U.S. ATOMIC ENERGY COMMISSION

DIRECTORATE OF REGULATORY OPERATIONS

REGION I

RO Inspection Report No: 50-219/74-11

Docket No: 50-219

Licensee: Jersey Centfal Power and Light Company

License No: DPR-16

Madison Avenue and 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: June 9-10, 1974

Dates of Previous Inspection: May 30-31, 1974

Reporting Inspector: T. Rebelowski

T. Rebelowski, Reactor Inspector — Date: 7/1/74

Accompanying Inspectors: _____ Date: _____

_____ Date: _____

_____ Date: _____

_____ Date: _____

Other Accompanying Personnel: _____ Date: _____

Reviewed By: E. C. McCabe, Jr. B/501 Date: 7/2/74

E. C. McCabe, Senior Reactor Inspector
Nuclear Support Section
Reactor Operations Branch

SUMMARY OF FINDINGS

Enforcement Action

None

Licensee Action on Previously Identified Enforcement Items

Not Inspected

Design Changes

None

Unusual Occurrences

None

Other Significant Findings

A. Current

1. The Integrated Primary Containment Leak Rate Test as conducted by the licensee indicated a satisfactory leakage rate of 0.301 weight percent per 24 hours (criteria 0.627) at a pressure of 20 psig (P_t). (Detail 3b)

2. The inspector's review of IPCLRT prerequisites found licensee actions adequate. (Detail 3d)

3. The problems encounted by the licensee during testing included partial loss of instrumentation, high drywell alarms and valve abnormalities. (Detail 3c)

B. Status of Previously Reported Unresolved Items

1. The licensee's containment temperature stabilization criterion has been defined. (Detail 3d1)

2. The licensee has reviewed containment air mass inventory. (Detail 3d2)

3. The licensee's Quality Assurance staff monitored the conduct of IPCLRT. (Detail 3d3)

4. The licensee's method of access control did not limit all work in secondary containment areas. (Detail 3d4)

Management Interview

A management interview was conducted at the site at the conclusion of the inspection on June 10, 1974, with Mr. J. Carroll, Plant Superintendent and Mr. K. O. E. Fickeissen, Jr., Technical Supervisor.

The following summarizes the items discussed:

A. Integrated Primary Containment Leak Rate Test

The inspector stated that the purpose of the inspection was to witness the conduct of portions of the Integrated Primary Containment Leak Rate Test (IPCLRT).

1. The inspector stated that the licensee's prerequisites to IPCLRT were satisfactory accomplished. (Detail 3d)

2. The inspector stated that preliminary data appeared to indicate that IPCLRT would meet acceptance criteria. (Detail 3b)

3. The inspector discussed with licensee instrumentation failure, drywell sump alarms and valve abnormalities.

   The licensee's representative stated that a retest of valves in areas where extension of test boundaries were made, the leakage values would be added to final summary report leakage calculations. (Detail 3c)

4. Resolution of the following unresolved items was accomplished.

DETAILS

1. Persons Contacted

Mr. J. Behm, Quality Assurance
Mr. R. Bright, Associate Engineer
Mr. H. Callahan, Control Room Operator
Mr. J. Carroll, Station Superintendent
Mr. B. Cooper, Shift Foreman
Mr. K. Fickeissen, Jr., Technical Supervisor
Mr. E. Growney, Technical Engineer
Mr. D. Reeves, Jr., Chief Engineer
Mr. E. Rosenfeld, Associate Engineer

2. General

The inspector was notified by the licensee on June 9, 1974, that preparations for the Integrated Primary Containment Leak Rate Test (IPCLRT) were complete.

3. Integrated Primary Containment Leak Rate Test (IPCLRT)

The licensee's periodic Integrated Primary Containment Leak Rate Test was performed during June 9-13, 1974. The inspector was on site during initial pressurization, temperature stabilization and a portion of the leakage test. Included in this report is additional data transmitted to the inspector by the licensee upon completion of the IPCLRT.

a. Prerequisites

(1) Examination of Containment Structural Integrity

The licensee performed an inspection of containment to determine the extent (if any) of the structural deterioration of containment since the previous integrated leak rate test (June, 1972). The following areas were examined.

(a) Bolting of bolting flanges.
(b) Cable penetrations.
(c) Pipe expansion joints.
(d) Evidence of leakage from torus.
(e) Torus support members.
(f) Liner plates bulging.
(g) Liner plate cracks.
(h) Structural beam deformation.
(i) Pitting, corrosion or rusting.

No deterioration was noted by the licensee. Minor rusting was noted on a number of penetration welds.

(2) Instrumentation Calibration

The inspector reviewed the licensee's documentation of containment leak rate instrumentation calibration for the following.

(a) Ten resistance temperature probes.
(b) Six dewcells.
(c) Pneumatic piston pressure gauge.
(d) Absolute manometer.
(e) U-tube water manometer.
(f) Air flow meter. (8 to 100 cfm)

The instruments were calibrated with traceability to the National Bureau of Standards, and within frequency criteria established by the licensee.

b. Sequence of IPCLRT Events

6/9/74 -	0800	Final Preparations in progress.
	1500	Airlock Leak Rate in progress.
	1625	Pressurization of containment started.
	1705	Pressurization stopped - Torus pressure gauge not functioning - Replaced.
	1715	Pressurization of containment continued.
6/10/74 -	0055	Drywell pressure at 21.00 psig.
	0400	Temperature Stabilization period started.
	0600	Temperature Stabilized at ~86°F.
	1400	Power Supply to Dewcells inadvertently disconnected. Data accumulation restarted. (Preliminary IPCLRT. .541% wt/day).
6/11/74		Test in progress.
6/12/74 -	0700	Integrated Leak Rate Test terminated. Sensitivity leakage verification test temperature stabilization period started.
6/13/74 -	1200	Final set of data reading on system sensitivity check taken.
6/13/74 -	1310	Commenced depressurization of containment.

The calculated containment integrated leak rate of 0.301 weight percent per 24 hours (88.5 scfh) was determined. The criteria of 0.627 weight percent per 24 hours was not exceeded.

c. Problems During Containment Testing

(1) Dewcell Failure

The licensee experienced the failure of one of six installed dewcells. Number 3 dewcell temperature indicator, located in the drywell below the reactor vessel, failed. The criterion of two thirds of the installed instrumentation being operable was not violated. The volume fraction value associated with this dewcell was distributed between the functioning dewcells. This revision was entered into the licensee computer program. The inspector had no further questions on this item.

(2) Drywell Sump Alarm

During the initial pressurization of the containment volume a high level drywell sump alarm was experienced. A change to the Integrated Primary Containment Leak Rate Test procedure was written to allow pump down of the drywell sump during the test. The licensee established that a leak rate of one half gal/min from all sources was contributing to the level increases in the sump. The water levels of the reactor vessel and torus were monitored and an equilibrium volume of water was maintained in containment to compensate for the drainage.

(3) Valve Abnormalities

(a) During a survey of secondary containment the licensee noted air leakage from an improperly secured manual isolation valve on piping supplying the high pressure trip and alarm functions. The manual valve was found unseated and was reseated properly.

(b) The main steam line drain valves V-1-106 and V-1-107 were found to be leaking. The boundaries were extended and the licensee stated that this exception will be noted in the final summary report.

d. Previously Reported Unresolved Items on CILRT

(1) Temperature Stabilization

The temperature stabilization criteria established by the licensee calls for a rate of change of average temperature of less than 1.0°F/Hr averaged over the last two hours.*

A table of actual readouts is listed below:

Date	Time	Avg. Temp	Rate of Change
6/10	0400	86.75	
6/10	0500	86.30	-0.55°/hr.
6/10	0600	86.00	-0.30°/hr.
6/10	0700	86.05	+0.05°/hr.
6/10	0800	86.20	+0.15°/hr.

Temperature stabilization was established at 0600 hours on 6/10/74. This item resolves the items documented in Report 50-219/74-09, details 2d and Report 50-219/74-10, details 3c.

(2) Containment Air Mass Inventory

The licensee had revised the IPCLRT procedure to include blanking and venting of systems. One area of concern in the supply air to containment pressurization was resolved. (RO Report 50-219/74-09, Detail 2e)

(3) Quality Assurance Audits

The licensee maintained a quality assurance surveillance of procedural items during the conduct of test. This resolves the item documented in RO Report 50-219/74-09, Detail 3j.

(4) Access Control

The licensee's review of administrative restrictions to entry to secondary containment concluded that no further restrictions to limit access to secondary buildings were required during the conduct of IPCLRT. During the inspector's time on site, the licensee experienced an inadvertent loss of power to monitoring instruments due to removal of power source through personnel error. The

* Note: The temperature stabilization criterion was verified acceptable by telephone conversation with RO:HQ (Seyfrit/Brunner, 6/26/74).

test data points were restarted and test time loss of approximately 6 hours was incurred. The inspector had no further comments in this area. This resolves the item documented in RO Report 50-219/74-09, Detail 2f.