

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

IE Inspection Report No: 50-320/77-14

Docket No: 50-320

Licensee: Metropolitan Edison Company

License No: CPPR-66

Box 542

Priority: --

Reading, Pennsylvania 19603

Category: B

Safeguards Group: --

Location: Middletown, Pennsylvania (TMI-2)

Type of Licensee: PWR 2772 Mwt (B&W)

Type of Inspection: Routine, Unannounced

Dates of Inspection: Apr. 1 6-8, 1977

Dates of Previous Inspection: March 31, 1977

Reporting Inspector: *T. Rebelowski*
T. Rebelowski, Reactor Inspector

7 May 10, 1977
DATE

Accompanying Inspectors: NONE

DATE

DATE

DATE

DATE

Other Accompanying Personnel: NONE

DATE

Reviewed By: *E.C. McCabe, Jr.*
E. C. McCabe, Jr., Chief, Nuclear Support Section No. 1,
Reactor Operations and Nuclear Support Branch

5/10/77
DATE

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SUMMARY OF FINDINGS

Enforcement Action

Deficiency

Contrary to 10 CFR 50, Appendix B, Criterion XIII, and Procedure QC 27-2, Rev. 2, the diesel generators' stator covers were not in place on April 7, 1977, and metal drilling chips were introduced into both stators of the generators. (Item 77-14-02: Detail 7.b)

Licensee Action on Previously Identified Enforcement Items

Not inspected.

Design Changes

Not inspected.

Unusual Occurrence

The licensee identified a construction anomaly in the Auxiliary Building elevator and enclosed stairway (77-14-03). (Detail 6)

Other Significant Findings

A. Acceptable Areas

(These are areas which were inspected on a sampling basis and findings did not involve an Item of Noncompliance, Unresolved or Open Item).

1. Preoperational Test Procedure Review. (Detail 4)
2. Hot Functional Test Program Review. (Detail 5)

B. Unresolved Items

(These are areas which further review or more information is required to determine whether or not the items are acceptable).

77-14-04 - Diesel Maintenance and Test Program. (Detail 2)

C. Status of Previously Unresolved Items

The following items have been resolved:

1. 77-01-02 - Air Line Cleanliness. (Detail 8.a)
2. 76-07-01 - Station Batteries Charge and Discharge Test, TP401/3. (Detail 8.b)
3. Inspection 50-320/76-03, Detail 13, Pressurizer Relief Valve Settings. (Detail 8c)

D. Open Items

(The items designated "Open Items" are inspector identified concerns in "Draft" procedures).

77-14-01 - R.C. System Hydrostatic Test Draft Procedure. (Detail 3)

Management Meeting

A management meeting was conducted with Mr. R. Toole, Test Superintendent on April 6, 1977. The inspector summarized the purpose and scope of the inspection.

At the conclusion of the inspection on April 8, 1977, a management meeting was held onsite with the following personnel in attendance.

Mr. R. Fenti, QA Auditor
 Mr. S. Levin, Project Engineer
 Mr. M. Stromberg, QA
 Mr. R. Toole, Test Superintendent

The items discussed included.

- A. Item of Noncompliance on Cleanliness Control. (Detail 7)
- B. Preoperational Test Procedure Review. (Detail 4)
- C. Hot Functional Test Procedure Review. (Detail 5)
- D. Reactor Coolant Hydrostatic Test Procedure Review. (Detail 3)
- E. Unusual Occurrence. (Detail 6)
- F. Pressurizer Relief Valve Testing. (Detail 8.c)
- G. Diesel - Status of Testing. (Detail 2)

DETAILS

1. Persons Contacted

Mr. J. Chwastyk, Shift Supervisor, Met Ed
Mr. R. Fenti, QA Auditor, GPU
Mr. R. Fountain, Auxiliary Operator, Met Ed
Mr. C. Gatto, Engineer, GPU
Mr. T. Hawkins, Assistant Startup Test Superintendent, GPU
Mr. B. Kauter, Startup Engineer, UE&C
Mr. S. Levin, Project Engineer
Mr. M. Nelson, Technical Engineer, GPU
Mr. I. Porter, Engineer, GPU
Mr. D. Rhyne, Group Leader Mechanical Engineer
Mr. R. Toole, Test Superintendent, UE&C

2. Diesel Status

Reference: (a) RO Bulletin 74-16
(b) 77-10-02 Retest Requirements
(c) Colt Industries letter dated February 17, 1977

The licensee has issued an approved Special Procedure 51.19 Diesel-Generator Initial Operational Test. The content of the procedure addressed the following areas.

Vendor Field Modification and Inspection of Unit 2 Diesel Generator Units

The procedure includes the following work items:

- a. Inspection of piston insert for machining error. (Identified in Reference (a))
- b. Fuel Header Crossover connection replacement.
- c. Replacement of cam rollers.
- d. Vertical drive hub metallurgy inspection.
- e. Gasket replacement.

Items b through e are identified in reference (c).

The scheduled completion of the above work items is prior to pre-operational testing of the Diesels. Additional testing at full load and examination of replacement part areas have been scheduled. (Reference b) The satisfactory completion of testing will be reviewed during the inspector's review of the test results evaluation. (77-14-04)

3. Reactor Coolant System Hydrostatic Test

Reference: TP 200/4, MTX 147.5 (Draft Procedure)

The inspector reviewed the "Draft" of procedure TP 200/4, MTX 147.5, Reactor Coolant System Hydro Test. The procedure addressed the guidelines of USAS B 31.7-1963 under Paragraph 1-737.

The areas addressed in this procedure included communications during testing, designation of "official" and backup gauges, specifications for reactor coolant versus metal temperatures, established pre-requisites and temporary jumper installation.

The inspector identified the following areas of concern:

The range of official and backup gauges was inconsistent with the code.

The requirements for jumpers and attachments to systems required for testing did not specify pressure ratings of the equipment.

The criteria for minimum temperature for test media and corresponding vessel temperatures was not established.

The access list should include NRC inspectors access to official hydro gauges.

A limiting number of RC Pump starts within certain time frames was not included in the procedure.

A reference to the Thermal Expansion Test readouts during hydrostatic test was not documented.

The licensee stated that the above concerns would be addressed in the approved procedure. This is Open Item 77-14-01.

4. Preoperational Test Procedure Review
TP 330/4, MTX 38.6, Integrated CRD System Test

The inspector reviewed the approved procedure for ANSI 18.1 conformance and technical content. The procedure addresses:

- Auxiliary and Regulated Power Supplies;
- Accuracy of Relative and Absolute position Indication circuits;
- Operation of individual and group control;
- Interlocks and alarms associated with CRDs; and,
- Rod speed in the Run mode for each regulating power supply.

The inspector's concerns were resolved. No inadequacies were identified.

5. HFT Procedure 600/17, Control Rod Drive Operational Test

The inspector reviewed the licensee's approved procedure 600/17, CRD Operational Test, which addresses the daily exercise of CRDMs and flushing of CRDM buffer cylinders. No inadequacies were identified.

6. Unusual Occurrence - Construction Anomaly

The licensee reported to the inspector an occurrence that will be reported under 10 CFR 50.55e. The construction of Auxiliary Building Stairwell, enclosed staircase and block wall around WDS-T-2 have been constructed not to the plan. An investigation by the licensee is presently underway. This item is unresolved. (77-14-03)

7. Plant Tour

a. General

The inspector performed three tours of work areas outside of normal working hours. The tours covered activities in the control room, main feed pump piping realignment, diesel generator room ventilation modification, radwaste storage areas, ion exchange areas and makeup pump rooms, steam generator and pressurizer areas, and the 480 V motor control center.

The turbine building areas were adequately cleaned. One area indicated the need for further attention to housekeeping; the area adjacent to the motor control center had an accumulation of debris (unpacked cartons, workers lunch refuse) and represented a potential fire hazard to safety-related equipment. The licensee stated that clean up personnel normally attend all areas on a two to three day cycle. The inspector stated that the amount of attention given to housekeeping should be reviewed for the need of increasing efforts in that area.

b. Diesel Generator Room - Failure to Maintain Closures

Reference: (1) Quality Control Procedure 27-2, Prevention of Foreign Material Entry and Control of Tools
(2) FCR-2340.1R1, Diesel Generator Building Sheet Metal Work

The licensee is presently modifying the ventilation system in the Diesel Generator Buildings. The modification includes the installation of a new run of sheet steel ventilation ducting, taking a direct suction off the left and right generator upper covers. FCR #2340.1 documents the requirements for the controls during the modifications in Section 3.9, Cleaning and Cleanliness, requirements per AE Procedures and Section 3.13, Contractor Quality Control Requirements.

During the inspector's tour of the working area in D.G. Room #2, on April 7, 1977, at 0630 hours, an opening to the generator to which a sheet metal transition piece will be attached, was found unprotected. The inspector observed metal chips in the generator stator area.

The licensee was informed of findings and did examine the area. The licensee stated that both generators would be cleaned prior to operation. (The inspector had noted proper closure during a previous inspection).

This failure to maintain closures of safety-related equipment per QC 27-2 and 10 CFR 50, Appendix B, Criteria XIII, Rev. 2, is considered an Item of Noncompliance categorized as a Deficiency. (77-14-02)

8. Previously Identified Unresolved Items

The following previously identified unresolved items are resolved:

a. 77-01-02 - Cleanliness of Air Systems

The inspector witnessed the sampling of certain terminals of the instrument air system. These sample points were determined at the time of testing by the inspector. Observations by the inspector confirmed the licensee's cleanliness requirements in the area of water and oil content of sample points. All sampled areas were satisfactory. This item is resolved.

b. 76-07-01 - TP 401/3, Station Batteries Charge and Discharge Test

The licensee has revised the test procedure to include precautions for personnel entry into the battery rooms on an indication of a high hydrogen concentration in Section 6.5 of the procedure and Section 8 documents the use of warning signs. This item is resolved.

c. Pressurizer Relief Valve Settings

Reference: Inspection 50-320/76-03, (Detail 13)

The licensee has scheduled the testing of pressurizer relief valves RC-R-1A and RC-R-1B. The testing will be performed per approved Work Request Procedure (April 6, 1977) which incorporates the standard administrative format.

The method of testing will require the safety valve bodies and the test gas medium to be at specified temperature plateaus that will approach normal ambient conditions. The inspector identified no inadequacies in the review of the procedure. The licensee stated that, prior to testing, NRC Region I, will be notified. This test scheduling resolves the referenced unresolved item.