

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

Report of Inspection

CO Report No. 247/70-1

Licensee: CONSOLIDATED EDISON COMPANY  
Indian Point No. 2 (IP-2)  
License No. CPPR-21  
Category B

Date of Inspection: February 10, 1970

Dates of Previous Inspection: December 9-19, 1969

Inspected by: G. L. Madsen 2/26/70  
G. L. Madsen, Reactor Inspector Date

Reviewed by: R. T. Carlson 2/27/70  
R. T. Carlson, Senior Reactor Inspector Date

Proprietary Information: None

SUMMARY

A management exit interview was held on February 10, 1970, at the Con Ed engineering offices in New York, New York to discuss the results of the task force quality control audit performed in December, 1969.

The licensee was informed that the QA-QC program for IP-2 does not meet the requirements of today's acceptance criteria; however, this should not be looked at in a negative manner in that there is evidence that extensive effort has been expended by Con Ed towards implementing a workable and satisfactory program.

The licensee was informed that the results of the in-depth audit were considered generally satisfactory; however, many deficiencies were identified which will require resolution by the licensee, changes to the FSAR, or evaluation by DRL. These items, together with the current status (proposed action by licensee) and scheduled followup by CO are presented in tabular form in Appendix A of this report.

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## DETAILS

### I. Scope

A meeting was held with management representatives of Con Ed and their principal contractors for the IP-2 project at the Con Ed engineering offices in New York, New York on February 10, 1970. The purpose of the meeting was to discuss the results of the special CO quality control audit performed in December, 1969.\* Messrs. R. T. Carlson, Senior Reactor Inspector, CO:I and G. L. Madsen, Reactor Inspector, CO:I represented CO at the meeting. Persons representing the licensee and their contractors were as follows:

#### A. Consolidated Edison Company

W. J. Cahill, Vice President of Engineering  
J. Grob, Chief Mechanical Engineer  
A. Flynn, Mechanical Engineer, Plant Bureau  
A. Corcoran, Construction Project Superintendent  
A. Dadson, Quality Assurance Supervisor, Construction Dep't.  
F. Flugger, Head Engineer, Nuclear Bureau  
O. Gluck, Engineer, Mechanical Plant Bureau  
F. McElwee, Resident Construction Manager  
A. Scaturro, Electrical Engineer  
G. Wasilenko, Assistant Division Engineer, Steam Division

#### B. Westinghouse

A. Simmons, Manager Engineering  
O. Hauge, Indian Point Plants Project Engineer Manager

#### C. Wedco

T. Lawson, Quality Control Inspection, Manager

### II. Results of Meeting

Mr. Carlson opened the meeting with a statement that the purpose of the session was to discuss the results of the Compliance task force quality control audit which was performed in December of 1969. He then expressed thanks for the cooperation and consideration which was extended to the members of the task force.

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\*CO Report No. 247/69-12.

Mr. Carlson then stated that the results of the audit indicated that the QA-QC program for IP-2 does not meet the requirements of today's acceptance criteria; however, this should not be looked at in a negative manner in that there is evidence that extensive effort has been expended towards implementing a workable and satisfactory system. The licensee was informed that the results of the in-depth audit were considered generally satisfactory, however, many deficiencies were identified which will require resolution by the licensee, changes to the FSAR, or evaluation by DRL. A review and discussion of the findings relating to specific areas audited followed. These are summarized below:

A. Component Procurement

Mr. Carlson indicated that the findings relating to the component procurement audit were generally satisfactory and the discrepancies which were identified are mostly concerned with Westinghouse authorized changes or NDT performance that is not in conformance with the FSAR. Con Ed and Westinghouse indicated that a search of the entire plant is presently in progress for determination of deviations between actual as-built conditions and the requirements of the FSAR. An amendment to the FSAR will be submitted as is appropriate.

The specific items discussed and status of each is included in Appendix A of this report.

B. Reactor Coolant System - Site Inspection

The licensee was informed that the review of records and the field installation of the reactor coolant system revealed welds of exceptional quality. The specific items discussed are included in Appendix A. The existence of confusion relative to qualification of revised welding procedures will require followup.

C. Safety Injection System - Site Inspection

The licensee was informed that the welding of the safety injection system appeared to be of good quality. The existence of undesirable surface conditions (weld spatter, arc strikes, gouges, excessive grinding and questionable fitup) was emphasized. Con Ed

and Westinghouse indicated that a final surface inspection of each system will be performed prior to system hydrostatic testing. At that time final cleanup and acceptance of the surface conditions will be made.

The absence of the residual heat removal pump internals, wherein records indicated the pumps to be installed and maintained, was reviewed. Westinghouse agreed that this situation would require followup and may necessitate further action on their part. Other specific items discussed are reflected in Appendix A.

D. Main Steam System - Site Inspection

The licensee was informed that no deficiencies were identified and the quality of completed welds was considered to be very good.

E. Electrical System - Site Inspection

Mr. Carlson pointed out that the conditions noted with respect to the electrical system are considered to be the area of major concern. The specific areas of concern include inadequacy of electrical installation control and a number of areas of questionable design adequacy. The licensee was informed that the design questions have been referred to DRL for consideration. The licensee indicated that the items have been recently discussed in meetings with DRL and some actions have been informally agreed to.

Discussion with the licensee and Westinghouse revealed that the following programs have been initiated.

1. Con Ed has completed a 100% design review of the power cables and plan to perform an instrument and control cable study on a sample basis.

The review to date has identified a common underground duct and manhole for the electrical power cabling for the service water pumps.

2. Westinghouse plans to make a 100% design check relative to separation of redundant channels to determine areas which lack separation as required by IEEE 279 and possible corrective actions.

3. Westinghouse has directed Wedco to perform a sample check of electrical cables to determine that the design criteria in the matter of electrical separations has been obtained. Westinghouse personnel indicated that the cabling to be checked has been specified. Mr. Carlson indicated that the specified sample may or may not be acceptable to Compliance and is somewhat dependent on conditions found. He also indicated that a 100% review of the field installation would be more ideally acceptable.

Appendix A of this report tabulates the specific items discussed.

F. Items of Questionable Design Adequacy

Mr. Carlson listed the items which have been referred to DRL for consideration. The licensee indicated that each of the items have been discussed with DRL; however, a final decision has not been culminated on several of the items. The list of items and present status of resolution are included in Appendix A of this report.

G. Future Inspection Program

Mr. Carlson indicated that the future compliance inspection program for the IP-2 project will include the following items:

1. Resolution of outstanding in-depth inspection items.
2. Additional followup relative to the electrical installation.
3. Evaluation of responses to the Maccary document requirements of Table A for reactor pressure boundary piping.
4. Review of preoperational procedures, witnessing of tests, and evaluation of results obtained.
5. Review of core loading procedures and witnessing of the loading operation.
6. Review of operating and emergency procedures.

7. Surveillance of training and the operational organization.
8. Evaluation of health physics and environmental programs.
9. Followup on specific commitments of safety significance made in DRL correspondence, the FSAR including amendments, public hearings, ACRS letters and other pertinent contents of the docket file.
10. Resolution of problems identified during the normal inspection program.

The licensee was asked for the most recent official core loading date. Con Ed replied that the present scheduled date is August 10, 1970.