

U. S. ATOMIC ENERGY COMMISSION
REGION I
DIVISION OF COMPLIANCE

Report of Inspection

CO Report No. 289/70-7

Licensee: Metropolitan Edison Company (Met Ed)
(Three Mile Island Unit No. 1)
License No. CPPR-40

Date of Inspection: October 8-9, 1970

Date of Previous Inspection: August 26-28, 1970

Inspected by: D. M. Hunnicutt 10/29/70
D. M. Hunnicutt, Reactor Inspector (Principal) Date

R. L. Brown 10/30/70
R. L. Brown, Reactor Inspector (Construction) Date

Reviewed by: E. M. Howard 10-30-70
E. M. Howard, Senior Reactor Inspector Date

SCOPE

A routine, announced inspection was made of Unit No. 1, one of the two 2535 Mwt pressurized water reactors (B&W) under construction on Three Mile Island near Middletown, Pennsylvania. The inspection effort was directed toward an appraisal of the performance of the licensee-contractor effort of various items listed in PI 3800/2 and included an inspection of Attachment C - Containment "Concrete" (4600) and "Welding" (4800), Attachment E-Other Class I Structures, "Reactor Vessel Support" (5400) and Attachment J - Reactor Vessel (4905).

SUMMARY

Safety Items - None

Nonconformance Items - None

Other Significant Items - None

Status of Previously Reported Problems - Identifying tags for electrical systems are being protected to reduce "fade-out". (See paragraph G.2)

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The CONAM Laboratory NDT procedures have been qualified according to NAVSHIPS 250-1500 requirements to fulfill the FSAR requirement, Section 6.1.2.4 and USAS B 31.7, Appendix B-110.1 commitments (CO Report No. 289/70-6, paragraph E). (See paragraph G.1)

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Management Interview - An exit interview was held with Messrs. Hreczuch, Fant, and Lambert on October 9, 1970. The inspector stated that the present steam generator inspection schedule of once per month appears to be lengthy and that the inspection requirements should be covered by an adequate procedure. No procedure was found to exist. Mr. Hreczuch stated the comments would be evaluated and appropriate action taken.

The inspector stated that the reactor vessel and the reactor vessel head did not have storage inspection log(s) or inspection forms to record inspection results.

The inspector stated that no inspection has been performed on the reactor vessel since the receiving inspection on September 25, 1970. Mr. Hreczuch stated that an inspection would be performed in the near future as required by the appropriate procedure and that an inspection form would be available for review during the next inspection at the site.

Concrete - The inspectors performed a review of the QC system in accordance with Attachment C - Containment, "Concrete", PI 3800/2. The inspection covered items 4605.04.e.2, 4605.06.a.8, 4805.03, 4805.04.e.3, 4805.04.g.3, g.4 and g.5. The procedures, instructions and specifications are in agreement with commitments in the FSAR. No deficiencies or omissions in procedures and record keeping related to concrete sampling, testing, rebar splicing or placement were observed during the inspection.

Reactor Vessel Support (RVS) - The inspector performed a review of the QC system for the RVS in accordance with Attachment E - Other Class I Structures, "Structures and Supports", PI 3800/2. The inspection covered items 5405.03, 5405.04.b.1 through and including f.5, 5405.05.a.1, a.2, and a.3, and 5405.06.a.2 and a.3. The procedures, instructions and specifications are in agreement with commitments in the FSAR. No deficiencies or omissions in procedures or record keeping related to materials, testing, handling, installation or implementation of QC inspections were observed during the inspection.

Reactor Vessel - The inspector performed a review of items 4905.05.a.1, a.2, and a.4 in accordance with Attachment J - Reactor Vessel, PI 3800/2.

The reactor vessel has been in storage since September 25, 1970, when receiving inspection was performed. No inspection has been performed since. UE&C Procedure NCP-5, Revision 0, states that the desiccant protection shall be monitored approximately every two weeks and recorded on "Periodic Component Inspection", Form SF-SU-113.

Mr. Hreczuch assured the inspector that the inspection would be performed in the near future and that an inspection form (SF-SU-113) would be at the storage site for inspection during the next routine site inspection.

The receiving inspection report indicated that three nozzles (1-14 inch core flooding and 2-28 inch reactor coolant) had been slightly marred during transit. These nozzles are scheduled to undergo visual and dye penetrant examination by B&W on October 12, 1970.

A re-audit was performed under PI 3800/2 of those items relating to "Other Class I Structures" which included 4805.04.a.1 through g.2. Results of this audit was consistent with the previous audit with no deficiencies found.

DETAILS

A. Persons Contacted

Met Ed

- Mr. Gene Hreczuch, Construction Engineer
- Mr. W. Shepard, Resident Engineer (Mechanical and Civil)
- Mr. L. Lundstrom, Quality Assurance

UE&C

- Mr. J. E. Fant, Site QC Manager
- Mr. David Lambert, QA Inspector
- Mr. Paul Dailey, QC Engineer

B. Construction Status

Mr. Hreczuch estimated that Unit No. 1 was approximately 52% complete, based on man hours expended.

C. Grinnell Company Audit by Met Ed

Mr. L. Lundstrom, Met Ed QA, performed an audit of the Grinnell Company, Warren, Ohio, on October 8, 1970. Mr. Lundstrom stated that this audit revealed several discrepancies, including certifications misfiled, omissions in certification, and incomplete records.

D. Grinnell Documentation

Mr. Hreczuch stated that Grinnell Company does not submit certifications until the contract has been completed. The inspector stated that failure to have adequate certification prior to installing a component is in nonconformance with Appendix B, 10 CFR 50. Mr. Hreczuch stated that Met Ed has discussed this problem with Grinnell but has not resolved the problem.

E. Major Components

The following major components have been received at the construction site:

1. One of the two steam generators. The second steam generator is scheduled to arrive at the construction sit about December, 1970.
2. The reactor vessel and reactor vessel head.
3. The stator, high pressure and both low pressure turbines, including casings and installation hardware, have been placed in the turbine hall. Erection and installation of these components is in progress.

F. Tendon Grout

The inspector requested information on the type of grout and other pertinent information concerning grouting around the containment vessel tendons. Mr. Hreczuch stated that GAI has not completed a study of this item and that the information was not available at that time.

G. Followup Items (PI 3800/1, N-14)

1. NDT Procedures*

Mr. Hreczuch and site records indicated that the CONAM Laboratory NDT procedures have been qualified according to NAVSHIPS 250-1500 requirements. During a previous inspection, the inspectors had found that the CONAM procedures had not been qualified as required by the FSAR, Section 6.1.2.4 and USAS B 31.7, Appendix B-110.1. This item is considered to be resolved.

2. Identifying Tags for Electrical Systems**

Messrs. Kopp and Fant stated that a new method for preserving identification tags has been developed to reduce "fade-out". Paper tags are now filled out with india ink, sprayed with "krylon" to water proof the tag and the tag is then encased in a plastic envelope and the envelope folded to assure protection from the elements. The encased tag is then securely attached to the item identified.

H. DRL and Consultant Site Visit

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Drs. N. W. Newmark and W. J. Hall, Consultants to DRS, and D. Ross, DRL, visited the construction site on October 8, 1970. The purpose of the visit was to acquaint Drs. Newmark and Hall with the facility and to observe construction related to seismic design. The inspector accompanied the Consultants and Mr. Ross on the plant tour conducted by Met Ed personnel. The inspector attended an informal meeting held subsequent to the plant tour in which topics of interest to the Consultants and DRL were discussed with Met Ed and the site AE.

*CO Report No. 289/70-6, paragraph E.

**CO Report No. 289/70-6, paragraph H.2.