

Mr. Charles H. Cruse
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Company
1650 Calvert Cliffs Parkway
Lusby, Maryland 20657

April 22, 1997

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - PROPOSED TECHNICAL
SPECIFICATION CHANGES TO REACTOR COOLANT SYSTEM FLOW LIMIT REGARDING
RADIOLOGICAL CONTROLS CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS.
1 AND 2 (TAC NOS. M97855 AND M97856)

Dear Mr. Cruse:

The NRC staff has reviewed your response of March 25, 1997, to our Request for Additional Information dated March 5, 1997, regarding changes to the reactor coolant system flow limit amendment related to radiological controls. Based on our review, we have concluded that the information provided is insufficient for the staff to perform an assessment of the acceptability of the proposal to plug additional tubes in the steam generators. The staff believes the responses have been inadequate and these inadequacies can extend the time necessary for receiving staff approval of the amendment. It is requested that Baltimore Gas and Electric Company provide sufficient information so that we may perform accident dose assessments to support your amendment. The information required is addressed in the enclosure.

In order to meet your schedule, the staff requests that additional information be provided within 30 days of receipt of this letter.

If you have any questions regarding this matter, please contact me at 301-415-3473.

Sincerely,

/S/

Alexander W. Dromerick, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket Nos. 50-317
and 50-318

Enclosure: Request for Additional
Information

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

April 22, 1997

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Baltimore Gas and Electric Company
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Sincerely,

A handwritten signature in cursive script, reading "Alexander W. Dromerick", is written over the typed name.

Alexander W. Dromerick, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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cc w/encl: See next page

Mr. Charles H. Cruse
Baltimore Gas & Electric Company

Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2

cc:

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Request for Additional Information
Proposed Amendment for Reduced Flow

Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2

1. The consequences of the following accidents must be assessed to support the increase in SG tube plugging from 800 to 2,500 tubes per SG.
 - a. Steam Generator tube rupture (SGTR)
 - b. Main Steam Line Break (MSLB)
 - c. Loss of Coolant Accident (LOCA)
 - d. Rod Ejection
 - e. Seized rotor
2. Baltimore Gas and Electric Company (BGE) must address whether the proposed additional plugging introduces the possibility of a new or different accident than previously assessed or results in a reduction in the margin of safety. Specifically, the condition which is of concern to the staff is that of overfill of the SG which may be experienced in the tube rupture.

BGE has performed accident analyses of the MSLB and the seized rotor. In a response to a question from the staff, the licensee indicated that they had performed a qualitative assessment of the impact of tube plugging on the rod ejection and the SGTR accidents. Based upon this assessment, the licensee indicated that "the appropriate NRC acceptance criteria for each event were met. Therefore, the analyses of record (including dose assessment) for these events were not revised."

It appears inappropriate for BGE to conclude that, because they determine that the doses are within the staff's acceptance criteria, a revised dose analysis need not be submitted for the staff's review and approval. By that assumption, is the licensee inferring that the analyses for which they are submitting revised assessments exceed the staff's dose criteria? If the licensee concluded that the consequences of the SGTR and the rod ejection were greater than that previously assumed then they would have an unreviewed safety question and the licensee would be required to have those analyses reviewed and approved by the staff.

The requirement for additional analyses is necessary because the additional plugging would result in an increase in the quantity of primary coolant released to the faulted SG in the event of an SGTR. This increase would result in additional releases from the faulted SG. In addition, because more tubes are plugged, the heat removal capability of each SG is diminished. Consequently, it will take longer for faulted SG to be isolated and for the intact SG to remove the decay heat from the core. For the intact SG, since heat removal capability is decreased, the time to remove decay heat is increased from previous evaluations. Consequently, steam releases from both SGs are likely to be increased from previous evaluations.

Enclosure

For the rod ejection accident, BGE must address whether the additional SG tube plugging results in a greater quantity of fuel melting or in a greater quantity of fuel rods which experienced gap releases? If it does, then the consequences would be increased above those previously analyzed. Anunreviewed safety question would exist. The licensee would have to assess the offsite and onsite consequences and the staff would need to perform a confirmatory analysis and issue an SE indicating that the consequences of a rod ejection accident remain acceptable with the additional SG tube plugging.