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March 18, 1994

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 2; Docket No. 50-318
Analysis of the Calvert Cliffs Unit No. 2 Reactor Vessel Surveillance Capsule
Withdrawn from the 97° F Location

Pursuant to 10 CFR Part 50, Appendix H, Baltimore Gas and Electric Company (BGE) hereby submits a summary technical report on the subject reactor vessel surveillance capsule. Appendix H requires the report to be submitted within one year after capsule withdrawal unless an extension is granted. The 97° location surveillance capsule was withdrawn on March 20, 1993.

The 97° location surveillance capsule is the second capsule withdrawn from the Calvert Cliffs Unit 2 reactor vessel beltline region. The capsule was removed and evaluated after being irradiated in the Unit 2 reactor vessel as part of the reactor vessel materials surveillance program. The objective of the program is to monitor irradiation-induced changes on the reactor vessel beltline material properties.

The capsule analysis results indicate that the tensile specimens are exhibiting normal behavior relative to neutron fluence exposure. The Charpy impact specimens exhibited the characteristic shift to higher temperature for the 30 ft-lb transition temperature and decrease in upper-shelf energy. Overall, the results of the 97° location capsule evaluation demonstrate that the current techniques used for predicting the change in the fracture toughness properties due to neutron irradiation and thermal environment are conservative. A change in the Technical Specifications is not required.

Should you have any further questions regarding this matter, we will be pleased to discuss them with you.

Very truly yours,

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Attachment

Analysis of the Calvert Cliffs Nuclear Power Plant Unit No. 2 Reactor Vessel Surveillance Capsule Withdrawn from the 97° Location of the Beltline Region (BAW-2199, February 1994)

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cc:

(With Attachment)

T. T. Martin, NRC

P. R. Wilson, NRC

(Without Attachment)

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R. I. McLean, DNR

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ATTACHMENT

**Analysis of the Calvert Cliffs Nuclear Power Plant
Unit No. 2 Reactor Vessel Surveillance Capsule
Withdrawn from the 97° Location of the Beltline Region
(BAW-2199, February 1994)**

Baltimore Gas and Electric Company

Docket No. 50-318

March 18, 1994