

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

Region I

Report No. 50-289/81-29
Docket No. 50-289
License No. DPR-50 Priority -- Category c
Licensee: Metropolitan Edison Company
P.O. Box 480
Middletown, Pennsylvania 17057

Facility Name: Three Mile Island Nuclear Station, Unit 1 (TMI-1)

Inspection at: Middletown, Pennsylvania

Inspection conducted: October 1-16, 1981

Inspectors: M. Shanbaky 11/5/81
M. Shanbaky, Senior Resident Radiation Specialist date signed
W. Barley 11/5/81
W. Barley, Resident Radiation Specialist date signed
Approved by: A. Fasano 11/5/81
A. Fasano, Chief, Three Mile Island Resident date signed
Section, PB#2

Inspection Summary:

Inspection on October 1-16, 1981, (Inspection Report Number 50-289/81-29)

Areas Inspected: Special unannounced inspection at TMI to verify the status of licensee's actions on previously identified open items in the radiological controls program including IE Circulars and IE Bulletins. The inspection also included examination of licensee's radiological control personnel qualifications, training program, audits and external and internal radiation exposure controls. The inspection involved 82 inspector-hours on site by two resident radiation specialists.

Results: Of the areas examined, no items of noncompliance were identified.

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Details

1. Persons Contacted

- *C. Adams, Quality Assurance (QA)
- R. Borders, Training Technician
- K. Bucher, Respiratory Decontamination Foreman
- W. Deimler, Jr., Unit 1 Radiological Control Technician "A"
- R. Dubiel, Manager Radiological Engineering
- W. Edwards, Unit 1 Radiological Control Foreman
- E. Gee, Respiratory Protection Supervisor
- *D. Hosking, QA
- *G. Kuehn, Deputy Manager Radiological Control, Unit 1
- E. Kulik, Training, General Employees
- R. Myers, Support Service Supervisor
- R. Perry, Acting Supervisor, Dosimetry
- W. Potts, Manager Radiological Controls, Unit 1
- M. Ross, Supervisor Operations, Unit 1
- P. Ruhter, Manager Radiological Engineering, Unit 2
- *C. ... /th, Supervisor Licensing
- *D. Tuttle, Acting Manager Radiological Engineering

*denotes those present at the exit interview

The inspector contacted several other licensee employees and contractors including members of the radiological control, operations and QA personnel.

2. Licensee Action on Previous Inspection Findings

(Closed) Inspector Followup Item (289/78-BU-08): Licensee action on IE Bulletin 78-08; followup on use of fuel transfer tube.

The inspector examined licensee actions concerning IE Bulletin 78-08. Through discussions with licensee representatives and tour of area in question, the inspector verified adequate control of exposures to personnel during use of fuel transfer tube. The fuel transfer tube area was adequately shielded and inaccessible to personnel.

(Closed) Inspector Followup Item (289/78-BU-07): Licensee action on IE Bulletin 78-07; respirator use and followup on procurement of new regulators.

The inspector examined the licensee's actions to implement recommendations of IE Bulletin 78-07. The inspector noted, through discussion with the licensee and review of Revision 6 of Radiological Controls Procedure (RCP) 1616.1, dated August 7, 1981, that National Institute for Occupational Health (NIOSH) approved supplied air hoods were being used with the recommended flow rates. Appropriate protection factors were assigned by the licensee in conformance with IE Bulletin 78-07.

The inspector discussed with the licensee the use of airline supplied air respirators at TMI. The inspector verified that all airline supplied air respirators used at TMI were operated in the continuous flow mode. IE Bulletin 78-07 addressed action to be taken by the licensee only for airline supplied air respirators operated in the demand mode.

(Closed) Inspector Followup Item (289/78-03-03): The inspector verified conformance with requirements of 10 CFR 20.102(c)1, through review of personnel dosimetry records and discussions with licensee representatives.

(Closed) Deficiency (289/78-18-01): Surveillance Procedure 1301.4.1, Revision 10, was reviewed as to management and procedural direction in order to record sampling information required by environmental technical specifications (ETS). This new revision of procedure 1301.4.1 provides for compliance with the ETS requirements.

(Closed) Inspector Followup Item (289/78-18-03): The inspector verified through discussions with licensee representatives and review of records that no dose adjustments of past neutron exposure information is required. In addition, a new system for measurement of neutron exposure is planned for return to power and the response of the new dosimetry will be tracked by item 289/81-07-01.

(Open) Inspector Followup Item (289/79-CI-21): Licensee action on IE Circular 79-21; prevention of unplanned releases of radioactivity.

The inspector examined licensee actions concerning IE Circular 79-21. Through discussions with licensee representatives and review of documentation, the inspector verified that the licensee performed reviews of procedures and reviewed "as built" systems as recommended in IE Circular 79-21. However, during a routine tour of the facility, the inspector noted indications of apparent leakage from the borated water storage tank (BWST). The indicated leakage was confined to the immediate BWST area. The licensee stated that the minor leakage observed was coming from the chemicals addition system which contains no contaminated water. The licensee was performing maintenance on the tank and associated equipment. This area will be reexamined during a subsequent inspection.

(Closed) Inspector Followup Item (289/79-IR-04): The inspector verified through observation of various radiological operations in progress, review of Radiation Work Permit (RWP) records, and review of procedures for surveys that adequate measurements of concentrations of radioactive materials in air are being performed.

(Closed) Inspector Followup Item (289/79-IR-09): The inspector verified through review of RCP 1612, Revision 8, "Monitoring for Personnel Contamination", that adequate management and procedural action exists to provide for proper evaluations of skin exposure to contamination incidents.

(Closed) Inspector Followup Item (289/79-IR-24): The inspector discussed with licensee representatives the procedural mechanisms in place for Unit 1 to insure proper control of personnel exposures. In addition, licensee commitments to provide for adequate documentation of survey results was reviewed. Corrective actions have been completed and appear adequate.

(Closed) Inspector Followup Item (289/79-03-02): The present areas designated as smoking areas were reviewed by the inspector. The inspector made observations of the current practices on personnel contamination monitoring and controlled area management and determined that the licensee has taken the necessary actions to prevent smoking by potentially contaminated individuals.

(Closed) Inspector Followup Item (289/80-BU-10): Through discussions with licensee representatives, review of documentation including licensee's documents OPS-80-3, OPI-80-4, MSS-80-245 and attached engineering evaluations, and tours of nonradioactive system component areas, the inspector verified licensee actions in regards to IE Bulletin 80-10.

(Closed) Infraction (289/80-14-01): Through review of a sample of RWP records, and direct observation of worker performance in radiological areas and sign in of RWP's at the control point, the inspector verified adequate corrective action to infraction 80-14-01.

(Closed) Infraction (289/80-14-02): The inspector reviewed current control point practices for ensuring proper worker qualifications and exposure limits. Through discussions with licensee representatives, and direct observation of radiation control technicians' activities at the radiological control point, the inspectors verified adequate corrective action to infraction 80-14-02.

(Closed) Infraction (289/80-14-03): Through review of records and by discussions with licensee personnel, the inspector verified adequate technician knowledge of applicable new and revised radiological control procedures.

(Closed) Infraction (289/80-22-44): Based upon a review of RCP 4239, Unit 2 1600 and 1700 procedure series, and observation of the operation of laboratory counting equipment, the inspector determined that Plant Operations Review Committee (PORC) approved procedures are now in use for routine analytical work.

(Closed) Inspector Followup Item (289/80-22-45): Through review of records and discussions with licensee representatives, the inspector verified that daily background, energy calibration, and source strength calibration checks are being performed before use of laboratory counting equipment.

(Closed) Inspector Followup Item (289/80-22-46): Based on a review of records for the laboratory counting equipment quality assurance checks, the inspector verified the use of a documented acceptance criteria (to include appropriate corrective actions for checks falling outside of established criteria) for use of laboratory counting equipment.

(Closed) Noncompliance (289/81-06-01): The inspector examined the licensee's corrective actions as submitted to the NRC in a letter dated July 8, 1981. The inspector verified that adequate corrective actions were completed.

3. Qualifications

The inspector reviewed the licensee's radiation protection organization and changes made since the previous NRC inspection of this area (IE Report 50-289/80-22). The inspector examined a sample of the licensee's radiation protection personnel training records, resume's, job descriptions, and job specifications to verify the adequacy of the radiation protection personnel qualifications. The inspector determined that the reviewed changes in the radiation protection program organization were made in accordance with the TMI Restart Report, and personnel qualifications met the plant technical specifications requirements, ANSI N18.1-1971 and Regulatory Guide 1.8, Revision 1, dated 1977.

4. Licensee Audits

The inspector reviewed audits performed for various aspects of the radiological protection program during 1981. The audits were being performed with the frequency required by technical specifications. The inspector noted that the licensee had established adequate control mechanisms for tracking responses and corrective measures for all identified items resulting from the audits.

5. Training

The inspector reviewed changes in the training programs for radiological controls personnel and general radiation workers. A change which affects both of the above programs is the opening of new classroom facilities in the training center. The new facilities represent an improved training environment with additional classrooms and teaching aids.

The training for radiological controls personnel has been modified to include sessions on emergency planning, radwaste training and respiratory protection. Routine retraining includes the presentation to technicians of changes to procedures or 10 CFR, and a familiarization with new bulletins and circulars as appropriate.

The general radiation worker's initial training has been expanded from 8 hours to 16 hours classroom instruction. In addition, while subject material has remained about the same, the order of presentation has been revised with new handouts to compliment the instructions. The practical factors (actual work in simulated conditions) session still remains at 4 hours.

6. Radiation Exposure Control

a. External Radiation Exposure

External radiation exposure records were reviewed by the inspector. Personnel external exposures appeared to be administratively controlled, and were determined to be within regulatory limits for all individuals selected for the detailed records review.

b. Internal Radiation Exposure

The inspector reviewed selected air sample results, the licensee's respiratory protection program and selected bioassay records in order to determine licensee compliance with regulatory and procedural requirements. No inadequacies were noted in this area.

7. Exit Interview

The inspector met with licensee management (denoted in paragraph 1) at the conclusion of the inspection on October 16, 1981 and summarized the inspection findings. Licensee management acknowledged the inspection findings.