation were transferred. The inspector was informed that all cable for Unit 1 has since been identified, and that all cable for Units 2 and 3 is identified and appropriately documented at the time of transfer.

This previously identified item of noncompliance is now closed.

7. Failure to Follow Procedures Which Resulted in Use of Incorrect Material in Class I Systems 2/

The inspector reviewed DPC's Mechanical Design Group's Justification Request 47 which justified using Grade 316H stainless steel piping components in lieu of Grade 304H because the mechanical properties at the contemplated design temperatures are greater. It also justifies and authorizies using Grade 308 or 308L welding electrodes for joining dissimilar metals, Grades 304H and 316H.

The inspector has no further questions. This previously identified item of noncompliance is now closed.

1/ See RO Inspection Report No. 50-270/72-7, Section II, paragraph 14.
2/ See RO Inspection Report No. 50-270/72-7, Section III, paragraph 5.

8. Failure to Identify and Report the Cause of Weld Defects 1/

DPC's QA procedure E-1, "The Identification and Control of Field Fabrication Pipe and Welds," requires the radiographic reviewers (Level II per SNT-TC-1A) to fill out the evaluation portion of form QC 30, "Radiographic Inspection Report," and at the end of the shift to summarize his findings on QC-61, "Radiographic Inspection Summary." The associate field engineer-welding and associate field engineer-NDT are now reviewing Form QC-61 for serious and repetitive defects and for repairs. In addition, the welding inspectors have been verbally instructed to discuss unusual or repetitive defects and repairs with the associate field engineer-welding. This verbal instruction will be included in DPC's formal training program.

This previously identified item of noncompliance is closed; however, DPC's entire welding and nondestructive testing program will be reinspected after their consultant completes his comprehensive review of the welding program and issues his final report. This is currently scheduled for January 1973.

9. Failure to Conduct Effective Audits of Electrical Quality Control 2/

On November 8, 9, and 10, 1972, nine design, construction, and staff engineers from offsite conducted an in-depth audit of the Oconee Nuclear Station construction quality control in the mechanical, civil, and electrical areas. The audit was conducted according to a written procedure which included checklists. It covered organization, procedures, documentation, and field verification.

The RO inspector listened to the conference phone call report of the audit findings to the site construction and QC management. The inspector noted the extent and the detail of the audit and observed that the audit findings were consistent with the findings of AEC audits.

On December 7, 1972, DPC confirmed by telephone that the audit results had been reported in writing and that corrective actions were being taken and would be documented.

This previously identified item of noncompliance is now closed.

10. Reactor Vessel Internals 3/

B&W reports the previously reported difficulty in obtaining proper fitup between the lower grid and the flow distributor in Unit 2 has been alleviated by machining both components to revised dimensions necessary for the desired fit.

1/ See RO Inspection Report No. 50-270/72-7, Section III, paragraph 7.
2/ See RO Inspection Report No. 50-270/72-7, Section II, paragraph 12.
3/ See RO Inspection Report No. 50-270/72-8, Details III, paragraph 2.

11. Copes-Vulcan Valves

The inspector was informed that there are no Copes-Vulcan valves used at Oconee. This information was requested by the inspector after reading of a possible generic problem at another reactor site.

12. Ventilation Ductwork Material of Construction

The inspector was informed that there is no Fiberglass Reinforced Polyester (FRP) ductwork at the Oconee reactors. This information was requested by the inspector after reading of a fire, in newly installed FRP ductwork, in the AEC's Special Nuclear Material Operating Experience Report (MOE:72-1).