

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

IE Inspection Report No: 50-286/75-06 Docket No: 50-286
Licensee: Consolidated Edison Company of License No: CPPR-62
New York, Inc. (Indian Point 3)
4 Irving Place Priority: _____
New York, New York 10003 Category: B
Location: Buchanan, Westchester County, New York Safeguards Group: _____

Type of Licensee: PWR, 1050 MWs (Westinghouse)
Type of Inspection: Special, announced
Dates of Inspection: February 27-28, 1975
Dates of Previous Inspection: January 7-10, 1975

Reporting Inspector: *Seth A. Folsom* 3/20/75
Seth A. Folsom, Reactor Inspector Date
Accompanying Inspectors: *R. C. Haynes* 3/21/75
R. C. Haynes, Senior Reactor Inspector Date
E. P. Jernigan 3/21/75
E. P. Jernigan, Reactor Inspector Date
W. F. Sanders 3-20-75
W. F. Sanders, Reactor Inspector Date

Date

Other Accompanying Personnel: None
Reviewed By: *R. F. Heishman* 3/21/75
R. F. Heishman, Senior Reactor Inspector Date

SUMMARY OF FINDINGS

Enforcement Action

A. Items of Noncompliance

1. Infraction

Contrary to 10 CFR 50, Appendix B, Criterion V, three minor attachments were welded to the pressure retaining material of the containment personnel lock without adequate instructions such that the requirements of the United Engineers and Constructor's Specification 9321-05-225-1, Paragraph 9 concerning welding requirements were not met. (Details, Paragraph 2).

B. Deviations

None

Licensee Action on Previously Identified Enforcement Items

A. Not inspected

Design Changes

None identified

Unusual Occurrences

None identified

Other Significant Findings

A Current Findings

Not applicable

B. Status of Previous Unresolved Items

The following previous items are considered closed:

1. Deletion of Seismic Requirement for Battery Charger (Reference Inspection Report 50-286/73-12). (Details, Paragraph 3).
2. Station Service Transformer QCR's (Reference Inspection Report 50-286/73-15). (Details, Paragraph 4).
3. Diode Failure in Reactor Protection System (Reference Inspection Report 50-286/75-04). (Details, Paragraph 5).
4. Welding Purge Gas Flow Rates (Reference Report 50-286/72-01). (Details, Paragraph 6).
5. Ultrasonic Examination of Reactor Coolant Pump Flywheels (Reference Inspection Report 50-286/73-04). (Details, Paragraph 7).
6. Concrete Cracks in Containment Floor - Elevation 46' (Reference Inspection Report 50-286/70-03). (Details, Paragraph 8).
7. Environmental Monitoring (Reference Inspection Report 50-286/70-03) (Details, Paragraph 9).
8. Steam Generator Support Weld Repair Program (Reference Inspection Report 50-286/74-06). (Details, Paragraph 10).
9. Valve Wall Thickness Verification Program (Reference Inspection Report 50-286/74-11). (Details, Paragraph 11).

Management Interview

A management interview was held at the site on February 28, 1975.

Persons Present

Mr. S. R. Buckingham, Quality Assurance Manager (Wedco)
Mr. H. W. Cairns, Supervisor, Construction Inspectors
Mr. J. B. Campbell, Quality Control Manager (Wedco)

Dr. G. I. Coulbourn, Manager, Indian Point 3 Construction
Mr. E. Dadson, Manager, Vendor and Contractor QA
Mr. J. P. Dean, Supervising QA Examiner
Mr. M. L. Snow, Reliability Manager (Wedco)
Mr. P. B. Upson, Chief Construction Inspector
Mr. J. S. White, Quality Assurance Project Engineer
Mr. J. C. Woeber, Construction Engineering Manager (Wedco)

Items Discussed

A. Purpose of the Inspection

The inspector stated that the purpose of the inspection was to review previous unresolved items.

B. Review of Items of Noncompliance

The item discussed is identified under Enforcement Action in the Summary of Findings in this report.

C. Review of Previous Unresolved Items

(Details, Paragraphs 3 through 11).

DETAILS

1. Persons Contacted

Consolidated Edison Company

Mr. H. W. Cairns, Supervisor, Construction Inspectors
Dr. G. I. Coulbourn, Manager, Indian Point 3 Construction
Mr. E. Dadson, Manager, Vendor and Contractor QA (HQ)
Mr. J. P. Dean, Supervising QA Examiner
Mr. W. L. Geider, Chief Construction Inspector
Mr. A. D. Kohler, Jr., Resident Construction Manager
Mr. T. Merend, Construction Inspector
Mr. D. Milano, Electrical Field Engineer
Mr. P. B. Upson, Chief, Construction Inspector
Mr. J. S. White, Quality Assurance Project Engineer (HQ)

Wedco

Mr. S. R. Buckingham, Quality Assurance Manager
Mr. J. B. Campbell, Quality Control Manager
Mr. L. Dolan, Drawing Control
Mr. J. J. Dombrowski, Electrical Engineer
Mr. R. Eunson, Welding Engineer
Mr. M. L. Snow, Reliability Manager
Mr. J. C. Woeber, Construction Engineering Manager
Mr. A. Xavier, Construction Engineer

Branch Testing Laboratories

Mr. D. Holmes, Manager
Mr. D. McKaskill, General Foreman

Courter and Company

Mr. P. McCaffery, Foreman

2. Containment Building Personnel Lock

The inspector found that three pieces of "uni-strut" had been welded to the inside surface of the pressure retaining material of the personnel lock located at the 79' elevation. The weldments appeared to be field welds and were approximately $\frac{1}{4}$ " x 1" fillet welds located at each end of the uni-strut pieces (six welds total). The uni-strut pieces served as anchoring brackets for electrical conduits located inside the personnel lock.

The inspector reviewed the UE&C "Specification for Containment Building Liner, Equipment Hatch and Personnel Locks" dated 1/8/68, with subsequent amendments, and found that paragraph 9 of this specification required that all welding on the personnel lock be accomplished only by qualified welders using qualified welding procedures in accordance with Section IX, "Welding Qualifications" of the ASME B&PV Code.

The inspector also reviewed the vendor's (Chicago Bridge & Iron Company) Drawing #100, Rev. 4, under contract No. 68-2730 and entitled "General Arrangement 2' x 6' x 6'-0 Personnel Lock". The inspector found that the brackets were not shown on this drawing. This drawing also contained the notation that the lock was designed to withstand an internal pressure of 54 psig. The inspector also found that page 5.1.4.4 of the FSAR contains the following statement relative to the personnel lock - "The design is in accordance with Section VIII of the ASME Code".

The inspector requested the licensee to provide the associated documentation supporting that the uni-strut pieces welded to the personnel lock pressure retaining material was accomplished in accordance with an approved design change, the welding was performed by qualified welders using qualified welding procedures and that appropriate quality control was applied to this activity. The licensee initially stated that the welding was performed by electricians and that the addition of such brackets was permitted for field-run electrical conduits. However, after further checks with the constructor, the licensee stated that the welding was performed by boilermakers early in November, 1974. The inspector was shown a list of four boilermakers, one or more of whom the licensee claimed performed the welding in question. The licensee provided documentation which showed that each of these boilermakers was qualified to perform the welding in question.

Neither the licensee nor his constructor at the time of this inspection could ascertain specifically who did the work and when. Neither could it be determined at that time if the welding procedure requirements relative to pre-heating had been met nor if the nondestructive examinations had been performed to assure that the welds met the appropriate acceptance criteria.

The failure to provide adequate instructions to control the welding of these brackets to the personnel lock pressure retaining material is contrary to the requirements of 10 CFR 50, Appendix B, Criterion V, relative to those procedural controls required for quality affecting activities on safety related structures.

3. Deletion of Seismic Requirement for Battery Charger

In a previous inspection the battery charger was listed as Class I equipment, having seismic documentation requirements. This was found to have been a typographical error. The equipment is currently listed as Class III in the FSAR, Page A1-4, December, 1974. This item is resolved.

4. Station Service Transformer QCR's

In a previous inspection the Westinghouse Quality Control Releases (QCR's) for the electrical power transformers were examined. The QCR for the station service transformer was not available. It has since been established that the station service transformer is categorized as Class III, and no QCR is required. This item is resolved.

5. Diode Failure in Reactor Protection System

The inspector examined documentation concerning the removal of 27 diodes in circuitry in which their presence, at another nuclear power plant, had apparently been a factor in the failure of the reactor protection system. These diodes were not considered to be essential at Indian Point 3, as their intended purpose had been to prolong instrumentation light bulb life. Westinghouse experience had shown that bulb life had not been improved by their use. The following documentation was examined by the inspector:

- a. Con Ed memorandum (Cairns to Coulbourn) February 4, 1975.
- b. Engineering Change Notice (ECN) 70158, November 18, 1974.
- c. Westinghouse Speed letter, signed by Mr. D. W. Heyer. December 4, 1974; Subject ECN-70158 (safeguards relay cabinets) which stated, in part "The subject ECN has been completed.

This item is resolved.

6. Welding Purge Gas Flow Rates

The inspector examined a representative group of weld history cards which included welding purge gas flow rates. These flow rates were found to be consistent with the weld qualification procedures. This item is resolved.

7. Ultrasonic Examination of Reactor Coolant Pump Flywheels

The inspector examined the following documentation which confirmed that the reactor coolant pump motor flywheels had been ultrasonically inspected in September, 1973.

- a. Con Ed Inspection Reports Nos. 31 and 33, September 26 & 27, 1973.
- b. Field Job Order (FJO) 1621.

This item is resolved.

8. Concrete Cracks in Containment Floor - Elev. 46'

The inspector examined Deficiency Report No. 3-61, November 19, 1973, which included the corrective action taken. Field Trip Report 9321-01/05 dated November 2-3, 1970, was found to include the repair procedures at the containment 46' Elevation. The inspector examined the repaired area in the containment and considered it acceptable. This item is resolved.

9. Environmental Monitoring

The Environmental Monitoring Program has been implemented, and has been found acceptable by IE:I inspectors. This item is resolved.

10. Steam Generator Support Weld Repair Program

The inspector reviewed the licensee's report, Steam Generator Support Weld Integrity Program, dated February 5, 1975.

The Procedures, Documents, and data described below were audited:

- a. Welding procedure MPI-001.
- b. Welding procedure qualification for procedure MPI-001.
- c. Welders qualifications.
- d. Certification of NDE personnel qualifications including current visual examination reports.
- e. Magnetic particle examination procedure WQA4.02- Rev. 0.
- f. Welding electrode certifications.
- g. Defect charts.

The inspector examined the completed repairs of selected welds in the steam generator supports. The final report of the repairs was reviewed.

The inspector found that the work had been completed in accordance with the appropriate requirements.

11. Valve Wall Thickness Verification Program

The valve wall thickness verification program was reviewed by the inspector. The licensee's records show that 100 valves were included in the program. Of these 100, fifteen were found to have wall thickness less than the nominal, and the following corrective measures were performed:

- a. Five valves were made to meet the wall thickness requirements by the addition of metal by overlay welding.
- b. Six valves were justified to be used "as is" on the basis of the mechanical strength of the valve materials and their intended service.
- c. Four valves had been incorrectly classed as 3 - inch valves, but were actually 2 - inch valves with 2" x 3" increasers added to the valve ends. These valves were measured and found to meet the required wall thickness.
- d. Three pressurizer relief valves were not measured. The licensee justified this position on the basis that the bodies on these valves were not pressure retaining, the pressure being contained by machined parts.

The program is considered resolved based upon the inspector's review of the following:

1. Branch Radiographic Laboratories Procedure "Ultrasonic Wall Thickness Measurement of Nuclear Reactor Piping Systems Valves".
2. Measuring data, and points of measurement.
3. Correspondence which presented the justification for accepting valves which were either not measured or which had wall thicknesses less than nominal.