



Commonwealth Edison
 72 West Adams Street, Chicago, Illinois
 Address Reply to: Post Office Box 767
 Chicago, Illinois 60690

DMB

April 25, 1984

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

Dockets: 50-454, 50-455

Reference: Letter to Cordell Reed from C. J. Paperiello, NRC RIII, dated April 26, 1983; I and E Inspection Report 50-454/83-14 and 50-455/83-12 -- Open items 454-83-14-02 and 455-83-12-02.

Subject: Source of Elevated Radioactivity Concentrations in Plant Discharge to Rock River

Dear Mr. Keppler:

In June of 1983, an NRC inspector observed that Byron Station had a higher quantity of gross beta radioactivity detected at the discharge point (identified as BY-11 in the environmental radiological monitoring program) as compared to the intake point (BY-10) of the plant cooling water from the Rock River. Commonwealth Edison was asked to identify the source of this anomaly since radioactive effluents were not (and are not yet) being discharged to the environment as a result of plant operation.

The results of this study performed by the Byron Station Radiation Protection and Chemistry Department is attached. As previously surmised in discussions with your staff, the elevated concentration of radioactivity in the plant discharge is due to naturally-occurring potassium-40 in liquid waste from the plant's sewage treatment facility.

I believe this study satisfactorily addresses the question posed by your staff. If you have any questions about the report or the environmental radiological monitoring program you may contact me, Carol Bennett of my staff, or Sharon Brown, Byron.

Sincerely yours,

John C. Golden
 Supervisor of Emergency Planning
 Technical Services Nuclear

cc: R. E. Querio
 J. R. VanLaere/S. D. Brown
 D. L. Farrar/T. Tramm
 NRC Resident Inspector, Byron Station
 L. Duchek/C. Bennett

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