

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

Inspection Report No: 50-286/75-28 Docket No: 50-286

Licensee: Consolidated Edison Company of New York, Inc. License No: CPPR-62

4 Irving Place Priority: _____

New York, New York Category: B1

Location: Buchanan, New York (IP-3) Safeguards Group: _____

Type of Licensee: PWR, 3025 MW Th (w)

Type of Inspection: Routine, Unannounced

Dates of Inspection: 10/30-31, 11/5-7, 10-14/75

Dates of Previous Inspection: 10/23-24/75

Reporting Inspector: A. N. Fasano
A. N. Fasano

12/2/75
DATE

Accompanying Inspectors: J. F. Streeter
T. A. Rebelowski
T. A. Rebelowski

12/2/75
DATE

DATE

DATE

Other Accompanying Personnel: None

DATE

Reviewed By: A. B. Davis
A. B. Davis, Section Leader
Reactor Projects Section 1
Reactor Operations and Nuclear Support Branch

12/3/75
DATE

8111030583 751104
PDR ADOCK 05000286
G PDR

SUMMARY OF FINDINGS

Enforcement Action

None

Licensee Action on Previously Identified Enforcement Action

None reviewed.

Design Changes

None identified.

Unusual Occurrences

None identified.

Other Significant Findings

A. Current Findings

1. Acceptable Areas

These are areas which were inspected on a sampling basis and findings did not involve an Item of Noncompliance, Deviation or Unresolved Item except as noted.

- a. Local Leak Test of Personnel Locks, Detail 8.
- b. Plant Tour, Detail 10b, c.
- c. Incore Thermocouples and RTD Calibration, TP 4.1.8; Detail 12b.
- d. Diesel Fuel Run-in, TP 1.47, Detail 12c.
- e. Reactor Coolant System Hand Cleaning, TP 1.1, Detail 12d.
- f. Residual Heat Removal Preoperational Checks, TP 4.3.2, Detail 12f.
- g. Spray Pumps and Eductors, TP 4.5.3; Detail 12g.

- h. Waste Disposal System Liquid Receipt and Storage, TP 4.6.1, Detail 12i.
- i. Nuclear Instrumentation Operation Check, TP 4.7.2, Detail 12j.
- j. Containment Isolation Valve Leak Test, TP 4.11.10, Detail 12o.
- k. Area Access Control, Detail 21.

2. Unresolved Items

These are items for which more information is required in order to determine whether they are acceptable or Items of Noncompliance.

- a. Time Response, RPS, TP 4.8.3, Detail 12a.
- b. Chemical Volume Control System, CVC, Charging, Letdown and Makeup, TP 4.2.1, Detail 12e.
- c. Safety Injection Instrumentation, TP 4.5.6, Detail 12k.
- d. Air and Motor Operated Valves (SI Valves), TP 4.10.1, Detail 12k.
- e. Heating Ventilation and Cooling, TP 4.11.1, Detail 12l.
- f. Fire Protection System, TP 4.11.6, Detail 12n.
- g. Boric Acid Heat Tracing, TP 4.13.5, Detail 12p.

B. Status of Previously Reported Unresolved Items

1. Items Resolved

- a. Station Nuclear Safety Committee Review, Detail 2.
- b. Training for Phase III Tests, Detail 3.
- c. Verification of Approved Procedures, Detail 4.
- d. Procedure to Avert Overpressurization, Detail 5.

- e. Facility Procedures, Detail 6.
- f. Test Connection Isolation Valve Testing, Detail 7.
- g. Decay Gas Tank Monitor, 3R-20 and Plant Gaseous Monitor, 3R-14, Detail 9.
- h. Plant Tour: Instrument Air Modification, Detail 10a and Containment Building Cleanliness, Detail 10d.
- i. Radiation Monitoring, TP 4.7.1, Detail 12m.
- j. Prototype Vibration Correlation, Detail 13.
- k. Additional Testing of Diesel Generator #31, Detail 16.

2. Updated Unresolved Items

More information is required to resolve the following items.

- a. Stack Sampling System, Detail 11.
- b. Operation Procedures, Detail 14.
- c. Surveillance and Calibration Procedures, Detail 15.
- d. PAB Filter System, Detail 17.
- e. HEPA and Charcoal Tests, Detail 18.
- f. Liquid Waste System, Detail 19.
- g. Gaseous Waste System, Detail 20.

Management Interview

A management interview was held at the Indian Point 3 site on November 14, 1975.

Personnel Attending

Mr. A. D. Kohler, Jr., Resident Construction Manager
Mr. J. Makepeace, NPG, Director of Technical Engineering
Mr. G. Beer, Director Quality Assurance
Mr. V. M. Perry, Jr., Superintendent, Unit 3 Construction

Mr. S. Zulla, Operations Engineer Unit 3
Mr. W. Josiger, Test Engineer Unit 3
Mr. S. Cantone, Chief Operations Engineer
Mr. A. Fasano, Reactor Inspector, USNRC

All items presented in the Details Section of this report were discussed during the course of this inspection. Particular attention was placed on the following items at the management interview:

1. Plant Tour, Detail 10.
2. Area Access Control, Detail 21.
3. Unresolved Test Procedures, Detail 12.
4. Updated Unresolved Items, Details 11, 14, 15, 17, 18, 19 and 20.

DETAILS

1. Persons Contacted

Mr. A. Kohler, Resident Construction Manager
Mr. V. Perry, Superintendent IP-3 Construction
Mr. F. Hertrich, Chief Construction Inspector
Mr. F. Repose, Supervisor Field Operations
Dr. M. Silberstein, General Manager
Mr. L. Brooks, Project Manager
Mr. W. Josiger, Test Engineer Unit 3
Mr. S. Zulla, Operating Engineer Unit 3
Mr. T. Uhl, Associate Engineer Unit 3
Mr. K. O'Conner, Engineer
Mr. T. Walsh, Staff Assistant, Instrumentation and Control
Mr. C. Caputo, Engineer, Test
Mr. E. Imbimbo, Associate Staff Assistant
Mr. R. Warren, Security Supervisor
Mr. S. Cantone, Chief Operations Engineer

2. Station Nuclear Safety Committee Review

Reference Inspection Report 50-286/75-03, Detail 4b(1); INT-ADMIN-1.0, Administrative Guidelines for the Test Program, Revision 6.

The administrative procedure was revised as of July 31, 1975 to provide for SNSC review of all safety related test procedures prior to the performance of the tests.

The SNSC has reviewed Phase III procedures and post core loading procedures, (Reference Con Edison Memo, October 30, 1975). This item is closed.

3. Training for Phase III Tests

Reference Inspection Report 50-286/74-12, Detail 6; INT-ADMIN-1.0, Administrative Guidelines for the Test Program Rev. 6, July 13, 1975, page 20.

The revision addresses the requirement for briefing of test personnel on procedure content prior to the conduct of Phase III test procedures. This item is closed.

4. Verification of Approved Procedures

Reference Inspection Report 50-286/75-02, Detail 8.

The licensee has completed the approval of the preoperational test procedures, (Reference WEDCO-Indian Point Nuclear Generating Station Unit No. 3 Test Procedure Index). This item is closed.

5. Procedure to avert Overpressurization

Reference Indian Point 3 Safety Evaluation Report; SOP-RCS-8, Revision 0, "Low Pressure Operation without a Steam Bubble," November 29, 1974.

The purpose of this procedure is to provide steps to be taken for the operation of the Reactor Coolant System during low pressure operations without a steam bubble. The procedure addresses conditions related to averting a pressure spike on the Reactor Coolant vessel that would exceed Technical Specification limits at low pressure and low temperature operation.

The inspector had no further question in this area.

6. Facility Procedures

Reference Inspection Report 50-286/75-23, Detail 2a(3)(c); SOP-CB-3, Containment Pressure Relief and Purge System.

The above referenced procedure describes the method of operation of the containment building pressure relief and purge system. The procedure was approved in accordance with administrative procedures on May 16, 1975. This item is closed.

7. Test Connection Isolation Valve Testing

Reference Inspection Report 50-286/75-11, Detail 6, FSAR Supplement 28, Figure 5.2-2.

SOP-CB-1, Containment Integrity, Revision 0, April 10, 1975 was reviewed. The purpose of this procedure is to ensure that requirements for containment integrity are in effect.

The procedure addresses non-automatic containment isolation valves which are not required to be open during accident conditions and requires the valves to be closed with blind flanges

installed. The procedure contains a listing of all blind flanges and valves. An example is A106 located between valves 730 and 732 on a test connection in the Residual Heat Removal loop. This item is closed.

8. Local Leak Test of Personnel Locks November 7, 1975

The tests were performed on November 8-9, 1975. The test results were reviewed and accepted by the licensee on November 10, 1975.

The purpose was to satisfy the local leak testing requirements of 10 CFR 50 Appendix J.

The inspector had no further question on this item at this time.

9. Decay Gas Tank Monitor 3R-20

Reference Inspection Report 50-286/75-25, Detail 3.(2).b.

The licensee has performed a 2 source variable field calibration of the monitor (3R-20). This item is closed.

Plant Vent Gaseous Monitor 3R-14

Reference Inspection Report 50-286/75-25, Detail 3.(2)b.

The licensee has performed a 4 source calibration of the monitor (R-14). The linearity confirmation and calibration has been completed. This item is closed.

10. Plant Tours

a. Instrument Air Modification

Reference Inspection Report 50-286/75-05, management interview E.

One freezer dryer unit was observed to be in operation. The spare freezer dryer was idle. The modification for bypassing the freezer dryer was in place. The bypass automatic valve is capable of being manually bypassed if such action was required. At the day of the tour a few electrical connections remained to be finalized to allow automatic operation of the bypass valve. Subsequent to the tour the wiring was completed and the system functionally tested satisfactorily. This item is closed.

b. Sample Penetration, W

The sample penetration where there has been a concern as to the stresses in the sample tubing due to temperature differential between the various lines within the penetration was observed. The location was observed to ascertain accessibility for monitoring and for future replacement that will be required. The penetration is not easily accessible. This item will be reviewed further by Region I.

c. Access Control (grating)

The grating that was designed to control access to the underside of the reactor vessel was observed to be in place.

d. Containment Building Cleanliness

Reference Inspection Report 50-286/75-26, Detail 3.b.

The containment was observed for housekeeping and cleanliness. The 95 foot elevation was in satisfactory condition. The lower areas continue to have construction activities. Cable trays appeared to be cleared of debris. The general condition appears to have continued to improve. The inspector has no further questions on this item at this time.

11. Stack Sampling System

Reference Inspection Report 50-286/75-25, Detail 4.

The piping of the stack particulate sampler (RE-13) was visually inspected. The licensee plans to remove the existing tubing and install tubing and eliminate unnecessary bends. All tubing bends will be 6 inch radius or greater.

The licensee has stated that the new run of tubing will be installed prior to initial criticality.

This item remains unresolved pending the completion of the tubing installation.

The licensee also plans to modify the containment atmosphere gas and particulate sampler (RE-11, 12) to minimize sharp bends. The principles addressed in the stack sampler system are being applied to this modification demonstrating a generic approach by the licensee. The inspector has no further question on this item at this time.

12. Preoperational, Startup and Ascension to Power; Evaluation of Licensee Test Results Review

The inspector evaluated the results of the licensee's preoperational test evaluation for the following test procedures INT-TP:

- 4.8.3 Time Response (RPS)
- 4.1.8 Incore T/C & RTD Calibration
- 1.47 Diesel Fuel-Run In
- 1.1 RCS Hand Cleaning
- 4.2.1 CVC Charging, Letdown & Makeup
- 4.3.2 RHR Pre Ops Check
- 4.5.3 Spray Pumps & Eductors
- 4.5.6 Safety Injection Instrumentation
- 4.6.1 Waste Disposal System Liquid Receipt & Storage
- 4.7.2 Nuclear Instrumentation Operation Checks
- 4.10.1 Air & Motor Operated Valves (SI Valves)
- 4.11.1 Heating Ventilation & Cooling
- 4.7.1 Radiation Monitoring
- 4.11.6 Fire Protection System
- 4.11.10 Containment Isolation Valve Leak Test
- 4.13.5 Boric Acid Heat Tracing

The objectives of the inspection were to assure that the licensee is performing an adequate evaluation of the test results by verifying:

That the cognizant engineering group has evaluated the test results and has signified that testing demonstrated that the system met design requirements.

That the licensee has compared test results with established criteria.

That the test results have been evaluated and approved or additional testing per administrative guidelines has been evaluated and documented.

a. Time Response, Reactor Protective System TP 4.8.3

This test is complete with the exception of the RCS flow coast down test (TP 4.1.3) which will be performed prior to heatup. Heatup is understood to be that evolution where post core load testing has been completed and the Reactor Coolant System is being heated to the 0 power temperature and pressure conditions. The TP 4.1.3 portion for final acceptance of TP 4.8.3 will be completed prior to initial criticality.

This item is unresolved pending the final review and acceptance of TP 4.8.3.

- b. Incore Thermocouples, TC, and Resistant Temperature Detectors, RTD, Calibration, TP 4.1.8

This procedure has been reviewed and accepted. The inspector has no further questions on this item at this time.

- c. Diesel Fuel-Run In TP 1.47

This procedure has been reviewed by the licensee and results evaluated to identify additional testing of the fuel tank level alarm to complete the procedure. The inspector verified the completed test results and is in agreement with the testing to be accomplished per administrative guidelines (blue sheet).

The inspector has no further questions on this test at this time.

- d. Reactor Coolant System, RCS, Hand Cleaning, TP 1.1

This test procedure has been reviewed and accepted. The inspector has no further questions on this item at this time.

- e. Chemical Volume Control System, CVC, Charging, Letdown and Makeup, TP 4.2.1

This test is over 90% complete. Additional testing with the review and acceptance will be done prior to initial criticality.

This item is unresolved pending the completion, review and acceptance of test results.

- f. Residual Heat Removal, RHR, Pre-operational Check, TP 4.3.2

This test is performed to verify the low head safety injection capabilities of the RHR and to check the RHR system. The results have been reviewed and accepted.

The inspector has no further questions on this item.

g. Spray Pumps and Eductors, TP 4.5.3

This procedure has been reviewed and accepted. The inspector has no further questions on this test at this time.

h. Safety Injection Instrumentation, TP 4.5.6

Testing is in progress on the accumulator level instrumentation. The spray additive tank level instrumentation remains to be performed. The tests will be completed prior to heatup.

This item is unresolved pending the completion of the test, final review and acceptance of the results.

i. Waste Disposal System Liquid Receipt and Storage, TP 4.6.1

The purpose of this procedure is to verify the operation of:

the Reactor Coolant Drain Tanks and the Reactor Coolant Drain Tank Pumps;

the Reactor Coolant Sump Tank and Sump Tank Pump;

the Chemical Drain Tank and Chemical Drain Pump; and

the Spent Resin Storage Tank Level Alarms.

The test results have been reviewed and accepted.

This item is closed.

j. Nuclear Instrumentation Operation Check, TP 4.7.2

This test has been completed and accepted. The inspector has no further questions on this item at this time.

k. Air and Motor Operated Valves (Safety Injection, SI, Valves) TP 4.10.1

This test was performed in March 1975 and is currently being repeated. The inspector's review identified three valves that were retested that had acceptance times of opening and closing of 10 seconds each which were measured to be 0.5 to

4 seconds over the acceptance value. Four valves that were above the 10 second acceptance value during the March test remained to be tested. The previous times for these values were 0.5 to 1 second above the 10 second acceptance value.

The licensee stated that additional information will be forwarded to NRC, (NRR) based on the final test results.

This item is unresolved pending the resolution of the test results with final acceptance criteria.

l. Heating, Ventilation and Cooling, TP 4.11.1

The testing of the containment ventilation system needs to be completed. The FSAR specifies that this test be completed prior to criticality, table 13.1-1 item 37.

The licensee will complete the test prior to the reactor coolant system heatup.

This item is unresolved pending the completion of the test, review and acceptance of the results.

m. Radiation Monitoring, TP 4.7.1

Reference Inspection Report 50-286/75-02, Detail 5b and WEDCO Form RFT, 77263 for this test procedure.

The inspector has reviewed the test procedure which was modified to assure checks on prerequisites.

The test has been completed, reviewed and accepted. The inspector has no further questions on this item.

n. Fire Protection System, TP 4.11.6

The licensee has to complete the installation of part of the fire hydrant piping. The piping remaining would provide fire hydrant availability to the Diesel Generator complex. The licensee has agreed to establish temporary connections to allow fire protection coverage of the Diesel Generator area.

During a tour of the facility the inspector observed that a fire hose had been connected to provide water to the Diesel Generator complex.

The licensee also has to install and check one smoke detector in the 138 Kv yard.

The licensee will complete the above installations and test prior to heatup.

This item is unresolved pending the completion of the installation, review and acceptance of the results.

o. Containment Isolation Valve Leak Test, TP 4.11.10

This test procedure has been reviewed and accepted. The inspector has no further questions on this item at this time.

p. Boric Acid Heat Tracing, TP 4.13.5

The circuits required to be completed prior to core loading have been tested and data has been evaluated and accepted. The final validation of the last two circuits was confirmed by telephone confirmation between the Region I inspector and the Consolidated Edison Chief Engineer on November 19, 1975.

The circuits remaining to be tested are associated with the waste processing and boron recycle systems. This part of the test procedure will be completed prior to criticality.

This item is unresolved pending the completion of the test procedure requirements, review and acceptance of the results.

13. Prototype Vibration Correlation

Reference Inspection Report 50-286/75-05, Management Interview C; letter from WEDCO to Consolidated Edison, November 10, 1975 (Indian Point Unit 3, Report-Reactor Internals Test Program).

The report has been transmitted to Consolidated Edison and has been accepted. This item is closed.

14. Operation Procedures

Reference Inspection Report 50-286/75-26, Detail 3a.

The following system operating procedures remain to be approved:

SOP WDS-1 Liquid Waste Disposal System Operation

SOP WDS-6 Liquid Waste Discharge Procedure

SOP WDS-7 Gaseous Waste Discharge Procedure

The final procedures cannot be written until the Environmental Technical Specifications have been approved. Pending the approval of the Environmental Technical Specifications by Core Loading the licensee will complete and approve the procedures prior to the RCS heatup.

This item is unresolved pending the completion and approval of the procedures.

15. Surveillance & Calibration Procedures

Reference Inspection Report 50-286/75-10, Detail 3b(4)

3PTV-3 Reactor Coolant System Leakage

This procedure remains to be completed. Final completion and approval of this procedure requires the completion and approval of the hydrostatic curves to be contained in the Technical Specification. Pending this approval by core loading, this procedure will be completed and approved prior to initial criticality.

This item is unresolved pending the completion, review and approval of this procedure.

16. Additional Testing of Diesel Generator #31

Reference: IE Inspection Report 50-286/75-22, Detail 7

The licensee has tested the starting circuits of the Diesel Generator #31 in Addendum #2 to INT TP 4.13.1. The testing was to verify repairs to the control circuits that were damaged and subsequently repaired as a result of a minor fire noted in the reference report. The diesel generator was satisfactorily loaded to 1700 amps. This item is resolved.

17. PAB Filter Systems

Reference Inspection Report 50-286/75-25, Detail 6b

The inspector observed the PAB structures for receiving the charcoal filter media. The filter media remains to be put in place.

The licensee states that the system will be finalized and tested prior to initial criticality.

This remains an unresolved item pending the final testing review and acceptance of this system.

18. HEPA and Charcoal Tests

FSB, Containment; and Control Room, Reference Inspection Report 50-286/75-25, Detail 6b.

The final acceptance of the test results remains to be accomplished. The acceptance of the results will be accomplished prior to initial criticality.

This item remains unresolved pending the final review and acceptance of the test results.

19. Liquid Waste System

Reference Inspection Report 50-286/75-25, Detail 5

System testing remains to be completed.

The licensee has stated that testing remains to be done on the waste evaporator and Reactor Coolant Drain Tank. Final testing will be completed prior to initial criticality.

This remains an unresolved item pending the completion of the testing and acceptance of the results.

20. Gaseous Waste System

Reference Inspection Report 50-286/75-25, Detail 5

The gaseous waste system testing is about 50% complete. The testing will be complete prior to initial criticality.

This remains an unresolved item.

21. Area Access Control

Discussions with the licensee indicate that there will be no construction work being performed in containment during fuel loading operations.

All activity and movement in containment and vital areas will be based on agreement between WEDCO, Con Edison Construction and Operations.

The 95' elevation, loading area, will be restricted, This control was observed to be currently in effect.

The fuel building will be controlled. The watch foreman will have responsibility for control.

The Emergency Diesel area will be secured.