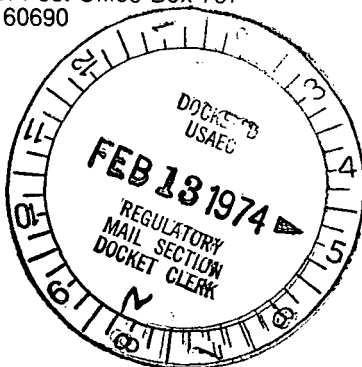
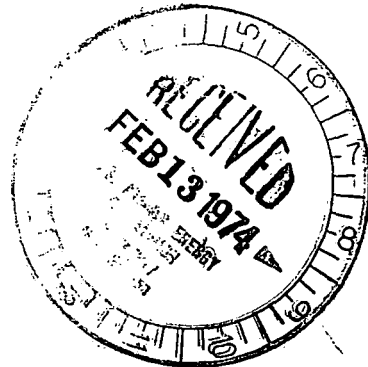


WFW Ltr #84-74

Regulatory Docket File



Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
February 6, 1974



Mr. J. F. O'Leary, Director
Directorate of Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

SUBJECT: LICENSE DPR-19, DRESDEN NUCLEAR POWER STATION, UNIT 2
REPORT OF ABNORMAL OCCURRENCE PER SECTION 6.6.B. OF THE
TECHNICAL SPECIFICATIONS
PRIMARY CONTAINMENT ISOLATION VALVE LEAKAGE

- References:
- 1) Dwg. P & ID M-25
 - 2) Letter from Mr. W. P. Worden to Dr. P. A. Morris dated May 18, 1972
 - 3) Letter from Mr. W. P. Worden to Mr. J. F. O'Leary dated January 17, 1974

Dear Mr. O'Leary:

This letter is to report a condition relating to the operation of the unit at about 2200 hours on January 28, 1974. At this time, while conducting local leak rate testing of primary containment isolation purge valves on the drywell and torus, the test of the volume bounded by valves 2-1601-21, 2-1601-22, 2-1601-56, 2-1601-55 and 2-8502-501 revealed excessive leakage. This malfunction is contrary to Section 4.7.A.2.f. of the Technical Specifications which specify that the total leakage rate through any one isolation valve will not exceed 5% L_{to} (48).

PROBLEM

During local leak rate testing of the Unit 2 drywell and torus purge valves on January 28, 1974, excessive leakage was discovered from the volume bounded by valves 2-1601-21, 2-1601-22, 2-1601-56, 2-1601-55 and 2-8502-501. The leakage discovered was 400.62 scfh, which is above the 5% L_{to} (48) (29.381 scfh) maximum leakage allowed through any one isolation valve, but below L_p (783.493 scfh), the maximum total allowable leakage.

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INVESTIGATION AND CORRECTIVE ACTION

During an investigation to determine the leakage flow path, a blank flange was installed in front of the 2-1601-21 valve. This reduced the total leakage to 110.68 scfh, which is still greater than 5% Lto. Subsequent to this leak test, a manual isolation valve, 2-8503-500, was closed upstream of 2-1601-55 to determine if this valve was leaking.

A second leak test was performed and the leakage was reduced to 17.93 scfh which is within the 5% Lto limit. The evaluation of the data indicates that the leakage through 2-1601-21 and 2-1601-55 was 289.94 and 92.75 scfh, respectively.

Since the Technical Specifications do not require shutdown for leakages of this magnitude, the unit continued operation at power. The valve will be inspected and necessary repairs made during the next extended outage. The blank flange will remain in place until primary containment integrity is no longer required.

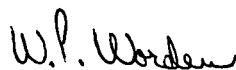
EVALUATION

Combining the data from the above described tests (max. leakage - 110.68 scfh), leak tests conducted during the 1972 refueling outage minus the additional leakage tests performed along with the above described tests (102.027 scfh), and subsequent leak tests performed during operation (44.40 scfh), a total leakage of 257.11 scfh is obtained. This total is the leakage from primary containment prior to the blank flanging of AO valve 2-1601-21 and the closing of manual valve 2-8503-500 thus isolating the leakage through AO valve 2-1601-55. The primary containment leakage of 257.11 scfh compares favorably with Lp (783.493 scfh).

Subsequent to the blank flange being installed and valve 2-8503-500 being closed, the total leakage from the containment is determined to be 164.36 scfh.

Leakage through the rubber seated butterfly vent valves has been a recurring problem on both Units 2 and 3. The problems have been related to the rubber seats. The recommended "fix" was to change the seat material from Buna-N rubber to "EPT", a rubber compound (see reference 2). A new rubber seat was installed in 2-1601-21 during the spring 1972 outage. The cause of the leakage is unknown at this time; however, it is felt that the failure is similar in mechanism to the leakage encountered on Unit #3's vent valves on November 20, 1973 (see reference 3). Valve 2-1601-21 and 2-1601-55 will be inspected and corrections made at the next available outage of sufficient duration.

Sincerely,

W. P. Worden
Superintendent