



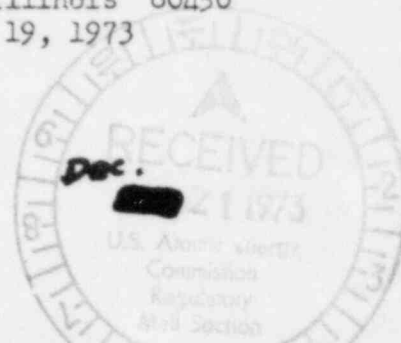
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WPW Ltr #918-73

Dresden Nuclear Power Station  
R. R. #1  
Morris, Illinois 60450  
December 19, 1973

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



SUBJECT: LICENSE DPR-25, DRESDEN NUCLEAR POWER STATION, UNIT #3. REPORT OF UNUSUAL EVENT PER SECTION 6.6.B.2 OF THE TECHNICAL SPECIFICATIONS. PRIMARY CONTAINMENT ISOLATION VALVE LEAKAGE.

References: 1) Letter from Mr. W. P. Worden to Dr. P. A. Morris dated May 18, 1972.

2) Dwg. P & ID M-356

Dear Mr. O'Leary:

This letter is to report a condition relating to the operation of the unit at about 1100 hours on November 20, 1973. At this time, while conducting local leak rate testing of primary containment isolation vent valves on the drywell and torus, the test of the volume bounded by valves 3-1601-23, 3-1601-24, 3-1601-60, 3-1601-61, 3-1601-62, and 3-1601-63 revealed excessive leakage. This malfunction is contrary to section 4.7.A.2.f. which specified that the total leakage rate through any one isolation valve will not exceed 5% L<sub>to</sub>(48).

PROBLEM, INVESTIGATION, & CORRECTIVE ACTION

During local leak rate testing of the Unit 3 drywell and torus vent valves on November 20, 1973, excessive leakage was discovered from the volume bounded by valves 3-1601-23, 3-1601-24, 3-1601-60, 3-1601-61, 3-1601-62, and 3-1601-63. The leakage discovered was 435.29 scfh which is above the 5% L<sub>to</sub>(48) (29.381 scfh) maximum leakage allowed through any one isolation valve, but below I<sub>p</sub>(783.493 scfh) the maximum total allowable leakage.

During subsequent investigation to determine the leakage flow path, a blind flange was installed in front of the 3-1601-24 valve. This reduced the leakage to 254.12 scfh on November 21, 1973. Another blind flange was installed in front of the 3-1601-23 valve, which is in series with the 3-1601-24 valve, on November 27, 1973. This reduced the total leakage to 4.69 scfh, which is within the limit specified above. Using this information, the leakage paths and rates are as follow:

8310200210 740117	3-1601-23	176.48 scf/hr.
PDR ADOCK 05000249	24	254.12 scf/hr.
S PDR		

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December 19, 1973

Since the Technical Specifications do not require shutdown for leakage of this magnitude, Unit 3 has continued operation at power. These valves will be inspected during the next extended outage to determine the mode of failure. The blind flanges will remain in place until primary containment integrity is no longer required.

#### EVALUATIONS

Combining the data from the above described tests and the local leak rate tests conducted during the Spring 1973 outage yields a total leakage of 272.43 scfh which compares favorably with the maximum total allowable leakage ( $L_p = 783.493$  scfh). (The leakage through two valves in series is not the sum of the individual leakages, but the smaller of the two leakages).

Although there may have been some leakage from the drywell through the reactor building vent stack, the stack was continuously monitored and the leakage in no way represented an uncontrolled release. The leakage therefore represented no safety hazard to the plant or the public.

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 (1). The new rubber seats were installed in the two above mentioned valves during the Spring 1973 outage. It is not known whether the leakage is associated with the rubber seats or another unrelated problem. The valves will be inspected and repaired during the Spring 1974 outage. A followup letter will be submitted at that time.

Sincerely,

*J. E. Watts for W.P.W.*

W. P. Worden  
Superintendent

WFW:ls