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BBS Ltr.#467-74

Dresden Nuclear Power Station
R. R. #1
Morris, Illinois 60450
June 27, 1974

50-237

Mr. J. F. O'Leary, Director
Directorate of Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

SUBJECT: LICENSE DPR-19, DRESDEN NUCLEAR POWER STATION, UNIT #2, REPORT
OF EXCEEDING 1×10^{-7} uCi/ml IN CONDENSER COOLING WATER DISCHARGE
CANAL PER SECTION 3.8.C.2 OF THE TECHNICAL SPECIFICATIONS.
2/3 RADWASTE DISCHARGE 1.0×10^{-7} uCi/ml.

References: Notification of Region III of AEC Regulatory Operations
Telephone: F. Maura, 1325 hours on June 21, 1974
Telegram: J. Keppler, 1430 hours on June 21, 1974

Dear Mr. O'Leary:

This letter is to report a condition relating to the operation of unit 2/3 radwaste at about 0700 hours on June 20, 1974. At this time, the "A" floor drain sample tank ("A" FDST) was discharged to the D2/3 discharge canal at a rate which resulted in an apparent B- γ radioactivity of 1.02×10^{-7} uCi/ml in the discharge canal. The radioactivity limit specified for the discharge canal (on an unidentified basis) is 1×10^{-7} uCi/ml above background (section 3.8.C.2).

PROBLEM

At the time of the occurrence, Unit 2 was in run mode at 2131 MWt. The D2/3 radwaste basement was flooded and in an effort to process as much water as possible out of the "A" FDST, the factor used in calculating the discharge of liquid effluents was increased to 10 without proper authorization. The operating order permits a maximum factor of 3 without authorization.

Had the discharge rate been exactly 5.6 gpm as calculated using the factor of 10, the radioactivity in the discharge canal would not have exceeded 1×10^{-7} uCi/ml. However, the actual discharge rate was 5.7 gpm which resulted in an apparent beta-gamma radioactivity of 1.02×10^{-7} uCi/ml in the discharge canal.

At 1700 hours on June 20, 1974, the discharge rate was reduced to 4.4 gpm, bringing the activity within Tech. Spec. limits for discharge on an unidentified basis.

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INVESTIGATION

It was determined that the following events led to the occurrence.

- 1) Failure to follow the operating order which specifies the factor to be used to calculate discharge rates.
- 2) The actual discharge rate was 5.7 gpm which was slightly above the planned rate of 5.6 gpm, although a two-hour check on tank level indicated a discharge rate of 5.5 gpm at 0900, June 20, 1974.

The original calculation of the radioactivity of 1.02×10^{-7} uCi/ml in the D2/3 discharge canal was conservative since it was calculated using the dilution flow from the routine discharge card. The dilution flow printed on the discharge card is 89% of the actual discharge flow. Thus, when the actual dilution flow is used, the activity in the discharge canal is calculated to be 0.91×10^{-7} uCi/ml. Therefore, the Technical Specifications limit of 1×10^{-7} uCi/ml for liquid effluent discharge on an unidentified basis was not exceeded.

CORRECTIVE ACTIONS

The immediate corrective action taken when the problem was discovered was to reduce the discharge rate to 4.4 gpm.

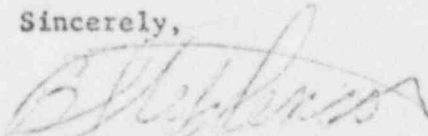
In order to prevent a future occurrence of the type described in this letter, the operating order was reviewed with the shift supervisors, emphasizing the correct use of multiplying factors to be used in calculating D2/3 discharge rates and the approvals required to exceed a factor of 3 on the river discharge cards.

EVALUATION

The radioactivity in the discharge canal was recalculated using the actual dilution flow and the corrected radioactivity in the canal was 0.91×10^{-7} uCi/ml; therefore, the Technical Specification limit of 1×10^{-7} uCi/ml for liquid effluent discharge on an unidentified basis was not exceeded.

Since the Technical Specifications limit was not exceeded, the discharge did not present a safety hazard to the public or environment.

Sincerely,



B. B. Stephenson
Superintendent

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