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BALTIMORE GAS AND ELECTRIC

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ELECTRIC ENGINEERING DEPARTMENT

May 23, 1983

The Regional Administrator
U. S. NRC Region 1
631 Park Avenue
King of Prussia, PA 19406

Dear Sir:

Subject: Calvert Cliffs Nuclear Power Plant
Units Nos. 1 and 2
License Nos. DPR-53 and 69
Nonroutine Radiological Environmental
Operating Report

This report is submitted to comply with the requirements of Appendix B Environmental Technical Specification Section 5.6.2.b.

Oyster samples were collected on April 12, 1983 from the Camp Conoy sampling location and analyzed for gamma-emitting radionuclides as required. The results of the analyses showed the presence of Ag-110m with an average concentration of 416 ± 24 pCi/Kg(wet). The oyster samples collected the same day from the Kenwood Beach sampling location (the background location) showed Ag-110m average concentration of 24 ± 8 pCi/Kg(wet).

Radioactive releases during the period of interest in 1983 for all isotopes have been within the allowable limits specified in the Environmental Technical Specifications (ETS). The natural tendency of oysters to highly concentrate environmental silver continues to be the cause of this event as was the cause of similar events previously reported.

For the period of interest in 1983, the monthly per cent capacity factors for both Units were as follows:

Period	Unit 1	Unit 2
January 1983	95.73	29.48*
February 1983	89.00	84.68
March 1983	98.51	95.07

*Unit 2 was brought back on-line on January 16, 1983 following completion of the planned maintenance work, namely, general inspection, refueling and retubing of the condensers started on October 16, 1982.

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During operation of Units 1 and 2, the circulating-water-pump data logs show that, on the average, at least five pumps (each rated at 200,000 GPM) per Unit were in operation. The processed radwaste from the combined waste processing system for Units 1 and 2 was released into the circulating water prior to the discharge into the Bay. The radwaste may be released at a design rate that can range from 10 GPM to a maximum of 120 GPM. In practice, the releases are made at a predetermined rate depending upon the measured concentration of radionuclides in the radwaste, the ETS limits, as well as the established ALARA objectives. At the maximum release rate, the radwaste concentration is decreased at least by a factor of 8×10^3 prior to discharge into the Bay.

Based on the average activity level of Ag-110m observed in oyster samples during 1983, the potential doses to the GI-Tract and the Whole Body of a maximum exposed individual (with the consumption rate of 5 Kilogram/year and the dose conversion factors as recommended in Reg. Guide 1.109, Rev. 1, October 1977) are estimated at less than 0.15 mrem/yr and less than 0.2×10^{-3} mrem/yr, respectively. These doses are small fractions (the total potential dose is less than 1%) of the permissible limit of 25 mrem/year to members of the general public as set forth in 40 CFR Part 190 "Environmental Radiation Protection Standards for Nuclear Power Operations," and are therefore considered to be of insignificant consequence to the health and safety of the public.

Very truly yours,

Gary R. Fuhrman

Gary R. Fuhrman, Director
Environmental Studies & Monitoring

GRF/eml

cc: Document Control Desk
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