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Commonwealth Edison Company

ONE FIRST NATIONAL PLAZA ★ CHICAGO, ILLINOIS

Address Reply to:

POST OFFICE BOX 767 ★ CHICAGO, ILLINOIS 60690

Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
December 21, 1970

Dr. Peter A. Morris, Director
Division of Reactor Licensing
U.S. Atomic Energy Commission
Washington, D.C. 20545

Regulatory

File Cy.

SUBJECT: LICENSE DPR-19, DRESDEN NUCLEAR POWER STATION UNIT 2, SECTION 6.6.A.3 of THE TECHNICAL SPECIFICATIONS.

Dear Dr. Morris:

This is to report a condition relating to the operation of the station which resulted in exceeding 0.7 curies of radioactivity for a period of time in excess of 72 hours in the "B" waste sample tank, thereby exceeding the limit as specified in section 3.8.D of the Technical Specifications. Attention was directed to the high activity during a review of the records on November 3, 1970.

A thorough review of the records was subsequently made indicating the total activity was reduced to only 0.8 curies within the 72-hour period for the "B" waste sample tank. A review of other activities and related holding time in all above-grade tanks revealed that no other case exceeded the specified limits for total activity content and holding time.

Problem, Investigation, and Corrective Action

The radwaste demineralizer had become spent (depleted of ion exchange capacity) and was transferred to the regeneration facility at 0515 on September 24, 1970 thereby temporarily eliminating the ability to demineralize waste collector water. This water was transferred through a filter to the "B" waste sample tank between 1233 and 1750 hours on September 27, 1970 and was sampled for analysis at 1905 on September 27. This analysis showed an activity of 1.7×10^7 picocuries per liter with 84% tank level resulting in a total activity of 1.8 curies. An analysis of a sample taken at 1300 on September 28 showed an activity of 1.2×10^7 . The tank level was processed down to 57% by 2400 on September 29 for a total activity of 0.8 curies (ignoring decay of activity below 1.2×10^7 as would be indicated by the analyses noted above).

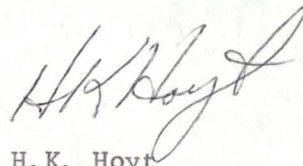
The regenerated demineralizer was returned to service at 2330 on September 28, 1970. Additional water was processed from the waste collector through the filter and demineralizer to "B" waste sample tank between 1305 and 1400 on September 30. The level was reduced to 64% and water was again added, and an analysis of a sample taken at 1414 on October 3, 1970 showed an activity of 3.4×10^6 and with a level of 74%, totalled 0.3 curies in the tank.

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It is recognized that sufficient guidelines had not been provided for the laboratory or operations to "flag" an activity which would require reprocessing action to maintain total activity below the limits of the Technical Specifications. Therefore an operating order was issued on November 20, 1970 to review cause and requirements for action any time an above-ground tank water activity exceeds 2×10^6 picocuries per liter.

Considerable effort has been devoted to reducing operating problems at radwaste. Those bearing directly on the reference problem include better control of the separation of high-activity and high-conductivity wastes thereby providing higher total volume processing through the radwaste demineralizer. The main factor contributing to the reference problem however, was the unavailability of new replacement resins on site. Several demineralizers in the operating system at that time had required replacement primarily because of fractured resin beads. Therefore the radwaste resin required regeneration which required greater time than replacement with new resin. Subsequently new improved quality resins have arrived and have been installed as required.



H. K. Hoyt
Superintendent

HKH:GLR:glt

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