

LICENSEE EVENT REPORT

CONTROL BLOCK: _____ ①

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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EVENT DESCRIPTION AND PROBABLE CONSEQUENCES ⑩
① ② Oyster samples collected on 12/5/78 from the Camp Canoy location and analyzed
③ ④ as required by Section 3.2, Appendix B, Environmental Technical Specification,
⑤ ⑥ showed Ag-110m at 81 + 11% pCi/kg. Background location showed Ag-110m at less
⑦ ⑧ 7 pCi/kg. Based on the observed levels, average individual doses to the GI
⑨ ⑩ Tract and Whole Body are very small fractions of the allowable doses to
⑪ ⑫ members of the general public (40CFR Part 190) and are of no consequence to
⑬ ⑭ the health and safety of the public. (CONTINUED)

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CAUSE DESCRIPTION AND CORRECTIVE ACTIONS ⑳
① ② The introduction of a more sensitive technique has reduced the MDL value for
③ ④ Ag-110m at less 7 pCi/kg. This is lower than the previous average MDL value
⑤ ⑥ of less 40 pCi/kg. The December Camp Canoy samples exceeded the new background
⑦ ⑧ value by over a factor of 10 while showing a continuation of the general trend
⑨ ⑩ of decreasing Ag-110m activity in oysters. No corrective action is required. (CONT)

FACILITY STATUS ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿

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NRC USE ONLY

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DOCKET NO. 50-317
REPORT DATE 01/04/79
EVENT DATE 12/21/78
ATTACHMENT

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES: (CONT)

The oyster samples were collected on December 5, 1978 from the Camp Canoy sampling location and analyzed for gamma-emitting radionuclides as required by Section 3.2 Appendix B Environmental Technical Specifications. The results of the analyses showed the presence of Ag-110m at $81 \pm 11\%$ pCi/Kg (wet). The oyster samples collected on the same date from the Kenwood Beach sampling location (the background location) showed Ag-110m at ≤ 7 pCi/Kg (wet).

Based on the observed levels of Ag-110m during 1978, for an average individual consuming 50 grams of oysters per day the doses to the GI Tract and Whole Body are estimated at $\leq 3 \times 10^{-2}$ mrem/year and $\leq 4 \times 10^{-5}$ mrem respectively. These are very small fractions of the allowable 25 mrem/year (GI Tract) and 25 mrem/year (Whole Body) doses to members of the general public, (40 CFR Part 190 Environmental Radiation Protection Standards for Nuclear Power Operations) and are considered to be of no consequence to the health and safety of the public.

CAUSE DESCRIPTION AND CORRECTIVE ACTION: (CONT)

The measurable level of Ag-110m in oysters was first detected in samples collected from the Camp Canoy sampling location in June 1977. Subsequently, samples collected in 1977 from the same location also showed measurable levels of Ag-110m as did the samples collected in January and February 1978. These findings were reported to the NRC as required.

The oyster samples collected from the Camp Canoy location from March through September 1978 showed an apparent decrease in Ag-110m concentrations. These concentrations ranged from $310 \pm 10\%$ to $160 \pm 15\%$ pCi/kg (wet). The observed decrease may in large part be due to depuration even though the effluent releases from the plant during the period of interest contained small quantities of Ag-110m.

Beginning with the fourth quarter of 1978 oyster samples are no longer sent to Radiation Management Corporation (RMC) in Philadelphia for gamma analyses. These analyses are done by the Chemical Engineering and Test Section of our Electric Test Department, using a 10% Ge(Li) with a Nuclear Data System 6600. The sample size and the count time are selected to meet the required detection capabilities for a number of radionuclides including Zr-Nb-95. As a result of this exercise, the MDL value for

CAUSE DESCRIPTION AND CORRECTIVE ACTION: (CONT)

Ag-110m is calculated at about ≤ 7 pCi/Kg (wet), which is substantially lower than the previous average MDL value of about ≤ 40 pCi/Kg (wet). On the assumption that this new MDL value of 7 constitutes the background value, the level of Ag-110m observed in December 1978 Camp Cancy samples exceeded the background value by over a factor of 10. However it does show a continuation of the general trend of decreasing Ag-110m activity in oysters at this location.