



Commonwealth Edison Company

ONE FIRST NATIONAL PLAZA ★ CHICAGO, ILLINOIS

Address Reply to:

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Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
October 9, 1970

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

SUBJECT: LICENSE DPR 19, DRESDEN NUCLEAR POWER STATION UNIT #2, SECTION 6.6.B.2
OF THE TECHNICAL SPECIFICATIONS.

Dear Dr. Morris:

This is to report a condition relating to the operation of the station in which, during a surveillance test on the HPCI system, the steam supply valve (2301-3) failed to open fully, and during a following surveillance test on the electromatic relief valves, one relief valve (2A) failed to open.

Problem, Investigation, and Corrective Action

On September 30, 1970, at 10:50 p.m., a surveillance test of the HPCI system indicated that the steam supply valve to the system (2301-3) failed to open fully. The system was declared inoperable, and testing of other required systems was initiated. The isolation condenser system was tested and found to be satisfactory at 11:00 p.m. on September 30. At 0100 on October 1, 1970, surveillance testing of the electromatic relief valves was begun. At 0130, it was determined that valve 2A would not open, at which time an orderly shutdown was begun, in according with section 3.5.C of the Technical Specifications. The unit was shutdown and reactor pressure reduced to 90 psig pressure by 8:20 p.m. on October 1, 1970.

Investigation following the shutdown indicated that the HPCI steam supply valve (MO-2301-3) was sticking due to tight packing around the valve shaft. The valve was cleaned, repacked and satisfactorily operated on October 3, 1970, at 5:15 a.m., with the reactor at 350°F and 120 psig. The HPCI system was satisfactorily tested at 6²⁰ p.m. on October 3, 1970 at 910 psig reactor pressure.

Investigation of 2A electromatic relief valve indicated that the valve solenoid armature guide had worn grooves into the armature guide posts. A complete replacement solenoid unit was installed on the valve. The other electromatics were inspected and found to have similar grooves in the guide posts. On these valves, the armature guide was relocated so that the guide cannot engage the worn areas. The above repairs are considered to be temporary, and a permanent repair is under investigation by General Electric Company with the manufacturer, both as to improvement in solenoid guide design and cause of the wear on the guides. All five valves were tested at approximately 900psig

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reactor pressure at 1400 on October 3, 1970. Valves A,B,D, and E operated satisfactorily but "C" valve failed to open. The operating lever on "C" valve was replaced and the valve tested satisfactorily at 2207 on October 3, 1970.

The problem of solenoid guide wear was discussed in a Station Review Board meeting in which it was concluded that the temporary repair consisting of establishing a new upper limit stop on the solenoid guides below the wear point is a satisfactory temporary repair. This repair will insure against any failure from this cause for a period of at least two months on the basis of operating periods leading to detected wear on the guides. It is planned that following receipt of permanent repair recommendations that this repair be accomplished within this period, or if this is not possible, that further inspections will be made to insure continued operability of the solenoid.

Regarding the inoperability of 2C electromatic valve at 900 psig reactor pressure, a review of the previous settings of all electromatic valve stroke adjustments made on August 3, 1970, showed that the 2C valve solenoid had farther to travel before engaging the lever arm than any of the other valves.

At that time, solenoid travel was not specified. Based on pilot valve travel adjustments made on August 3, 1970 to meet the 5/32" to 3/16" specified travel, it was considered at that time that correct adjustments were made on all valves. It is now considered that on 2C valve the solenoid stroke required to actuate the pilot 5/32" was near the stroke limit of 2". With the new actuating arm a stroke of only 1" is required to accomplish valve pilot movement of 5/32". An additional test on all electromatics is planned after approximately one week operating period to verify that operability of all valves still exists.

H.K. Hoyt
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Superintendent

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