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

AUG 14 1974

RO Inspection Report No. 50-269/74-5

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

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

Location: Seneca, South Carolina

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

Type of Inspection: Routine, Unannounced

Dates of Inspection: July 10-12, 16-18 and 24-26, 1974

Dates of Previous Inspection: April 18-19 and 23-26, 1974

Principal Inspector: T. N. Epps, Reactor Inspector (July 16-18 & 24-26, 1974)
Facilities Operations Branch

Accompanying Inspector: G. R. Jenkins, Radiation Specialist, Radiological and Environmental Protection Branch (July 10-12, 1974)

Principal Inspector: T. N. Epps 8/9/74
T. N. Epps, Reactor Inspector — Date
Facilities Operations Branch

Reviewed By: 8/9/74
F. J. Long, Chief — Date
Facilities Operations Branch

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SUMMARY OF FINDINGS

The purpose of this inspection was to follow up on unresolved items, abnormal occurrences, previous violations and to conduct a general operations inspection of Unit-1.

I. Enforcement Action

A. Violations

The following violations are considered to be category II, severity.

1. Condensate Test Tank Not Sampled Before Release

Oconee Technical Specification 3.9.8. requires liquid radioactive waste sampling and activity analysis of the condensate test tank contents prior to release.

Contrary to the above on April 24, 1974, a release was made from the B condensate test tank without prior sampling.

Corrective actions described in DPC's abnormal occurrence report dated May 6, 1974, were reviewed and the inspector had no further questions. (Details I, paragraph 8)

2. Reactor Coolant System Pressure Transmitters

Oconee Technical Specification 2.3 requires that the high reactor coolant system pressure setpoint be no greater than 2355 psig.

Contrary to the above surveillance tests conducted during May, 1974, showed pressure setpoints to be above 2355 psig. Corrective actions described in DPC's abnormal occurrence report dated May 17, 1974, were reviewed and the inspector had no further questions. (Details I, paragraph 10)

3. Main Steam Stop Valve Closing Time

Oconee Technical Specification 4.8.1. requires a closing time of 15 seconds or less for channel B when testing main steam stop valves.

Contrary to the above on May 10, 1974, a periodic test yielded closing times of 15.0, 23.0 and 22.5 seconds for three Unit 1 main steam stop valves. Corrective actions described in DPC's unusual event report dated June 7, 1974, were reviewed and the inspector had no further questions. (Details I, paragraph 11)

B. Safety Items

None

II. Licensee Action on Previously Identified Enforcement Matters

A. Violations

1. High Radiation Areas (RO Inspection Report Nos. 50-269/74-3 and 50-270/74-2, Item I.A.1.a.)

Duke Power Company's response, dated May 24, 1974, stated in part, that plans were being made to install doors capable of being locked in other rooms in the Auxiliary Building which could be high radiation areas, and that this would allow control to be established if control of these areas were required by 10 CFR 20.203. Contrary to this statement, and to 10 CFR 20.203, two rooms in the Auxiliary Building, which were posted as high radiation areas, had no doors nor other access control mechanism installed. Duke Power Company's response also stated, in part, that the General Office health physics staff would give increased direction and technical support to the activities of the Station health physics section, including direct participation in design improvements and station modifications. A Station Modification Report was submitted by the Station health physics section on April 11, 1974, to fabricate and install metal doors to control high radiation areas as they occur, yet no tangible action had resulted three months later. (Details II, paragraph 2)

2. Evaluating, Correcting and Reporting Radiological Problems (RO Inspection Report Nos. 50-269/74-3 and 50-270/74-2, Item I.A.1.b.)

Duke Power Company's response, dated May 24, 1974, was verified by the inspector. There are no further questions on this item. (Details II, paragraph 3)

3. Personnel Survey Instruments (RO Inspection Report Nos. 50-269/74-3 and 50-270/74-2, Item I.A.1.c.)

Duke Power Company's response, dated May 24, 1974, was verified by the inspector. There are no further questions on this item. (Details II, paragraph 4)

4. Health Physics Procedures (RO Inspection Report Nos. 50-269/74-3 and 50-270/74-2, Item I.A.1.d.)

Duke Power Company's response, dated May 24, 1974, was reviewed with licensee representatives. Review and revision of health physics procedures is in progress; a new completion date of September 1, 1974, was provided. (Details II, paragraph 5)

5. Unit Vent Particulate Air Monitoring (RO Inspection Report Nos. 50-269/74-3 and 50-270/74-2, Item I.A.1.e.)

Duke's reply dated May 24, 1974, was reviewed and additional information requested regarding actions taken to date or planned to correct these problems. (Details II, paragraph 6)

6. Process Radiation Monitor Setpoints (RO Inspection Report Nos. 5-269/74-3 and 50-270/74-2, Item I.A.1.f.)

Duke's reply dated May 24, 1974, was reviewed and additional information requested to include identification of specific setpoints for this equipment.

7. Radioactive Gas Releases (RO Inspection Report Nos. 50-269/74-3 and 50-270/74-2, Item I.A.1.g.)

Duke Power Company's response, dated May 24, 1974, was verified by the inspector. There are no further questions on this item. (Details II, paragraph 7)

8. Nuclear Safety Review Committee (RO Inspection Report Nos. 50-269/74-3 and 50-270/74-2, Item I.A.2.a.)

Duke Power Company's response, dated May 24, 1974, was reviewed by the inspector. There are no further comments on this item. (Details II, paragraph 8)

9. Posting Notice of Violations (RO Inspection Report Nos. 50-269/74-3 and 50-270/74-2, Item I.A.2.b.)

Duke Power Company's response, dated May 24, 1974, was verified by the inspector. There are no further questions on this item. (Details II, paragraph 9)

10. Violations previously identified in reports 50-269/74-1 and 50-269/74-2 are considered to be closed.

B. Safety Items

None

III. New Unresolved Items

74-5/1 The licensee's program for power escalation testing has not been completed for Unit 1. (Details I, paragraph 14)

IV. Status of Previously Reported Unresolved Items

71-7/1 Valve Wall Verification Program

This item is closed. (Details I, paragraph 2)

73-12/1 Calibration of Effluent Monitors

No change

73-13/1 Wastewater Collection Basin Modification

No change

73-13/2 Control Rod Failures

No change

74-2/1 Control of Materials, Parts and Components

It was verified that an approved procedure is in effect. This item is closed (Details I, paragraph 3)

74-2/2 EP/0/A/1800/16 "Loss of Power"

This procedure now covers degraded power sources. This item is closed. (Details I, paragraph 5)

74-2/3 High Activity in The RCS

This procedure has been written and approved. This item is closed. (Details I, paragraph 6)

74-2/4 Loss of Component Cooling Water System

This procedure has been approved. This item is closed. (Details I, paragraph 4)

74-3/1 Measuring and Reporting of Effluents

The licensee's program for measuring and reporting of effluents has been altered in the areas previously noted. This item is closed. (Details II, paragraph 10)

74-3/2 Solid Waste Shipping Containers

The licensee has implemented an inspection program for shipping containers. This item is closed. (Details II, paragraph 11)

74-3/3 Training of Unlicensed Utility Operators

Not inspected.

V. Unusual Occurrences

A. A.O.-269/74-2 Isolation of Keowee Underground Feeder

No further questions. (Details I, paragraph 7)

B. A.O.-269/74-7 Condensate Test Tank Not Sampled Before Release

No further questions. (Details I, paragraph 8) (Summary I.A.1.a.)

C. UE-269/74-1 Keowee Unit-2 Emergency Start Test

No further questions. (Details I, paragraph 9)

D. A.O.-269/74-8 Reactor Coolant System Pressure Transmitters

No further questions. (Details I, paragraph 10) (Summary I.A.1.b.)

E. U.E.-269/74-2 Main Steam Stop Valve Closing Time

No further questions. (Details I, paragraph 11) (Summary I.A.i.c.)

F. A.O.-269/74-10 Gaseous Release During LDST Sampling

Corrective action described in DPC's report, dated July 1, 1974, were discussed with licensee representatives. This item remains open. (Details II, paragraph 12)

VI. Other Significant Findings

Personnel and Organizational Changes

Mr. J. N. Pope is now the Assistant Operating Engineer on Unit 1, replacing Mr. T. L. McConnell, who transfered to another DPC facility.

VII. Management Interview

G. R. Jenkins' management interview was held on July 12, 1974, with the following DPC management representatives present with other DPC representatives:

J. E. Smith - Plant Superintendent
J. W. Hampton - Assistant Plant Superintendent
R. M. Koehler - Staff Engineer
O. S. Bradham - Technical Support Engineer
C. L. Thames - Health Physics Supervisor

Items discussed included items II.A.1. and II.A.4.

The management interview for the portions of the inspection conducted by T. N. Epps was held in two parts on July 18, 1974 and July 26, 1974. The following DPC personnel were present each time:

J. E. Smith - Plant Superintendent
J. W. Hampton - Assistant Plant Superintendent
R. M. Koehler - Staff Engineer
L. E. Schmid - Operating Engineer
O. S. Bradham - Technical Support Engineer

Among items discussed were the three violations in Section I of this summary and the new unresolved item in Section III.

DETAILS I

Prepared By: T. N. Epps 8/9/74
T. N. Epps, Reactor Inspector Date
Facilities Operations Branch

Dates of Inspection: July 10-12, 16-18, 24-26, 1974

Reviewed By: 8/8/74
F. J. Long, Chief Date
Facilities Operations Branch

1. Individuals Contacted

Duke Power Company (DPC)

J. E. Smith - Plant Superintendent
R. M. Koehler - Staff Engineer
L. E. Schmid - Operating Engineer
C. L. Thames - Health Physics Supervisor
J. N. Pope - Assistant Operating Engineer
J. T. Campbell - Shift Supervisor
J. Cox - Station Senior Quality Assurance Engineer

2. Thin Walled Valves

Revision 4 to the Duke Power Company, Oconee Valve Wall Thickness Verification Program has been reviewed by Region II Construction Branch personnel and there are no further comments at this time regarding Unit 1.

3. Control of Material, Parts and Components

The inspector verified that an approved procedure exists to control components to stock for reuse after repairs. The station senior quality assurance engineer indicated that this procedure covers control of CRD stators, RC pump seals, and reactor building spray pump parts.

4. Emergency Procedure for "Loss of Component Cooling Water"

This emergency procedure was approved on June 27, 1974, by the Plant Superintendent. The inspector reviewed this procedure and had no further questions.

5. Emergency Procedure for "Loss of Power"

The inspector reviewed this procedure and verified that it was revised to include degraded power sources. The procedure was approved by the Plant Superintendent on April 26, 1974.

6. Emergency Procedure for "High Activity in the RCS"

This procedure was approved on June 20, 1974. A licensee representative indicated that the intent of this procedure is to have reactor operations personnel notify site management if repetitive alarms are annunciated due to high activity in the reactor coolant system. It was also stated that the intent is to shut the reactor down before the technical specification limit on reactor coolant activity is exceeded.

7. Isolation of Keowee Underground Feeder (AO 50-269/74-2)

This item involved a lockout of the Keowee Unit 2 generator due to electrical grounding. This incident was reported by the licensee on February 22, 1974, in Abnormal Occurrence report No. 50-269/74-2. The licensee's corrective action was to review the grounding system to identify potential problems and to check the control room "Keowee Unit 2 Emergency Lockout" annunciator for operability. This problem has not recurred to date.

8. Condensate Test Tank Not Sampled Before Release

Oconee Technical Specification 3.9.8 requires liquid radioactive waste sampling and activity analysis of the condensate test tank contents prior to release. Contrary to the above on April 24, 1974, a release was made from the B condensate test tank without prior sampling.

This incident was reported by the licensee on May 6, 1974, in Abnormal Occurrence report No. 50-269/74-7.

The cause of this incident was operator error. Corrective action was to clearly identify the condensate test tank isolation valves and to modify the procedure for releasing liquid waste to require verification by the operator that all steps have been completed prior to release.

The inspector verified this corrective action. There are no further questions at this time.

9. Keowee Unit 2 Emergency Start Test

On April 23, 1974, during a Keowee Hydro Emergency Start Test, Keowee Unit 2 started as required but tripped after 15 seconds. This incident was reported by the licensee on May 6, 1974, in Unusual Event report No. 50-269/74-1.

It was determined that a temporar, low oil level indication due to the rapid start was the cause of ·· trip. The licensee's corrective action was to install a 40 secon(ime delay on the low oil level relay to avoid erroneous low oil level indications after rapid starts.

The inspector had no further questions on this item.

10. Reactor Coolant System Pressure Transmitters

Oconee Technical Specification 2.3 requires that the high reactor coolant system pressure trip setpoint be 2355 psig maximum.

Contrary to the above, on May 7, 1974, pressure transmitters RC3A-PT1, RC3A-PT2, RC3B-PT1 and RC3B-PT2 were found to be out of calibration during surveillance testing. These transmitters provide inputs to the reactor protection system.

This incident was reported by the licensee on May 17, 1974, in Abnormal Occurrence report No. 50-269/74-8.

The licensee's corrective action was to recalibrate the transmitters and to increase frequency of calibration to be performed on a quarterly basis until reliability is verified.

A licensee representative stated that the reactor coolant system pressure transmitters had been checked on Oconee Unit 2 and were within calibration limits.

There are no further questions at this time.

11. Main Steam Stop Valve Closing Time

Oconee Technical Specification 4.8.1 requires a closing time of 15 seconds or less for channel B when testing main steam stop valves.

Contrary to the above on May 10, 1974, a periodic test yielded closing times of 18.0, 23.0, and 22.5 seconds for three Unit 1 main steam stop valves.

This was reported by the licensee on June 7, 1974, in Unusual Event report No. 50-269/74-2.

The licensee's corrective action was to remove orifices from the valve actuator drain ports to allow faster closing times. The valves were retested yielding acceptable closing times.

12. Control Room Records

The inspector reviewed samples of the control room log sheets and log book and the shift supervisor's log book for the two week period ending July 24, 1974. The jumper log was also reviewed for the months of June and July 1974.

The inspector had no significant comments on this review.

13. Plant Tour

The inspector toured the facility including observations in the control room, portions of the auxiliary building, and portions of the turbine building including the high energy line installed during the last shutdown. Housekeeping in a portion of the turbine building appeared to be lacking and a high radiation area sign was observed in the turbine building where no high radiation area existed. These comments were given to site management. The high radiation area sign was removed before the inspector left the site and the licensee stated that work was planned to cleanup the portions of the turbine building in question.

14. Power Escalation Testing

Four power escalation tests have not been run on Unit 1. These are:

TP/1/B/800/8 - ICS Tuning at Power

TP/1/B/800/13 - Unit Loss of Electrical Load

TP/1/A/800/14 - Turbine Reactor Trip Test

TP/1/A/800/29 - Unit Load Transient Test

In addition to the above, TP/1/C/700/7, "Core Pressure Drop Test," has not been completed and finally approved and TP/1/A/800/27, "Incore Instrument Calibration" test results have not received final approval.

Licensee management agreed to establish a target date for completing the above tests by the end of August 1974. This will be carried as an unresolved item.

DETAILS II

Prepared by: G. R. Jenkins, Radiation Specialist — 8-1-74 Date
Radiological and Environmental Protection Branch

Dates of Inspection: July 10-12, 1974

Reviewed by: J. T. Sutherland, Chief — 8-1-74 Date
Radiological and Environmental Protection Branch

1. Individuals Contacted

J. E. Smith - Plant Superintendent
J. W. Hampton - Assistant Plant Superintendent
L. E. Schmid - Operating Engineer
R. M. Koehler - Staff Engineer
C. L. Thames - Health Physics Supervisor
C. T. Yongue - Assistant Health Physics Supervisor
M. C. Williams - Assistant Health Physics Supervisor
M. G. Kriss - Assistant Health Physics Supervisor
R. Reed - Assistant Shift Supervisor

2. High Radiation Areas

The licensee response to this violation was reviewed.

An inspector toured the second floor level of the Auxiliary Building to determine if Room 104 and other high radiation areas were properly posted and controlled. Room 104 was posted as a radiation area (maximum dose rate of 80 millirem/hour at contact with the Bleed Holdup Tank), and the inspector verified that a metal door with locking device had been installed. However, two rooms (Room 208 "Pipe Chase" and Room 214 "Demineralizer Hatch Area") which were posted as high radiation areas (maximum dose rates of 280 millirem/hour and 300 millirem/hour, respectively) had no positive personnel access control as required by 10CFR 20.203(c)(2). The Health Physics Supervisor stated that a Station Modification Report had been submitted to Charlotte on April 11, 1974 to fabricate and install metal doors to control high radiation areas as they occur. He further stated that a call to Charlotte during the inspection revealed that the modification was delayed in the General Office (Charlotte) administrative approval circuit. The Health Physics Supervisor initiated an on-site work request on July 12, 1974, to fabricate and install barricades at the high radiation area entrances.

3. Evaluating, Correcting and Reporting Radiological Problems

The licensee response to this violation was reviewed. An inspector verified that the licensee has initiated a program for evaluating, correcting and reporting radiological problems. Four Health Physics Problem Reports have been initiated since the inception of this program; these were reviewed by the inspector. The inspector had no further questions concerning this item.

4. Personnel Survey Instruments

The licensee response to this violation was reviewed. Records of the daily response check of personnel survey instruments (RM-14) were reviewed, and a spot check of operability of the instruments was made. The inspector had no further questions on this item.

5. Health Physics Procedures

The licensee response to this violation was reviewed. An inspector reviewed Administrative Procedure No. 17 for control of health physics procedures. The current status of the review and revision of health physics procedures was discussed. A licensee representative estimated that about 66% of the procedures have been revised and are in the approval process. The Health Physics Supervisor stated that all revised health physics procedures will be issued by September 1, 1974.

6. Unit Vent Particulate Air Monitoring

The licensee response to this violation was reviewed. An inspector reviewed records of the analyses of daily air samples from the Unit 1 and Unit 2 vents. A supplemental response to this item has been requested, to include an estimated date when the problems with the unit vent particulate monitors will be resolved.

7. Radioactive Gas Releases

The licensee response to this violation was reviewed. An inspector discussed waste gas releases with an assistant shift supervisor, who was knowledgeable of the requirement to coordinate releases with favorable meteorological conditions. The inspector observed the temperature recorder chart for the period of the two most recent waste gas releases; neither were made during an atmospheric inversion. A licensee representative stated that gaseous waste releases are now coordinated with favorable meteorological conditions. The inspector had no further questions on this item.

8. Nuclear Safety Review Committee

The licensee response to this violation was reviewed. An inspector reviewed the minutes of the NSRC meeting of June 4-5, 1974. Although the radioactive gas release incident of February 8, 1974 was not discussed, the minutes were generally more descriptive than those previously reviewed. The inspector had no further comment on this item.

9. Posting Notice of Violations

The licensee response to this violation was reviewed. An inspector verified that the licensee has established a mechanism for posting notices required by 10 CFR 19, and observed that a notice of violations was posted. The inspector had no further questions on this item.

10. Measuring and Reporting of Effluents (74-3/1)

A prior inspection had revealed that some aspects of the licensee's program for measuring and reporting of effluents were not in accordance with guidance provided by AEC Regulatory Guide 1.21. An inspector reviewed these items with a licensee representative, and was informed that:

a. The release rate of tritium from the plant vents is now determined by quarterly sampling;

b. The minimum detectable activity (MDA) for gamma analysis of each isotope in liquid radwaste is now 5×10^{-7} microcuries per milliliter;

c. Results of particulate activity released during the period July - December 1973 have been corrected and sent to Charlotte for review. The corrected released activity will be reported in the semi-annual report for January - June 1974;

d. The licensee has evaluated the methods used for accounting for gaseous activity released. In order to insure that any uncertainty is on the conservative side, the existing method will be continued until a planned improvement in data input to the computer is implemented.

The inspector had no further questions on this item.

11. Solid Waste Shipping Containers (74-3/2)

A prior inspection had noted that the licensee had no program for inspecting waste drums to assure compliance with applicable DOT regulations. A licensee representative stated that a drum inspection

program has been implemented, and that a procedure will be written covering the inspection program. The inspector had no further questions on this item.

12. Gaseous Release During LDST Sampling (AO-269/74-10)

An inspector discussed the licensee's report of this release with licensee representatives. A similar incident had occurred during the previous sampling of the letdown storage tank, as discussed in Duke's letter to Region II dated March 8, 1974 A licensee representative explained that both incidents apparently resulted from the LDST gas sample outlet line being improperly routed to the upstream side of the waste gas exhauster, which is normally isolated. A Station Modification Report has been submitted to relocate the sample line. In the interim, the LDST sampling valves have been "red-tagged" closed.