

U. S. ATOMIC ENERGY COMMISSION  
DIRECTORATE OF REGULATORY OPERATIONS  
REGION I

RO Inspection Report No.: 50-286/73-01

Docket No.: 50-286

Licensee: Consolidated Edison Co. (Indian Point 3)

License No.: CPPR-62

4 Irving Place

Priority: -

New York, New York 10003

Category: A

Location: Buchanan, New York

Type of Licensee: PWR 1050 MWe (Westinghouse)

Type of Inspection: Routine, Unannounced

Dates of Inspection: January 23, 24, 1973

Dates of Previous Inspection: November 20, 21, 22, 1972 &  
December 1, 14, 1972

Reporting Inspector: *J. Allentuck*  
J. Allentuck, Reactor Inspector

2/15/73  
Date

Accompanying Inspectors: \_\_\_\_\_

\_\_\_\_\_ Date

\_\_\_\_\_ Date

Other Accompanying Personnel: \_\_\_\_\_

Reviewed By: *R. F. Heishman*  
R. F. Heishman, Senior Reactor Inspector

2-15-73  
Date

8111190422 730216  
PDR ADDCK 05000286  
G PDR

## SUMMARY OF FINDINGS

### Enforcement Action

None

### Licensee Action on Previously Identified Enforcement Items

Not applicable

### Design Changes

None

### Other Significant Findings

#### A. Current Findings

##### 1. Procedure for Checking Minimum Bend Radius

The Wedco procedure for checking the minimum bend radius of safety cable has not been implemented. Consolidated Edison inspectors continue to examine all installed cable bends for compliance with the UE & C letter of November 14, 1972. This matter is unresolved pending Wedco implementation of their procedure. (Details, Paragraph 3)

##### 2. Attachment and Removal of Temporary Alignment Clips

This procedure has been implemented as evidenced by a Wedco inspection report dated January 6, 1973. The matter of implementation of this procedure is considered resolved, subject, however to continued Regulatory inspection. (Details, Paragraph 4)

##### 3. Procedure for Energizing Space Heaters on Motors so Equipped

This procedure has been implemented as evidenced by a log observed by the inspector. (Details, Paragraph 5)

##### 4. Welder Identification

The revision to the weld procedures made by a letter shown the inspector on November 22, 1972 and reported in Report No. 50-286/72-05 has been implemented. This conclusion has been based on observation of weld record drawings which carries welder identification marks adjacent to the weld number. (Details, Paragraph 6)

5. QC Procedures for Welding Class 1 Piping

Wedco has implemented quality control procedures for welding Class 1 piping as evidenced by a sampling of welding records relating to the main steam system and the residual heat removal system. (Details, Paragraph 7)

6. Implementation of QC Procedures for Class 1 Piping

Wedco has implemented quality control procedures for Class 1 piping as evidenced by a sampling of receiving reports, material certifications, quality control releases for various portions of the main steam line and the residual heat removal system. (Details, Paragraph 8)

7. Traceability of Weld Rod

Weld rods currently used in welding safety related systems are traceable to the welds on which they were used. (Details, Paragraph 7)

8. Installation of Pipe Hangers

At present, there are no QC procedures for the installation of pipe hangers. Such procedures are included in the new QC program which has not yet been implemented. This matter remains unresolved. (Details, Paragraph 9)

9. Test Documentation of Safety Cables

All cables for which test documentation either did not exist or was unsatisfactory have been segregated. This disposition of unsatisfactory test reports is currently being undertaken by United Engineers and Contractors. Cables for which no test report exist is being tested on site by Hippotronics, Incorporated, a Wedco subcontractor. This matter remains unresolved. (Details, Paragraph 11)

10. Scrap Cable Materials and Short Lengths in the Cable Yard

The licensee has removed all lengths of cable, whether on or off reels, which were under 200 feet long, from the cable yard for scrapping. This work has not yet been completed. This matter remains unresolved. (Details, Paragraph 12)

11. Old cable in the cable yard

The licensee is retesting all cable on reels bearing numbers less than 5,000. (Details, Paragraph 12)

12. Sealing Cable Ends of Cable in Cable Yard

The licensee is undertaking to seal cable ends of cables in the cable yard. (Details, Paragraph 13)

Management Interview

An exit interview was conducted at the site on January 24, 1973 with the following individuals.

Con Ed

A. Kohler, Jr., Resident Construction Manager  
G. Coulbourn, Jr., Manager, IP-3 Construction  
L. Daly, QA Engineer  
J. Dean, Site QA Representative

Wedco

M. Snow, Manager, QA

Items discussed are summarized below:

- A. The inspector stated that he had determined that the implementation of the procedure shown him on December 14, 1972, for checking the minimum bend radius of cable had not been implemented, but that Con Edison inspectors continued to examine all installed cable bends for compliance with the requirements of the UE & C letter of November 14, 1972. This matter remains unresolved until the implementation of the Wedco procedure. (Details, Paragraph 3)
- B. The inspector stated that the Wedco procedures for the removal of carbon steel straps from stainless steel pipes had been implemented by Wedco. (Details, Paragraph 4)
- C. The inspector stated that the procedure for energizing space heaters on motors so equipped had been implemented. (Details, Paragraph 5)
- D. The inspector stated that the procedure for welder identification, as revised by the Wedco letter of November 22, 1972, had been implemented. (Details, Paragraph 6)

- E. The inspector stated that he had reviewed the quality control procedures for welding Class 1 piping. QC procedures for certification of NDT technicians and procedures have not been included in the current QC procedures for welding Class 1 piping. This matter remain unresolved until the requirement for such certifications are included in the QC program. (Details, Paragraph 7)
- F. The inspector stated that the QC procedure for Class 1 piping had been implemented. This matter is considered resolved. (Details, Paragraph 8)
- G. The inspector stated that weld rods used on welds can be traced to the weld number. (Details, Paragraph 7)
- H. The inspector stated that QC procedures were apparently unavailable for installation of hangers. The licensee responded that such procedures would be included in the new QC program and that inspection of pipe hangers would be conducted in a systematic fashion upon implementation of the revised QC program. This matter remains unresolved. (Details, Paragraph 8)
- I. The inspector stated that he had examined the final Westinghouse report relative to stains observed during the previous inspection in the reactor vessel. The inspector stated that this matter would not be considered resolved until Con Edison had formally accepted the Westinghouse report. The licensee stated that such acceptance would be forthcoming prior to the acceptance of the system from Wedco. (Details, Paragraph 10)
- J. The inspector stated that he had been told that a review of cable test documentation was currently in process by UE & C and that cable for which no test documents existed was being retested by Hippotronic. He stated that this matter would remain unresolved until such time that the review of test reports and the retesting of cable was completed. The licensee stated that the program would continue until completion. (Details, Paragraph 11)
- K. The inspector stated that he had observed instructions from Wedco for the removal to the scrap yard from the cable storage yard of all cable lengths less than 200 feet. The inspector further stated that this matter would remain unresolved until such time as the program was completed. The licensee stated that the program would be pressed to completion. (Details, Paragraph 12)
- L. The inspector stated that he had observed instructions from Wedco to retest all cables on reels bearing numbers less than 5,000. This matter remains unresolved until completion of this program. The licensee stated that the program would be pressed to completion. (Details, Paragraph 12)

- M. The inspector stated that he had observed instructions from Wedco for the sealing of ends of cable in the cable yard. The licensee stated that this program would be pressed to completion. This matter remains unresolved. (Details, Paragraph 13)
  
- N. The inspector stated that he had inquired of the licensee's representative as to the relevance of the Indian Point 3 project of certain generic items, mainly inoperability of safety injection pumps, under certain conditions and the failure of a 14" gate valve at another site. The licensee stated that he would determine, as soon as possible, an answer to this inquiry. (Details, Paragraph 14)

DETAILS

1. Persons Contacted

Con Ed

A. Kohler, Jr., Resident Construction Manager  
K. Ludwig, Project Manager  
G. Coulbourn, Jr., Manager, IP-3 Construction  
J. Dean, QA Supervisor, Site  
L. Daly, QA Engineer  
B. Garrow, Staff Assistant

Wedco

M. Snow, Manager, Reliability  
W. Diebler, Manager QC  
C. Hughes, QC Engineer

2. Status of Construction

The licensee reported that the overall status of construction was 78% complete, mechanical 40%, structural 85% and electrical 35%.

3. Cable Bend Radius

The licensee stated that the Wedco procedure for verifying that the minimum bend radius of cables had not been exceeded, had not yet been implemented. Pending implementation of this procedure, Con Edison inspectors would continue to examine on a 100% basis, all installed cable bends for compliance with the minimum bend radius requirements included in the UE & C letter of November 14, 1972. On a random basis, Con Edison inspectors were verifying that the minimum bend radius was not exceeded while cables were being pulled. The inspector observed records of inspections beginning on December 27, 1972, indicating that Con Edison inspectors were inspecting installed cable for minimum bend radius. This matter remains unresolved until Wedco implements the inspection procedure.

4. Attachment and Removal of Temporary Alignment Clips

The inspector examined a Wedco inspection report dated January 6, 1973, covering removal of carbon steel straps from liner plates. The work appeared to have been done in conformance with the Wedco procedure shown the inspector on December 14, 1972. The implementation of this

procedure is considered resolved subject to continued Regulatory inspection.

5. Space Heaters on Motors

On the basis of an examination of Wedco inspection reports for Service Water Pumps, numbers 31, 32, 33, 34 and 35, and Reactor Coolant Pumps 31, 32, 33 and 34. The inspector determined that the Wedco procedure for energizing space heaters on motors so equipped had been implemented.

6. Welder Identification

The inspector examined an isometric drawing upon which completed welds were indicated by distinctive colorings and markings. The dates of completion and start of each weld were also indicated as well as the name of the welders who had worked on the weld. This confirmed the fact that the revised procedure for welder identification has been implemented by Wedco.

7. QC Procedures for Welding Class 1 Piping

On the basis of inspection of weld records for weld SI-1064 in line 093 and AC-1037 in line 653 related to the residual heat removal system, the inspector determined that procedures for quality control of Class 1 welding had been implemented by Wedco. The inspector examined the certification of the welders and examined the welds in the field. For weld MS-106, the inspector examined field repair documentation for which records appeared to be in accordance with procedures. The inspector examined weld rod control records and determined that the weld rod used in any specific weld could be traced to a lot or heat number. The inspector visually examined welds AC-1037 in line 653 and SI-1064 in line 093 in the residual heat removal system. The inspector observed that while certification of NDT technicians and procedures were available, they were not required by existing QA procedures. The inspector was informed that this requirement was included in the draft QA program. This matter remains unresolved until the draft QA program is adopted and procedures are implemented.

8. Implementation of QC Procedures for Class 1 Piping

The inspector examined quality control documents for piping associated with the welds mentioned in paragraph 7 above. The inspector examined material certifications, quality control release documents and receiving reports of Class 1 piping material. The inspector noted that the requirement for material certification was not included by Wedco in its QC procedure but was obtained on the basis of Con Ed requirements. This is

shown in purchase orders to B. F. Shaw and Tubeco, the suppliers of pre-fabricated piping. There is no requirement for traceability for field run piping. The inspector examined: (a) quality control documents for the following pipe spools: SI-093, spool piece 01, flange F14, flange F13, reducer E9 and TD-29; (b) quality control release documents for this material; (c) material certifications; (d) welding procedures, repair procedures; (f) RT records; (g) dye penetration test records; (h) cleanliness certification; (i) package identification; and (j) receiving reports.

9. Installation of Pipe Hangers

The inspector was informed that quality control procedures for the installation of pipe hangers were included in the new program and that inspection of pipe hangers against these procedures would be conducted in a systematic fashion upon implementation of the revised QA program. This matter remains unresolved.

10. Cleanliness of Reactor Vessel

The inspector was unable to inspect the reactor vessel for cleanliness because of work in progress. The inspector examined the final Westinghouse report relative to the stains observed in the reactor vessel and reported in RO:I Report No. 50-286/72-04. The Westinghouse report number dated November 28, 1972, numbered PA-MSA-953 Assessment of "Effect of Stains Found on Inside of Reactor Vessel" had not been formally accepted or approved by Consolidated Edison. The inspector stated that this matter would remain unresolved until such time as Con Edison formally accepted the Westinghouse report.

11. Test Documentation of Safety Cables

The inspector was informed that Wedco had reviewed all cable at the site for the availability and acceptability of test documentation. In all cases where test documentation was unavailable or unacceptable, material has been segregated and tagged. Those materials for which test reports are not available, are being retested by Hippotronics. Results of these tests will be reviewed by United Engineers and Contractors for acceptability. In those cases, where existing test reports appear unacceptable, reviews are made by UE & C for disposition. This matter remains unresolved.

12. Scrap Cable Materials and Short Lengths in the Cable Yard

The inspector examined a letter from Wedco to the installation contractor, Fishbach & Moore instructing the latter to remove from the cable storage yard to a scrap area all lengths of cable less than 200 feet. In addition,

all cable remaining on reels bearing a number less than 5,000 would be retested. The inspector observed work in the cable storage yard in this connection. The matter remains unresolved.

13. Sealing of Cable Ends

The inspector was informed by the licensee that cable ends on all reels in the cable storage yard would be taped. The inspector observed this activity in progress in the cable yard. Work is not yet completed. This matter remains unresolved.

14. Generic Problems

The inspector requested the licensee to inform him whether or not he was aware of the abnormal occurrence which took place at another site relating to the Containment Building Spray Pump. The inspector further requested that the licensee analyze the abnormal occurrence with the view toward its relevance in Indian Point 3. In addition, the inspector requested the licensee to inform him if the 14" gate valve which failed at another site was installed at Indian Point 3 and to review the significance of that failure relative to IP-3.