

50-249

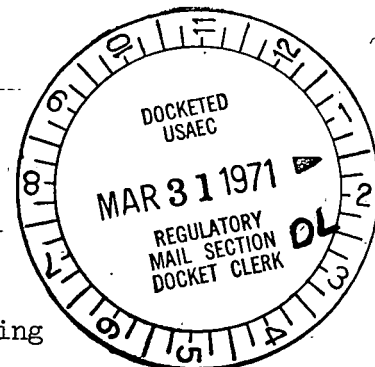


Commonwealth Edison Company
Dresden Nuclear Power Station
Rural Route No. 1
Morris, Illinois 60450
March 27, 1971

Dr. Peter A. Morris, Director
Division of Reactor Licensing
U.S. Atomic Energy Commission
Washington, D.C. 20545

Subject: License DPR-25, Dresden
Nuclear Power Station Unit #3

Ref: Telegram dated March 19, 1971 "Information Concerning
a Dresden Unit 3 Jet Pump Problem"



Dear Dr. Morris:

This is to inform you about the low flow condition observed in a Recirculation System jet pump at Dresden Unit 3 during startup testing. One purpose of these tests is to obtain an initial calibration of jet pump flow instruments. Since these tests were conducted with the reactor in the cold, depressurized condition, there was no nuclear or thermal effect on the core.

Problem and Investigation

On March 15, 1971 during functional tests of the Recirculation System, subsequent to fuel loading but prior to significant nuclear heating, a low flow indication was observed on recirculation jet pump no. 11. Normal flow indications were recorded up to and including March 14, 1971. The problem was believed to be associated with the flow transmitter.

Initial checks revealed no problems with the flow transmitter or indicators. Subsequent back-flushing of the instrument lines, removal of various components within the system (i.e. instrument excess flow check valves, etc.) and recording of pressure data confirmed that the problem was associated with the jet pump itself. On March 17, the decision was made to remove the reactor head and vessel internals to gain access to the jet pumps.

At 5:30 A.M. on March 23, the reactor head, dryer, separator and jet pump 11 ram's horn had been removed. Work on the jet pump and subsequent removal of the dam was performed with the water level at approximately 2/3 core height. Radiation levels were approximately 35 mr/hour and the doses to personnel were low. The cause for the reduced flow in jet pump no. 11 was found to be a welding purge dam lodged in the transition casting of the jet pump at a point where the flow is divided from the riser inlet to two nozzles for jet pumps nos. 11 and 12. The purge dam was lodged against the casting and blocked approximately three-fourths of the flow to jet pump no. 11. Upon

1615
DV

March 27, 1971

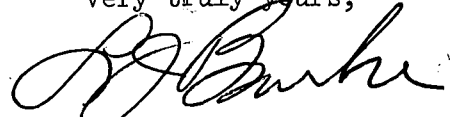
removal, the purge dam was revealed to be a standard plywood and rubber dam, approximately 16 inches in diameter, commonly used in construction heliarc welding operations.

Analysis and Corrective Action

Preliminary evaluations of the occurrence indicate that, due to the size and characteristics of the dam, it originated from the 16 inch low pressure coolant injection (LPCI) system discharge piping. The LPCI System is the only source of 16 inch pipe that discharges directly into the recirculation piping. The system was last operated with flow into the vessel on December 21, 1970. It is believed that the welders purge dam was washed to a point ahead of the testable check valve AO 2-1501-25A or into the recirculation piping at that time, and finally was forced into the jet pump inlet riser during the Recirculation System functional tests between the period of March 12 - 15, thereby blocking flow through the jet pump. The possibility of other dams remaining in the system has been considered. All systems leading into the Recirculation System have now been operated at full flow for a long enough period to dislodge any objects of this type.

Precautions were taken to prevent dropping fragments into the system during removal and a flushing program is being conducted to remove pieces which may remain in the system.

Very truly yours,



L. Burke

Supervising Engineer
Station Construction Dept.

LB:dd