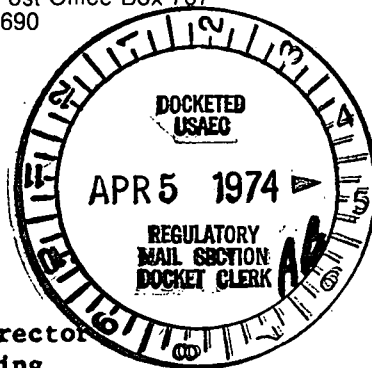




Commonwealth Edison

One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

BBS Ltr.#243-74



Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
April 2, 1974

50-237

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.1.a. OF THE TECHNICAL SPECIFICATIONS.
GENERATOR LOAD REJECT SCRAM FAILURE.

- References: 1) Notification of Region III of AEC Regulatory Operations
Telephone: Mr. F. Maura, 1330 hours on March 25, 1974
Telegraph: Mr. J. Keppler, 1455 hours on March 25, 1974
- 2) Dresden Station Electrical Prints 12E2466 & 12E2465

Dear Mr. O'Leary:

At 0530 hours on March 23, 1974, during routine turbine surveillance testing, closure of a turbine control valve did not initiate a reactor protection system trip.

This malfunction is contrary to Table 3.1.1 of the Technical Specifications which requires a minimum of two operable instrument channels per trip system, and is therefore an apparent abnormal occurrence.

PROBLEM

The Reactor Protection System is designed to provide an anticipatory reactor scram on turbine control valve closure. This scram is initiated in anticipation of the rapid reactor pressure increase and subsequent neutron flux "spike". Turbine control valve fast closure is initiated by a fast acting solenoid which dumps the control valve hydraulic fluid to drain. A limit switch, which is actuated by movement of the fast acting solenoid, concurrently initiates a reactor protection system trip. (See attached sketch). Failure of the fast acting solenoid to operate negates the need for a reactor scram, since the control valve does not "fast close" and no rapid pressure increase results.



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April 2, 1974

During weekly turbine surveillance testing, the number one turbine control valve was cycled. Upon closure, it failed to produce a "B" reactor protection system trip.

At the time of the failure, the unit was in the "run" mode with thermal power at 1336 megawatts. The unit was operating at a steady electrical load of 395 megawatts.

INVESTIGATION AND CORRECTIVE ACTION

Following the malfunction, the "B" reactor protection system was placed in the tripped position, and a load reduction to less than 40% power was initiated. The control valve fast closure scram is not required below 40% power.

Initial checks indicated that the limit switch functioned properly when manually actuated. The position of the limit switch was adjusted to insure proper actuation by the fast acting solenoid. The number one control valve was then successfully cycled three times. It was concluded at that time that the switch position led to the malfunction.

A week later, on March 30, 1974, a repeat of the malfunction was experienced. The valve was cycled a second time and again failed to initiate a reactor protection system trip. Subsequent cycles of the valve resulted in satisfactory actuation of the trip.

Based on the repeated malfunction, it is now concluded that the fast acting solenoid is not functioning properly.

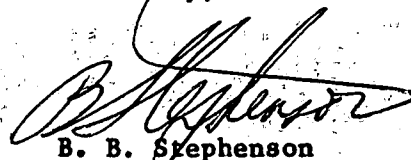
The fast acting solenoid on number one control valve will be repaired or replaced at the next maintenance outage.

EVALUATION

Failure of the control valve fast acting solenoid had no effect on safety. No fast closure of the control valve will result when the fast acting solenoid malfunctions, and therefore the anticipatory reactor scram is not necessary. As a result of this evaluation, it is concluded that the malfunction was not an abnormal occurrence.

A similar malfunction was experienced on October 27, 1972. The current malfunction is not safety significant, and does not indicate a generic problem. No additional action other than replacement of the fast acting solenoid is warranted.

Sincerely,



B. B. Stephenson
Superintendent

