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Vice President  
Nuclear Energy

Baltimore Gas and Electric Company  
Calvert Cliffs Nuclear Power Plant  
1650 Calvert Cliffs Parkway  
Lusby, Maryland 20657  
410 495-4455



November 2, 1998

U. S. Nuclear Regulatory Commission  
Washington, DC 20555

**ATTENTION:** Document Control Desk

**SUBJECT:** Calvert Cliffs Nuclear Power Plant  
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318  
Responses to Requests for Additional Information for the Review of the Calvert  
Cliffs Nuclear Power Plant, Units 1 & 2, Integrated Plant Assessment Report for  
the Diesel Fuel Oil System, and Errata

**REFERENCES:**

- (a) Letter from Mr. C. H. Cruse (BGE) to NRC Document Control Desk, dated April 8, 1998, "Application for License Renewal"
- (b) Letter from Mr. D. L. Solorio (NRC) to Mr. C. H. Cruse (BGE), September 3, 1998, "Request for Additional Information for the Review of the Calvert Cliffs Nuclear Power Plant, Units 1 & 2, Integrated Plant Assessment, Sections 4.1, 4.2, 5.2, 5.7, 5.15, and 5.16"
- (c) Letter from Mr. D. L. Solorio (NRC) to Mr. C. H. Cruse (BGE), September 24, 1998, "Renumbering of NRC Requests for Additional Information on Calvert Cliffs Nuclear Power Plant License Renewal Application Submitted by the Baltimore Gas and Electric Company"

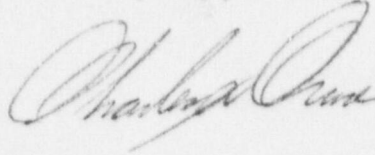
Reference (a) forwarded the Baltimore Gas and Electric Company (BGE) license renewal application (LRA). Reference (b) forwarded questions from NRC staff on six sections of the BGE LRA. Reference (c) forwarded a numbering system for tracking BGE's response to all of the BGE LRA requests for information and the resolution of the responses. Attachment (1) provides our response to the Diesel Fuel Oil System questions contained in Reference (b). The questions are renumbered in accordance with Reference (c). Attachment (2) provides errata to Section 5.7 of the BGE LRA, "Diesel Fuel Oil System."

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

Very truly yours,



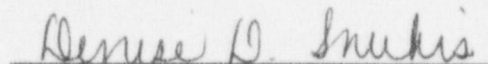
STATE OF MARYLAND :  
: TO WIT:  
COUNTY OF CALVERT :

I, Charles H. Cruse, being duly sworn, state that I am Vice President, Nuclear Energy Division, Baltimore Gas and Electric Company (BGE), and that I am duly authorized to execute and file this response on behalf of BGE. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other BGE employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.



Subscribed and sworn before me, a Notary Public in and for the State of Maryland and County of Calvert, this 2nd day of November, 1998.

WITNESS my Hand and Notarial Seal:

  
Notary Public

My Commission Expires:

2/1/2002  
Date

CHC/KRE/dlm

- Attachments: (1) Response to Request for Additional Information; Integrated Plant Assessment Report for the Chemical and Volume Control System  
(2) Errata to Section 5.7, Diesel Fuel Oil System; License Renewal Application

cc: R. S. Fleishman, Esquire  
J. E. Silberg, Esquire  
S. S. Bajwa, NRC  
A. W. Dromerick, NRC  
H. J. Miller, NRC

C. I. Grimes, NRC  
D. L. Solorio, NRC  
Resident Inspector, NRC  
R. I. McLean, DNR  
J. H. Walter, PSC

ATTACHMENT (1)

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RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION;  
INTEGRATED PLANT ASSESSMENT REPORT FOR THE  
DIESEL FUEL OIL SYSTEM

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## ATTACHMENT (1)

### RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION; INTEGRATED PLANT ASSESSMENT REPORT FOR THE DIESEL FUEL OIL SYSTEM

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#### NRC Question No. 5.7.17

On page 5.7-12 of Baltimore Gas and Electric Company's (BGE's) License Renewal Application (LRA), cathodic protection of external surfaces of underground piping is mentioned. However, a statement is made that no credit is taken for the cathodic protection program. National Association of Corrosion Engineers (NACE) International has published Recommended Practice (RP) 01-69 (92), "Control of External Corrosion on Underground or Submerged Metallic Piping Systems," that gives guidance on the protection of underground pipelines. RP 01-69 indicates that coatings and cathodic protection are to be used together. In light of the NACE guidance, clarify BGE's basis for not relying on the cathodic protection program.

#### BGE Response

As stated in Section 5.7.2 of the LRA, the external surfaces of buried Diesel Fuel Oil (DFO) System piping are protected, per standard industry practice, with external coating and wrapping and an impressed current Cathodic Protection System. The cathodic protection of the DFO piping is provided by the non-safety-related Cathodic Protection System. The Cathodic Protection System is not within the scope of license renewal because it does not perform any of the system intended functions defined in 10 CFR 54.4(a)(1), (2), and (3). Although it plays a role in the protection of the piping, for conservatism when determining plausible aging mechanisms, no credit was taken for the Cathodic Protection System. For aging management, although the buried services inspection program is the credited program, the Cathodic Protection System will play an integral part in the strategy employed in that program.

#### NRC Question No. 5.7.18

National Association of Corrosion Engineers RP 01-69 also describes methods to determine the effectiveness of coatings and cathodic protection programs. Describe the extent to which BGE includes these methods in its programs.

#### BGE Response

The aging management program credited to discover age-related degradation of the external surfaces of the Fuel Oil Storage Tank (FOST) shell and aboveground DFO piping is CCNPP Administrative Procedure MN-1-319, "Structure and System Walkdowns," (PEG-7, as identified in Section 5.7 of the LRA, has been replaced by MN-1-319). Procedure MN-1-319 does not directly reference NACE RP 01-69.

Age related degradation of the external surfaces of the buried DFO piping will be managed by a new Buried Pipe Inspection Program, which is under development.

#### NRC Question No. 5.7.19

There are additional NACE standards, such as RP0193-93, for managing aging of tank bottoms, such as the FOST shell and bottom external exposed surfaces. Discuss the extent to which BGE includes these methods in its programs.

ATTACHMENT (1)

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION;  
INTEGRATED PLANT ASSESSMENT REPORT FOR THE DIESEL FUEL OIL SYSTEM

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BGE Response

The aging management program credited to discover age-related degradation of the external surfaces of the FOST shell is MN-1-319 (PEG-7, as identified in Section 5.7 of the LRA, has been replaced by MN-1-319). Procedure MN-1-319 does not directly reference NACE RP 0193-93.

As stated in LRA Section 5.7.2 on page 5.7-17, Baltimore Gas and Electric Company has concluded there are no plausible age-related degradation mechanisms for the external surfaces of the FOST bottoms.

**ATTACHMENT (2)**

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**ERRATA TO SECTION 5.7, DIESEL FUEL OIL SYSTEM;**

**LICENSE RENEWAL APPLICATION**

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**Baltimore Gas and Electric Company  
Calvert Cliffs Nuclear Power Plant  
November 2, 1998**

## ATTACHMENT (2)

### ERRATA TO SECTION 5.7; DIESEL FUEL OIL SYSTEM; LICENSE RENEWAL APPLICATION

The following change applies to Section 5.7 of the Baltimore Gas and Electric Company License Renewal Application:

- On page 5.7-15, Calvert Cliffs procedure PEO-0-023-2-O-M, "Drain Water From 11 & 21 FOST," is credited for aging management. Calvert Cliffs has implemented improved Technical Specifications, which currently include a Surveillance Requirement (SR 3.8.3.3) to "Check for and remove accumulated water from each FOST." This new surveillance requirement is currently implemented by Calvert Cliffs Surveillance Test Procedure (STP) O-106-0, "Diesel Fuel Oil Storage Tank Water Check." Baltimore Gas and Electric Company intends to discontinue the PEO because of this new STP.

Therefore, for aging management, Baltimore Gas and Electric Company is changing the commitment from PEO-0-023-2-O-M to STP O-106-0. All of the statements on page 5.7-15 related to the PEO, regarding acceptance criteria and actions taken, apply equally to the STP. The surveillance is currently required to be met every 92 days, whereas the PEO was performed monthly. Baltimore Gas and Electric Company has documented justification that this change is acceptable.