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UNITED STATES  
 NUCLEAR REGULATORY COMMISSION  
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 U.S. NRC  
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R. J. Hickok  
 140 Cottage Road  
 Wilmington, IL 60481

Gentlemen:

Recently the NRC collected environmental samples around the Dresden Nuclear Power Station from surface water and the three water-bearing layers from which drinking water is drawn in the area around the Dresden Station. These samples were analyzed for the NRC by Argonne National Laboratory. The samples included water collected on September 5, 1980, from the Unit 2 and 3 discharge canal (which would be representative of the Dresden Cooling Lake), the Unit 1 discharge canal to the Kankakee River, the 1200-foot on-site domestic water well, and the Illinois River at Dresden Island Lock and Dam. Two samples were collected at area homes - a well water sample from a depth of 160 feet was collected on September 6, 1980, and a well water sample from a depth of 300 feet was collected on September 12, 1980.

No radioactivity was detected in any of these samples except a small amount of alpha and beta activity in the well water collected from depths of 160 and 300 feet. For the well at a depth of 160 feet, 6.8 picocuries per liter of beta activity was detected. For the well at a depth of 300 feet, 6.3 picocuries of alpha and 17.1 picocuries of beta activity were detected. According to Argonne National Laboratory, "These are considered to be normal levels of radioactivity in well water samples. The alpha and beta activities may vary significantly in different aquifers." These levels of alpha and beta activity are the same as typical levels of naturally occurring radium-226 from well water along the Illinois River valley. There is no evidence of any radioactivity from the Dresden Station.

Based on these measurements, we find no reason for the NRC to perform additional well sampling at this time. In the future, Commonwealth Edison will analyze water samples from the various aquifers used for drinking water in the Dresden vicinity. NRC inspectors will review the sampling results, and periodic inspections will be conducted to make sure the utility's environmental monitoring program is being properly conducted.

If you have any further questions, please contact Mr. Jan Strasma of my staff.

Sincerely,

*James G. Keppley*  
 James G. Keppley  
 Director

bcc:  
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