U. S NUCLEAR REGULATORY COMMISSION
OFFIC_ OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-320/80-09

Docket No. 50-320

License No. DPR-73 Priority -- Category C

Licensee: Metropolitan Edison Company

100 Interpace Parkway

Parsippany, New Jersey 07054

Facility Name: Three Mile Island Nuclear Station Unit 2

Inspection at: Middletown, Pennsylvania

Inspection conducted: April 27 - May 31, 1980

Inspectors: R J Conte — 7/17/80
R. Conte, Senior Resident Inspector — date signed

M. Shanbaky — 7/18/1980
M. Shanbaky, Senior Radiation Specialist — date signed

Approved by: A. Fasano — 7/21/80
A. Fasano, Chief, Site Operations Section — date signed
TMI Program Office

Inspection Summary:
Inspection on April 26 - May 31, 1980, (Report No. 50-320/80-09).
Areas Inspected: Routine inspections by NRC TMI Program Office staff of licensee action on previous inspection findings; procedure implementation; selected new and revised procedures submitted for approval; implementation of notification of significant event requirements; and, health physics and environmental areas. The inspection included daily (Monday-Friday) onsite staff coverage with selected backshift coverage.
Results: Of the five areas inspected, four items of noncompliance were identified in three areas (Infractions - failure to implement fire protection measures during open flame cutting in fuel handling building - Paragraph 2; failure to maintain containment integrity - Paragraph 4.b(1); failure to maintain reactor coolant system pressure indication operable - Paragraph 4.b(2); Deficiency - failure to properly report significant events in accordance with 10 CFR 50.72 - Paragraph 5).

DETAILS

1. Persons Contacted

Licensee Representatives

Principal licensee and contractor personnel contacted during this inspection are identified in paragraph 8.

NRC Inspection Participants

The following personnel participated in this inspection.

W. Barley, IE:RI, May 7 - May [illegible], 1980
L. Bettenhausen, IE:RI, May 5 - May 16, 1980
J. Buchanan, IE:HQ, April 29 - May 8, 1980
R. Conte, IE:RI, April 27 - May 31, 1980
A. Fasano, IE:RI, April 27 - May 31, 1980
D. Haverkamp, IE:RI, April 27 - May 31, 1980
W. Millsap, IE:RII, April 27 - April 29, 1980
T. Moslak, IE:RI, May 7 - May 31, 1980
K. Plumlee, IE:RI, April 27 - May 11, 1980
M. Shanbaky, IE:RI, April 27 - May 31, 1980
L. Thonus, IE:RI, April 27 - May 31, 1980

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved (320/80-05-02): NRC to complete review of adequacy of fire protection measures during open flame cutting on March 29, 1980. During an NRC shift tour of the fuel handling building on March 29, 1980, open flame cutting was in progress on the 305' elevation by contract (vendor) personnel. The below listed observations were made:

-- The individuals did not have a permit form as required by Fire Protection Procedure 1410-Y-26, Revision 4, April 23, 1980, Welding, Cutting, Grinding and Open Flamework Procedure for Fire Safety;

-- Ample portable extinguishing equipment was not provided;

-- Sparks were spanning an area of 20-30 feet from the source cutting with flammable boxes within 5 feet and with the cutting done on non-treated wood;

-- The control room was not aware of this evolution; and,

-- There was no documentation of follow-up inspection by the designated firewatch.

Further review of this event revealed that if the permit system was utilized as required by procedure 1410-Y-26 the above inadequacies were to be corrected. Since contract personnel were involved, it appeared that they were not aware of licensee requirements in this area.

This represents noncompliance (infraction level) with Orders of July 2[illegible], 1979, and February 11, 1980, proposed Technical Specification 6.8.1, Regulatory Guide 1.33, Revision 2, Feburary 1978, and Fire Protection Procedure 1410-Y-26 paragraphs 6.1.1 and 6.1.4 (320/80-09-01).

During a subsequent exit interview the inspector stated that this noncompliance was the second within a few months involving contract personnel and the inspector emphasized an apparent need for more training for contract personnel in the area of licensee established procedural requirements. Further, the inspector reiterated the seriousness of a fire in Unit 2 in light of present plant conditions. The licensee acknowledged the comments in this area.

3. Facility Procedures Submitted for Approval

Facility procedures and subsequent revisions, required to be submitted for approval to the NRC as required by Technical Specification (TS) 6.8.2, were reviewed by the NRC TMI Program Office staff. These procedures address the Recovery Operations Plan Implementation (Surveillance Procedures) and Recovery Mode Implementation (Operating Procedures). Detailed review of selected procedures included both health physics and operations aspects with consideration of the following: (1) the procedures, when implemented, would not degrade the containment of radioactive material, jeopardize core cooling, or result in excessive personnel exposures; (2) the technical content of the procedure is adequate to perform the intended evolution.

Composite staff comments on procedures were forwarded to the licensee. Licensee resolution of these comments was acceptable.

4. Procedure Implementation

a. Implementation of selected portions of the following procedures was observed to verify compliance with specific procedural requirements and with established administrative controls for procedure usage:

-- Special Operating Procedure (SOP) R-2-80-16, dated April 17, 1980, RCS (Reactor Coolant System) Pressure Reduction to 100 psig, on May 9, 1980; and,

-- 2104-4.55, Revision 0, April 23, 1980, Reactor Building Entry and Pre-Decon, on May 20, 1980.

In addition, selected portions of the following procedures were reviewed for adequacy with respect to procedural implementation resulting in adverse plant conditions from a human factors/engineering point of view:

-- SOP R-2-80-18, dated April 3, 1980, Temporary Nuclear Sample System Flowpath Verification (post implementation review); and,

-- 2104-4.62; (PORC recommended approval May 9, 1980), Temporary Nuclear Sample System (pre-implementation review).

b. During this review two apparent noncompliance items were identified.

(1) Paragraph 5.1.2 of Operating Procedure 2104-4.55, Reactor Building Entry and Pre-Decon, required the opening of the outer airlock door in accordance with a referenced procedure but neither procedure addressed the shutting of a purge valve (designated "E" valve) on the outer door in the proper sequence. As a result, on May 20, 1980, and upon implementation of procedure 2104-4.55 containment integrity was not maintained during air equalization between reactor building and the airlock through the inner door. This represents noncompliance (infraction level) with the Orders of July 20, 1979, and February 11, 1980, Technical Specification (TS) 3.6.1.1 (320/80-09-02).

(2) In addition, Appendix A, Valve Lineup for Special Operation Procedure R-2-80-18, Temporary Nuclear Sample System Flowpath Verification, required that a system interface valve (SNS-V26) be closed. However, closure of this valve resulted in isolation of the only operable source of reactor coolant system pressure on May 29, 1980. This represents noncompliance (infraction level) with the Orders of July 20, 1979, and February 11, 1980, TS 3.3.3.6 (Table 3.3-10) (320/80-09-03).

In addition, during a pre-implementation review of 2104-4.62, Temporary Nuclear Sample System, which was submitted to the NRC for approval, discrepancies were identified as noted below. The PORC recommended approval on May 9, 1980.

-- Guidance to the operator was lacking. For example a statement "if cooling is needed" was not backed up by a temperature parameter specification", or, "observe level" in a waste container tank was not clarified to indicate that only high/low alarms were available for the observation.

-- System interface required valve positions were not addressed. Additional administrative controls to preclude inadvertent operation was not provided.

-- Prerequisites for system operation prior to sampling were not always complete. The Mini-Decay Heat System operation was not addressed as a prerequisite for sampling that system.

In a subsequent exit interview, the inspector noted that these types of procedural problems are recurrent when major system operating procedures are submitted to the NRC for approval. Also it appeared that the procedure review system was not functioning effectively to guard against such human engineering shortcomings. The licensee acknowledged the inspector's comments in this area.

5. Implementation of Notification of Significant Event Requirements

During the inspection period certain events occurred in which the licensee did not fully meet 10 CFR 50.72, Notification of Significant Events, requirements. This section lists several categories of events that are required to be reported to the NRC Operations Center as soon as possible and no later than one hour by telephone. The specific events are noted below.

-- On May 20, 1980, between 9:00 p.m. and 9:30 p.m., during the reactor building entry procedural implementation, containment integrity was not maintained in accordance with Technical Specification 3.6.1.1 for a period of approximately 5-10 minutes. The NRC Operations Center was not notified until approximately 11:45 a.m. on May 23, 1980, exceeding the one hour limit for notification. This was contrary to 10 CFR 50.72(a)(6).

-- On May 29, 1980, a procedure was implemented and caused the isolation of the only operable source of pressure indication for the reactor coolant system (RCS). The control room operators were unaware of this for approximately 6 hours during which pressure reduction evolutions occurred with the standby pressure control system isolated in one instance (for approximately 1 minute). The NRC Operations Center was not notified. This was contrary to 10 CFR 50.72(a)(3).

The reporting requirements of 10 CFR 50.72 were reviewed with the licensee during a previous inspection (50-320/80-05, Unresolved Item No. 320/80-05-03), and the inspector's finding addressed, in part, apparent operator confusion in the classification of events due to the incorporation of various reporting requirements into the licensee's emergency notification procedures. The specific issues were addressed with licensee management prior to the above events; however, subsequent changes to the licensee's notification system apparently were not effective. The above instances represent noncompliance (deficiency) with 10 CFR 50.72 (320/80-09-04).

6. Health Physics and Environmental Inspection and Review

a. Plant Tours

On a daily basis shift inspectors completed a general plant tour including all control points and selected radiologically controlled areas. Observations included:

-- Access control to radiologically controlled areas;

-- Adherence to Radiation Work Permit (RWP) requirements;

-- Proper use of respiratory protection equipment;

-- Adherence to Health Physics and Operating Procedures;

-- Use of survey meters including personnel frisking techniques;

-- Cleanliness and housekeeping conditions; and,

-- Fire protection measures.

b. Measurement Verifications

The below listed measurements were independently obtained to verify the quality of licensee performance in these selected areas:

-- Radioactive material shipping;

-- Radiological control radiation and contamination surveys; and,

-- Onsite environmental air samples.

No items of noncompliance were identified.

7. Unresolved Items

Unresolved items are findings about which more information is needed to ascertain whether it is an item of noncompliance, a deviation, or acceptable. Unresolved items reviewed during this inspection are discussed in paragraph 2.

8. Exit Interview

On June 4, 1980, NRC representatives met with the licensee representatives (noted below) subsequent to the conclusion of the inspection period. The purpose, scope and findings of the inspection were summarized.

Licensee Representatives

J. Chwastyk, Plant Operations Manager, Unit 2
N. Decker, Jr., Fire Protection Engineer, Unit 2
G. Hovey, Director, TMI-2
G. Kunder, Technical Specification Compliance Supervisor, Unit 2
S. Levin, Maintenance Manager, Unit 2

NRC Representatives

J. Collins, Deputy Program Director, TMI Program Office
R. Conte, Senior Resident Inspector, Unit 2
A. Fasano, Chief, Site Operations Section