

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-309/78-17

Docket No. 50-309

License No. DPR-36 Priority -- Category C

Licensee: Maine Yankee Atomic Power Company

20 Turnpike Road

Westborough, Massachusetts 01581

Facility Name: Maine Yankee Atomic Power Station

Inspection at: Wiscasset, Maine

Inspection conducted: September 5-8, 1978

Inspectors: R. S. Markowski
R. S. Markowski, Reactor Inspector

9/26/78

date signed

W. Beckman for
W. Ruhlman, Reactor Inspector

9/26/78

date signed

G. Napuda
G. Napuda, Reactor Inspector

9/26/78

date signed

D. Beckman
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9/26/78

date signed

Approved by: H. B. Kister
H. Kister, Chief, Nuclear Support
Section 2, RO&NS Branch

9/29/78

date signed

Inspection Summary:

Inspection on September 5-8, 1978 (Report No. 50-309/78-17)

Areas Inspected: Routine, unannounced inspection by regional based inspectors of the Quality Assurance Program (QAP) and Training Program implementation including: QAP revisions; design changes/modifications; procurement; records management; audits; licensed operator requalification; general employee training and craft and technician personnel training. The inspection also included followup of previously identified unresolved items, items of noncompliance and a plant tour. The inspection involved 104 inspector-hours onsite by four NRC regional based inspectors.

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Results: Of the eleven areas inspected, no items of noncompliance were identified in eight areas; three apparent items of noncompliance were identified in three areas (Infraction - failure to take corrective action to preclude repetition of a condition adverse to quality, Detail 4.c; Deficiency - failure to conduct post lecture requalification program quizzes, Detail 8.b; and Infraction - use of a manometer not traceable to recognized standards without the basis of calibration documented, Detail 13.b).

DETAILS

1. Persons Contacted

- *P. Anderson, Staff Assistant to Plant Superintendent
- P. Clark, Engineer - PEQAG
- R. Cyr, Senior Maintenance Supervisor - Mechanical
- *W. Fournier, Senior Training Co-ordinator
- A. Jordan, Engineer - PEQAG
- *D. Pike, Manager of Operations Quality Assurance
- R. Prouty, Maintenance Department Head
- A. Proctor, Stores Supervisor
- *S. Sadosky, Operations Quality Assurance Engineer
- *E. Wood, Plant Superintendent
- *R. Wyckoff, I&C Supervisor

*denotes those present at the exit meeting.

The inspectors also interviewed other licensee employees during the course of the inspection. They included engineering, maintenance, operations, plant technical support, quality assurance and stores personnel.

2. Followup on Previously Identified Items

(Closed) Unresolved Item (309/77-10-01): Document methods for disseminating pertinent LER/Personnel Error type information to non-licensed operations, maintenance, and I&C department personnel and define record keeping requirements. Procedure O-00-06, General Plant Training Program, Revision 3 assigns responsibility for the above activities to the Training Department. The inspector confirmed that the Training Coordinator forwards the information to the applicable department heads for dissemination to their personnel. Routing sheets which record the individual's reviews are maintained by the Training Department.

This item is resolved.

(Closed) Infraction (309/77-17-01): Failure to establish and implement a quality assurance program consistent with the schedule for accomplishing quality affecting activities. The inspector verified that the licensee's corrective action was consistent with their reply to the NRC in a letter dated October 19, 1977.

This item is closed.

(Closed) Deficiency (309/77-17-02): Failure to establish procedures describing how to accomplish corrective action by organizations other than in-plant. The inspector verified that the procedures had been revised and issued consistent with the licensee's reply to the NRC in a letter dated October 19, 1977.

This item is closed.

(Closed) Unresolved Item (309/77-16-04): Conduct annual audit in area of housekeeping/fire protection prior to August 15, 1978. The inspector verified that the required audit had been performed.

This item is resolved.

(Closed) Infraction (309/77-17-03): Failure to control engineering drawings with respect to completed design changes. The inspector verified that the subject drawings were revised as stated in the licensee's letter to the NRC dated October 19, 1977.

This item is resolved.

(Closed) Deficiency (309/77-17-04): Failure to document the results of a leak test required for PDCR 1-75. The inspector found that the corrective action as specified in a letter to the Commission dated October 19, 1977 had been completed.

This item is closed.

(Closed) Deficiency (309/77-17-06): Failure to segregate a nonconforming valve. The inspector found that the corrective action as specified in a letter to the Commission dated October 19, 1977 had been completed.

This item is closed.

(Closed) Deficiency (309/77-17-07): Failure to certify stores and PEQAG personnel who perform receipt inspections to ANSI N45.2.6. The inspector confirmed that the above personnel meet the qualification requirements of Paragraph 4.5.2, ANSI N18.1-1971 as specified in the licensee's letter to the Commission dated November 10, 1977.

This item is closed.

(Closed) Unresolved Item (309/77-17-10): Review of procedures 0-00-4 and 0-06-1 when issued. The aforementioned procedures have been issued and were reviewed by the inspector. Refer to paragraph 3 of this report.

This item is resolved.

(Closed) Unresolved Item (309/77-17-11): Review of procedure 0-00-3 when issued. The aforementioned procedure has been issued and was reviewed by the inspector. Refer to paragraph 3 of this report.

This item is resolved.

(Closed) Unresolved Item (309/77-17-12): Review of procedure 0-05-1 when issued. The aforementioned procedure has been issued and was reviewed by the inspector. Refer to paragraph 3 of this report.

This item is resolved.

(Closed) Unresolved Item (309/77-17-13): Fix Records Vault door and roof. The inspector verified that the roof and door had been repaired and it appears unlikely that water can enter the vault at either location.

This item is resolved.

(Closed) Unresolved Item (309/77-17-14): Temporary storage of records. The inspector informed the licensee of the NRC position. The licensee stated that a re-evaluation of their records retrieval/storage system had been completed. As a consequence of this review a decision had been made by licensee management to convert to a microfilmed system and it is expected that it will be fully implemented by December, 1980. The inspector stated that this area will be examined/reviewed during a subsequent inspection(s).

This item is resolved.

(Closed) Unresolved Item (309/77-17-15): Review procedures 0-05-1, 0-06-3, 0-07-2, 0-07-3 and 0-08-3 when issued. The aforementioned procedures have been issued and were reviewed by the inspector. Refer to paragraph 3 of this report.

This item is resolved.

(Closed) Unresolved Item (309/77-17-16): Review housekeeping/cleanliness procedure. The inspector verified that procedures 0-07-5, Cleaning Procedure, Revision 1 and 0-00-8, Housekeeping, Revision 1, were consistent with Appendix B of the accepted Quality Assurance Program (YOQAP-1-A).

This item is resolved.

(Closed) Unresolved Item (309/77-17-17): Review procedure for control of ignition sources. The inspector verified that Procedure 2.60.7, Welding and Cutting Safety Procedure, Revision 0 establishes fire control areas, the need for permits, a fire watch and area inspections.

This item is resolved.

(Closed) Unresolved Item (309/77-17-18): Review procedures 0-01-2 and 0-06-2 when issued. The aforementioned procedures have been issued and were reviewed by the inspector. Refer to paragraph 3 of this report.

This item is resolved.

(Closed) Unresolved Item (309/77-17-19): Review license action with respect to ANSI 18.7 requirements for independent verification that lifted leads and jumpers have been removed. The inspector verified that procedure 16-1, Yellow Tag-Control Log, Revision 2 requires that "the shift supervisor on watch will verify bypass installation/removal." Further, item 7 on Form 16-1-1 provides space to document this action.

This item is resolved.

(Closed) Unresolved Item (309/77-17-20): Revise procedures 0-10-2. The inspector reviewed 0-10-2, Revision 4; and, verified that it was consistent with the accepted quality assurance program description.

This item is resolved.

(Closed) Unresolved Item (309/77-17-21): Review of procedure 0-02-1 when issued. The aforementioned procedure has been issued and was reviewed by the inspector. Refer to paragraph 3 of this report.

This item is resolved.

(Closed) Unresolved Item (309/77-17-23): Write a procedure for the control of test and experiments. Procedure 0-06-3 was revised, to incorporate the requirements for the control of test and experiments conducted in accordance with 10 CFR 50.59.

This item is resolved.

(Closed) Unresolved Item (309/77-17-24): Review procedure 0-00-7 when issued. The aforementioned procedure has been issued and was reviewed by the inspector. Refer to paragraph 3 of this report.

This item is resolved.

3. Quality Assurance Program Review

The inspectors reviewed the below listed site QA implementing procedures issued and/or revised subsequent to the last NRC QA inspection in August, 1977.

The revisions were reviewed for consistency with the licensee's Accepted Quality Assurance Plan. These procedures also served as the basis of the inspection of the areas discussed in the report. During the conduct of the inspection, discussions with licensee personnel indicated that they were aware of the procedures and revisions.

The procedures reviewed were:

- 0-00-3, Quality Assurance In-Plant Audits, Revision 4
- 0-00-4, Safety Classification of Systems Comp. & Structures, Revision 4
- *-- 0-00-7, Independent Inspection, Revision 4
- *-- 0-00-8, Housekeeping, Revision 1
- *-- 0-01-1, Design Change & Alteration, Revision 3
- *-- 0-01-2, Document Revision Procedure, Revision 2
- 0-02-1, Material, Equipment & Service Purchase, Revision 3
- *-- 0-03-1, Material Receipt, Handling & Storage, Revision 4
- 0-04-1, Material Identification and Control, Revision 3
- *-- 0-05-1, Document Control, Revision 4
- 0-06-1, Procedure Preparation and Distribution, Revision 3
- *-- 0-06-2, Procedure Review, Approval and Distribution, Revision 6
- 0-06-3, Preoperational, Operational & Special Tests, Revision 4
- *-- 0-06-5, Control of Measuring and Test Equipment, Revision 4
- *-- 0-07-1, Installation & Maintenance of Safety Class Sys. Comp. & Structures, Revision 5
- 0-07-2, Control of Special Processes, Revision 5
- 0-07-3, Maintenance Requests, Revision 4
- 0-08-3, Administration of Non-Routine Corrective Maintenance, Revision 4

- 0-10-2, Surveillance Tests & Records, Revision 4
- *-- 0-10-3, Maintenance of Operations Departmental Logs, Revision 4

- 16-1, Yellow Tag - Control Log, Revision 2

*denotes those procedures which have been revised.

No items of noncompliance were identified.

4. Audits

a. References

- Applicable procedures as referenced in Paragraph 3.

b. Quality Assurance Audits

The inspectors reviewed the audits listed below to verify that they were conducted as follows: in accordance with written checklists/procedures; by trained personnel not having direct responsibilities in the areas audited; with findings documented and reviewed by responsible management; with followup actions initiated/completed/closed out; and, with audit frequencies and general audit conduct in accordance with established schedules and procedures.

- 76-13, Surveillance and Tests
- 76-14, Nuclear Materials Control
- 77-2, Chemistry
- 77-3, Health Physics
- 77-4, Plant Security
- 77-5, Training
- 77-7, Plant Changes
- 77-8, Procurement

- 77-9, Material Control
- 77-10, Nonconformances
- 77-11, Control of Special Processes
- 77-12, Measuring and Test Equipment
- 77-13, Surveillance and Tests
- 77-14, Special Nuclear Materials Control
- 77-15, Reporting Requirements
- 77-16, Document Control
- 77-17, Emergency Plan
- 77-18, Technical Specifications
- 78-1, Operations
- 78-8, Procurement and Material Control
- 78-9, Housekeeping and Cleanliness Control
- 78-10, Fire Protection

The licensee identified 71 items requiring followup during the conduct of the above audits.

One apparent item of noncompliance is discussed in c below.

c. Corrective Action

The inspector noted that Item 12 of Audit 77-12 reported instances where calibration services were being provided by vendors that had not been evaluated and approved by the Quality Assurance Division (QAD) as required by Procedure 0-06-5.

The corrective action taken to resolve the audit item included deletion of the evaluation and approval requirement from Procedure 0-06-5. This deletion was approved by management and included tacit QAD agreement.

The above inadequate corrective action resulted in this procurement activity (see Paragraph 6.d) being conducted contrary to the requirements of Section VII of the YOQAP-1-A.

This failure to provide adequate corrective action is contrary to the requirements of 10 CFR 50, Appendix B, Criterion XVI and Section XVI of the YOQAP-1-A. This item of noncompliance is an infraction (50-309/78-17-01).

5. Modifications

a. References

-- Applicable procedures referenced in Paragraph 3.

b. Review

The inspector selected and reviewed the design changes/modifications listed below and associated documents, on a sampling basis, to verify as applicable that: they were accomplished in accordance with 10 CFR 50.59 and the licensee's QA Program requirements; code requirements and specifications were included; acceptance tests including values and standards were specified; records of equipment performance were reviewed and accepted; and, prints/drawings and operating procedures were appropriately revised.

- PDCR 1-78, Installation of check valves in HPSI suction line;
- PDCR 3-78, CIS closure of Control Room Ventilation MOVs';
- PDCR 4-78, Steam Generator Modification; and;
- PDCR 6-78, Low steam generator pressure bypass bistable modification.

No items of noncompliance were identified.

6. Procurement

a. References

- Appropriate procedures referenced in paragraph 3.

b. Procurement Document Review

The Purchase Orders (PO) delineated below were selected by the inspector from a sample of Material Issue Slips which provided traceability from Maintenance Requests to procurement documents for items installed in the plant.

The PO's were reviewed to verify that proper approval, quality assurance/quality control requirements and quality record requirements were incorporated.

The documents reviewed were:

- PO 22354, Spot Check Cleaner;
- PO 08755, RPS Trip Bistable;
- PO 4302, Prop Spring;
- PO 4143, 1" Stainless Steel Globe Valve; and,
- PO 3272, Primary System Sample Valve.

No items of noncompliance were identified.

c. Storage Area Tour

The inspector conducted a tour of the site storeroom. During this tour the following aspects of storage control were reviewed/observed:

- general storage conditions and item identification;
- housekeeping practices;
- storage area inspection documentation;
- segregation of materials on a "hold status" (locked cabinet); and,
- review of procurement documents and receipt inspection documents associated with the two items in a "hold" status (PO 10029 and PO 23021).

During the tour of the storeroom, the inspector observed that lunchpails and coffee supplies were stored within the storage areas. These items were immediately removed from the storeroom.

No items of noncompliance were identified.

d. Evaluation of Vendors

The inspector identified that at least two vendors that had not been evaluated for acceptability were issued purchase orders (11017 and 22668) for calibration services. This is contrary to the requirements of Appendix B, Criterion VII and Section VII of the YOQAP-1-A and occurred as a result of the inadequate corrective action discussed in Paragraph 4.c. Pending appropriate action by the licensee with respect to the evaluation of vendors supplying services procured by the plant and review by RI, this item is unresolved (50-309/78-17-02).

7. Records and Drawings

a. References

-- Applicable procedures referenced in Paragraph 3.

b. Record Storage and Retention

The inspector selected the following records for inspection, in order to determine the licensee's capability to store, control and retrieve operating records:

- Power Range Safety Channel Check, Procedure No. 3-6.2.2.16 (August 1978);
- Reactor Coolant Flow Test, Procedure No. 3-6.2.2.2 (August 1977);
- SI Tank Level Calibration, Procedure No. 3-6.2.1.14 (August 1978);
- S/G Level Instrument Calibration, Procedure No. 3-6.2.2.5 (1977 and 1978);
- CEA Drop Time Test, Procedure No. 3-6.2.1.19 (August 1978); and,

- Station Battery Weekly Test, (October 1, 1977 and July 1, 1978).

The inspectors also requested and inspected the records listed below at various times during this inspection and verified that they were retrievable and that they were maintained as required.

- Audit Reports listed in paragraph 4;
- Procurement Records listed in paragraph 6;
- Modification Records listed in paragraph 5; and,
- Training Records referenced in paragraphs 8-11.

No items of noncompliance were identified.

- c. The inspector selected a sample of ten controlled distribution drawings to determine that established document control procedures were implemented and that as-built drawings are being maintained. The inspector compared drafting room aperture card revision status and remote drawing file revision status with the master drawing indices.

The ten drawings selected were inspected at the controlled drawing files in the Maintenance Department Office, I&C Department Office, Control Room, Main Files, PEQAG Office and Operations Department Offices. All drawings inspected were either of the correct revision or were properly annotated indicating that revision(s) were in process due to implemented design changes.

No items of noncompliance were identified.

- d. The inspector confirmed that the records maintained for Special Test 4-31, Increased Tc Test, were maintained in accordance with the requirements of 10 CFR 50.59.

The licensee stated that this was the only Special Test performed during the period since the last NRC QA inspection which was subject to the requirements of 10 CFR 50.59.

No items of noncompliance were identified.

8. Requalification Training

a. References

- Procedure 0-00-05, OPERATOR QUALIFICATION AND REQUALIFICATION PROGRAM PROGRAM, Revision 6.

b. Program Items

The inspector verified that, as currently established, the operator requalification program includes the following items:

- an established, planned, continuing lecture schedule;
- documentation of personnel attendance;
- required reactivity control manipulations;
- discussions/reviews of changes in facility design, procedures and facility license; and,
- review of abnormal/emergency procedures.

As currently established, the accepted operator requalification program described by the referenced procedure requires that periodic quizzes be administered in order to monitor the progress of those individuals who have shown deficiencies and to provide input relative to the effectiveness of the lecture series. Contrary to the above requirement and Section 4.b of 10 CFR 55, Appendix A, no such quizzes were administered during the June 1977 to May 1978 requalification training cycle. This is a Deficiency level item of noncompliance. (309/78-17-03)

During the training period noted above, eleven of eighteen participating licensed personnel were required to attend lectures and be administered quizzes because of deficiencies exhibited on the 1977 annual requalification examination. The licensee's Training Coordinator stated that, while no quizzes had been given, a written evaluation had been made for each group of operators attending the program's simulator training which included a portion of the lecture series.

c. Record Review

The inspector selected and reviewed the records of three licensed operators to verify that each contained the following documentation:

- completed course and yearly examination with answers;
- manipulation of controls for reactivity changes required by the program;
- simulation or discussion of emergency/abnormal procedures and responses; and,
- results of supervisory evaluations.

No items of noncompliance were identified.

9. General Training

a. Reference

- Procedure O-00-6, GENERAL PLANT TRAINING PROGRAM, Revision 3.

b. Program Definition

The inspector reviewed the referenced procedure with respect to the program definition requirements of: 10 CFR 50, Appendix B, Criterion II; 10 CFR 19.12; 10 CFR 73.50; and ANSI N18.1. The referenced procedure set forth formal training programs for: new employees; temporary maintenance or service personnel; operations personnel; technicians; and, craft personnel. These programs establish training which covers: administrative controls and procedures; radiological health and safety; controlled access and security; industrial safety; emergency plans and procedures; fire training; and, quality assurance indoctrination. Formal training is also provided for female employees on the contents of Appendix A to Regulatory Guide 8.13.

No items of noncompliance were identified.

c. Program Participation

The inspector reviewed the licensee's records to assure that the required training had been given. In addition, the inspector conducted interviews with those individuals whose records were reviewed. The interviews were to verify that: the scope of the training was similar to that contained in the licensee's records; the training as conducted was meaningful to those attending; and, that the areas presented were covered accurately and sufficiently from the participants' point of view. Records were reviewed for and interviews were conducted with those personnel listed below:

- one employee with less than one year in their current position;
- three employees with more than one year service;
- two temporary employees; and,
- one female employee.

No items of noncompliance were identified.

10. I&C Technician Training Programa. Reference

- Procedure 6-203-1, Initial and Review Qualification Training of I&C Personnel.

b. Program Content

The referenced procedure contains the training program requirements for the initial qualification and refresher training for I&C technicians. The program includes training in administrative controls, qualification training for the performance of specific departmental tasks, and requalification/refresher training of a technical nature.

No items of noncompliance were identified.

c. Records Review/Personnel Interviews

The inspector selected and reviewed the records of two I&C Technicians and conducted interviews with these individuals. The interviews were directed at confirming that the selected individuals understood the information which had been presented and that they were able to describe how these instructions applied to their job positions. The inspector identified no discrepancies between the interview results and the licensee's documentation.

During review of I&C Department Training records, the inspector noted that the "Yearly Review Qualification Record" sheets which document individual annual refresher training in plant and departmental administrative controls did not include entries for training administered in late 1977 and early 1978. A review of training session notes and departmental meeting minutes indicated that the training had been given. This fact was corroborated in the interviews above. The responsible I&C Department representative stated that up-dating of the individual records had been delayed due to the department's involvement in the refueling outage and series of unplanned shutdowns and that the updating would be accomplished as soon as practicable following the unplanned shutdown which was in progress during this inspection.

The matter of updating individual training records from departmental records as required by Procedure 6-203-1 is unresolved pending completion of the updating and review of the subject records by NRC:RI during a subsequent inspection. (309/78-17-04).

11. Maintenance Personnel Training

a. Reference

- Procedure MYM-5-201, Initial and Continuing Training and Qualification of Maintenance Department Personnel, Revision 1, December 11, 1975.

b. Program Content

The referenced procedure contains the training program requirements for the initial qualification and refresher training for Maintenance Department Mechanic and Electrician personnel. The program includes training in administrative controls, qualification training for the performance of specific departmental tasks, and requalification/refresher training of a technical nature.

No items of noncompliance were identified.

c. Records Review/Personnel Interviews

The inspector selected and reviewed the records of two Mechanics and conducted interviews with these individuals. The interviews were directed at confirming that the selected individuals understood the information which had been presented and that they were able to describe how these instructions applied to their job positions. The inspector identified no discrepancies between the interview results and the licensee's documentation.

No items of noncompliance were identified.

12. Monitoring of Plant Activities

During a five and one half hour period from 9:45 a.m., until 3:45 p.m., on September 6, 1978, the inspector monitored plant activities in the control room and containment. The inspector observed that staffing requirements were met, that applicable procedures were followed, and that Technical Specification requirements were implemented and/or satisfied.

The following evolutions were observed:

- Cooldown and depressurization of the RCS;
- Cooldown and depressurization of the Pressurizer;
- Isolation of the RCS Loops; and,
- Partial draining of the pressurizer.

The inspector also observed the containment entry and subsequent maintenance activities associated with the repair of a leaking Control Element Drive Mechanism vent plug. During this activity, the inspector observed that one of the five licensee personnel working on the CEDM did not have the cuffs of his protective clothing taped as required by the applicable Radiation Work Permit No. 78-9-65. This was identified to a Health Physics technician who was monitoring the containment but was, at that time, otherwise engaged. Immediate corrective action was taken to tape the subject individual's cuffs. Prior to completion of this inspection the subject individual was specifically counseled in the need to comply with all radiological protection requirements and Maintenance Department Personnel were informed of the occurrence and were similarly reminded of the need to comply with all radiological controls.

No items of noncompliance were identified.

13. Control of Measuring and Test Equipment

a. Reference

-- Applicable procedures in Paragraph 3.

b. Primary and Reference Standards

The inspector reviewed the calibration documentation of and examined the following instruments and their storage to determine if these activities were consistent with established requirements.

- 62-050, Meriam Mercury Manometer
- 62-067, Portable Pneumatic Calibrator
- 62-081, Deadweight Tester
- 62-077, Electrostatic Voltmeter
- 62-083, Digital Multimeter
- "Tygon H₂O Manometer"

The inspector identified that the "Tygon H₂O Manometer" was fabricated by I&C shop personnel and was used to calibrate Deadweight Tester No. 62-081 which was subsequently used in performing in-plant safety related activities (Example: Procedure 3-6.2.1.24, Containment Pressure Indication Channel-MR#0805-78). This instrument did not have calibration records traceable to national standards nor was the basis of calibration documented as required by 10 CFR 50, Appendix B, Criterion XII, and Section XII of the YOQAP-1-A.

This is an infraction item of noncompliance (50-309/78-17-05).

14. Unresolved Items

Items about which more information is required to determine acceptability are considered unresolved. Paragraphs 6.d and 10.c of this report contain unresolved items.

15. Exit Interview

The inspectors met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on September 8, 1978. The inspectors summarized the purpose and scope of the inspection.

A subsequent telephone conversation between the inspectors and the Manager of Quality Assurance was conducted on September 19, 1978. The findings were summarized during the meeting held on September 8, 1978, or during the above referenced telephone conversation.