

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

Region I

Report No. 50-309/79-10

Doc-let 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 Nuclear Generating Station

Inspection at: Wiscasset, Maine

Inspection conducted: June 19-22, 1979

Inspectors: Karl E. Plumlee 8/7/79
Karl E. Plumlee, Radiation Specialist date signed

Approved by: Karl E. Plumlee, for 8/7/79
Hilbert W. Crocker, Acting Chief date signed
Radiation Support Section,
Fuel Facilities and Materials
Safety Section.

Inspection Summary:

Inspection on June 19-22, 1979 (Report No. 50-309/79-10)

Areas Inspected: Routine, unannounced inspection by a regional based inspector of radiation protection during operations including the qualifications of radiation protection personnel; licensee audits; training; procedures; exposure control; posting, labeling and control of radiation hazards; notifications and reports to individuals and to NRC; and outstanding items. Upon arrival at the facility, areas where work was being conducted were examined to review radiation protection procedures and practices. The inspection involved 30 inspector-hours on site by one regional based NRC inspector.

Results: No items of noncompliance were identified.

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DETAILS

1. Persons Contacted

*G. Cochrane, Radiological Controls Supervisor

*C. Frizzle, Assistant Plant Manager

W. Paine, Operations Supervisor

G. Pillsbury, Director of Health and Safety

R. Radasch, Instruments and Controls Supervisor

*S. Sadosky, Operational Quality Assurance

*D. Sterniolo, Chemistry and Health Physics Supervisor

*E. Wood, Plant Manager

In addition to the above the inspector interviewed several operators, technicians, and repairmen.

*Denotes those present during the exit interview on June 22, 1979, 1:30 PM.

2. License Action on Previous Inspection Findings

(Closed) Inspector follow item (78-01-01) Development of calibration procedure for air samplers. Review of the current procedure, Revision 3, May 26, 1978, Health Physics Procedure 9.218 "Calibration of Air Samplers" did not identify any remaining problem in this area. The inspector had no further questions on this item.

(Closed) Item of noncompliance (78-04-01) Control of High Radiation Area access. Review of the corrective action on this item and observation of access controls on this inspection did not identify any remaining problem in this area. (Paragraph 7)

(Closed) Inspector follow item (78-04-02) Functional testing of RMS 6102X and 6102Y (plant vent particulate and gas monitors). Review of maintenance records and "Daily RMS operational check" records did not identify any failure following March 29, 1978, to obtain a factor of 3X or 4X greater instrument indication during the source checks than without the source. The inspector had no further questions on this item.

(Closed) Inspector follow item (78-15-02) Licensee calculations of shielding for the fuel transfer tube. Documentation indicates that the calculations are complete but details of the installation are incomplete. The installation will be followed up under item 78-BU-08 (paragraph 3)

(Closed) Inspector follow item (78-15-03) Licensee documentation of responsible technician qualifications. Review of Revision 3, November 24, 1978, Procedure No. 7.211 "Chemistry and Health Physics Department Training Program" and records maintained pursuant to the procedure showed that training and qualifications are now fully documented. (Paragraph 4.a)

(Closed) Inspector follow item (78-15-04) Radiation signs. Review on this inspection indicated that new signs were obtained and installed and the old signs were discarded. The inspector had no further questions on this item.

(Closed) Inspector follow item (78-15-05) Licensee evaluation of TLD beta dose response. A licensee representative stated that the absorber thickness over the TLD chip is 28 milligrams/cm² not including a paper sticker, which exceeds the value of 7 mg/cm² or less specified on Form NRC-5 for skin dosimetry measurements. The licensee relies on portable instrument surveys and protective clothing in limiting skin exposure to levels that do not require the use of personal skin dosimetry devices. The inspector had no further questions on this item.

(Closed) Item of noncompliance (78-18-01) Requirement to have an individual present on site who is qualified in radiation protection. Review of shift schedules, review of qualification records, and observation of scheduled retraining performed during this inspection did not identify any problem during the period examined, June 10 to June 23, 1979. The inspector had no further questions on this item.

(Closed) Item of noncompliance (78-18-02) Adherence to procedures on containment entry. The inspector accompanied during an entry into containment by a health physics technician and operations personnel. No problems were identified. The inspector had no further questions on this item.

(Closed) Item of noncompliance (78-18-03) Lack of written procedure for whole body counter calibration. Review on this inspection verified that a written procedure has been provided and is being followed. The inspector had no further questions on this item. (Paragraph 5, procedure No. 9.234)

(Closed) Item of noncompliance (78-18-04) Adherence to procedure requiring evaluation of certain exposures. Review of exposure records for the period October 1, 1978 to March 31, 1979, did not identify any further problems. The inspector had no further questions on this item.

(Closed) Item of noncompliance (78-18-05) Control of access to a high radiation area. Review of corrective action on this item, and observation of access controls exercised elsewhere in the facility did not identify any problems. The inspector had no further questions on this item. (Paragraph 7)

(Closed) Item of noncompliance (78-18-06) Posting of information required by 10 CFR 19. Observation of posted information at the time of this inspection did not identify any problems. The inspector had no further questions on this matter.

(Closed) Item of noncompliance (78-18-07) Requirement to survey for airborne radioactive materials. Review of this item, and observation of practices during a containment entry on this inspection, did not identify any remaining problems. The inspector had no further questions on this item. (Paragraph 6.b)

3. Licensee Action on NRC Bulletins and Circulars

(Closed) Bulletin (78-BU-07) airline respirators and hoods. Review of the implementation of commitments made in the licensee response, dated July 26, 1978, did not identify any problems. (Paragraph 6.b)

(Open) Bulletin (78-BU-08) Radiation Levels from Fuel Element Transfer Tubes. Installation of additional shielding is being considered. Licensee calculations of shielding requirements are complete but details of the design and installation are not final. (Paragraph 2, item 78-15-02) The completion of this installation will be followed up on a subsequent routine inspection.

(Open) Circular (78-C1-03) Packaging greater than Type A quantities of LSA radioactive materials for transport. The licensee is preparing a quality assurance program pursuant to requirements of 10 CFR 71.51; and Revision 5, submitted to PORC 6/19/79, Procedure No. 9.1.15, "Shipment of Radioactive Material," is being processed. The licensee representative stated that no packages containing greater than type A quantities of LSA radioactive materials were shipped during 1979, to date, and none will be shipped until this can be done in full compliance with requirements of 10 CFR 71. This item will be followed up on a subsequent routine inspection. (Paragraph 10)

4. Radiation Protection Training and Qualifications

a. New Chemistry and Health Physics Department (C&HP) Employees

Part of the inspection effort was to examine licensee compliance with requirements of Technical Specifications Section

5.3, "Facility Staff Qualifications," that each member shall meet or exceed the minimum qualifications for comparable positions of ANSI N18.1-1971, "Selection and Training of Nuclear Power Plant Personnel;" and also with Procedure No. 7.211 "Chemistry and Health Physics Department Training Program."

Review indicated that one C&HP technician was hired since this item was previously inspected. This individual stated that he holds an Associate Degree (Nuclear Technology, 1966) and worked four years in the Health Physics section of another nuclear power plant (as well as eight years, mostly in chemistry, radwaste, and electronics,) prior to employment by Maine Yankee, February, 1979.

The inspector noted that the above experience exceeded the ANSI N18.1 required minimum of two years in a specialty.

Review of checkoff sheets and signatures maintained pursuant to Procedure No. 7.211 showed this individual had completed the specified items to be considered competent in health physics job functions but had not completed the chemistry items.

The license representative stated that this individual was assigned to health physics but not to chemistry job functions.

No items of noncompliance were identified.

b. Other Personnel Qualified in Radiation Protection

Technical Specifications Section 5.4, "Training" requires a retraining and replacement training program in accordance with Section 5.5 of ANSI N18.1-1971 and Appendix A of 10 CFR 55. A licensee letter dated January 23, 1979 stated that a revised program was being implemented.

Review of records of scheduled radiation protection training for 11 members of the reactor operations staff during 1979 indicated that seven had been requalified during 1979 and two were scheduled to attend training, part of which the inspector observed during this inspection. The other two individuals had recently completed the new employee training and had not started retraining. Interviews with individuals, and observation during a containment entry (Paragraph 2, item 78-18-02) as well as observation of the performance of other activities, did not identify any problems.

5. Radiation Protection Procedures

Part of the inspection effort was to examine licensee compliance with requirements of Technical Specifications (TS) Sections 5.8 "Procedures", which incorporates portions of Regulatory Guide 1.33, November, 1972, "Quality Assurance Programs-Operations"; and TS5.11 "Radiation Protection Program" requiring implementation of approved procedures for all operations involving personnel radiation exposure. Licensee administrative procedures specify how approved procedures are maintained and updated.

The licensee had prepared, revised, or routinely reviewed and updated the following procedures since the previous inspection of radiation protection and radiation protection instrument calibration procedures (September, 1978).

Examination of Procedures Nos. 9.1.6 through 9.1.10, and Procedure No. 9.234, as well as examination of selected sections of the remaining procedures listed below, did not identify any items of noncompliance.

PROCEDURE NUMBER	TITLE	REVISION NO.	DATE
9.1.1	Plant Radiological Surveys	2	5/79
9.1.3	Neutron Surveys	4	4/79
9.1.5	Radioactive Source Inventory and leak Test	4	3/79
9.1.6	Establishing and Posting Controlled Areas	4	3/79
9.1.7	Area and Equipment Decontamination	3	3/79
9.1.8	Monitoring for Personnel Contamination	3	3/79
9.1.9	Personnel Decontamination Procedure	5	12/78
9.1.10	Radiation Work Permits	7	3/78
9.1.12	Use of Personnel Monitoring Devices	8	4/79
9.1.13	Receipt and Handling of New Fuel	4	1/79
9.201	General Calibration Procedure for all Laboratory & Portable Instruments	6	5/25/79
9.202	Calibration of the Eberline Rad Owl RO-3	1	5/25/79
9.203	Calibration of the Laboratory G.M. Counters	5	3/7/79

PROCEDURE NUMBER	TITLE	REVISION NO.	DATE
9.204	Operation and Calibration of the NMC Automatic Sample Changer	1	3/7/79
9.207	Operation and Calibration of the Eberline PIC-6A	5	5/4/79
9.208	Operation and Calibration of the Eberline E-400	5	5/4/79
9.209	Operation of NMC Constant Air Monitors	2	2/16/79
9.210	Calibration of the Eberline Neutron Detector PNR-4	4	5/25/79
9.211	Calibration of the Eberline PAC-4S Alpha Counter	2	3/2/79
9.212	Calibration of the Eberline Rad Owl RO-1	3	5/25/79
9.213	Operation and Calibration of the Eberline RM-14 Radiation Monitor	4	5/25/79
9.214	Operation and Calibration of the Teletector Model 6112	4	5/25/79
9.215	Calibration of the Victoreen Radacon II	3	5/25/79
9.216	Pocket Dosimeter Calibration and Leak Testing	4	5/31/79
9.229	Transfer of Radioactive Samples to the NRC	1	4/27/79

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PROCEDURE NUMBER	TITLE	REVISION NO.	DATE
9.232	Operation and Calibration of the Eberline E-140	3	5/4/79
9.234	Calibration of the Whole Body Counter	0	11/1/78
9.235	Calibration of the Victoreen Panoramic Model 470A	0	2/1/79
9.236	Calibration and use of the Victoreen Condenser "R" Meter and ION Chambers	0	2/7/79

6. Personnel Exposure Control

a. External Exposures

Part of the inspection effort was to examine compliance with the requirements of 10 CFR 20.101 and also with licensee procedures containing external exposure limits.

Review of computer listings of personnel exposures on site during the period January 1, 1978, to March 31, 1979, did not identify any individual annual whole body exposure during the calendar year 1978 as great as three rem, or any quarterly whole body exposure during the first calendar quarter, 1979, as great as one rem.

The inspector selected a sample of 12 individual record folders, including folders for eight temporary or contract employees who arrived and departed during 1979, to examine form NRC-4s, NRC-5s, termination letters, records of MPC hours, records of whole body counts, and records of personnel exposure investigations and other special cases including record corrections. These folders contained Form NRC-5s that were current as of March 31, 1979.

No items of noncompliance were identified.

b. Internal Exposures

10 CFR 20.103 requires limits on internal exposures and licensee procedures implement the limits, i.e., Procedures Nos. 9.1.6 "Establishing and Posting Controlled Areas"; 9.1.10 "Radiation Work Permits"; and 9.1.20 "Bio-assay Program".

The examination of records, described under subparagraph a., above, and interviews with personnel, as well as observations during tours of the facility did not identify any items of noncompliance with the regulatory requirements or the procedures.

The licensee representative stated that the licensee has not fully implemented a respiratory protection program that allows use of protection factors. Most of the procedures, a test booth, and respirators necessary for an acceptable program appeared to be available on site, however, credit for protection factors was not taken up to the time of the inspection.

This item will be followed upon a subsequent routine inspection (Paragraph 10) (79-10-01)

7. Posting, Labelling and Control

Part of the inspection effort was to examine compliance with requirements of 10 CFR 19.11, "Posting notices to workers", 10 CFR 19.12, "Instructions to workers", and 10 CFR 10.102, "Caution signs, labels, signals and controls", and Technical Specifications Section 5.12, "High Radiation Area", as well as corrective actions on previous concerns in this subject area.

The inspector observed the posted notices, signs, labels, and controls during tours of the facility. The tours included a survey around the exterior of the buildings and around the fence enclosing the buildings. A fence change had been made following an inadvertent addition of untreated water to the Refueling Water Storage Tank (RWST) caused by a valving error on August 25, 1978. The RWST is outdoors but within a fenced area. No radiation measurements indicated greater than $\frac{1}{2}$ mr/hr outside the fenced boundary.

The inspector also interviewed several individuals to verify that they had received the required instructions and understood the signs, notices, labels and controls.

No items of noncompliance were identified.

8. Notifications and Reports

Part of the inspection effort was to examine compliance with requirements of 10 CFR 19.13 and 10 CFR 20.409, "Notifications and reports to individuals", 10 CFR 20.402, "Reports of theft or loss of licensed material", 20.403, "Notifications of incidents", 20.405, "Reports of overexposures and excessive levels and concentrations", 20.407, "Personnel monitoring reports", and 20.408, "Reports of personnel monitoring on termination of employment or work".

The licensee representative stated there were no thefts or losses during 1978 or 1979 to date.

Review of records of personnel exposures (Paragraph 6) did not identify any overexposures, any errors in reports, or omissions of required reports to individuals and to NRC.

No items of noncompliance with reporting requirements were identified.

9. Licensee Audits and Reviews of Radiation Protection Program

a. Review by Offsite Team

Part of the inspection effort was to examine compliance with requirements of the Technical Specifications, Section 5.5.B, "Audits", insofar as reviews and audits were conducted of the radiation protection program.

Review of the Audit Report No. 78-3, conducted October 11 and 12, 1978, indicated that an audit was performed by offsite personnel; problems were identified and corrected; and the auditor's report was reviewed by Nuclear Safety Audit and Review (NSAR) Committee.

b. Reviews by Plant Operations Review (PORC) Committee Involving Radiation Protection

Part of the inspection effort was to examine compliance with requirements of Technical Specification Section 5.5.A.6. that PORC shall be responsible for review or investigation of (a) procedures, . . . (e) items of noncompliance with Technical Specifications.

Review of PORC meeting minutes indicated that reviews were conducted of Inspection Reports Nos. 50-29/78-04 and 50-29/78-18.

No items of noncompliance were identified.

10. Management Interview

The inspector met with the licensee's representatives, designated in Paragraph 1, near the conclusion of the inspection on June 22, 1979, at 1:30 PM.

The inspector reviewed the scope and findings of the inspection.

The inspector stated that he intended to interview one individual and to complete a review of training records before concluding the inspection. (No items of noncompliance were identified)

Packaging and shipping requirements for radioactive materials were discussed.

Items that will be followed up on a subsequent inspection were discussed (Paragraphs 3 and 6).