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VICE PRESIDENT
NUCLEAR ENERGY
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July 26, 1991

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
Implementation of Regulatory Guide 1.97¹

REFERENCES: (a) NRC Confirmatory Order dated July 16, 1985
(b) Letter from Mr. S. A. Varga (NRC) to J. A. Tiernan (BG&E), dated February 6, 1988
(c) Letter from Mr. J. A. Tiernan (BG&E) to NRC Document Control Desk, dated August 9, 1988

Gentlemen:

The purpose of this letter is to inform you that Baltimore Gas and Electric (BG&E) Company has completed the implementation of all actions required for Calvert Cliffs Units 1 and 2 to comply with Regulatory Guide (RG) 1.97. In Reference (a), the NRC issued a confirmatory order that approved BG&E's schedule for completion of the installation or upgrade of post-accident monitoring instrumentation specified in RG 1.97. Specifically, all work was to be completed prior to startups of Unit 1 following the Cycle 10 refueling outage (spring 1988) and of Unit 2 following the Cycle 9 refueling outage (spring 1989).

In Reference (b), the NRC issued a slight modification to the July 16, 1985 Confirmatory Order indicating that the NRC staff was conducting a generic review concerning the need for environmentally qualified Category 2 instrumentation to monitor safety injection accumulator tank level or pressure and containment sump water temperature. The NRC staff indicated that no additional actions would be required regarding installation of these two parameters until after completion of the staff's generic review. We await notification of your decision on this matter. For

¹ NRC Regulatory Guide 1.97, Revision 3, "Instrumentation for LWRs to Assess Plant and Environs Conditions During and Following an Accident"

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your information, we currently have non-safety-related instrumentation for safety injection accumulator tank level and pressure. We have no installed instrumentation capable of monitoring containment sump water temperature.

In Reference (c), BG&E provided a comprehensive report of the status of RG 1.97 instrumentation upgrades. This report reflected the completion of all Unit 1 installation work and our plans to complete the installation or upgrade of the remaining 11 items for Unit 2 (see Reference [c], Table 2). These items were:

- o Wide-range excore neutron detector upgrade
- o RHR outlet temperature indication upgrade
- o Core exit thermocouple upgrade
- o Environmental qualification upgrade for miscellaneous instrumentation
- o Miscellaneous electrical upgrades
- o Miscellaneous instrument modifications
- o Diesel generator instrumentation cabling upgrade
- o 4-KV and 480V Class 1E switchgear instrumentation upgrade
- o Auxiliary spray and charging line isolation scheme upgrade
- o Control Room Panel C06 modifications
- o Transmitter and power supply upgrades for containment heat removal instrumentation

With regard to boric acid charging flow, in Reference (c) we indicated that installation of a flowmeter was complete for Units 1 and 2 and that testing and system modifications were underway to achieve the desired instrument accuracy. We noted that a problem was being experienced with accuracy as the result of pump-induced system flow pulsations. Although our efforts to improve flowmeter accuracy are continuing, we currently rely on the charging pump breaker lights as the primary indication of the positive displacement charging pumps' flow to satisfy this RG 1.97 requirement. The charging pump breaker lights satisfy Category 2 criteria. The charging pump flowmeter has been changed to Category 3 and serves as backup indication to the charging pump breaker lights. An additional instrument, the charging pump electric current meters (which also satisfy Category 2 criteria), provides further backup indication to the charging pump indicator lights. This approach was evaluated pursuant to 10 CFR 50.59 and determined not to constitute an unreviewed safety question.

Implementation of new Technical Specifications for RG 1.97 instrumentation is complete, and remaining updates to the Calvert Cliffs Final Safety Analysis Report for RG 1.97 instrumentation will be complete with the issuance of UFSAR Revision 12 (July 1992).

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 read "G. P. Chaf". The signature is fluid and cursive, with the first name "G." and last name "Chaf" clearly distinguishable.

GCC/BSM/dlm

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