U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-237/88015(DRS); 50-249/88016(DRS)

Docket Nos. 50-237; 50-249 Licenses No. DPR-19; DPR-25

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

Facility Name: Dresden Nuclear Power Station, Units 2 and 3

Inspection At: Morris, Illinois

Inspection Conducted: May 25, 26 and June 23, 24, 1988

Inspector: R. Mendez 7/7/88
Date

Approved By: Monte P. Phillips, Chief 7/7/88
Operational Programs Section Date

Inspection Summary

Inspection on May 25, 26 and June 23, 24, 1988 (Reports No. 50-237/88015(DRS); No. 50-249/88016(DRS))
Areas Inspected: Routine, unannounced safety inspection to review a Licensee Event Report and Actions on previous inspection findings (92701 and 92702).
Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

Commonwealth Edison Company

*E. D. Eenigenburg, Station Manager
*C. W. Schroeder, Services Superintendent
*E. Netzel, QA Superintendent
*J. Ackteiberg, Tech Staff Supervisor
*T. J. Lewis, Regulatory Assurance
*J. R. Williams, Regulatory Assurance
L. Lizalek, Tech Staff Engineer
M. Moy, Tech Staff Engineer

*Denotes those attending the exit meeting on June 24, 1988.

2. Licensee Event Report Followup

(Closed) Licensee Event Report (249/88004-LL): The Atmospheric Containment and Dilution (ACAD) purge valve 3-2599-23 was found to exceed the Appendix J limit of 0.6 La (493 SCFH). The licensee measured a leak rate of 192 SCFH on the ACAD 3-2599-23 purge valve. In addition, the following valves were found to leak excessively: ACAD 2599-3A (164 SCFH); Standby Liquid 1101-16 (102 SCFH); and the vent and the drywell/torus purge supply 1601-21, 24 and 56 valves (114 SCFH). The total as-found leakage using the maximum pathway method was 1,104 SCFH (1.34 La) or approximately twice the Appendix J reportable limit. The licensee repaired valve 3-2599-23 by lapping the disk and seat and replacing the gasket. The licensee found that the possible failure of valve 3-2399-3A was an accumulation of foreign material. Valve 3-2399-3A was cleaned and repacked in accordance with Work Request D 74168. The standby liquid control valve 3-1101-16 was found to have the sodium pentaborate come out of solution and solidify. The valve was cleaned and flushed. The drywell/torus purge supply valves 1601-21, 24 and 56 were all replaced with a new style Pratt 1200 butterfly valve. All the above valves successfully passed the as-left local leak rate test. Although the licensee has committed to issue a supplemental report on the failure of the above valves, the immediate corrective actions to repair or replace the valves were adequate.

3. Followup on Previous Inspection Findings

a. (Closed) Open Item (237/87010-01; 249/87009-01): The licensee's Type A test procedure DTS-1600-7, "Units 2/3, Primary Containment Integrated Leak Rate Test," listed a containment volume that differed from the value in the Dresden FSAR. Section 5.2 of the Dresden FSAR listed the total containment volume as 275,481 cubic feet. The total free volume used during the previous containment integrated leak rate test (CILRT) was 288,966 as listed in Appendix F of the licensee's CILRT procedure. In order to resolve the discrepancy, an Action Item Record (AIR) No. 12-87-20 was issued by the licensee

to request assistance from their Nuclear Engineering Department in determining the correct containment total free volume. On November 12, 1987, Sargent and Lundy, the architect engineer (AE), completed their review of the recalculated values for the drywell and torus free air volumes and determined that the total volume as 286,234 cubic feet. By letter dated December 13, 1987, the licensee's engineering department recommended that the free volume in Procedure DTS-1600-7 and the FSAR be changed to 286,234 cubic feet.

b. (Closed) Open Item (237/87010-02): Instantaneousness spikes in temperature and humidity readings were recorded by instrumentation sensors. During the March 1987 CILRT, spikes in temperature and humidity readings were recorded by the licensee's data acquisition system (DAS). The licensee was not able to determine and correct the cause during the test. The licensee subsequently rejected 13 data points during the Type A test and one data point during the supplemental test based on the magnitude and character of the reading changes. The basis for rejection was the one percent outlier criteria specified in Appendix D of ANSI 56.8, 1981. On March 30, 1987, after completion of the CILRT, the licensee attempted to intentionally cause the data to spike by creating noise or electrical interference. The licensee found that when the door leading to the personnel hatch (where the DAS was located) was slammed, it caused the data to spike. The licensee also discovered that the hardware connection at the back of the DAS had become loose. The licensee found that once the connector was firmly in place, the data spiking stopped. Although, the licensee has apparently found the cause of the instantaneous sensor spikes, they were in the process of upgrading the DAS to prevent future problems.

c. (Closed) Open Item (237/87022-01; 249/87021-01): Pratt 2F II butterfly valves were consistently failing the as-found local leak rate tests. The licensee had issued several LERs since 1980 due to failure of the Drywell/Torus Purge Supply valves 1601-21, 22, 55, 56, the Drywell/Torus Purge Exhaust valves 1601-23, 24, 60, 61, 62, 63, and the A and B Torus Vent 1601-20A, 20B, 31A and 31B. Since 1980, twenty Pratt 2F II valves were replaced including eight during the current outage due to poor local leak rate test results. The licensee replaced the eight old valves with Pratt 1200 series butterfly valves during the current Unit 3 outage. According to the licensee, the new valves have a wider seating surface for better sealing and an off-center shaft along the disc to provide greater torque against the seat.

d. (Closed) Deviation (237/87022-02; 249/87021-02): The licensee deviated from a commitment made to the NRC in Licensee Event Report (LER) 84-019-0 dated November 15, 1984. The LER was issued as a result of two make-up boxes used for local leak rate testing that were found out of calibration in the non-conservative direction. The local leak rate results were corrected and the licensee determined that they had exceeded their Technical Specification limit of 493 SCFH (0.6 La). As part of their corrective actions, the licensee made the following commitments that were stated in the LER as being accomplished or were to be accomplished.

(1) Signs will be attached to the boxes to require calibration of the flowmeters to be performed only as a whole unit.

(2) Signs have been attached to the boxes stating the calibration pressure and temperature.

(3) Station procedures which involve the use of flow instruments DTS 112 and 113 were to be revised to include additional equations to relate different pressures and temperatures as compared to the calibration pressure and temperature in determining actual leak rates.

The inspector verified that signs were attached to the flow makeup that required calibration of the flowmeters as a whole unit. Additionally, the makeup boxes contained the signs designating the calibration pressure and temperature of 48 psig and 70°F, respectively. Finally, the inspector verified that the equations relating corrected temperature and pressure were included in the licensee's local leak rate test procedure.

e. (Closed) Open Item (237/87022-03; 249/87021-03): Feedwater check valves were leaking excessively during local leak rate testing. The inspector noted that the four LERs were issued between 1980 and 1984 that identified excessively leaking feedwater check valves and caused the leakage rate to exceed the Appendix J limit of 0.6 La. The licensee had made two modifications to the feedwater check valves that improved the local leak rate test results. One modification consisted of placing two additional hold down clamps so that the valve disk would be secured against the seat. A second change consisted of installing bushings on the pivot pins of the check valves. The bushings and pins were machined to keep the disk from moving out of the plane of the seating surface. The licensee had completed the two modifications on the valves and the as-found leakages of the valves have improved.

4. Exit Meeting

The inspector met the licensee representatives denoted in Paragraph 1 at the conclusion of the inspection on June 15, 1988. The inspector summarized the scope and results of the inspection and discussed the likely content of the inspection report. The licensee acknowledged the information and did not indicate that any of the information disclosed during the inspection could be considered proprietary in nature.