



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

50-254



NJK-74-32

April 15, 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, Unit 1  
Docket No. 50-254, DPR-29, Appendix A,  
Sections 1.0.A.4, 3.5.B.1, and 6.6.B.1.a

Dear Mr. O'Leary:

The purpose of this letter is to inform you of the details of an abnormal occurrence which was discovered on April 6, 1974. With Unit 1 in the cold shutdown condition during the refueling outage, the discharge piping of the "A" loop of the RHR Service Water System was found to be leaking. This occurrence was reported to the Region III Directorate of Regulatory Operations by telephone and the Region III Directorate of Licensing by telegram on April 6, 1974. Since the unit was in the cold shutdown condition and no work was being performed that had the potential to drain water from the vessel, there were no Limiting Conditions for Operation violated. However, the incident is an abnormal occurrence according to Technical Specification 1.0.A.4.

#### PROBLEM AND INVESTIGATION

On the morning of April 4, 1974, water was reported seeping through a crack in the turbine building wall. It was not immediately known whether the source of the water was a pipe failure or seepage from the soil. On the morning of April 6, 1974, after checking several other possible sources, it was determined that a leak existed in an underground section of the 16" loop "A" Residual Heat Removal System service water header. This was determined by transferring shutdown cooling from A loop to B loop. When this was done the seepage into the turbine building basement was greatly reduced.

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SAFETY IMPLICATIONS

The low pressure coolant injection mode of the RHR system was not affected by the failure. Due to the condition of the reactor, the containment cooling mode of the RHR system is not required. The shutdown cooling mode of the RHR system is still operable using loop B. Therefore the safety implications of the failure are minor.

EVALUATIONS AND CORRECTIVE ACTIONS

An effort is now in progress to locate the exact piping failure. To date, the line has been drained, but there is still leakage into the isolated section of pipe of approximately 3 GPM. The next step will be to cut a hole in the line in the Unit 1 high pressure coolant injection room and visually, or with the aid of a television camera, locate the leak. At that time an evaluation will be made as to the feasibility of repairing the leak and the possible cause of the failure.

As a second course of action, representatives from Sargent and Lundy and Commonwealth Edison M & S Engineering are discussing the relocation of the pipe above ground. Also being factored into this second plan is a resolution of the problem reported as an unusual event in our letter of March 8, 1974. This is the problem of the operability of the two containment cooling loops being jeopardized by a single failure of certain portions of the containment cooling system.


A decision as to whether the line will be repaired or a new exposed line will be run will be made when the location and extent of the leak is known. The results of the investigations of both courses of action will be reported to you along with the final decision on the repair in a subsequent letter.

EVALUATION OF CUMULATIVE EXPERIENCE

There is no cumulative experience related to this incident since there have been no previous failures of this type at Quad-Cities Station.

Very truly yours,

COMMONWEALTH EDISON COMPANY  
QUAD-CITIES NUCLEAR POWER STATION



N. J. Kalivianakis  
Station Superintendent

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