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*Central File HQ*

July 31, 1980

Mr. James G. Keppler, Director  
 Directorate of Inspection and  
 Enforcement - Region III  
 U.S. Nuclear Regulatory Commission  
 799 Roosevelt Road  
 Glen Ellyn, IL 60137

Subject: Dresden Station Unit 2  
 Additional Response to IE  
 Bulletin 80-17  
NRC Docket No. 50-237

Reference (a): J. G. Keppler letter to C. Reed  
 dated July 3, 1980

Dear Mr. Keppler:

This letter provides Commonwealth Edison's response for Dresden Unit 2 to IE Bulletin 80-17, which was transmitted by Reference (a). The attachment to this letter contains the response to items 2 and 3 of the bulletin concerning scram tests performed on July 27 and 28, 1980.

Please address any questions concerning this matter to this office.

Very truly yours,

*L. O. DelGeorge*

L. O. DelGeorge  
 Nuclear Licensing  
 Administrator

cc: Director, Division of Reactor  
 Operations Inspection

SUBSCRIBED and SWORN to  
 before me this 31st day  
 of July 1980

*[Signature]*  
 Notary Public

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ATTACHMENT

DRESDEN STATION RESPONSE

NRC IE BULLETIN 80-17

Item 2: Special Operating Procedure 80-7-50 was written as required in Item 2 for Unit 2. On July 27, 1980, a manual scram was performed to gather data. On July 28, 1980, an automatic scram from IRM upscale was performed for the same purpose. The results of both scrams are delineated below.

- a. Twenty-nine control rod scram insertion times were obtained utilizing a multi-pen recorder. This was the maximum number of rods that could be timed in this manner. From this information, an all-rod insert time can be estimated from the slowest of these rods. There was no feasible way to determine the actual all-rod insert time.

TIMES: 3.49 sec. - Manual Scram  
3.64 sec. - Automatic Scram

The times listed above are comparable to those found during hot scram timing surveillances. Computer scans of control rod notch positions verified all rods were inserted past 06. A visual check was also done to verify this at the time of testing.

- b. Voltage was measured across the scram solenoids while the scram signal was present. The voltages for all four groups of both channels were found to be zero. Also, the group lights on the 902-5 panel went out, which is a positive indication of loss of voltage.
- c. An operator was stationed at the backup scram solenoids during both scrams. The valves operated correctly, and air was vented as designed in both tests.
- d. The times to fill the scram instrument volume to the various alarm points are as follows:

<u>Manual</u>		<u>Automatic</u>
0 sec.	Reactor Scram	0 sec.
23.1 sec.	SIV 3 gal. not drained alarm	23.3 sec.
20.16 sec.	SIV 25 gal. rod block alarm	20.75 sec.
22.88 sec.	SIV 50 gal. scram alarm	23.46 sec.

The above data appears inconsistent but was expected due to the experience at Quad Cities Station and Dresden Unit 3.

e.f. Stroke times of the vent and drain valves were obtained subsequent to the test scrams. These times were as follows:

	<u>Opening</u>	<u>Closing</u>	<u>Scram Closing Time</u>
3-302-22	.6 sec.	Less than .1 sec.	4.21 sec.
3-302-21A	Less than .1 sec.	Less than .1 sec.	4.46 sec.
3-302-21B	Less than .1 sec.	Less than .1 sec.	2.08 sec.

g. A water sample was taken after the manual scram and analyzed for total suspended solids - 3.43 ppm. The sample after the automatic scram was 37.16 ppm.

h. Time to drain the SDV to a repeatable level is as follows:

<u>Manual</u>		<u>Automatic</u>
0	SDV vent/drain valves open	0
5 sec.	SIV 25 gal. rod block alarm reset	3.0 sec.
8.4 sec.	SIV 50 gal. scram alarm reset	14.2 sec.
2:24.4 min.	SIV 25 gal. rod block alarm trip	2:03.8 min.
3:20.2 min.	SIV 50 gal. scram alarm trip	3:19.8 min.
12:20 min.	SIV 25 gal. rod block alarm reset (final)	12:30.6 min.
12:15.8 min.	SIV 50 gal. scram alarm reset (final)	12:34 min.

The above information was similarly observed on the Unit 3 tests and is considered perfectly normal. Additionally, a two-rod scram test was performed to verify the proper sequential operation of the scram instrument volume (SIV) level switches. Two rods, one discharging to each SDV, were individually scrambled and left in that condition until all the SIV alarms annunciated. This test was repeated twice, and both times the sequential operation was correct.

i. The vent headers were open to the atmosphere prior to both scrams, and the resultant drainage times are as follows. On the automatic scram, positive opening of the vent line vacuum breakers was assured whereas on the manual scram the vacuum breakers were allowed to function on their own - this probably accounts for the variance in drainage times.

Manual

Automatic

0	SDV vent/drain valves open	0
58 min.	East SDV headers drained	33 min.
16 min.	West SDV headers drained	28 min.

- j. A scram was not required to determine the scram reset delay times. The procedure to acquire the needed data was to manually close the individual scram relays while monitoring the voltage across the reset contacts. The period of time in which voltage was zero represents the reset times required.

Channel A, Groups 1 & 4 - 16.8 sec.  
Channel A, Groups 2 & 3 - 17 sec.  
Channel B, Groups 1 & 4 - 18.2 sec.  
Channel B, Groups 2 & 3 - 18.2 sec.

- k. A test was conducted to determine the SDV drainage rate in the configuration where the vent line is connected to the RBEDT and the vacuum breaker in the vent line is prevented from functioning. To perform this test, the east vent line was reconnected, temporarily, to the RBEDT and the vacuum breaker was blocked. The west vent line was left open to the atmosphere, and its vacuum breaker was allowed to function. The SDV header was then filled completely and verified filled by UT. Draining of the SDV was then begun. In this configuration, the west vent line drained in 13-18 minutes, and the east vent line was taking substantially longer to drain. After one hour, the 8-inch header was half full, and the 4-inch header was completely full. At this point, the vacuum breaker was unblocked, and the east header then took an additional 28 minutes to drain. The east vent line was then restored to its pre-test configuration of being vented to the atmosphere.

Item 3: After each scram test and after the drainage test conducted in Item k. above, an air test was performed to verify that the SDV was free of any blockage and UT was performed to verify that the drainage was complete.