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VICE PRESIDENT
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August 25, 1993

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
Emergency Diesel Generator Project - Instrumentation and Control Systems
Design Report

- REFERENCES:
- (a) Letter from Mr. D. G. McDonald, Jr. (NRC) to Mr. G. C. Creel (BG&E), dated October 10, 1990, Response to Station Blackout Rule (TAC Nos. M68525 and M68526)
 - (b) Letter from Mr. D. G. McDonald, Jr. (NRC) to Mr. G. C. Creel (BG&E), dated February 12, 1991, Response to Station Blackout Rule (TAC Nos. M68525 and M68526)
 - (c) Letter from Mr. R. E. Denton (BG&E) to NRC Document Control Desk, dated July 7, 1993, Modification to Our Station Blackout Rule Response
 - (d) Letter from Mr. R. E. Denton (BG&E) to NRC Document Control Desk, dated July 20, 1993, Emergency Diesel Generator Project - SACM Diesel Generator and Mechanical Systems Design Report
 - (e) Letter from Mr. R. E. Denton to NRC Document Control Desk, dated July 26, 1993, Emergency Diesel Generator Project - Electrical Engineering Design Report

In response to the requirements of 10 CFR 50.63, Baltimore Gas and Electric Company is adding one safety-related diesel generator and one non-safety-related diesel generator at our two-Unit Calvert Cliffs Nuclear Power Plant. These diesel generators enhance our ability to meet station blackout requirements. After the installation of the new diesel generators is complete, we will have one diesel generator dedicated to each of the four engineered safety features busses, with the non-safety-related diesel generator used to mitigate station blackout conditions and as a standby for any of the four dedicated diesel generators. The NRC has reviewed and approved the basic concept of our station blackout response capability as both an alternate AC and AC independent site

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(References a and b). We have modified our station blackout response (Reference c) and are awaiting NRC approval of the change. The initial approval was contingent upon our submittal to the NRC of design information concerning: the new diesel generator installation, the change in our onsite emergency electrical system, and the alternate AC power source. The attachment to this letter is one of the submittals requested.

In order to gain NRC approval of the modifications to our onsite emergency electrical system, we are preparing a series of design reports for NRC review. These design reports will cover appropriate aspects of the diesel generator design and qualification, and changes to our electrical system. The design reports have been broken down into several groups to aid in their review by the NRC. These groups are: Civil Engineering, SACM Diesel Generator and Mechanical Systems, Electrical Engineering, and Instrumentation and Controls. In addition to these design reports, other correspondence will be provided to describe the alternate AC power source. Requests to change the Technical Specifications will be supplied in separate submittals.

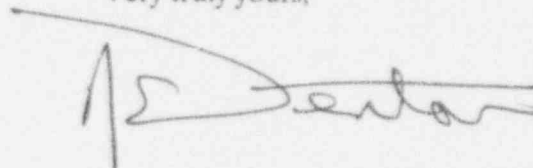
The Instrumentation and Control Systems Design Report is attached. This report describes the instrumentation and controls for the SACM diesel generator both in the Diesel Generator Building and in the Main Control Room. In addition, it discusses the instrumentation and control systems for the diesel building support systems, such as the heating and ventilation system and fire protection. The report discusses the design bases and gives a system description for the various control systems. An important function of this report is to detail our commitment to various codes, standards and Regulatory Guides. Our commitments and exceptions to the various codes and standards are explicitly described in the various sections of the report. Note, however, that these commitments are for design, procurement, fabrication and construction only; operational and surveillance commitments will be made through the License Amendment Request.

This is Revision 0 of the subject report. While a majority of information concerning the instrumentation and control systems is contained in this report, some information is contained in other reports. The function and some of the control systems for the diesel generator are discussed in the SACM Diesel Generator and Mechanical Systems Design Report (Reference d). The electrical distribution system for the plant is described in the Electrical Engineering Design Report (Reference e). Responses to questions or concerns arising from the NRC review will be included in future report revisions.

We request that this report be reviewed and approved by March 1, 1994. This date will support installation of the majority of the instrumentation and control systems equipment.

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

Very truly yours,

A handwritten signature in dark ink, appearing to be "J. S. Carter", written over a horizontal line.

RED/PSF/psf/dlm

Attachment

Document Control Desk

August 25, 1993

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cc: D. A. Brune, Esquire
J. E. Silberg, Esquire
R. A. Capra, NRC
D. G. McDonald, Jr., NRC
T. T. Martin, NRC
P. R. Wilson, NRC
R. I. McLean, DNR
J. H. Walter, PSC