



Commonwealth Edison
Quad-Cities Generating Station
Post Office Box 216
Cordova, Illinois 61242
Telephone 309/654-2241



NJK-74-334

October 18, 1974

Mr. John F. O'Leary, Director
Directorate of Licensing Regulation
U.S. Atomic Energy Commission
Washington, D. C. 20545

REFERENCE: Quad-Cities Nuclear Power Station
Docket No. 50-254, DPR-29
Appendix A, Sections 1.0.A.2, 3.2.B, Table 3.2.2,
and 6.6.B.1.a.

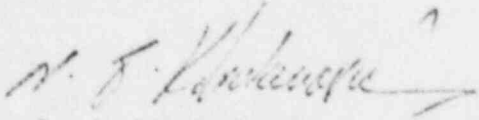
Dear Mr. O'Leary:

Enclosed please find Abnormal Occurrence Report No. AO 50-254/74-32 for Quad-Cities Nuclear Power Station. This occurrence was previously reported to Region III, Directorate of Regulatory Operations by telephone on October 11, 1974 and to you and Region III, Directorate of Regulatory Operations by telecopy on October 11, 1974.

This report is submitted to you in accordance with the requirements of Technical Specification 6.6.B.1.a.

Very truly yours,

COMMONWEALTH EDISON COMPANY
QUAD-CITIES NUCLEAR POWER STATION


N. J. Kalivianakis
Station Superintendent

NJK/EAR/lk

cc: Region III, Directorate of Regulatory Operations
J. S. Abel

8307130274 741018
PDR ADDCK 05000254
S PDR

50-254
incident
10969
COPY SENT REGION III

REPORT NUMBER: A.O. 50-254/74-32

REPORT DATE: October 18, 1974

OCCURRENCE DATE: October 10, 1974

FACILITY: Quad-Cities Nuclear Power Station
Cordova, Illinois 61242

IDENTIFICATION OF OCCURRENCE:

Low-Low Water Level ECCS Initiation Instrument LIS-1-263-72C drift.

CONDITIONS PRIOR TO THE OCCURRENCE:

Unit 1 reactor in the Run mode at approximately 200 MWe and decreasing.

DESCRIPTION OF OCCURRENCE:

At 1500 hours on October 10, 1974 the instrument department was doing routine quarterly calibration surveillance of LIS-1-263-72C when it was discovered that the number one switch in the level instrument would not trip at any test pressure. No actions other than re-alignment of the switch were needed to bring the situation under control. This failure of the level switch was in violation of Technical Specification 3.2.B and Table 3.2.2.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

Component Failure:

The apparent cause of this occurrence is designated as component failure. The cause of the failure was apparently due to an excessive gap between the mercury switch and the actuating magnet within the instrument. The position of the magnet varies with changes in the level sensed by the instrument. When the position of the magnet reaches the set point, the mercury switch is actuated. If the gap between the magnet and the mercury switch is too large, the mercury switch will not trip. The exact cause of the excessive gap could not be determined; however, it was caused either by a shift of the mercury switch mounting bracket or by a gradual weakening of the strength of the field of the magnet.

October 18, 1974

ANALYSIS OF OCCURRENCE:

The safety implications related to this occurrence are minimal. All of the number one switches of the four low-low level instruments used for ECCS initiation are used in the Core Spray System logic. The logic scheme is a one out of two twice arrangement. The three other switches were found to operate satisfactorily at the time of this occurrence. Thus, the low-low level portion of the core spray system logic would have functioned as needed. As a result of this occurrence there were no adverse effects on the safe operation of the unit nor on the health and safety of the public.

CORRECTIVE ACTION:

The immediate corrective action taken to correct this occurrence was to reposition the mercury switch bracket and recalibrate the instrument according to the Instrument Surveillance Test Procedure. The switch calibration was checked on October 11, 1974 and found to be satisfactory. The normal monthly functional test to be performed in November will verify the adequacy of the above action.

FAILURE DATA:

There have been no previous failures of this particular instrument, so there is no failure data to report for it. However, an identical instrument for Unit 2, LIS-2-263-72D, has failed four times since January 17, 1974 and is presently undergoing increased surveillance testing as an interim measure until a new instrument can be procured and installed. The instruments involved are Yarway Model 4418C level indicating switches calibrated for a range of 120 inches of water level.