

CHARLES H. CRUSE

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 4, 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  
Response to Request for Additional Information for the Review of the Calvert  
Cliffs Nuclear Power Plant, Units 1 & 2, Integrated Plant Assessment Report for  
the Containment Spray System

- REFERENCES:
- (a) Letter from Mr. C. H. Cruse (BGE) to NRC Document Control Desk, dated January 21, 1998, "Request for Review and Approval of System and Commodity Reports for License Renewal"
  - (b) Letter from Mr. D. L. Solorio (NRC) to Mr. C. H. Cruse (BGE), September 2, 1998, "Request for Additional Information for the Review of the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 & 2, Integrate Plant Assessment Reports for the Containment Isolation Group, Containment Spray System, and Primary Containment Heating and Ventilation System"
  - (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 four Baltimore Gas and Electric Company (BGE) system and commodity reports for license renewal. Reference (b) forwarded questions from NRC staff on three sections of the BGE License Renewal Application, including the Containment Spray System. Reference (c) forwarded a numbering system for tracking BGE's response to all of the BGE License Renewal Application requests for additional information and the resolution of the responses. Attachment (1) provides our response to the Containment Spray System questions contained in Reference (b). The questions are renumbered in accordance with Reference (c).

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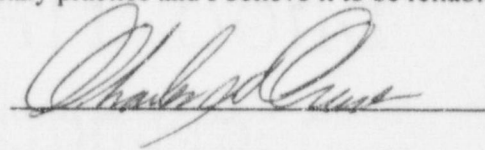
Should you have further questions regarding this matter, we will be pleased to discuss them with you.

Very truly yours,



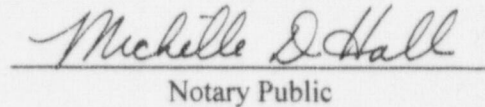
STATE OF MARYLAND :  
: TO WIT:  
COUNTY OF CALVERT :

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.

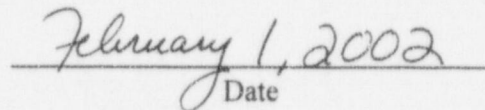


Subscribed and sworn before me, a Notary Public in and for the State of Maryland and County of Calvert, this 4 day of November, 1998.

WITNESS my Hand and Notarial Seal:

  
Notary Public

My Commission Expires:

  
Date

CHC/KRE/dlm

Attachment: (1) Response to Request for Additional Information; Integrated Plant Assessment Report for the Containment Spray System

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 CONTAINMENT SPRAY SYSTEM**

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**Baltimore Gas and Electric Company  
Calvert Cliffs Nuclear Power Plant  
November 4, 1998**



## ATTACHMENT (1)

### RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION; INTEGRATED PLANT ASSESSMENT REPORT FOR THE CONTAINMENT SPRAY SYSTEM

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#### NRC Question No. 5.6.1

Section 6.4.2 of the Calvert Cliffs Nuclear Power Plant (CCNPP) Updated Final Safety Analysis Report (UFSAR) states that "It is expected the containment spray will be effective in removing fission products from the containment atmosphere." Discuss why this intended function is not included as part of the system description or the system scoping results in Section 5.6 of the *(Baltimore Gas and Electric Company [BGE])* License Renewal Application (LRA). If this intended function is included, describe the components included within the scope of license renewal and subject to an aging management review. If not, justify why this function is excluded.

#### BGE Response

The function for the Containment Spray System of removing fission products from the containment atmosphere is in fact credited in the CCNPP accident analysis. This function was inadvertently omitted from the system description and scoping results. Omission of this function has no effect on aging management review since as an active function it is not required to be evaluated as stated in 10 CFR 54.21(a)(1)(i).

#### NRC Question No. 5.6.2

Discuss why the shutdown cooling intended function, as described in the CCNPP UFSAR is not included as one of the system scoping results in Section 5.6.1.1 of the LRA. If this intended function is included, describe the components included within the scope of license renewal and subject to an aging management review. If not, justify why this function is excluded.

#### BGE Response

The Shutdown Cooling System is used to remove core decay heat and reactor coolant sensible heat during plant cooldowns and cold shutdowns. The "shutdown cooling intended function" is not included with the functions based on the requirements of 10 CFR 54.4(a)(1) and (2) because CCNPP is a "Hot Standby" plant and is not required to reach cold shutdown following a design basis accident. As discussed in CCNPP Engineering Standard ES-011, "System, Structure, and Component (SSC) Evaluation," CCNPP is a hot standby plant. The main steam safeties are credited as the heat removal mechanism with steam generator inventory being supplied by the Auxiliary Feedwater System from Condensate Storage Tank 12. RCS temperature will be maintained at saturation temperature of the steam generators for the main steam safeties relief setpoints adjusted for the differential temperature due to heat transfer characteristics across the steam generator tubes. The "shutdown cooling intended function" is, however, included in Section 5.6.1.1 of the LRA, with the group of functions based on the requirements of 10 CFR 54.4(a)(3), as "To provide RCS heat removal to ensure safe shutdown in the event of a postulated severe fire . . ." This function has no effect on aging management review since as an active function its components are not required to be evaluated as stated in 10 CFR 54.21(a)(1)(i).

## ATTACHMENT (1)

### RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION; INTEGRATED PLANT ASSESSMENT REPORT FOR THE CONTAINMENT SPRAY SYSTEM

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#### NRC Question No. 5.6.3

Provide the basis for excluding spray nozzles shown in Figure 5.6-1 in Section 5.6.1.1 from the scope of license renewal.

#### BGE Response

The spray nozzles shown in Figure 5.6.1.1 as not being within the scope of license renewal are associated with the emergency dousing function for the containment filter units. See the response to Question 5.6.4 below for an explanation of why these components are excluded from the scope of license renewal.

#### NRC Question No. 5.6.4

Chapter 6 of the CCNPP UFSAR states that the containment spray system supplies the emergency dousing nozzles for the iodine removal units. The ability to put out charcoal fires due to decay heat from buildup of fission products is normally relied upon at some nuclear power plants as an emergency dousing function. Provide the basis for not including the ability of the containment spray system to supply the emergency dousing nozzles for the iodine removal units as an intended function in Section 5.6.

#### BGE Response

The emergency dousing function of the Containment Spray System, as described in CCNPP UFSAR Section 6.7.2, is not within the scope of license renewal. Updated Final Safety Analysis Report Section 6.7.2 explains that the dousing system is isolated in Modes 1 through 4. The emergency dousing is non-safety-related at CCNPP based on an analysis showing that maximum post-loss-of-coolant accident charcoal bed temperature will not cause iodine desorption or charcoal bed ignition. In Modes 5 and 6, the dousing system is available to provide fire protection in order to support certain maintenance activities.

#### NRC Question No. 5.6.5

Are there any parts of the systems, structures, or components described in Section 5.6 that are inaccessible for inspection? If so, describe what aging management program will be relied upon to maintain the integrity of the inaccessible areas. If the aging management program for the inaccessible areas is an evaluation of the acceptability of inaccessible areas based on conditions found in surrounding accessible areas, please provide information to show that conditions would exist in accessible areas that would indicate the presence of or result in degradation to such inaccessible areas. If different aging effects or aging management techniques are needed for the inaccessible areas, please provide a summary to address the following elements for the inaccessible areas: (1) Preventive actions that will mitigate or prevent aging degradation; (2) Parameters monitored or inspected relative to degradation of specific structure and component intended functions; (3) Detection of aging effects before loss of structure and component intended functions; (4) Monitoring, trending, inspection, testing frequency, and sample size to ensure timely detection of aging effects and corrective actions; (5) Acceptance criteria to ensure structure and component intended functions; and (6) Operating experience that provides objective evidence to demonstrate that the effects of aging will be adequately managed.

ATTACHMENT (1)

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION;  
INTEGRATED PLANT ASSESSMENT REPORT FOR THE CONTAINMENT SPRAY SYSTEM

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BGE Response

Baltimore Gas and Electric Company can access all Containment Spray System components if required.