

CHARLES H. CRUSE
Vice President
Nuclear Energy

Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, Maryland 20657
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October 30, 1996

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
30-Day Response to Generic Letter 96-06, "Assurance Of Equipment
Operability and Containment Integrity During Design-Basis Accident
Conditions"

REFERENCE: (a) Letter from Mr. B. K. Grimes (NRC) to Mr. C. H. Cruse (BGE), dated
September 30, 1996, NRC Generic Letter 96-06: "Assurance Of
Equipment Operability and Containment Integrity During Design-Basis
Accident Conditions"

The purpose of this letter is to forward our 30-day response to Reference (a). The generic letter was issued to request a written summary of our evaluation to:

- (1) determine if containment air cooler cooling water systems are susceptible to either wa erhammer or two-phase flow conditions during postulated accident conditions; and,
- (2) determine if piping systems that penetrate the containment are susceptible to thermal expansion of fluid so that overpressurization of piping could occur.

Attachment (1) contains our detailed response to the information requested.

We regret that we were not offered the opportunity to comment on this generic letter prior to its release. The public and industry are generally better served when they have been allowed to comment on proposed generic letters. We encourage the Nuclear Regulatory Commission to continue allowing public comment on future proposed generic letters and bulletins.

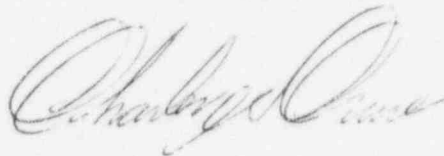
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Should you have questions regarding this matter, we will be pleased to discuss them with you.

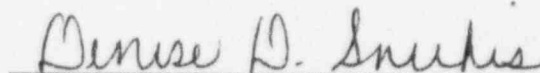
Very truly yours,



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

I hereby certify that on the 30th day of October, 19 96, before me, the subscriber, a Notary Public of the State of Maryland in and for Calvert County, personally appeared Charles H. Cruse, being duly sworn, and states that he is Vice President of the Baltimore Gas and Electric Company, a corporation of the State of Maryland; that he provides the foregoing response for the purposes therein set forth; that the statements made are true and correct to the best of his knowledge, information, and belief; and that he was authorized to provide the response on behalf of said Corporation.

WITNESS my Hand and Notarial Seal:


Notary Public

My Commission Expires:

2/2/98
Date

CHC/JMO/dlm

Attachment: (1) Baltimore Gas & Electric Company's 30-Day Response to GL 96-06:
"Assurance Of Equipment Operability and Containment Integrity During
Design-Basis Accident Conditions"

cc: D. A. Brune, Esquire
J. E. Silberg, Esquire
Director, Project Directorate I-1, NRC
A. W. Dromerick, NRC

H. J. Miller, NRC
Resident Inspector, NRC
R. I. McLean, DNR
J. H. Walter, PSC

ATTACHMENT (1)

BALTIMORE GAS AND ELECTRIC COMPANY'S

30-DAY RESPONSE

TO GL 96-06:

"ASSURANCE OF EQUIPMENT OPERABILITY AND

CONTAINMENT INTEGRITY

DURING DESIGN-BASIS ACCIDENT CONDITIONS"

Calvert Cliffs Nuclear Power Plant

Units 1 & 2

October 30, 1996

ATTACHMENT (1)

BALTIMORE GAS AND ELECTRIC COMPANY'S 30-DAY RESPONSE TO GL 96-06: "ASSURANCE OF EQUIPMENT OPERABILITY AND CONTAINMENT INTEGRITY DURING DESIGN-BASIS ACCIDENT CONDITIONS"

REQUIRED RESPONSE

Within 30 days of the date of this generic letter, addressees are required to submit a written response indicating:

- 1) *whether or not the requested actions will be completed;*

Response

The requested actions are (1) determine if containment air cooler (CAC) cooling water systems are susceptible to either waterhammer or two-phase flow conditions during postulated accident conditions and, (2) determine if piping systems that penetrate the containment are susceptible to thermal expansion of fluid so that overpressurization of piping could occur. Note that for Calvert Cliffs, Units 1 and 2, the containment spray system is an alternate, redundant containment cooling system to the CAC system.

For waterhammer, we will first evaluate whether the potential to create voiding in a CAC exists. If voids are found to form during postulated accident conditions, then the potential for a waterhammer to form and its resulting magnitude will be evaluated to determine its impact on the system. Corrective actions will be taken if the scenario (i.e., loss-of-coolant accident/loss of offsite power [concurrent] or main steam line break) is found to be credible. We are investigating the potential of addressing this issue through other industry efforts.

For two-phase flow, we have already evaluated the potential to create two phase flow conditions at the outlet of the CACs and associated downstream restrictions as part of the service water system design basis. However, the transient period, during which service water control valves are repositioned at the start of the design basis accident, will be reviewed. If required, a detailed analysis of this transient will be incorporated into the system design basis. Corrective actions will be taken if necessary.

For overpressurization, we will determine if liquid filled, safety-related piping systems that penetrate the containment are susceptible to the scenario described in the generic letter. Please note that providing piping systems with thermal relief protection from overpressure events was an initial design consideration. Evaluating the adequacy of thermal relief protection will require a review of the system drawings and plant operating procedures to determine if specific piping segments, in containment, can be isolated. The piping segments identified will be reviewed to determine if appropriate relief protection is provided. Corrective actions will be taken if necessary and may include procedure changes or system modifications.

- 2) *whether or not the requested information will be submitted; and,*

Response

The requested summary information will be submitted.

ATTACHMENT (1)

BALTIMORE GAS AND ELECTRIC COMPANY'S
30-DAY RESPONSE TO GL 96-06: "ASSURANCE OF EQUIPMENT OPERABILITY AND
CONTAINMENT INTEGRITY DURING DESIGN-BASIS ACCIDENT CONDITIONS"

- 3) *whether or not the requested information will be submitted within the requested time period.*

Response

Currently, we plan to develop an evaluation sufficient to determine the basis for continued operability of affected systems and components. By January 28, 1997, we will provide a summary status of our evaluations, an assessment of their impact on operability, and a schedule for implementing the results of the evaluation.