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October 19, 1984

Mr. James G. Keppler
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Quad Cities Station Units 1 and 2
Response to IE Bulletin 84-03
NRC Docket Nos. 50-254/265

Reference (a): IE Bulletin 84-03 - R. C. DeYoung letter to All OLs and CPs dated August 24, 1984

Dear Mr. Keppler:

Reference (a) requested us to evaluate the potential for and consequences of a refueling cavity water seal failure prior to beginning refueling. Attached is the response for Quad Cities Station.

To the best of my knowledge and belief the statements contained in the Attachment are true and correct. In some respects these statements are not based on my personal knowledge but upon information furnished by other Commonwealth Edison employees, contractor employees and consultants. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

Please address any questions that you or your staff may have concerning our response to this office.

IE11

One (1) signed original with Attachment is being sent directly to the USNRC Document Control Desk in Washington, DC for reproduction and distribution as requested in the Bulletin.

Respectfully,

G. L. Alexander
Nuclear Licensing Administrator

cc: US NRC, Document Control Desk
Washington, DC 20555

RIII Inspector - D

SUBSCRIBED and SWORN to
before me this 22nd day
of October, 1983

Rosalie A. Pinter
Notary Public

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ATTACHMENT

Response to IE Bulletin 84-03
Refueling Cavity Water Seal

Quad Cities Station Units 1 and 2

The refueling cavity water seal at Quad Cities is not subject to gross failure because the Quad Cities design has no active components. There is no pneumatic seal. Water from a leak in the seal is collected. The system alarms in the control room if excessive leakage flow is detected. Also present in the control room are alarms for low skimmer surge tank level and low fuel pool level.

The system was examined and an estimate was obtained for the maximum leakage rate assuming a complete break of the lines carrying the leakage flow. The minimum time to drain the entire cavity and fuel pool to the level of the break is 3.36 hours. After this drains down, there still would be three feet of water above the fuel in the spent fuel pool. Any fuel in the reactor vessel would be covered by approximately 28 feet of water. This would prevent any clad damage and keep radiation levels in an acceptable range. Considering that the transit time from the fuel pool to the reactor core is approximately two minutes and the drain down time is greater that several hours, sufficient time is available for corrective action for fuel in transfer during such an event.

The makeup capacity to re-flood the cavity depends upon the systems available. Technical Specificaions normally require three of four Residual Heat Removal (RHR) pumps each with a capacity of 3500 gpm to be available. In addition, one of two Core Spray pumps with a capacity of 4500 gpm each would be required to be operable. The condensate system, if available, is capable of delivering 10 X 10^6 lbs/hr of water to the vessel. If absolutely necessary, fire hoses from the diesel fire pumps could put water in the cavity or fuel pool. A make-up capacity of 400 gpm could reasnably be expected from the diesel fire system.

Quad Cities Abnormal Procedure, QOA 1900-1 "Loss of Water Level in the Spent Fuel Storage Pool or Reactor Cavity and Level Decreasing" was revised as a result of this Bulletin. Some additional symptoms were added, along with actions for fuel in transfer. Also, additional methods of getting water into the cavity/fuel pool are recommended.