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

Report of Inspection

CO Report No. 286/71-2

Licensee: Consolidated Edison Company
Indian Point 3
License No. CPPR-62
Category A

Date of Inspection: April 6 and 7, 1971

Date of Previous Inspection: January 26-28, 1971

Inspected by: R. F. Heishman
R. F. Heishman, Reactor Inspector (Principal)

5-6-71
Date

Reviewed by: E. M. Howard
E. M. Howard, Senior Reactor Inspector

5-6-71
Date

Proprietary Information: None

SCOPE

An announced limited inspection of the 3023 Mwt pressurized water reactor under construction near Buchanan, New York, was made on April 6 and 7, 1971. The inspection was limited to selected elements of PI 3800/2. These areas included Attachment C (Concrete Records), Attachment E (Refueling Canal Liner), and outstanding inspection items.

SUMMARY

- Safety Items - None
- Nonconformance Items - None
- Unusual Occurrences - None
- Status of Previously Reported Problems

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1. Reactor Vessel Lifting Beam NDTT (CO Report 286/70-6)

The method of ensuring that the lifting beam was above 70°F as required by the handling procedure was not procedurally defined nor specified at the time of the last inspection. The inspector reviewed documentation which indicated that the lifting beam had resistive heaters affixed and was covered with insulation. The temperature of the lifting beam was monitored for surface temperature and power to the resistive heaters. Records reviewed indicated that the surface temperature was maintained above 70°F during the lifting operation. This item is considered resolved.

2. Test Instrument Calibration (CO Report 286/70-2)

The previously reviewed Wedco procedure for calibration of test instruments did not provide adequate information regarding frequency of calibration. The inspector reviewed a revised procedure which provided additional requirements including frequency of calibration which appears adequate. This item is considered resolved.

3. Reactor Vessel Lifting Incident (Inquiry Memo 286/71-A and CO Report 286/71-1)

The inspector reviewed the progress of the investigation into the reactor vessel lifting incident. Current information indicates the vessel inspection is complete and test data is being evaluated. Preliminary indications are that the vessel was found acceptable with no damage sustained during the incident. The final report is expected to be available on or about May 1, 1971. The investigation of the cause of the crane failure is essentially complete, with the failure of the pinion gear bracket to base plate welds and a severed cable having been established as causative factor; however, a determination has not been made relative to which failure occurred first. Sections of the cabling have been destructively tested and one such test by U. S. Testing Company for the licensee indicates the breaking strength of the cable to be 124,388 pounds. No minimum physical strength nor reference to codes or standards was specified on the purchase documents; however, page 23 of Federal Specification RR-W-410a, specifies nominal breaking strength of uncoated wire rope, Type I, General Purpose, Class 3, improved plow steel to be 123,000 pounds for 1-1/4 inch diameter 6 x 37 strand wire rope. The crane trolley assembly has been returned to the manufacturer (Whiting Company) for disassembly, inspection, and rebuilding. Wedco is providing full time vendor surveillance at the Whiting Company plant. The licensee informed the inspector that complete documentation is being maintained of the rebuilding and will be available for review on site prior to load testing of the crane. The licensee estimates the crane will be reassembled and ready for testing on or about May 5, 1971. The investigation is being documented on quality control check lists in accordance with detailed procedures written by Wedco with the concerned contractors concurrences.

The inspector reviewed correspondence between Wedco and Whiting regarding the load testing of the reassembled crane. The details of the testing have not been finalized; however, the testing is scheduled to include the following:

- a. Functional checks, electrical and mechanical.
- b. Load testing utilizing 70 ton load and 4-cable reeving on the hook (cable test).
- c. 460 ton load test utilizing the reactor vessel on the shipping skid in the horizontal position as the test load. Shoring will be used to allow no more than six inches clearance between the load and the decking. CO:1 will review the crane testing procedures prior to the installation of the reactor vessel.

Other Significant Items

1. An audit of concrete records was performed in accordance with PI 4600, paragraph 4605.05.a.1 through and including 4605.05.b.7.c. No significant deficiencies were identified.
2. Review of the records pertaining to the refueling canal liner was performed in accordance with PI 4805.05. Records indicated that work performance was in accordance with the FSAR and applicable codes and standards.

Management Exit Interview

A management exit interview was held on April 7, 1971, at the construction site. The following personnel were in attendance.

Mr. J. A. Corcoran, Site Superintendent, Con Ed
Mr. E. J. Dadson, QA Engineer, Con Ed
Mr. F. M. Matra, IP-3 Project Superintendent, Con Ed

The following significant items were discussed.

The inspector stated the answer to the February 12, 1971 CDN was deemed inadequate by CO:I and has been forwarded to CO:HQ for further action. The areas of inadequacy related to the Quality Control Releases (QCR's) which did not provide information in sufficient detail to determine the quality of the item.

Mr. Corcoran acknowledged the comment and stated that Westinghouse and Con Ed had reviewed the position stated the answer to the CDN and considered it adequate.

The inspector stated the planned load testing of the polar crane using the reactor vessel on its shipping skid as the test load appeared to be a significant risk.

Mr. Corcoran stated Con Ed had not approved the load testing procedures. In fact, Westinghouse had not submitted the plan for load testing to Con Ed for review at the time of the inspection. The inspector requested the load testing procedure be made available for CO:I review prior to installation of the reactor vessel. Mr. Corcoran stated the inspector would be informed of the schedule for load testing of the crane.

The inspector stated the audit of concrete records indicated no significant deficiencies and the records of the refueling canal liner installation appeared to be in accordance with the FSAR and applicable codes and standards.

DETAILS

A. Persons Contacted

The following personnel, in addition to those listed in the exit interview, were contacted during the inspection.

Con Ed

Mr. R. M. Schuster, QC Engineer (NDI)

Wedco

- Mr. W. Diebler, Manager, Site QC
- Mr. F. Hayard, QC Engineer, Piping
- Mr. C. Bliesener, Quality Planning Engineer
- Mr. S. M. Roberts, Reliability Engineer
- Mr. J. Gaspauch, QC Engineer (Civil Structural)

U. S. Testing

Mr. C McDonnell, Project Manager, Indian Point

McCormack-Champion Company

- Mr. R. Gerdoney, Welding Foreman
- Mr. S. Farrell, General Foreman, Boilermakers

B. Status of Construction

The licensee reported the status of construction to be approximately 49% complete.

Consolidated Edison Company
Indian Point 3

Feeder Report

CO Report No. 286/71-2

Date of Inspection:

April 6-7, 1971

Feeder Report by:

R. F. Heishman
R. F. Heishman, Reactor Inspector (Principal)

5/26/71
Date

SCOPE

This report covers the detailed review of the inspection points in the provisional instructions for Attachment C - Containment, paragraph 4605.05.a.1 through and including 4605.05.b.7.c, and Attachment E - Other Class I Structures (Refueling Canal Liner), paragraph 4805.05 (appropriate sections).

SUMMARY

No significant deficiencies were identified in the review of concrete records. Retrievability of records was adequate and the required documentation was available.

Review of the available records pertaining to the refueling canal liner was performed in accordance with PI 4805.05. Records indicated that work performance was in accordance with the FSAR and applicable codes and standards.

DETAILS

Attachment C - Containment

CONCRETE (4600)

Record Review (4605.05)

1. Record Review Items (4605.05.a)

a. Frequency and Results of Strength Tests on Concrete Cylinders and Rebar Splices (4605.05.a.1)

Records indicate six cylinders per 100 cu. yds. or part thereof per day are being made and tested with acceptable results in accordance with the specification.

b. Frequency and Results of Slump Tests (4605.05.a.2)

Concrete is being slump tested from each truck and the results documented on the truck batch ticket. Slumps greater than five inches are rejected.

c. Changes in Quality Assurance Program (4605.05.a.3)

No change.

2. Material Selection Tests and Records (4605.05.b.1.a)

a. Aggregate Test Records (4605.05.b.1.a)

Suppliers have not changed since qualifying test. Gradation tests in accordance with ASTM C-33 are conducted. Documentation of tests reviewed did not indicate significant deficiencies.

b. Water Quality Tests (4605.05.b.1.b)

Detailed water analysis reports were reviewed. No deficiencies were found.

c. Cement Tests (4605.05.b.1.c)

Certificates of compliance on cement were reviewed for conformance with ASTM requirements. No deficiencies were noted.

3. Mix Designs Are Being Adhered To (4605.05.b.2)

Documentation relative to mix designs appear adequate. Records indicating use of required mixes were reviewed and no deficiencies were found.

4. Batch Plant Equipment Calibration (4605.05.b.3)

Batch plant calibrations are accomplished by the local N. Y. Bureau of Weights and measures. No frequency is specified in the procedures or specification; however, records indicate the last calibration was performed December 22, 1970. Previous calibration was July 1970.

5. Temperature and Delivery Time Requirements Are Being Met (4605.05.b.4)

Temperature limits are 50 - 90°F in the forms. Batch tickets indicate temperature and delivery times to be within limits.

6. Curing Procedures Are Being Followed (4605.05.b.5)

Curing records were reviewed to indicate specified requirements were being met. The check list references the applicable procedures.

7. Special Concrete (4605.05.b.6)

Special grout requirements are being followed

8. Records and Controls Discussed Are Being Followed (4605.05.b.7)

a. Location Ready for Placement (4605.05.b.7.a)

Signoff sheets for placement, signed by electrical, mechanical, structural and QC were reviewed and no deficiencies were found.

b. Proper Mix Design Requested and Used (4605.05.b.7.b)

Records of pour requested from WEDCo construction to Pittsburgh Testing Laboratory were reviewed indicating the procedural requirements were being met.

Attachment E - Other Class I Structures
Refueling Canal Liner

WELDING (4800)

Record Review (4805.05)

1. Nondestructive Testing Records (4805.05.a.3)

No NDT has been accomplished to date.

2. Defect Removal Verification (4805.05.a.4.b)

QC reports were reviewed which indicated visual inspection to verify removal of defective welds which were rejected by QC for excessive reinforcement.

3. Acceptance of Repair (4805.05.a.4.f)

QC reports reviewed indicated acceptance of repairs on welds discussed above.

4. Records of Welding Material Control (4805.05.a.5)

- a. Issue Control and Identification (4805.05.a.5.a); Post-Issue Control of Temperature and Moisture (4805.05.a.5.b); Disposition of Issued but Unused Materials (4805.05.a.5.c); and Pre-Issue Storage Conditions (4805.05.a.5.e)

Control

WEDCo Electrode/Procedures WD-WECP-(60) specify the control of issuance and return of unused welding materials. All welding material is verified for compliance with purchased documents prior to release for storage in welding materials warehouse. Issuance of material is by withdrawal request form, stating the type, size, amount and signed by the welding foreman. Issued electrodes are maintained in portable ovens. Receiving reports, withdrawal slips and audit reports were reviewed to indicate compliance with the requirements. No deficiencies were noted.