

September 28, 1984

TO: Mr. John Veil  
Office of Environmental Programs

FROM: Dr. E. I. Bauereis

SUBJECT: Impingement Episode at Calvert Cliffs Nuclear Power Plant

According to the NPDES permit (MD0002399) for Calvert Cliffs Nuclear Power Plant under I. Special Conditions, H. Intake Monitoring, any impingement episode substantial enough to cause modification to plant operations is a reportable event.

On August 28, 1984 Calvert Cliffs Nuclear Power Plant Unit 1 reactor and turbine were manually tripped. At 9:50 p.m. on August 28, 1984 #11 circulating water pump was stopped when 11A and 11B traveling screens developed a 40 inch differential water level due to a massive influx of fish blanketing the screens. Subsequently, at 9:56 p.m. 12A and 12B screens developed a differential water level of 50 inches resulting in stopping #12 circulating water pump and the reactor was manually tripped.

The Outside Operators Log for August 26, 1984 shows severe anoxic conditions in the Chesapeake Bay adjacent to the Calvert Cliffs Nuclear Power Plant. In the early afternoon (1 p.m.) when oxygen concentrations should be greater than 5.5 mg/l, the dissolved oxygen measured 1.7 mg/l. The severe anoxic conditions (less than 3 mg/l) at least 12 hours before the impingement event probably resulted in severely stressed or morbid fish. Under these unusual circumstances there is little that can be done to prevent the fish kill but the Biofouling Task Force is working to improve the performance of the traveling screens.

Copies of the report by the biologist performing the impingement sampling and the Outside Operators Log for August 28, 1984 are attached.

If you have any questions regarding this letter report, please call me at 301/234-6533.

*Elizabeth I. Bauereis, Ph.D.*

Senior Biologist  
Environmental Programs

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Attachment

cc: Messrs. A. E. Lundvall, Jr.  
T. Foley, N.R.C. ✓  
C. H. Cruse  
P. T. Crinigan

G. R. Fuhrman  
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