

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

Report of Inspection

CO Report No. 286/70-3

Licensee: CONSOLIDATED EDISON COMPANY
Indian Point No. 3 (IP-3)
Construction Permit No. CPPR-62
Category A

Dates of Inspection: March 24 and 25, 1970

Dates of Previous Inspection: January 27 and 28, 1970

Inspected by: *R. F. Heishman* 5/7/70
R. F. Heishman, Reactor Inspector Date

Reviewed by: *R. T. Carlson* 5/7/70
R. T. Carlson, Senior Reactor Inspector Date

Proprietary Information: None

SUMMARY

The status of construction was reported by the licensee to be 25% complete.
(Section II A.)

The UE&C site QC organization has changed by the replacement of the Field Supervisor. (Section II B2.)

The Wedco QA plan has been written and implemented. (Section II B3)

Concrete batch plant operations have resumed at the primary batch plant at Verplanck, New York. (Section II C1.)

Concrete strength results from the substitute batch plant indicate adequate concrete.
(Section II C2.)

A small amount of surface cracking in the containment floor slab and Primary Auxillary Building, and a possible honeycomb area in the biological shielding has been discovered. Evaluation and repair is in progress. (Section II C3.)

The containment liner out-of-round problem is being evaluated by the designers.
(Section II D.)

Follow up on QC procedures indicated correction of previously identified deficiencies. (Section II E.)

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DETAILS

I. Scope of Visit

A routine, announced inspection was made of the 3023 Mwt pressurized water reactor (Indian Point No. 3) under construction at Buchanan, New York. The purpose of the inspection was to follow up on items previously identified* as part of the initial quality assurance inspections.

The following persons were contacted during the inspection:

Consolidated Edison Company (Con Ed)

Mr. F. D. McElwee, Resident Construction Manager
Mr. J. A. Corcoran, Site Superintendent
Mr. G. J. Dadson, QA Engineer
Mr. F. M. Matra, IP-3 Project Superintendent
Mr. R. M. Schuster, QC Engineer (Welding)

Wedco Corporation (Wedco)

Mr. M. L. Snow, Manager, QA and Reliability
Mr. T. A. Lawson, Manager, Site Quality Control
Mr. S. M. Roberts, Reliability Engineer

United Engineers and Constructors (UE&C)

Mr. R. Mesche, Field Supervisor, Quality Control
Mr. J. Gasparick, QC Inspector (Civil Structural)

II. Results of Visit

A. Status of Construction

The status of construction is reported by the licensee to be 25% complete. The polar crane wall has been erected to the final elevation in two opposite quarter sections and the rails are being installed. The polar crane is being assembled and will be installed as the remaining portion of the wall is being formed and completed. Concrete has been poured in the reactor pit wall.

Con Ed has authorized overtime for some crafts on site and construction is progressing at an accelerated rate. The craft labor on unit No. 3 is reported by the licensee to be approximately 475 - 500 men/day.

B. Administration and Organization

1. Con Ed

An administrative clerk has been added to the licensee's staff which appears to have reduced the administrative backlog.

2. UE&C

Mr. Ray Mesche has replaced Mr. J. Fant, who has departed the site, as Field Supervisor Quality Control. Mr. Mesche has previously been employed in QC at Dresden units 2 and 3. The UE&C QC organization on site appears to have regained the previously displayed enthusiasm found lacking during the last inspection*. An additional records clerk has been added to the UE&C QC staff.

3. Wedco

The Wedco QA organization is functioning and has moved all QC functions (Wedco, UE&C, PTL) into the same building for better control and communication.

The Wedco Quality Assurance Plan, reported previously* as the QA Manual, has been approved by Wedco and implemented. Con Ed is reviewing the plan and plans to offer comments but no approval is required. The QA Plan consists of policies, responsibilities, organization and the broad scope of the Wedco Quality Assurance Program. The intent as expressed by Mr. Snow is to continually add to this plan with detailed procedures. Several of these procedures have been written, approved, and implemented as discussed in Section II.E. of this report. The Wedco QA Plan is an addition to the requirements of the application and appears to be a well developed coordination of the various levels of quality control.

Wedco has approved in writing the UE&C quality assurance procedures.

C. Concrete (4600)

1. Implementation of QA Program (4605.03)

The previously reported* problem of use of a substitute batch plant at Tarrytown, New York has been solved by repair of the primary batch plant at Verplanck, New York and subsequent return to the supplying of concrete from the Verplanck batch plant. A new survey was made by Pittsburgh Testing Laboratories prior to operation. The inspector audited the records of this survey and found them in order.

The written audit report of the Tarrytown batch plant which was not available during the last inspection* was audited by the inspector.

Wedco has established plans for providing a sprinkling system for aggregate at the batch plant during the summer months when concrete high temperature can be a problem. This is in addition to a general upgrading of the batch plant implemented upon resumption of operations on February 24, 1970.

2. Followup Record Review (4605.05.a.1.)

Concrete strength test results were audited for the 28-day breaks on concrete received from the Tarrytown batch plant. The average strength was well above the required strength; i.e., 3,000 psi concrete averaged 3740 psi.

3. Other Significant Items

Quality control records showed three items of concern regarding concrete:

- a. The QC inspector discovered a slight crack in the floor slab at elevation 34 feet in the Primary Auxiliary Building (PAB). The crack is visible from below the slab but not from above.
- b. Several surface cracks in the containment floor slab (3 feet long) at the 46 foot elevation were discovered by the QC inspector.
- c. The QC inspector discovered an area ($\approx 2' \times 2'$) of possible honeycomb in the biological shielding at the 54 foot elevation.

The established system for evaluation and repair of the above items is in progress. CO:I will review the results during subsequent inspections.

D. Structures and Supports (5400)

1. Observation of Work Performance (5405.06.a.2.)

The previously identified* problem of containment liner out of round has not been solved. Action to date includes surveys by CB&I, UE&C, Wedco and Con Ed. A repair procedure has been submitted by CB&I to UE&C for approval. An engineering evaluation is in progress and the results will be obtained during subsequent inspections. This item was reportedly discussed with DRL informally during a meeting in January, 1970. Con Ed informed the inspector that no commitments were made at that time and suggestions made by DRL are being considered during the evaluation. A "hold-order" has been given to preclude the pouring of concrete in the exterior wall pending satisfactory resolution of the problem. CO:I will continue to follow this matter.

E. Followup Actions

This portion of the inspection report is a followup to the in-depth quality assurance inspection made November 17-21, 1969** and January 28-29, 1970*. For continuity of reporting, the results of this part of the inspection are tabulated under the appropriate criteria utilizing only those criteria requiring followup action.

*CO Report No. 286/70-2.

**CO Report No. 286/69-9.

1. Criterion V - Instructions, Procedures and Drawings

a. Discussion

(1) Westinghouse, Wedco and UE&C

Wedco has written and implemented a procedure for control of shop drawings and field change notices which covers all site operations. The procedure assigns the responsibilities and methods to be used for control of field change notices including drawings.

b. Findings

(1) Westinghouse, Wedco and UE&C

A system of instructions, procedures and drawings regarding control of shop drawings and field change notices has been implemented which meets the commitments in the application and the intent of Appendix B to 10 CFR 50. This item is considered resolved.

2. Criterion VI - Document Control

a. Discussion

(1) Westinghouse, Wedco and UE&C

Wedco has developed, approved and implemented two procedures titled, "Records and Filing Procedure" and "Document Control" which documents the system discussed in CO Report No. 286/70-2.

b. Findings

(1) Westinghouse, Wedco and UE&C

The development, approval and implementation of procedures covering document control meet the commitments in the application and the intent of Appendix B to 10 CFR 50. This item is considered resolved.

3. Criterion XII - Calibration and Test Equipment

a. Discussion

(1) Westinghouse, Wedco and UE&C

Wedco has written a procedure covering calibration and test equipment used on site including frequencies of calibration, methods of calibration, tagging, and a series

of checklists for documenting the above. If approved and implemented, the procedure will provide the required confidence level on this subject.

b. Findings

(1) Westinghouse, Wedco and UE&C

The draft procedure, when approved and implemented, will meet the commitments in the application and the intent of Appendix B 10 CFR 50. CO:I will followup on approval and implementation during subsequent inspections.

4. Criterion XIII - Handling, Storage, etc.

a. Discussion

(1) Westinghouse and Wedco

Responsibility for handling, storage, receiving and inspection of materials has been assigned to the Wedco Manager, Material Control. These responsibilities are detailed in the procedure and have been implemented. The procedure provides checklists and guidelines for use by the inspection personnel and provides for assistance to the material control section from other parts of the organization when required.

b. Findings

(1) Westinghouse and Wedco

The system as documented and implemented meets the intent of Appendix B, 10 CFR 50 and commitments of the application. This item is considered resolved.

5. Criterion XVIII - Audits

a. Discussion

(1) Westinghouse

The inspector reviewed the report of a Westinghouse audit conducted in accordance with the Quality Assurance Program. The audit was conducted of site activities by the following team:

Mr. R. H. Anderson, QA Manager, Tampa Division
Mr. C. G. Baacke, QA Branch, Specialty Metals Division
Mr. J. R. Steele, QA Branch, Turnkey Projects
Mr. L. F. Jones, Headquarters Quality Control

The auditors used detailed checklists which are reported by Wedco to be standard Westinghouse forms used for this purpose throughout the Westinghouse organization. Corrective action has been or is being taken on all items identified by this audit.

(2) Wedco and UE&C

The audit requirements of Procedure QA-8 are being performed by Wedco rather than UE&C as originally intended. Wedco informed the inspector that the procedure would be modified to reflect the change.

b. Findings

A system of auditing has been implemented which complies with the application and the intent of Appendix B, 10 CFR 50. This item is considered resolved.

F. Exit Interview

An exit interview was held with Messrs. Corcoran, Matra and Dadson of Con Ed and Mr. Snow of Wedco on March 25, 1970. The following significant items were discussed:

1. The inspector stated the procedures which were reviewed showed considerable effort had been expended since the last inspection.*
2. Con Ed was informed by the inspector that followup would be made on the procedure regarding calibration and test equipment. Mr. Snow stated the procedure would be approved in the immediate future when staffing was completed.
3. The inspector stated concern regarding the containment out-of-round problem and asked when action would be completed. Mr. Corcoran stated the engineering evaluation was in progress and assured the inspector no concrete would be placed in the exterior wall until action was completed. No date of completion was given.
4. The inspector informed Con Ed that the next inspection would be a major inspection and would review the piping plans and procedures.