

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

Region I

Report No. 77-31

Docket No. 50-289

License No. DPR-50 Priority -- Category C

Licensee: Metropolitan Edison Company

P. O. Box 542

Reading, Pennsylvania 19603

Facility Name: Three Mile Island Nuclear Station, Unit 1

Inspection at: Middletown, Pennsylvania

Inspection conducted: September 26-28, 1977

Inspectors: *P. Kellogg*
P. Kellogg, Reactor Inspector

10/12/77
date signed

date signed

date signed

Approved by: *A. B. Davis*
A. B. Davis, Chief, Reactor Projects
Section No. 1 RO&NS Branch

10/12/77
date signed

Inspection Summary:

Inspection on September 26-28, 1977 (Report No. 50-289/77-31)

Areas Inspected: Routine, unannounced inspection of license event followup; general plant operations including direct observations in the control room; and licensee action on previous inspection findings. The inspection involved 24.5 inspector hours onsite by one NRC inspector.

Results: No items of noncompliance were identified.

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DETAILS

1. Persons Contacted

R. Bailey, Lead Mechanical Engineer
K. Bryan, Shift Foreman
*C. Hartman, Lead Electrical Engineer
*G. Kunder, Supervisor of Operations
*J. O'Hanlon, Unit Superintendent
D. Pilsitz, Shift Foreman
M. Shalto, Engineer Associate II, Nuclear
H. Shipman, Operation Engineer II

The inspector also talked with and interviewed 6 other licensee employees during the course of the inspection.

*denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved item 289/77-14-01, Corporate Technical Support Staff (CTSS) review of 1976 PCR's. The CTSS has completed the review of 1976 Permanent Change Requests. The inspector reviewed the completed review forms for PCR's 76-785, 786, 787, 788, and 794. PCR's 808 and 810 were not issued.

(Closed) Unresolved item 289/77-14-03, Mechanical Draft Cooling Tower Local Readout. The licensee has reviewed the local readout and is comparing these readings with the remote readings in the control room to verify the accuracy of the two indications.

(Closed) Unresolved item 289/77-22-02, Hydrogen concentration in battery rooms. The licensee conducted a test under Work Request 21030 on August 18-25 to determine the Hydrogen concentration in both battery rooms during an equalizing charge. The test results indicated 0% hydrogen in the rooms during the charge.

(Open) Unresolved item 289/77-19-03, Corrective Actions for LER 77-03, 04-07. The inspector reviewed the status of the corrective action for LER 77-07. The licensee's representative indicated the strut bearing modification would be completed during the 1978 refueling outage. The latching bar interlock arm modification will be installed by November 1, 1977.

3. Review of Plant Operations

Shift Logs and Operating Records

- a. The inspector reviewed the following logs and records:
- (1) Control Room Log Sheets, July 1 - September 25, 1977
 - (2) Control Room Log Books, July 1 - September 26, 1977
 - (3) Shift Foreman Log, July 1 - September 26, 1977
 - (4) Primary Auxiliary Operators Log - Tour Readings, July 1 - September 26, 1977
 - (5) Primary Auxiliary Operators Log - Liquid Waste Disposal Panels, July 1 - September 26, 1977
 - (6) Auxiliary Operator Log - Out Building Tour, July 1 - September 26, 1977
 - (7) Shift and Daily Checks, July 1 - September 22, 1977
 - (8) Equipment Lockout Tags 896-1097, July 1 - September 22, 1977
 - (9) Do Not Operate Tags 1-40, July 1 - September 22, 1977
 - (10) Jumper and Lifted Lead, July 1 - September 22, 1977
- b. The logs and records were reviewed to verify:
- (1) Log sheet entries are filled out and initialed;
 - (2) Log entries involving abnormal conditions are sufficiently detailed;
 - (3) Log Books reviews are being conducted by the staff;
 - (4) Operating orders do not conflict with Technical Specifications;
 - (5) Jumper log entries do not conflict with T.S. and,
 - (6) Problem identification reports confirm compliance with TS reporting and LCO requirements.

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c. The inspector used the following acceptance criteria for the above items:

- (1) Technical Specifications
- (2) Administrative Procedure, AP1011 Rev. 3, Controlled Key Locker Control
- (3) Administrative Procedure, AP1012 Rev. 7, Shift Relief and Log Entries
- (4) Administrative Procedure, AP1013 Rev. 5 Bypass of Safety Function and Jumper Controls
- (5) Inspector Judgement

d. Findings were acceptable.

4. In Office Review of Licensee Event Reports (LER's)

The inspector reviewed LER's received in the NRC:I office to verify that details of the event were clearly reported including the accuracy of the description of cause and adequacy of corrective action, and the inspector determined whether further information was required from the licensee, whether generic implications were involved, and whether the event warranted on site followup. The following LER's were reviewed.

- 77-11/1T - Engineered Safeguards Motor Control Center tripped during power operation
- 77-12/3L - Engineered Safeguards Pump was removed from service prior to testing Redundant Pump
- 77-13/4T - Suspended Solids Concentration of Station Discharge greater than specified maximum
- 77-14/3L - Reactor Building Isolation Valve failed to close on an Engineering Safeguards Test Signal
- 77-15/3L - One Auxiliary Transformer was De-energized by event in Unit II
- 77-17/3L - Reactor Building Local Leakage exceeded 0.6 La criteria
- 77-18/3L - Nuclear Services River Water Pump Shaft failed

- 77-20/4L - Station River Water Discharge Temperature exceeded 3°F below inlet temperature
- 77-21/1T - Reactor Building Atmosphere Sample was not taken during an eight hour period
- 77-22/1T - Restrictions were placed on the Decay Heat Removal Pumps

Except as noted in detail 5 below, the inspector had no further questions on these items.

5. On Site Licensee Event Followup

For those LER's selected for on site followup, the inspector verified that reporting requirements of Technical Specification and Regulatory Guide 1.16 had been met, that appropriate corrective action had been taken, that the event was reviewed by the licensee as required by AP1015, Required Reports and Notification and that continued operation of the facility was conducted in accordance with Technical Specification limits. The following LER's reviewed on site:

- 77-11/1T - Engineered Safeguards Motor Control Center tripped during Power Operation
- 77-12/3L - Engineering Safeguards Pump was removed from service prior to testing the Redundant Pump
- 77-14/3L - Reactor Building Isolation Valve failed to close on an Engineering Safeguards test signal
- 77-18/3L - Nuclear Services River Water Pump Shaft failed
- 77-21/1T - Reactor Building Atmosphere Sample was not taken during an eight hour period
- 77-22/1T - Restrictions were placed on the Decay Heat Removal Pumps

This review included physical observation of equipment, discussions with members of the plant staff, inspection of the Control Room and Shift Foremans Log, revised facility procedures and licensee correspondence. With the exception of the licensee's findings, no other items of noncompliance were identified. Unless otherwise indicated, the inspector has no further questions on these LER's.

With respect to LER 77-11/T1, Preventive Maintenance procedure E-5, 480v Circuit Breakers - Inspection and Testing has been revised to include a test to determine overcurrent trip plunger binding.

With respect to 77-12/3L, the Operations Supervisor, by memorandum dated May 23, 1977, reminded the operators and supervisors of the importance of procedural adherence and meeting the specific requirements of Technical Specifications.

With respect to 77-14/3L, RB-V7 was cycled once weekly for three weeks after cleaning dirt from the air supply solenoid and in-line filter. No subsequent malfunctions were noted.

With respect to 77-18/3L, a Preventive Maintenance procedure has been issued to provide for the vibration measurement program and to establish limits and administrative controls for equipment usage as the established limits are exceeded.

With respect to 77-21/1T, the procedures for sampling (163i) and surveillance (1302-3.1) are being revised to verify proper vacuum and flow exist.

With respect to 77-22/1T, the interim measures to verify pump operability have been implemented in accordance with the licensee's letter of September 8, 1977. The inspector expressed concern over the licensee management controls that had allowed a refueling outage to be completed without implementing the testing, recommended by the NSSS, of the Decay Heat Pumps.

The licensee's representative indicated that spare parts had been ordered, but had not arrived at the completion of the outage. The inspector acknowledged the licensee's concern over disassembling a pump without spares on hand, but also indicated that good engineering practices would have increased the priority of the parts to ensure they were on hand by the end of the outage. This corrective action associated with this LER will be followed up on at a subsequent inspection. (289/77-31-01)

6. Backshift Inspection

This inspection began at 00:01 AM September 25, 1977. During this shift, the inspector observed training startups in the control room and monitored other activities. Activities observed included:

- Control Room indications for reactor building pressure, NaOH tank level, RCS pressure and temperature, and control rod positions