Mr. Charles H. Cruse
Vice President - Nuclear Energy
Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

March 27 1997

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING THE TECHNICAL SPECIFICATION CHANGE REQUEST TO CONVERT TO THE IMPROVED TECHNICAL SPECIFICATIONS FOR THE CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 (TAC NOS. M97363 AND M97364)

Dear Mr. Cruse:

By letter dated December 4, 1996, you submitted a request to convert the current Technical Specifications (TSs) for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, to be consistent with the Improved Standard Technical Specifications (ISTS) in NUREG-1432, Revision 1, "Standard Technical Specifications for Combustion Engineering Plants," dated October 30, 1996. To complete our review, we need additional information regarding Section 1.0 of your December 4, 1996, submittal. The information requested is addressed in the enclosure under the heading "NRC Comments-Section 1.1."

To support the NRC staff's review schedule, your written response to this request for additional information is requested within 15 days of the receipt of this letter. Should you have any questions, please do not hesitate to contact me at (301) 415-3473.

Sincerely,

ORIGINAL SIGNED BY:

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

cc w/encl: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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Mr. Charles H. Cruse
Baltimore Gas & Electric Company

Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2

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Calvert Cliffs Nuclear Power Plant

Conversion to Improved Technical Specifications

NRC Comments - Section 1.1

1.1-01 DOC L.6
Definition of Channel Calibration
DOC A.6
Definition of Channel Functional Test
TSTF-64

TSTF-64 is meant to clarify the applicability of Channel Calibration and Channel Functional Test by replacing the STS words,

> "The Channel Calibration shall encompass the entire channel, including the required sensor, alarm, display, and trip functions, and shall include the Channel Functional Test."
>
> "The Channel Functional Test may be performed by means of any series of sequential, overlapping, or total channel steps so that the entire channel is tested."

with the following:

> "The Channel Calibration shall encompass those components, *such as sensors, alarms, displays, and trip functions, required to perform the specified safety function(s). The Channel Calibration* shall include the Channel Functional Test."
>
> "The Channel Functional Test may be performed by means of any series of sequential, overlapping, or total channel steps so that *all components in the channel, such as sensors, alarms, displays, and trip functions, required to perform the specified safety function(s) are* tested."

As discussed in DOCs L.6 and A.6, respectively, the CTS wording is changed to the TSTF-64 wording.

a. The DOCs do not state why these changes, which may reduce the scope of testing believed to be required by the CTS definitions, are acceptable from a safety standpoint. Revise the DOC with this information.

b. Why is the change less restrictive for Channel Calibration and administrative for the Channel Functional Test?

Note: The TSB reviewer rejected TSTF-64 as unnecessary because the existing wording is clear. Final TSB position is pending. If TSTF-64 is rejected, DOCs L.6 and A.6 and the SE will require revision.

BGE Response:

ENCLOSURE

1.1-82 DOC LA.1
Definition of Axial Shape Index

The definition used for trip and pretrip signals in the reactor protective system is removed from the CTS definition of Axial Shape Index.

(a) The new location and regulation controlling future changes are stated ambiguously. Revise the DOC to be specific.

(b) The DOC does not state why this definition is not necessary to be retained as part of the definition of Axial Shape Index. Revise the DOC with this information.

BGE Response:

1.1-83 not used

1.1-84 TSTF-19
ITS Definition of Channel Calibration
STS Definition of Channel Calibration

TSTF-19 proposed to remove the STS wording -

> "Whenever a sensing element is replaced, the next required Channel Calibration shall include an inplace cross calibration that compares the other sensing elements with the recently installed sensing element."

In the Vogtle SE, these words were not adopted. This difference was discussed in the SE as follows:

> "The licensee proposed to omit from the Channel Calibration definition the language in the STS definition regarding the method of calibrating temperature sensing elements (resistance temperature detectors(RTDs) and thermocouples) because it is not part of the CTS definition.
>
> "The existing definition of Channel Calibration does require calibration of the sensors, but does not specify the technique for calibrating RTDs or thermocouples. Whether the RTDs or thermocouples are calibrated using cross calibration techniques (as specified in the STS definition) or bath immersion (used by the licensee)is considered by the licensee to be irrelevant to the definition. The licensee considers both techniques equally valid, and thus concludes it is sufficient for the purpose of the definition to simply require that they be calibrated.
>
> "This difference is based on maintaining the flexibility of the existing definition and the licensee's decision not to backfit the STS language in question. Because the proposed definition is consistent with the current requirement, this difference is acceptable."

TSB approved TSTF-19 with modifications. NEI approval is pending. The ITS definition adopts TSTF-19 as it was proposed. Since the CTS definition does not have the STS wording proposed for removal, CTS are not affected by this TSTF. The JFD section of safety evaluation may need revising based on final accepted version of TSTF-19. If TSTF-19 is rejected, then a JFD, similar to the excerpt from the Vogtle SE, must be added to the submittal.

BGE Response:

1.1-05 DOC A.16
Definition of ESFAS Response Time
Definition of Reactor Protective System Response Time

The ITS definitions, consistent with the STS, contain the allowance "The response time may be measured by means of any series of sequential, overlapping, or total steps so that the entire response time is measured." Neither the CTS response time surveillance requirements (4.3.1.1.3 and 4.3.2.1.3) nor the CTS definitions contain this allowance. Although it may be current plant practice to perform testing in this manner, explicitly adding it to the definitions is less restrictive. Redesignate the change as less restrictive and add appropriate additional justification.

BGE Response:

1.1-06 DOC A.14
JFD.5
CTS Table 1.1 Note **
ITS Table 1.1-1 Note (b)
STS Table 1.1-1 Notes (b) and (c)
Definition of Mode 6, Refueling
Definition of Mode
TSTF-88

The CTS Note ** defines Mode 6, in part, as when the reactor vessel head is "unbolted," but does not specify how many closure bolts must be tensioned for the reactor vessel head to be "bolted;" i.e., adequately seated in Modes 4 and 5 (vessel pressure $\leq$ 500 psia). According to JFD.5, Calvert Cliffs has an analysis that shows 12 bolts must be tensioned, but 18 are required by plant procedure. Thus, by procedure, if $\leq$ 17 bolts are tensioned, the reactor vessel head is considered to be "unbolted" and the plant is in Mode 6, Refueling. By contrast, STS Note (b) requires all bolts to be fully tensioned in Modes 4 and 5, and Note (c) defines Refueling as when one or more bolts are less than fully tensioned.

a. For consistency with the STS and most other plants, but consistent with the existing requirements, Calvert Cliffs should adopt STS Notes (b) and (c) with appropriate modifications to reflect the number of bolts now required by plant procedures to be tensioned for the head to be "bolted," such as:

Suggested Note (b) The 18 or more reactor vessel head closure bolts required for bolting the reactor vessel head in Modes 4 and 5 are fully tensioned.

Suggested Note (c) Reactor vessel head unbolted.

b. How many bolts must be tensioned for Modes 1, 2, and 3 and for pressure above 500 psia? If the answer is "all," then it is suggested that a note be added for these modes in ITS Table 1.1-1, as follows:

All reactor vessel head closure bolts fully tensioned.

c. For consistency with the STS and the above suggestions, the proposed wording "bolting" in the definition of Mode, should be changed to the STS wording "closure bolt tensioning."

BGE Response:

1.1-07 DOC L.3
DOC A.15
STS & ITS Definition of Staggered Test Basis

Calvert Cliffs' interpretation of the STS definition of Staggered Test Basis given in DOC L.3 is the following:

> **"The CTS definition of Staggered Test Basis requires that components tested on a Staggered Test Basis be performed in equal subintervals (e.g., CTS: 3 Control Room Emergency Filtration System fans required to be tested every 92 days on a Staggered Test Basis would require one fan to be tested once per 31 days) The proposed change would delete the requirement to test each component in equal subintervals (e.g., ITS: 3 Control Room Emergency Filtration System fans required to be tested every 31 days on a Staggered Test Basis would require all three fans to be tested within a 92-day period with the interval between components not specified). However, the interval between components should be such that the intent of staggering is satisfied. The purpose of staggered testing is to ensure that common failures due to testing do not render more than one train inoperable. "**

Removal of the "n equal subintervals" wording from the CTS definition, as described above, does not mean it has been removed from the intent of the STS definition. The above interpretation is incorrect. Maintaining the equal subintervals is important to allow flexibility, such as the 25% interval extension allowance, while preserving the benefits of staggered testing. DOC L.3 should be withdrawn and DOC A.15 should be revised to reflect the correct interpretation.

BGE Response:

1.1-08 A.12
STS & ITS Definition of L_a

The STS bracketed value of 25% of containment air weight per day was replaced with 20%; where did this value come from?

BGE Response:
