

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

RO Inspection Report No.: 50-219/74-09

Docket No.: 50-219

Licensee: Jersey Central Power and Light Company

License No.: DPR-16

Madison Avenue at Punch Bowl Road

Priority: _____

Morristown, New Jersey 07960

Category: C

Location: Oyster Creek, Forked River, New Jersey

Type of Licensee: 1930 Mwt, BWR (GE)

Type of Inspection: Announced

Dates of Inspection: May 8-9, 1974

Dates of Previous Inspection: May 2-3, 1974

Reporting Inspector: *T. Rebelowski*
T. Rebelowski, Reactor Inspector

6/3/74
DATE

Accompanying Inspectors: *J. Streeter*
J. Streeter, Reactor Inspector

6/3/74
DATE

Other Accompanying Personnel: _____

DATE

Reviewed By: *E. C. McCabe, Jr.*
E. C. McCabe, Senior Reactor Inspector,
Reactor Operations Branch

6/3/74
DATE

B/S25

SUMMARY OF FINDINGS

Enforcement Action

None

Licensee Action on Previously Identified Enforcement Items

Not inspected

Unusual Occurrences

None identified

Other Significant Findings

A. Current

1. The following areas were inspected with areas of concern noted.
 - a. The instrumentation volume fraction assignments were not addressed in the IPCLRT procedure (Details, Paragraph 2b)
 - b. The calculated containment free air volume was not available. (Details, Paragraph 2c)
 - c. Temperature stabilization criteria have not been established. (Details, Paragraph 2d)
 - d. A review of containment air mass inventory by the licensee is incomplete. (Details, Paragraph 2e)
 - e. Access control in the secondary building during the test was not addressed by the licensee. (Details, Paragraph 2f)
 - f. Licensee's assumptions on conduct of testing do not meet 10 CFR 50, Appendix J, requirements. (Details, Paragraph 2g)
 - g. Procedure format changes are necessary. (Details, Paragraph 2h)
 - h. Administrative controls on valve repairs are incomplete. (Details, Paragraph 2i).
 - i. Quality assurance audits were not addressed by the licensee. (Details, Paragraph 2j)

B. Status of Previously Reported Unresolved Items

Not inspected.

Management Interview

A management interview was conducted at the site at the conclusion of the inspection on May 9, 1974, with the following persons in attendance:

Jersey Central Power and Light Company

Mr. J. T. Carroll, Station Superintendent
Mr. K. O. E. Fickeissen, Jr., Technical Supervisor
Mr. E. J. Gowney, Technical Engineer
*Mr. D. A. Ross, Manager, Nuclear Generating Stations

The following summarizes the items discussed.

A. General

The inspector stated that the purpose of the inspection was to review the draft Integrated Primary Containment Leak Rate Test procedure (IPCLRT).

B. Reassignment of Instrument Volume Fractions

The inspector stated that the method of reassignment of volume fractions for failed instruments was not identified. The licensee stated that this item would be reviewed. (Details, Paragraph 2b)

C. Containment Volume Determination

The inspector requested information on determination of the containment free air volume. The licensee stated that this data would be available prior to conduct of the IPCLRT. (Details, Paragraph 2c)

D. Temperature Stabilization Criteria

The inspector stated that the criteria for temperature stabilization for conducting a IPCLRT as presented by the licensee does not meet the Regulatory position. The licensee stated that he cannot meet the Regulatory position on temperature stabilization. (Details, Paragraph 2d)

* Mr. D. A. Ross participated in the management interview via telephone conference call.

E. Containment Air Mass Inventory

The inspector stated that the pressure sources that could contribute to the air mass during the test were not identified. The licensee stated that the procedure would be revised. (Details, Paragraph 2e)

F. Access Control

The inspector stated that the control of unauthorized personnel into the secondary building was not addressed. The licensee will review this item. (Details, Paragraph 2f)

G. Test Conductance

The inspector stated that the licensee's proposed method of reducing measured Type A test values by correcting for local leak repairs accomplished subsequent to the Type A test was not in accordance with 10 CFR 50, Appendix J. The licensee stated that the IPCLRT would be revised to reflect Appendix J requirements. (Details, Paragraph 2g)

H. IPCLRT Format

The inspector stated that format changes were necessary in several areas of the procedure. The licensee stated that the procedure will be revised. (Details, Paragraph 2h)

I. Administrative Control - Type B and C Test Results

The inspector noted that the licensee's results from Type B and C testing was not monitored by an administrative procedure. The licensee stated that a review of this item will be made. (Details, Paragraph 2i)

J. Quality Assurance Audits (QAA)

The inspector stated that QAA were not addressed in IPCLRT procedure. The licensee stated that QAA will be performed. (Details, Paragraph 2j)

K. Inspector Notification of IPCLRT Schedule

The inspector requested to be informed of the test date one week prior to the IPCLRT. The licensee agreed to contact the inspector. (Details, Paragraph 2k)

DETAILS

1. Persons Contacted

Mr. R. M. Bright, Associate Engineer
Mr. J. T. Carroll, Station Superintendent
Mr. R. Dube, QA Supervisor
Mr. K. O. E. Fickeissen, Jr., Technical Supervisor
Mr. E. J. Gowney, Technical Engineer
Mr. D. L. Reeves, Jr., Chief Engineer
Mr. J. L. Sullivan, Jr., Operations Engineer

2. Integrated Primary Containment Leak Rate Test (IPCLRT)

- a. The inspector reviewed the draft procedure (No. 602.1, Rev. 1) for the Integrated Primary Containment Leak Rate Test (IPCLRT). The inspector discussed with the licensee the areas of test duration, closure of containment isolation valves without preliminary exercising or adjustment, use of reference vessel method test results to judge acceptability of test, environmental conditions under which the test would not be conducted, independent log of test events, instrument error analysis, instrument calibration criteria and records, instrument failure criteria, and assignment of volume fractions to individual instruments. The inspector had no further questions concerning these matters at this time.

The inspector identified some areas of concern. These areas and the licensee's commitments for resolution follow.

b. Reassignment of Instrument Volume Fractions

The inspector stated that neither the IPCLRT procedure or computer program addressed the issue of reassignment of instrument volume fractions in the event of instrument failure. The licensee stated that he would evaluate the need for volume fraction reassignment criteria and modify the IPCLRT procedure if necessary. This item is unresolved.

c. Containment Volume Determination

The inspector requested information on the calculated containment free air volume and the torus water level assumed in the calculation. The inspector also asked if there was information available on the containment free air volume as a function of torus level. The licensee stated that this information was not immediately available but would be available prior to the conduct of the test. This item is unresolved.

d. Temperature Stabilization

The inspector stated that the licensee's criteria for containment temperature stabilization were not addressed in the IPCLRT procedure.

The inspector presented the following Regulatory position on temperature stabilization criteria.

- (1) The change in average temperature of all containment temperature detectors in use should have stabilized within 0.1°F/hour over the last two hours of the stabilization period.
- (2) No single containment temperature measuring element shall change more than 0.5°F/hour during the last hour of the stabilization period.
- (3) Determination of the temperature and time criteria given in (1) and (2) above shall not be initiated until the containment has been held at a constant pressure for a minimum of four hours.

The licensee stated that he will be unable to meet the Regulatory position due to the following reasons.

- (4) The licensee stated that the temperature instrumentation presently installed in containment only has the ability to monitor temperature changes of .5°F or greater.
- (5) The licensee stated that the method of air circulation in containment would involve a heat source. The reactor building closed cooling water will be valved out to the drywell coolers, thus no cooling of containment air mass.

The licensee stated that the Regulatory position was not consistent with previous temperature stabilization criteria stated in a Directorate of Licensing approved topical report.*

This item is unresolved.

e. Containment Air Mass Inventory

The inspector stated that the IPCLRT procedure did not include the licensee's method of removal, blanking or venting systems that could contribute to the containment air mass inventory during progress of test. Examples of pressure sources such as air piping systems, nitrogen piping systems and mainsteam isolation valve (MSIV) accumulators were discussed.

* Bechtel Topical Report BN-TOP-1, Rev. 1

The licensee stated that the MSIV accumulators would be vented and that other pressure sources would be determined and included in the valve line-up sheets or in the procedural steps of the IPCLRT.

This item will be reviewed by the inspector upon issuance of the licensee's approved procedure. This item is unresolved.

f. Access Control

The inspector stated that the IPCLRT procedure did not address the method of controlling unauthorized personnel from entering the reactor building during testing. The inspector stated that during containment pressurization and for a period of time after reaching the test pressure, access to areas in the reactor building should be restricted to assure personnel safety.

The licensee stated that a review of this item will be made. This item is unresolved.

g. Test Conductance

The inspector stated that the IPCLRT procedure allows correcting unacceptable Type A test results by taking credit for local leak repairs after the conduct of the Type A test. The procedure states that IPCLRT "need not be repeated provided local leakage measurements are conducted and the leak rate differences prior to and after repairs when corrected to P_t and deducted from the integrated leak rate measurement, yield a leakage rate value not in excess of the allowable operational leak rate." The inspector stated that this was in conflict with Section III.A.1.b. of 10 CFR 50, Appendix J, which states "If during a Type A Test.... potentially excessive leakage paths are identified....which result in the Type A test not meeting the acceptance criteria...the type A test shall be terminated. Repairs and/or adjustments to equipment shall be made and a Type A test performed." The licensee agreed to revise his procedure to reflect Appendix J requirements in this area. This item is unresolved pending inspector review of approved procedure.

h. IPCLRT Format

The inspector stated that the IPCLRT procedure format did not meet present industry standards. Areas of concern identified by inspector are listed below.

- (1) The IPCLRT procedure sections describing the prerequisites and performance of test, lack provisions for entry of signature/date block verifications for test personnel.
- (2) The valve line up sheets do not identify system diagrams as references to complete system isolation valve checkoffs.
- (3) The use of terms in procedure such as "normal valve line up" are not definitive. The inspector stated that references to operational procedures and mode of line up (shutdown, refueling, etc.) are not identified.

The licensee stated that the revised ICLRT procedure would incorporate the inspector's comments. These items will be reviewed by inspector upon issuance of licensee's approved procedure. This item is unresolved.

i. Administrative Controls of Type B and C Test Results

The inspector's review of the IPCLRT procedure revealed that the completion of local leak rate tests (Type B and C) were identified by the licensee in the prerequisites of the procedure. The inspector inquired if the licensee had an established method to monitor the future repair of valves and penetrations during the interim between required local leak rate tests. The program should monitor the test results to assure that the 0.6 La criteria of maximum leakage as established in 10 CFR 50, Appendix J, will not be exceeded.

The licensee stated that repaired valves or penetrations have been tested and results compared to individual leakage requirements of technical specifications. The licensee agreed to review the inspectors statements and would provide a method of assurance that the 0.6 La criteria will be monitored.

This item will be reviewed at a subsequent inspection. This item is unresolved.

j. Quality Assurance Audits

The inspector's review of the IPCLRT procedure revealed that the area of Quality Assurance was not addressed.

The licensee stated that the IPCLRT will be monitored by members of the Quality Assurance staff. The use of predetermined audit checklists that will require review of the procedure prior to test, checks during implementation of the test and review of the test

results will be included in the program. Pending inspector's review of completed audits, this item is unresolved.

k. Inspector Notification of IPCLRT Schedule

The inspector requested the licensee to notify the RO:I project inspector or his senior inspector one week prior to commencement of the IPCLRT. The inspector emphasized that the licensee should not delay the test for the purpose of allowing an inspector to be present. The licensee acknowledged this information and agreed to contact the inspector.