## U.S. NUCLEAR REGULATORY COMMISSION OFFICE OF INSPECTION AND ENFORCEMENT

#### REGION III

Report No. 50-254/80-08; 50-265/80-01

Docket No. 50-254; 50-265

License No. DPR-29; DPR-30

Licensee: Commonwealth Edison Company Post Office Box 767 Chicago, IL 60690

Approved By: J. F. Streeter, Chief

Facility Name: Quad-Cities Nuclear Generating Plant, 1 and 2

Inspection At: Quad-Cities Site, Cordova, IL

Inspection Conducted: January 4, March 6-7, 9-11, 1980

Inspectors: E. T. Chow (January 4, March 6-7, 9-11, 1980)

The

Nuclear Support Section 1

Hopkins (March 6-7, 9-11, 1980)

Streeter (January 4, 1980)

4/4/80

4/14/80

Inspection Summary

Inspection on January 4, March 6-7, 9-11, 1980 (Report Nos. 50-254/80-08 and 50-265/80-01)

Areas Inspected: Routine, announced inspection of the containment integrated leak rate test; review of previous Unresolved Items. The inspection involved 106 inspector-hours on site by three NRC inspectors. Results: Of the two areas inspected, one Item of Noncompliance was identified in one area. (Deficiency - failure to follow procedure -Paragraph 4.d)

# DETAILS

### 1. Persons Contacted

\*N. Kalivianakis, Station Superintendent
\*L. Gerner, Technical Staff Supervisor
\*J. Swales, Technical Staff
\*J. Hoeller, Technical Staff
\*J. Heilman, Q. A. Engineer

The inspector also talked with and interviewed several members of the technical and engineering staffs.

\*Denotes those present at the exit interview.

## 2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (50-254/79-08-02): Drywell Temperature Readings Test for Isolation of Drywell Cooler Damper Air Supply Lines: The inspector determined that the licensee had performed a special test, Test No. 2-24, "Unit 2 Drywell Cooling Air Damper Supply and Control Air Isolation," dated May 4, 1979, and verified that the system could be isolated and the temperature distribution inside the drywell was still adequate.

(Open) Unresolved Item (50-254/79-08-04): Isolation of Drywell, Torus, and Drywell to Torus Differential Pressure Switches: The licensee maintained his previous position that there are no means to locally test the switches. The licensee stated that, according to the manufacturer's specification, the pressure switches could sustain a maxiumum pressure of 200 psi. This item will remain open pending further review by the inspectors.

(Closed) Unresolved Item (50-254/79-08-05): Isolation of Air Supply Lines to Drywell Cooler Dampers: The licensee stated that the air supply lines to the drywell cooler dampers are disconnected inside the drywell. The inspectors visually verified that the lines were disconnected and capped outside the drywell. The inspectors determined that the licensee's corrective actions were adequate.

(Open) Unresolved Item (50-254/79-08-06): Future Test Schedule for Unit 1 CILRT: The licensee stated that an amendment to technical specifications relating to CILRT is still in the corporate office and will be submitted to NRR. In the meantime the licensee will request an official position from NRR regarding the future test schedule for Unit 1 CILRT. This item is still unresolved pending the licensee's action. (Closed) Unresolved Item (50-265/76-24): TIP System Leakage: The inspectors reviewed information relating to Procedure QTS 100-38, Revision 1, "Automatic TIP Ball Valves and TIP Purge Line Local Leak Rate Test," and verified that the local leak rate test on the TIP system was performed as described in the licensee letter to RIII dated December 10, 1976.

## 3. Review of Licensee Event Report

(Closed) Reportable Occurrence Report No. R079-27/03L. (Closed) Supplemental Reportable Occurrence Report No. R079-27/03L-1. The inspectors reviewed information relating to local leak rate tests as described in Procedure QTS 100-1, Revision 4, "Local Leak Rate Test, Pressure Decay Method," and Procedure QTS 100-2, Revision 4, "Local Leak Rate Test, Flowmeter Method." The inspectors noted that all testing and corrective actions were completed regarding the excessive leakages measured for primary containment during the Unit 2 End-of-Cycle 4 refueling outage local leak rate testing program. The inspectors noted that the corrected local leak rates satisfied Technical Specification requirements.

No items of noncompliance or deviations were identified.

# 4. Containment Integrated Leak Rate Test (CILRT)

a. Procedure Review

The inspectors reviewed procedure QTS 150-1, Revision 7, "Integrated Primary Containment Leak Rate Test," and stated the following:

- (1) Based on the present and the previous CILKT, the reactor water level dropped about one inch per hour during the tests. The prerequisites of the test procedure should include a guideline on the dropping of the reactor water level.
- (2) The test procedure should be more specific as to the number of data sets required for the acceptability of the induced leakage test results.
- (3) The subvolume No. 11 free air volume was calculated using the reactor vessel air volume above 5". The number 5 should be used in the equation for calculating containment dry air mass in procedure QTS 150-T3, Revision 6, "Calculations Performed for IPCLRT Data," instead of the number 30 as used in the current equation. The modification of the equation will increase the measured leak rate slightly.

(The licensee acknowledged the above comments and stated he would modify the test procedure and computer program accordingly.)

(4) The inspectors noted that the licensee did not test the drywell, torus, and drywell to torus differential pressure switches during the Unit 2 CILRT. This is an Unresolved Item (50-265/80-01-01) pending further review by the inspectors.

No items of noncompliance or deviations were identified.

b. Instrumentation

The inspector reviewed the calibration data associated with performing the CILRT. A multipoint calibration of all instrumentation was performed. Correction values were generated based on the difference between measurements of resistance from a NBS verified resistance box and actual resistance measured. All corrections were placed as an array or equation into the CILRT computer.

Туре	Quantity	Serial Number	
RTD	30	44209-44238	
Flowmeter	1	7910A912GR1	
Pressure Gauge	2	PPG 1-2	
Dewcells	10	5835-1 to 8	

No items of noncompliance or deviations were identified.

c. Witness of Test

The inspector witnessed portions of the CILRT on March 10, 1980, and verified that:

Appropriate revision of procedure was in use by test personnel.

Test prerequisites were met.

Proper plant systems were in service.

No items of noncompliance or deviations were identified.

d. Direct Observation of Valve Lineups

The inspectors visually verified the positons of the valves 2-1402-33A, 2-1402-33B, 2-8801A, 2-8801B, 2-8801C, 2-8802A, 2-8802B, 2-8802C, 2-4699-46, and 2-4799-157.

The inspectors noted that Procedure QTS 150-57, .vision 6, "Unit 2 IPCLRT Valve Lineup," required that Valv. : 2-1402-33A and 2-1402-33B (Local leak test valves for core spray isolation valves) be locked closed. Although the valves were checked off as being verified locked closed, the inspectors found the valves closed but unlocked. However, the inspectors visually verified that series Valves 2-1402-32A and 2-1402-32B were locked closed.

Technical Specification 6.2.A requires that "Detailed written procedures including applicable checkoff lists . . . . shall be prepared, approved, and adhered to."

Contrary to the above, Procedure QTS 150-57, Revision 6, "Unit 2 IPCLRT Valve Lineup," was not adhered to in that valve position verification was not carried out on March 8, 1980, to verify that Valve 2-1402-33A and Valve 2-1402-33B were locked closed as required. This is considered an item of noncompliance (50-265/80-01-02) of the deficiency level.

No other items of noncompliance or deviations were identified.

# e. Blowdown and Containment Inspection

The inspector verified that blowdown was within Technical Specification radioactivity release limits.

No items of noncompliance or deviations were identified.

### f. CILRT Data . aluation

The 24-hour CILRT was started on March 10, 1980, at 12:00 a.m. The inspector independently monitored and evaluated leak rate data to verify the licensee's calculation of the leak rate. There was acceptable agreement between the inspector's and licensee's leak rate calculations as indicated in the following summary (units are in weight percent per day):

Measurement	Licensee	Inspector
Leakage rate measured (Lam) during CILRT	.4743	.4795

Lam at 95% confidence level .4854 .5037

The 10 CFR Part 50, Appendix J acceptance criterion at the 95% confidence level = 0.75 (La) = 0.75 (1) = 0.75. As indicated above, Lam at the 95% confidence level was less than that value. A preliminary calculation by the licensee indicated that the measured integrated leak rate with the addition of local leak rate differences prior to and after repair was .8 wt%/day.

No items of noncompliance or deviations were identified.

### g. Supplemental Test Data Evaluation

After the satisfactory completion of the 24 hour test on March 11, 1980, 12:00 a.m. a known leakage of .4623 weight percent/day was induced. The inspector independently monitored and evaluated leak rate data to verify the licensee's calculation of the supplemental leak rate. There was acceptable agreement between the inspector's and licensee's leak rate calculations as indicated in the following summary (units are in weight percent per day):

Measurement	Licensee	Inspector
Leakage rate measured (Lc) during supplemental test	.8293	.8324
Lc @ 95% confidence level Induced leakage rate (Lo) =	.8483	.8839

Appendix J Acceptance Criterion: Lo+Lam-0.25La <Lc Lo+Lam+0.25La. As indicated above, the supplemental test results satisified the requirements of 10 CFR Part 50, Appendix J.

No items of noncompliance or deviations were identified.

### 5. Unresolved Items

Unresolved Items are matters about which more information is required in order to ascertain whether they are acceptable items, Items o' Noncompliance, or Deviations. An Unresolved Item disclosed during the inspection is discussed in Paragraph 4.

# 6. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on March 12, 1980. The inspector summarized the purpose and the scope of the inspection and the findings.