RO:I Form 12
(Jan 75) (Rev)

NOTICE
AS OF APR 7 1976
REGION I HAS NOT OBTAINED PROPRIETARY CLEARANCE IN ACCORDANCE WITH 10 CFR 2.790

U.S. NUCLEAR REGULATORY COMMISSION

OFFICE OF INSPECTION AND ENFORCEMENT

REGION I

IE Inspection Report No: 50-29/76-09 Docket No: 50-29

Licensee: Yankee Atomic Electric Company License No: DPR-3

20 Turnpike Road Priority:

Westborough, Massachusetts 01581 Category: C

Location: Rowe, Massachusetts 01367 Safeguards Group:

Type of Licensee: PWR, 600 MWt (W)

Type of Inspection: Routine, Unannounced

Dates of Inspection: March 23-26, 1976

Dates of Previous Inspection: February 25-27, 1976

Reporting Inspector: W. J. Lazatus, Reactor Inspector — Date: 4/6/76

Accompanying Inspectors: T. F. Stetka, Reactor Inspector — Date: 4/6/76

Date

Date

Date

Date

Other Accompanying Personnel: E. C. McCabe, Jr., Section Chief, Nuclear Support Section No. 2 (Acting) — Date: 4/7/76

Reviewed By: E. C. McCabe, Jr., Section Chief, Nuclear Support Section No. 2 (Acting) — Date: 4/7/76

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SUMMARY OF FINDINGS

Enforcement Action

None.

Licensee Action on Previously Identified Enforcement Items

Not inspected.

Design Changes

Not inspected.

Reportable Occurrences

None identified.

Other Significant Findings

A. Current Findings

1. Acceptable Areas

These are areas which were inspected on a sampling basis and findings did not include an Item of Noncompliance, Deviation, or an Unresolved Item:

a. Review and Approval of Facility Procedures and Procedure Changes. (Details 3)

b. Format and Content of Facility Procedures. (Details 4)

c. Temporary Procedures. (Details 5)

d. Operating Memos. (Details 6)

e. Technical Content of Facility Procedures. (Details 7)

f. Design Modifications Resulting in Procedure Changes. (Details 8)

g. Plant Tour. (Details 9)

h. Technical Specification Required Calibration Testing. (Details 10)

i. Qualification of Technicians. (Details 11)

j. Calibration of Test Equipment. (Details 12)

k. Calibration of Safety Related Components Not Addressed by Technical Specifications. (Details 13 with exceptions noted in Details 13c and d)

2. Unresolved Items

These are items for which additional information is required to determine if the item is Acceptable, a Deviation, or an Item of Noncompliance:

a. Dial Manometer Calibration Frequency. (Details 2c)

b. Specification of Calibration Intervals. (Details 2d)

3. Licensee Identified Items of Noncompliance

None.

B. Status of Previous Unresolved Items

Not inspected.

Management Interview

A. Entrance Interview

A pre-inspection interview was conducted on March 23, 1976 to discuss the scope and objectives of the inspection with the following licensee personnel in attendance:

Mr. R. L. Boutwell, Technical Assistant
Mr. N. N. St. Laurent, Assistant Plant Superintendent
Mr. J. L. Staub, Technical Assistant to the Plant Superintendent

B. Exit Interview

An exit interview was conducted onsite at the conclusion of the inspection on March 26, 1976 to discuss the findings of the inspection as detailed in this report. The following licensee personnel were in attendance:

Mr. H. Autio, Plant Superintendent
Mr. L. Bozek, Operational Q.C. and Audit Dept.
Mr. D. Kauppinen, Technical Assistant, Operations Dept.
Mr. R. Maceyak, Operational Q.C. and Audit Dept.
Mr. J. Shippee, I and C Supervisor
Mr. D. Vassar, Assistant Operations Supervisor

DETAILS

1. Persons Contacted

Mr. H. Autio, Plant Superintendent
Mr. W. Billing, Chemistry and Health Physics Supervisor
Mr. R. Boutwell, Technical Assistant
Mr. E. Chatfield, Control Room Operator
Mr. D. Cooney, Technical Assistant to the I and C Supervisor
Mr. T. Danek, Operations Supervisor
Mr. K. Jurentkuff, Shift Supervisor
Mr. L. Lafond, Control Room Operator
Mr. R. Paradis, Control Room Operator
Mr. R. Pettengill, Control Room Operator
Mr. N. St. Laurent, Assistant Plant Superintendnet
Mr. J. Shippee, I and C Supervisor
Mr. J. Staub, Technical Assistant to the Plant Superintendent
Mr. E. Taylor, Shift Supervisor
Mr. D. Vassar, Assistant Operations Supervisor

2. Inspection Purpose

The purpose of the inspection was to:

a. Review administration of safety-related facility procedures;

b. Review Technical Specification required calibration testing; and,

c. Review calibration of safety related components.

3. Review and Approval of Facility Procedures and Procedure Changes

The inspector reviewed the following sampling of safety-related facility procedures to verify that the review and approval of procedures, procedure changes, and temporary changes were in accordance with the requirements of the Technical Specifications and the licensee's administrative procedure:

OP 2113	Operation of the Reactor Control Rod System, Rev. 2, 5/16/75.
OP 2156	Operation of the Component Cooling System, Original, 2/27/75.
OP 2256	Operation of the Main Steam System, Original, 7/25/75.

OP 2167	Chemical Shutdown, Boric Acid Preparation, Rev. 1, 7/25/75.
RP 2600	Operation of the Control and Service Arc Systems, Rev. 3, 10/9/75.
OP 6603	Operation of the Radiation Monitoring System, Original, 5/14/74.
OP 2114	Reactor Rod Control System Precritical Check, Original, 5/14/74.
OP 3635	Reactor Scram Alarm, Rev. 1, 1/27/75.
OP 3612	N-B13, Component Cooling Water Header Low Flow, Original, 12/31/74.
OP 3686	Steam Generator Hi and Lo Level, Original, 2/5/75.
OP 3651	N-A52, Boric Acid Mix Tank Minimum Level, Original, 2/5/75.
OP 3701	T-A48, Reduced Control Air Header and Control Air Header Low Pressure, Original, 4/9/75.
OP 3636	N-A37, Radiation Monitoring, Original, 2/14/75.
OP 3634	N-B35, High Startup Rate Alarm, Rev. 1, 1/27/75.
OP 3257	Loss of AC Supply, Rev. 2, 1/9/76.
OP 3203	Feedwater Line Break, Rev. 2, 3/11/76.
OP 3001	Large Loss of Load Accident Without Reactor Scram, Original, 3/4/74.
OP 3006	Environmental Flooding Conditions, Rev. 2, 3/11/76.
OP 5208	Installation of a Control Rod Drive Mechanism, Rev. 1, 5/2/75.
OP 5260	Maintenance of Component Cooling Pumps, Original, 9/27/74.
OP 5401	Maintenance of Main Steam Safety Valves, SV 409A-L, Original, 5/8/74.

OP 5256	Maintenance of Boric Acid Pump, Original, 8/7/74.
DP 5575	Control Air Compressor Maintenance Procedure, Original, 10/1/74.
OP 4600	Radiation Monitoring Surveillance Check, Rev. 1, 7/3/74.
OP 4606	Main Coolant Flow Trip System Surveillance Check, Rev. 2, 12/18/75.
AP 0001	Plant Procedures, Rev. 5, 2/13/76.
AP 0003	Plant Operations Review Committee Responsibilities and Authorities, Rev. 1, 3/11/76.
AP 0021	Operating Memos, Rev. 1, 12/20/74.

No inadequacies were identified in this review.

4. Format and Content of Facility Procedures

The inspector also reviewed the procedures listed in Detail 3 for format and content consistency with the requirements and guidelines of ANSI N18.7-1972 and facility Administrative Procedure AP 0001, Plant Procedures. This review included verification that Technical Specification limits and detailed checklists were incorporated into procedures where appropriate and that, where checklists were used, they were compatible with stepwise instructions in the procedure.

The inspector had no further questions in this area.

5. Temporary Procedures

The inspector reviewed the following sampling of procedures described as "one time procedures" to verify proper review and approval, format and content, and administrative procedures for control of these temporary procedures:

OP 2000.17	Charging Line Removal from Service for Maintenance of Flow Detector Isolation Valves, Original, 9/27/74.
OP 2000.19	Hydrostatic Test of the No. 1 Charging Pump Suction Strainer Drain Line, Original, 1/27/75.
OP 2000.21	Changeover to the New PAB/WDB/SFPB Exhaust and V.C. Purge System. Rev. 1, 10/25/75.

OP 2000.14 Preoperational Flushing of the Post Accident Hydrogen Vent System, Original, 5/7/74.

OP 2000.22 Preoperational and Acceptance Testing of the Filtered Ventilation Exhaust and V. C. Purge System, Rev. 1, 2/10/75.

AP 0001, Plant Procedures, specifies that these "one time procedures" will be used only once following review and approval. Any subsequent reuse will require a new review and approval.

The inspector had no further questions in this area.

6. Operating Memos

The inspector reviewed effective Operating Memos to verify that operating instructions for safety-related systems and components were not included in these memos.

The inspector had no further questions in this area.

7. Technical Content of Facility Procedures

The inspector reviewed the following sampling of safety-related procedures to verify that they are adequate to accomplish the evolution in question within design characteristics and Technical Specification limitations. FSAR descriptions, Technical Specifications and system prints were used in this analysis:

OP 2113 Operation of the Reactor Control Rod System, Rev. 2, 5/16/75.

OP 2256 Operation of the Main Steam System, Original, 7/25/75.

OP 2167 Chemical Shutdown Boric Acid Preparation, Rev. 1, 7/25/75.

OP 3701 T-A48, Reduced Control Air Header and Control Air Header Low Pressure, Original, 4/9/75.

OP 3006 Environmental Flooding Conditions, Rev. 2, 3/11/76.

OP 5260 Maintenance of Component Cooling Pumps, Original, 9/27/74.

Within the scope of this review, no inadequacies were noted.

8. Design Modifications

Design modifications were evaluated to verify accomplishment in accordance with 10 CFR 50.59 requirements and for revision of operating procedures to reflect applicable changes.

That review is documented in Region I Inspection Report 50-29/76-06, Details 3.

9. Plant Tour

The inspector made a tour of accessible areas in the Turbine Building and Service Building to examine the state of cleanliness and housekeeping being maintained. It was noted that the areas inspected were clean, with careful housekeeping and equipment preservative efforts evident.

10. Technical Specification Required Calibration Testing

a. The inspector reviewed calibration procedures and associated data sheets on a sampling basis for the following:

(1) That calibration frequency requirements had been met.

(2) That, during calibration of components in a system, the service status of the system was in conformance with applicable limiting conditions of operation.

(3) That the procedures were reviewed and approved as required by the Technical Specifications.

(4) Complete procedure format.

(5) Technical content of procedures.

(6) That trip points of components selected for calibration were in conformance with Technical Specification requirements.

b. The following procedures were reviewed:

(1) OP 4607 MC Flow Trip System Calibration; Data for calibration performed 6/21/75.

(2) OP 4601 Nuclear Instrument Surveillance Check; Data for calibrations performed 2/17/76, 1/20/76, 12/22/75, 10/18/75.

(3) OP 4625 V.C. Pressure Indicating System Calibration; Data for calibration performed 11/21/75.

(4) OP 4605 Steam Generator Narrow Range Level Trip Channel Calibration No. 1; Data for calibration performed 11/18/75.

(5) OP 4621 HPSI Pump Ammeter No. 2 Calibration; Data for calibration performed 11/29/75.

(6) OP 4609 Safety Injection Actuation Channels Calibration and Functional Check; Data for calibration performed 11/18/75.

No inadequacies were noted in this area.

11. Technician Qualification

a. The inspector reviewed the qualification records of two technicians having responsibility for calibration of safety-related components and equipment to verify that their experience level and training was in accordance with the guidelines of ANSI N18.1-1971, Selection and Training of Nuclear Power Plant Personnel.

b. Of the two technicians chosen as a sample, one's qualifications exceeded the requirements of ANSI N18.1-1971 while the other technician was still undergoing training for qualification and did not perform calibrations unless accompanied by a qualified technician.

The inspector had no further questions in this area.

12. Calibration of Measuring/Testing Devices

a. The inspector reviewed the control of measuring/testing devices to verify the following:

(1) Calibration frequency was met and accuracy verified.

(2) Accuracy of the devices is traceable to the National Bureau of Standards.

(3) Storage and control of the devices is in accordance with procedural requirements.

b. The following devices were selected as a sampling:

(1) Simpson Model 260 VOM (YAEC 2144)

This device is calibrated annually with primary standard RFL Model 829G whose accuracy is traceable to the National Bureau of Standards.

(2) L and N Model 8662 Portable Potentiometer (Serial Number 1529384)

This device is calibrated annually by an independent testing laboratory which provides certification that accuracy is traceable to the National Bureau of Standards.

(3) Test Gauge (Serial No. 31)

This gauge is calibrated guarterly with a Model T-50 Deadweight Tester whose accuracy is traceable to the National Bureau of Standards.

The inspector had no further questions in this area.

13. Calibration of Safety Related Components Not Addressed by Technical Specifications

a. The inspector reviewed calibration procedures on a sampling basis for components associated with safety-related systems but not specified in the Technical Specifications as requiring calibration. The procedures were reviewed to verify the following:

(1) Administrative requirements have been established to calibrate the equipment.

(2) Procedure Format and content was consistent with ANSI N18.7-1972 guidelines.

(3) Calibration data for selected components was satisfactory.

b. The following procedures were reviewed:

(1) OP 6211 Calibration of the Charging and Volume Pump Speed Control System.

(2) OP 6250 Feedwater Flow Transmitter Calibration.

(3) OP 6351 Boric Acid Mix Tank Level Recorder and Transmitter Calibration.

(4) OP 6363 Calibration and Maintenance of Purification Flow Controller FIC-202.

(5) OP 6252 Bailey Main Steam Flow Compensating Relay Calibration.

(6) OP 6266 Calibration of the Boiler Feed Pump Discharge Header Pressure Switch PS405.

(7) OP 6350 Boric Acid Mix Tank Low Temperature Alarm (LTS-224).

Except as noted in Details 12c and d below, the inspector had no further questions in this area.

c. Calibration records were reviewed for the following components:

(1) Charging and Volume Pump Speed Control System, Procedure OP-6211, performed 11/25-26/75.

(2) Nos. 1 and 2 Feedwater Flow Transmitter, Procedure OP-6250, performed 12/6/75 for No. 1 and 12/5/75 for No. 2.

(3) Boric Acid Mix Tank Level Recorder and Transmitter, Procedure OP-6351, performed 7/15/75.

Review of OP6250 indicates that a test gauge used in the calibration, appeared to have exceeded its calibration date schedule (last calibrated 4/9/75). Procedure AP-6002, Control of Instrument and Controls Department Measuring and Test Equipment, states that test gauges are to be calibrated once per calendar quarter.

The inspector questioned this matter and the licensee stated that the test gauge referred to in OP-6250 was a dial manometer that required an annual calibration schedule. The licensee further stated that the dial manometer was a new piece of equipment and had not yet been included in Procedure AP-6002. The licensee concurred that a revision to AP-6002 is necessary to include the calibration frequency of the dial manometer.

This item is Unresolved.

d. The following procedures were reviewed for the requirements stated in 2a above:

(1) OP-6262 Calibration and Maintenance of Steam Bypass Valve and Controls.

(2) OP-6150 Incore TIC Recorder Calibration and/or Repair.

(3) OP-6450 Inspection, Repair & Stroke Calibration of V.C. Isolation SOV's and/or Trip Valves.

During reviews of these procedures, the inspector noted that no calibration interval was stated. This was in contrast to other calibration procedures that have the calibration interval stated. Discussions with the licensee indicated that the calibration intervals would be added to these procedures as they come up for revision.

This item is Unresolved.