

U. S. ATOMIC ENERGY COMMISSION
DIRECTORATE OF REGULATORY OPERATIONS

REGION (D)

RO Inspection Report No: 50-286/74-04

Docket No: 50-286

Licensee: Consolidated Edison Company

License No: CPPR-62

4 Irving Place

Priority: _____

New York, New York

Category: B1

Location: Indian Point 3, Buchanan, New York

Type of Licensee: PWR 1050 MWe (W)

Type of Inspection: Routine, Announced

Dates of Inspection: February 26-28, 1974

Dates of Previous Inspection: January 29, 1974

Reporting Inspector: *R. H. Brickley*

3/15/74

R. H. Brickley, Reactor Inspector

Date

Accompanying Inspectors: *J. N. Hannon*

3/15/74

J. N. Hannon, Reactor Inspector

Date

Date

Date

Date

Other Accompanying Personnel: NONE

Date

Reviewed By: *E. C. McCabe, Jr.*

3/15/74

E. C. McCabe, Jr., Senior Reactor Inspector
Reactor Operations Branch

Date

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SUMMARY OF FINDINGS

Enforcement Action

None

Unusual Occurrences

None Identified

Licensee Action on Previously Identified Enforcement Items

A. Not Inspected.

Other Significant Findings

A. Current

1. The licensee has revised the initial core load date. (Details, Paragraph 2)
2. Preoperational test procedure preparation status was obtained. (Details, Paragraph 3)
3. Six preoperational test procedures were reviewed. (Details, Paragraph 4)
4. The licensee's position on Regulatory Guide 1.68 was obtained. (Details, Paragraph 5)
5. Safety implication from a condensate pump failure is an unresolved item. (Details, Paragraph 6)
6. Timely completion of preoperational test procedure preparation is not being accomplished. (Details, Paragraph 3b)
7. The test log was reviewed. (Details, Paragraph 8)

B. Status of Previously Reported Unresolved Items

1. A preliminary list of Phase III tests was obtained. (Details, Paragraph 7a)
2. Auxiliary Boiler Feed Pump (Electrical) Run-In INT-TP-1.41 has been modified. (Details, Paragraph 7b)

Management Interview

Attendees

Consolidated Edison Company

Mr. S. H. Cantone, Operations Engineer
Dr. G. I. Coulbourn, Manager, Indian Point 3 Construction
Mr. J. Deane, Supervisor, QA Examination
Mr. A. D. Kohler, Jr., Resident Construction Manager
Mr. V. M. Perry, Jr., Superintendent, Field Operations
Mr. G. D. Whittier, Test Engineer, Unit 3 Startup

WEDCO

Mr. R. E. Barclay, Operations Manager
MR. E. A. Reeves, Operations/Procedures Manager

The following items were discussed:

- A. Revised initial core load date. (Details, Paragraph 2)
- B. Status of preoperational test procedure preparation. (Details, Paragraph 3)
- C. Preoperational test procedure review. (Details, Paragraph 4)
- D. Regulatory Guide 1.68. (Details, Paragraph 5)
- E. Condensate pump failure. (Details, Paragraph 6)
- F. Resolution of previous unresolved items. (Details, Paragraph 7)
- G. Test Log. (Details, Paragraph 8)

DETAILS

1. Persons Contacted

Consolidated Edison Company

Mr. S. H. Cantone, Operations Engineer
Dr. G. I. Coulbourn, Manager, Indian Point 3 Construction
Mr. J. Deane, Supervisor, QA Examination
Mr. D. Hartsfield, Superintendent, Nuclear Inspection
Mr. A. D. Kohler, Jr., Resident Construction Manager
Mr. V. M. Perry, Jr., Superintendent, Field Operations
Mr. F. C. Repose, Chief Construction Inspector

WEDCO

Mr. R. E. Barclay, Operations Manager
Mr. W. Bradford, Assistant Operations Manager
Mr. E. A. Reeves, Operations/Procedures Manager
Mr. L. Waldschmidt, Assistant Operations Manager

2. Initial Core Load Date

The licensee stated that a meeting between Con Ed and WEDCO had resulted in the following officially revised plant schedule.

RCS Hydrostatic Test	July 1974
Hot Functional Tests	September 1974
Integrated Leak Rate Test	October 1974
Initial Core Loading	November 1974

The revised schedule represents a slippage of four months. The above information is reportedly being transmitted to Licensing by a corporate letter.

3. Preoperational Test Procedure Status

a. Status

Phase	I	II	III
Number of Procedures Planned	76	97	28
Procedures Approved for Performance	89%	6%	0%
Procedures Under Review by Joint Test Group (JTG)	11%	30%	0%

The inspector reiterated his concern that Phase II and III procedures would not be prepared, reviewed, and approved in a timely manner. It was pointed out that two of the six procedures available for review during this inspection were for tests being performed or completed. In such cases, questions involving test validity can arise too late to be corrected before test completion. The licensee stated that he felt that procedures were being made available in as timely a manner as possible and that he recognized the problem as stated.

- b. Subsequent to the inspection, in a March 4, 1974 telephone conversation with the licensee, the inspector stated that it was an RO position that approved preoperational test procedures should be available for RO examination at least thirty days prior to the performance of the scheduled activity but not less than ninety days prior to the scheduled fuel loading. In addition, since two of the procedures recently made available for RO examination were on tests in progress or completed the inspector did not consider this timely as discussed during this and a previous inspection. It was also emphasized that tests should not be delayed for procedure reviews by RO. (Also, see RO Inspection Report No. 50-286/73-13, Paragraph 2a)

4. Preoperational Test Procedure Review

The inspector reviewed six preoperational test procedures with the following findings.

a. TP-4.12.2 Instrument Air Functional Test

Step 6.3.33 refers to valve IA-36 which could result in confusion since there are several valves with this designation. The licensee stated that valves will be renumbered after system acceptance so that each is individually designated and that procedures will be revised accordingly. No commitment date is presently available for accomplishing this action. This item is unresolved.

b. TP-4.12.25 Instrument Air Closed Cooling Water System Test

Step 5.1.3 does not define criteria to establish boundary conditions for proper pump operation. The licensee stated that there are no provisions for the instrumentation necessary to obtain data for pump verification, and that proper pump operation will be certified by analysis and documented prior to acceptance by the licensee. This item is unresolved.

c. TP-4.13.2, Battery Charger and Battery Functional Test

(1) Acceptance Criteria

Step 1.1 identifies Section 8 of the FSAR as providing the acceptance criteria for satisfactory test performance. It is not clear how the criteria will be satisfied by this test, particularly in the area of single component failures.

The licensee stated that Step 1.1 will be revised to prescribe the appropriate acceptance criteria applicable to the test.

This item is unresolved pending TP-4.13.2 revision.

(2) Precautions and Limits

Step 5.2 does not specify precautions or place limits on hydrogen accumulation, although it does caution test personnel regarding electrical hazards in general.

The licensee stated that there are presently no provisions for monitoring hydrogen, that Administrative Procedures require the charge to be secured if the exhaust fan is lost, and that, while specific electrical safety precautions are not identified, a standard package of safety precautions will be made available for the operator's use. This item is unresolved.

d. TP-1.45, D/G Starting Air System - Service Test, Flush and Leak Test

There were no deficiencies identified with TP-1.45.

e. TP-4.13.4, Static Inverters

(1) Warmup

Several sections of Procedure TP-4.13.4 require the recording of data after a warmup time of seven minutes (Sec. 5.6.13, 5.6.20, etc.) while the attached data sheets list data requirements following a fifteen minute warmup only. The licensee stated that a fifteen minute warmup was required initially, with a subsequent seven minute warmup period required. The seven minute data was recorded on the data sheets for the fifteen minute period.

(2) Loading

Several sections of the procedure (Sec. 5.6.1, 5.6.7, 5.6.13 etc.) require that low, intermediate, and high load conditions be applied to each inverter without specifying the method or equipment to be used. The licensee stated that the method used was to apply dummy loads (special test equipment) and that this information will be contained in the completed test package.

(3) Inverter 33

This procedure does not cover inverter 33. The licensee stated that inverter 33 will be covered either by a separate procedure or by an addendum to this procedure.

The inspector noted that the test covered by this procedure had been completed prior to the above discussion. The questions raised, however, are unresolved.

f. TP-4.13.6, Freeze Protection Electrical Heat Tracing

No deficiencies in TP-4.13.6 were identified.

5. Regulatory Guide 1.68

The inspector requested that the licensee state his position with regard to their intention to follow the guidelines of R.G 1.68. The licensee stated that RG 1.68 had just recently been issued and that their present program is an improved version of the one used on Unit 2. He further stated that the Unit 2 program and procedures had been reviewed during previous inspections and therefore should be satisfactory. The licensee also stated his feeling that the guideline of having procedures available for RO examination at least 30 days prior to the performance of the scheduled activity but not less than 90 days prior to the scheduled fuel loading was arbitrary, was not possible based on present manpower, and would not improve their present program.

The inspector acknowledged the licensee's position and stated that RG 1.68 and other RO guidelines are and will continue to be used in the inspection program.

6. Condensate Pump Failure

The test log review revealed the fact that #31 condensate pump had failed on February 1, 1974, apparently resulting in a fractured impeller. This occurrence had previously been mentioned by the licensee during a brief tour of Unit 3.

Further investigation revealed that the licensee had chosen not to report this event pursuant to 10 CFR 50.55(e), as it was not considered to be safety related. This determination was reportedly based on the fact that the condensate system is not required for safe shutdown and is therefore not a safety-related system. No analysis or evaluation of safety implications appeared to have been performed to support this conclusion.

In a subsequent telephone conversation, the inspector emphasized that casualties to non-safety systems could have safety-related effects. The licensee was asked to describe his program for evaluating potentially reportable construction and design deficiencies pursuant to 10 CFR 50.55(e). The below additional information was requested.

- a. The analysis the licensee made to conclude that this failure could not have adversely affected the safety of operation of the plant.
- b. The manufacturer and model number of the pump.
- c. Was the pump involved the same as those used on Unit 2?
- d. Have any similar failures occurred?
- e. Identification of the licensee's system for evaluating failures to determine if they are reportable under 10 CFR 50.55(e).

The program for evaluating design and construction deficiencies with respect to reporting requirements pursuant to 10 CFR 50.55(e) is unresolved pending identification of the requirements for evaluation of safety considerations, including application of such requirements to the condensate pump failure.

7. Previously Reported Unresolved Items

a. Phase III Tests

The licensee provided the inspector with a preliminary list of his Phase III tests. The licensee stated that other Phase III testing is covered as part of Phase II procedures. The following are the Phase III tests planned:

<u>NUMBER</u>	<u>TITLE</u>
INT-TP-5.0	Core Loading Summary
INT-TP-5.1	Initial Core Loading
INT-TP-5.2	Prerequisite and Periodic Check
INT-TP-5.3	Boration Check List
INT-TP-5.4	Sampling Reactor Vessel
INT-TP-5.8.7	Turbine Governor Load Limit for Runback
INT-TP-5.10.1	Automatic Reactor Control
INT-TP-5.11.7	Calibration Steam and Feedwater Instrument At Power
INT-TP-7.1	NSSS Startup Sequence
INT-TP-7.2	Physics Testing and Objectives Criteria Initial Criticality
INT-TP-7.3	Nuclear Design Checks
INT-TP-7.4	Boron Dilution
INT-TP-7.4.1	Boron Addition
INT-TP-7.6	RCC Pseudo Ejection Test at Zero Power
INT-TP-7.7	Minimum Shutdown Verification
INT-TP-8.1	Power Level Increase
INT-TP-8.2	RCC Pseudo Ejection and RCC Out of Position Test
INT-TP-8.3	Static RCC Drop and RCC Out of Position Test
INT-TP-8.5	Excore/Incore Calibration
INT-TP-8.6	Nuclear and ΔT Calibration and Thermal Power Measurement
INT-TP-9.1	Load Swing Test
INT-TP-9.3	Flow Coastdown
INT-TP-9.4	Large Load Reduction
INT-TP-9.5	Plant Trip Test
INT-TP-9.6	Dynamic Rod Drop Test
INT-TP-9.7	Generator Load Trip Test

INT-TP-10.1 Acceptance Run and Heat Rate
INT-TP-10.2 Steam Generator Moisture Carryover
 Measurement

The inspector has no further questions on this item. (RO Report 50-286/73-13, Paragraph 2a(1))

b. Auxiliary Boiler Feed Pump Run-In

The licensee issued a P&I change to Section F.4 of TP-1.41, Auxiliary Boiler Feed Pump (Electrical) Run-IN, to delete the one hour run time for bearing housing temperature stabilization. The inspector had no further questions on this item. (RO Report 50-286/73-07, Paragraph 8f)

8. Test Log Review

The Unit 3 Test Log was reviewed pursuant to the requirements of Administrative Procedure 3AD-8, Rev. 2, and the following items were noted:

a. Log Marking

The log is not marked per the requirements of Page 49 of 3AD-8 Rev 2. The licensee stated that the log will be marked as required by procedure. This item is unresolved.

b. Log Entry Completeness

Some entries appear to be lacking sufficient supporting information to enable the reader to follow the events.

The licensee stated that completeness of log entries will be stressed in future tests. This item is unresolved.