

U.S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS
REGION I

RO Inspection Report No: 50-289/74-19 Docket No: 50-289
Licensee: Metropolitan Edison Company License No: CPPR-40
P.O. Box 542 Priority: _____
Reading, Pennsylvania 19603 Category: B
Location: Three Mile Island Unit 1
Middletown, Dauphin County, Pennsylvania
Type of Licensee: PWR 871, MWe (B&W)
Type of Inspection: Routine, Unannounced
Dates of Inspection: April 4-5, 1974
Dates of Previous Inspection: March 26-28, 1974
Reporting Inspector: *S A Folsom* 4/18/74
Seth A. Folsom, Reactor Inspector Date
Accompanying Inspectors: NONE Date

Other Accompanying Personnel: NONE Date
Reviewed By: *William F. Heishman* 1449 030 4/18/74
B. F. Heishman, Senior Reactor Inspector Date

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SUMMARY OF FINDINGS

Enforcement Action

None

Licensee Action on Previously Identified Enforcement Matters

Not Inspected

Design Changes

None

Unusual Occurrences

None

Other Significant Findings

A. Current Findings

1. A carbon steel nut was found loose in the reactor internals at post-hot functional inspection. This item is unresolved. (Details, Paragraph 9)
2. A makeup pump was damaged when it was started without lubrication. This item is unresolved. (Details, Paragraph 10)

B. Status of Previously Reported Unresolved Items

1. The following items were resolved during the inspection:
 - a. Failure of nuclear service river water pumps/motors. (Details, Paragraph 2)
 - b. Seismic mounting of cable trays and conduits. (Details, Paragraph 3)
 - c. Lack of separation of seven electrical circuits beneath HVAC panel. (Details, Paragraph 4)
 - d. Replacement of suppression diodes in 480 - volt breakers. (Details, Paragraph 5)
 - e. Replacement of end caps on overcurrent trip delays in circuit breakers. (Details, Paragraph 6)

- f. Ruptured diaphragm in condensate storage tank. (Details, Paragraph 7)
- g. Pressurizer safety valve documentation. (Details, Paragraph 8)

Management Interview

A management interview was held at the site on April 5, 1974 with the following personnel in attendance:

General Public Utilities Service Corporation (GPUSC)

Mr. S. Levin, Project Engineer, Unit No. 1
Mr. G. L. Roshy, Auditor
Mr. M. J. Stromberg, Site Quality Assurance Auditor
Mr. R. L. Wayne, Senior Quality Assurance Engineer
Mr. J. E. Wright, Quality Assurance Manager

United Engineers and Constructors (UE&C)

Mr. D. C. Lambert, Field Supervisor, Quality Control

The following items were discussed:

- A. The inspector emphasized the importance of prompt reporting to RO:I of incidents per 10 CFR 50.55(e). He stated that on nights or weekends, if the RO:I office telephone answering service did not appear to perform satisfactorily, that the inspector should be called at his home. The home phone numbers of the inspector, senior inspector, and branch chief were furnished to the licensee. The licensee acknowledged this information, and agreed to notify those concerned.
- B. The inspector stated that the following items had been resolved at this inspection:
 - 1. Failure of nuclear service river water pumps/motors. (Details, Paragraph 2)
 - 2. Seismic mounting of cable trays and conduits. (Details, Paragraph 3)
 - 3. Lack of separation of seven electrical circuits beneath HVAC panel. (Details, Paragraph 4)
 - 4. Replacement of suppression diodes in 480 - volt breaker. (Details, Paragraph 5)

5. Replacement of end caps on overcurrent trip delays in circuit breakers. (Details, Paragraph 6)
6. Ruptured diaphragm in condensate storage tank. (Details, Paragraph 7)
7. Pressurizer safety valve documentation. (Details, Paragraph 8)

The licensee acknowledged this information.

- C. The licensee stated that the two items reported to the inspector during the inspection; carbon steel nut found loose in reactor internals, and failure of makeup pump, would be reported in writing within 30 days of the occurrence, in accordance with 10 CFR 50.55(e). The inspector stated that these items were unresolved. (Details, Paragraphs 9 and 10)

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DETAILS

1. Persons Contacted

General Public Utilities Service Corporation (GPUSC)

Mr. J. Barton, Manager, Startup and Test
Mr. W. T. Gunn, Project Site Manager
Mr. R. W. Heward, Jr., Project Manager
Mr. S. Levin, Project Engineer, Unit 1
Mr. P. Levine, Quality Assurance Engineer
Mr. G. L. Kopp, Quality Assurance Specialist
Mr. G. P. Miller, Site Startup Manager
Mr. H. M. Mitchell, Maintenance Supervisor
Mr. D. H. Reppert, Safety and Licensing Health Physicist
Mr. G. L. Roshy, Auditor
Mr. M. J. Stromberg, Site Quality Assurance Auditor
Mr. R. L. Wayne, Senior, Quality Assurance Engineer
Mr. J. H. Wright, Resident Civil Engineer
Mr. J. E. Wright, Quality Assurance Manager

United Engineers and Constructors (UE&C)

Mr. D. C. Lambert, Field Supervisor, Quality Control

2. Failure of Nuclear Service River Water Pumps/Motors

Five categories of difficulties had been encountered in the pre-operational testing of the three nuclear service river water pumps and motors:

- a. Excess vibration
- b. Broken pump shaft
- c. Corroded bearing cooling water filters
- d. Movement of foundation
- e. Cracking of motor bearing support

Each pump had been operated for several months without difficulty. The problems encountered were analyzed, and engineering changes made. At the time of the inspection one pump was in operation, another was operable and on "standby". Repairs to the third pump were underway with completion scheduled for April 7, 1974. The changes made were documented, and appeared to insure future reliable operation. This item is resolved.

1449 034

3. Seismic Mounting of Cable Trays and Conduits

The inspector examined the reinforced suspension and bracing of the electrical cable trays and conduits. The reinforcement was in accordance with the architect-engineer's revised drawings. The licensee's Deficiency Report disposition, and the licensee's Audit Report confirmed that all required seismic reinforcement had been completed. This item is resolved.

4. Lack of Separation of Seven Circuits Beneath HVAC Panel

The inspector examined the modified routing of the seven cables numbered CQ 163, CBE 472, PR 113, RP 114, EA 310, CM 572, and RH 64. The following documentation was also reviewed:

- a. Corrective action memorandum by V. E. Cichocki, dated January 21, 1974.
- b. Disposition verification by D. C. Lambert and R. Liscom, dated March 6, 1974.

This item is resolved.

5. Replacement of Suppression Diodes in 480 - Volt Breakers

The inspector examined the following:

- a. Unusual Occurrence Report No. 3, certifying the replacement of the IN 5404 diodes with 6B20AP10BZ thyrectors, dated April 1, 1974.
- b. Diode replacement report, referencing Deviation Report No. 211, with attached drawing, dated March 28, 1974.

This item is resolved.

6. Replacement of End Caps on Overcurrent Trip Delays in Circuit Breakers

The inspector examined randomly - selected end caps installed in safety-related circuit breakers and found that each had been replaced and tested in accordance with the constructor's letter of March 29, 1974 to the licensee. The test data was also reviewed. This item is resolved.

1449 035

7. Ruptured Diaphragm in Condensate Storage Tank

The inspector examined the interior of Condensate Tank 1B (COV-1B) from the manway rear ground level. An angle-iron guard had been installed to protect the outlet nozzle from clogging, in accordance with the licensee's letter to Dr. D. F. Knuth, dated March 15, 1974. This item is resolved.

8. Pressurizer Safety Valve Documentation

The vendor documentation on the two Dresser 2½" x 6" Pressurizer Safety Valves RC-RV1A and RC-RV1B was examined during the inspection. The documentation included:

- a. Purchase Order (31022Z) with nine Change Orders.
- b. Purchase Specifications OS-187 and PT-11.
- c. Mill certs of castings examined, dated April 9, 1973.
- d. Quality Assurance Data Sheet Package dated August 4, 1971.
- e. Dresser Certification of Quality, including test data, dated June 30, 1971.

No deficiencies were identified. This item is resolved.

9. Carbon Steel Nut Found Loose in Reactor Internals

The licensee reported the following during the inspection. "On April 3, 1974, during post-hot functional inspection of the reactor internals a 3/4" carbon steel nut was found laying on top of the lower grid assembly at the interface of core positions L-2 and M-3. Photographs of the nut and the surrounding area were taken before removal of the nut from the internals. A detailed inspection of the core internals did not reveal any damage. Additional inspections and investigations are in progress." The licensee stated that this would be reported, per 10 CFR 50.55(e). This item remains unresolved.

10. Makeup Pump Damaged by Lack of Lubrication

During the inspection the licensee reported that on April 4, 1974 the Makeup Pump A had been started without required lubrication, apparently due to operator error. The bearings required replacement. Repairs were scheduled for completion by April 10, 1974. This item is unresolved.