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June 25, 1993

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit No. 1; Docket No. 50-317
Review of Input to Accident Sequence Precursor Report for 1992, Licensee
Event Report 317/92-08, "Ground Fault In Isolated Phase Bus Duct System"

REFERENCE: (a) Letter from Mr. D. G. McDonald, Jr. (NRC) to Mr. R. E. Denton
(BG&E), dated June 11, 1993, Preliminary Evaluation of Calvert
Cliffs Nuclear Power Plant, Unit 1, Licensee Event Report 317/92-08,
"Ground Fault In Isolated Phase Bus Duct System," Input to Accident
Sequence Precursor Report for 1992

Gentlemen:

In Reference (a), the NRC notified Baltimore Gas and Electric Company (BG&E) that the Office for Analysis and Evaluation of Operational Data has drafted the 1992 Accident Sequence Precursor (ASP) Report, "Precursors to Potential Severe Core Damage Accidents: 1992, A Status Report," NUREG/CR-4674, Volumes 17 & 18 (Draft). The subject Licensee Event Report (LER) is one of the 1992 precursor events included in the draft ASP report. You requested that BG&E provide written comments on the preliminary evaluation of the LER and address the following three specific questions:

1. *Comment on the ASP analysis characterization of the possible Unit 1 response as the result of the event.*

Response:

The BG&E staff has reviewed the preliminary evaluation and NUREG/CR-4674, Volumes 15 & 16 (Final). The event description, additional event-related information and modeling assumptions contained in the preliminary report are consistent with both the possible Unit 1 plant responses and the possible core damage sequences that are described in the NUREG/CR-4674. Given the event tree options that are available in the NUREG, you made the best selection.

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2. *Comment on whether the analysis reasonably represents the plant safety equipment configurations and capabilities which existed at the time of the event.*

Response:

The analysis reasonably represents the plant configurations and capabilities which existed at the time of the event. However, from the preliminary evaluation, it is not readily apparent that the modeling assumptions and conditional core-damage probability include the capability to provide auxiliary feedwater (AFW) flow from the Unit 2 motor-driven (No. 23) AFW pump to Unit 1 via the motor-driven pump discharge cross connect. During this event, the No. 23 AFW pump was available. When all feedwater is lost, Emergency Operating Procedure - 3, "Loss of Feedwater," directs the operators to establish AFW flow to the Unit 1 steam generators using the No. 23 AFW pump. The inclusion of this additional pump into the sequence evaluations, using the guidelines of the NUREG for failure probabilities and operator actions, may result in adjustments to the top sequences such that the entire accident sequence precursor probability falls below the threshold of 1×10^{-6} .

3. *Comment on the analyst's assumptions regarding equipment recovery probabilities.*

Response:

The analyst's assumption that main feedwater flow could be re-established is correct. The analyst correctly notes that the Main Feedwater System had not failed. Assigning a non-recovery factor of 0.04 is consistent with the available recovery characteristics listed in NUREG/CR-4674 as well as the plant configurations and capabilities that existed at the time of the event.

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

Very truly yours,



for
R. E. Denton
Vice President - Nuclear Energy

RED/JMO/jmo/dlm

cc: D. A. Brune, Esquire
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