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BBS Ltr.#418-74

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
June 10, 1974

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 ABNORMAL OCCURRENCE PER SECTION 6.6.B.1 OF THE TECHNICAL SPECIFICATIONS.
FAILURE OF MO-3-2301-3 TO OPEN.

Reference: Notification of Region III of AEC Regulatory Operations
Telephone: Mr. J. Maura, 1330 hours on June 6, 1974
Telegram: Mr. J. Keppler, 1330 hours on June 6, 1974

Dear Mr. O'Leary:

This letter is to report a condition relating to the operation of the unit at about 2000 hours on June 5, 1974. At that time HPCI valve 3-2301-3 failed to open. This malfunction is contrary to section 3.5.C.1 of the Technical Specifications which requires the HPCI system to be operable when reactor pressure is 90 psi or greater and irradiated fuel is in the core.

PROBLEM

On June 5, 1974 at about 2000 hours, Unit 3 HPCI valve 3-2301-3 failed to open. At the time of the failure, HPCI surveillance was in progress for the unit startup. During the valve operability tests, the valve was operated satisfactorily. However, during the sequence valve operations for HPCI pump operability test, the valve failed to open.

At the time of the failure the unit was in startup and thermal power was 180 megawatts. Reactor pressure at the time of the failure was 196 psi.

INVESTIGATION

An investigation into the problem revealed that the main contactor in the supply breaker for the valve failed to pick up. The cause of the problem was determined to be due to a lack of clearance between the aux contact operating bar and the main contact armature roller. A lack of

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clearance will cause a greater open pressure to be applied to the main contactor armature. The greater pressure is due to the fact that on initial pick up of the main contactor, armature open pressure will include the aux contact spring pressure. With clearance available the aux contact spring pressure will not be applied to the main contactor armature until it has partially closed.

The failure of a main contactor to pick up can be due to two related causes. In this case a lack of clearance between the main contactor armature roller and the aux contact operating bar caused the failure. However, the same type of failure could occur if the air gap between the main contactor armature and the main contactor coil were too great. Both failures are related because any adjustment made to correct one condition could result in an incorrect adjustment on the other.

CORRECTIVE ACTION

Since this type of failure can be due to two causes, two corrective actions were made. First, the air gap between the main contactor armature and the main contactor coil was adjusted. Secondly, the clearing between the aux contact operating bar and the main contactor armature roller was adjusted. Following both adjustments, the valve was cycled twice to verify proper operation.

In addition, the maintenance inspection procedure was changed to include a detailed instruction as to how to make the required adjustments. All the Unit 2 and 3 D.C. breakers will have the adjustments checked as soon as practical. Also, following the failure the required surveillance was performed.

EVALUATION

This failure did not put the safety of the plant or public in jeopardy. At the time of the failure all other safety systems were operational and would have insured a safe unit shutdown if necessary. In light of cumulative experience, the corrective action taken is satisfactory at this time.

Sincerely,

B. B. Stephenson
Superintendent

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