

CHARLES H. CRUSE
Vice President
Nuclear Energy

Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, Maryland 20657
410 495-4455



October 16, 1998

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
Exigent License Amendment Request: Reactor Protective System
Instrumentation

- REFERENCES:**
- (a) Letter from Mr. D. E. Nunn (SCE) to NRC Document Control Desk, dated September 22, 1998, Docket Nos. 50-361 and 50-362, Proposed Technical Specification Change Number NPF-10/15-500, Reactor Trip Operating Bypass Removal Process Variable San Onofre Nuclear Generating Station (SONGS) Units 2 and 3
 - (b) Letter from Mr. J. W. Clifford (NRC) to Mr. H. B. Ray (SCE), dated September 25, 1998, Issuance of Amendment Under Emergency Conditions for San Onofre Nuclear Generating Station, Unit No. 2 (TAC No. MA3624)

Pursuant to 10 CFR 50.90, the Baltimore Gas and Electric Company hereby requests an Amendment to Operating License Nos. DPR-53 and DPR-69 by incorporation of the changes described below into the Technical Specifications for Calvert Cliffs Units 1 and 2. We request that this amendment request be considered under exigent circumstances as described in 10 CFR 50.91(a)(6) in that failure to act quickly could result in preventing resumption of operation of Calvert Cliffs Units 1 and 2 should an unscheduled shutdown occur.

The proposed amendment revises Technical Specification 3.3.1, "Reactor Protective System (RPS) Instrumentation - Operating," and Technical Specification 3.3.2, "Reactor Protective System (RPS) Instrumentation - Shutdown," to clarify an inconsistency between the Technical Specification wording and the design bases as described in the Technical Specification Bases and the Updated Final Safety Analysis Report (UFSAR). Specifically, the proposed change replaces the operating bypass input process variable, Thermal Power, in Footnotes (a), (b), and (d) of Table 3.3.1-1 and in the Note to Limiting Condition for Operation (LCO) 3.3.2 with Nuclear Instrument (NI) Power. In addition, it

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clarifies Footnote (e) of Table 3.3.1-1 by indicating the input process variable as "NUCLEAR INSTRUMENT POWER." Footnotes (a), (b), (d), (e), and the LCO Note describe operating bypasses for RPS Trip Functions Rate of Change of Power - High, Reactor Coolant Flow - Low, Axial Power Distribution - High, Thermal Margin/Low Pressure, Asymmetric Steam Generator Transient, and Loss of Load.

BACKGROUND

During an unscheduled outage at San Onofre Nuclear Generating Station (SONGS), Unit No. 2, Southern California Edison (SCE) engineers identified an inconsistency between the SONGS 2 & 3 Technical Specifications and the design bases for RPS operating bypass input process variable. They discovered that the operating bypass input process variable identified in their Technical Specification is "Thermal Power," which by Technical Specification definition includes both fission power and decay heat, where as the actual operating bypass input process variable is "logarithmic power," a parameter that includes primarily fission power. This inconsistency compelled SCE to obtain an emergency Technical Specification change in order to resume operation of SONGS 2, following the completion of the unscheduled outage activities (References a and b).

Upon learning of SCE's experience, we reviewed Calvert Cliffs' Technical Specifications and UFSAR and identified a similar inconsistency. In addition, we identified an incorrect use of "Thermal Power" within the Technical Specification Bases and the UFSAR. As described below, the incorrect use of Thermal Power in the Technical Specifications will prevent resumption of operation of Calvert Cliffs Unit 1 and 2 from an outage.

REQUESTED CHANGES

Revise Footnotes (a), (b), (d), and (e) to Technical Specification Table 3.3.1-1 and the Note to LCO 3.3.2 as shown in the marked-up Technical Specification pages in Attachment (1).

SAFETY ANALYSIS

The RPS contains provisions for bypassing trip signals under certain conditions in order to perform tests, to perform maintenance, or to inhibit trip during special operational conditions. Some bypasses are actuated automatically while others must be actuated manually with a key-lock system. The RPS operating bypasses are addressed in footnotes to Technical Specification Table 3.3.1-1 and in the Note to LCO 3.3.2. The automatic bypass removal features must function as a backup to manual actions for all trips credited in safety analyses to ensure the trip Functions are not operationally bypassed when the safety analysis assumes the Functions are not bypassed. The following are the affected footnotes to Technical Specification Table 3.3.1-1 and the Note to LCO 3.3.2 with the corresponding RPS Functions.

- Footnote (a) states, "Bistable trip unit may be bypassed when THERMAL POWER is $< 1E-4\%$ [Rated Thermal Power] RTP or $> 12\%$ RTP. Bypass shall be automatically removed when THERMAL POWER is $\geq 1E-4\%$ RTP and $< 12\%$ RTP." Footnote (a) applies to the RPS Function Rate of Change of Power - High.
- Footnote (b) states, "Bistable trip unit may be bypassed when THERMAL POWER is $< 1E-4\%$. Bypass shall be automatically removed when THERMAL POWER is $\geq 1E-4\%$ RTP. During testing pursuant to LCO 3.4.16, trips may be bypassed below 5% RTP." Footnote (b) applies to RPS

Functions Reactor Coolant Flow - Low, Thermal Margin/Low Pressure, and Asymmetric Steam Generator Transient.

- Footnote (d) states, "Bistable trip unit may be bypassed when THERMAL POWER is <15% RTP. Bypass shall be automatically removed when THERMAL POWER is \geq 15% RTP." Footnote (d) applies to RPS Functions Axial Power Distribution - High and Loss of Load.
- Footnote (e) states, "Trip is only applicable in MODE 1 \geq 15% RTP." Footnote (e) applies to RPS Functions Axial Power Distribution - High and Loss of Load.
- The Note to LCO 3.3.2 states, "Bistable trip units may be bypassed when THERMAL POWER is <1E-4% RTP. Bypass shall be automatically removed when THERMAL POWER is \geq 1E-4% RTP." The Note to LCO 3.3.2 applies to RPS Function Rate of Change of Power - High.

In Calvert Cliffs Technical Specification 1.1, Thermal Power is defined as "... the total reactor core heat transfer rate to the reactor coolant." Therefore, Thermal Power includes the decay heat produced in the core and will not decrease to < 1E-4% RTP for a shutdown of normal duration. Hence, the zero power mode RPS operational bypass provided by Footnote (b), with Thermal Power as an input process variable, cannot be achieved. As described in Section 7.2 of the Calvert Cliffs UFSAR and the Technical Specification Bases, the zero power RPS operational bypass is designed to allow subcritical testing of the control element drive mechanism and to prevent false trips during normal heat-up and cooldown. Verbatim compliance with the Technical Specifications as currently written will prevent plant startup due to false trips.

The UFSAR and the Technical Specification Bases clearly show that the correct RPS bypass input process variable for Footnotes (a), (b), (d), (e), and LCO Note is NI Power not Thermal Power as defined in the Technical Specifications.

The Technical Specification Bases state in part, "Zero power mode bypass ... is manually enabled below the specified setpoint to permit low power testing. The [wide range NI Level 1 bistable in the wide range drawer provides a signal] to auxiliary logic, which then permits manual bypassing below the setpoint and removes the bypass above the setpoint. ... The Rate of Change of Power-High trip is automatically bypassed at < 1E-4% RTP, [as sensed by the wide range NI Level 1 bistable], and at > 12% RTP by [the linear range NI Level 1 bistable, mounted in their respective NI drawers] ... The Loss of Load and Axial Power Distribution - High trips are automatically bypassed when at < 15% RTP [as sensed by the linear range NI Level 2 and 1 bistables, respectively]. The bypass is automatically removed by this bistable above the setpoint." Therefore, the Technical Specification Bases clearly show that the intended input process variable is NI Power not Thermal Power.

Section 7.5.2 of the UFSAR provides a detailed description of the Calvert Cliffs NI System and its interface with RPS. The NI System supplies reactor power (neutron flux) level and power level rate-of-change signals to RPS. In Subsections 7.5.2.4 and 7.5.2.5, it is clearly stated that the wide-range logarithmic channels and the power range linear channels provide the signal for the operating bypass permissive and trip enable bistables. Therefore, replacing "THERMAL POWER" with "NUCLEAR INSTRUMENT POWER" in Footnotes (a), (b), and (d) of Technical Specification Table 3.3.1-1 and in the Note to LCO 3.3.2, and clarifying Footnote (e) of Technical Specification Table 3.3.1-1 by indicating the input process variable as "NUCLEAR INSTRUMENT POWER" will make the Technical Specification input process variable consistent with the design bases.

As mentioned above, our review has also identified inconsistent use of the term Thermal Power in some parts of the UFSAR and the Technical Specification Bases. The UFSAR and the Technical Specification Bases will be revised to correct these inconsistencies following the approval of this amendment request.

DETERMINATION OF SIGNIFICANT HAZARDS

The proposed change has been evaluated against the standards in 10 CFR 50.92 and has been determined to not involve a significant hazards consideration, in that operation of the facility in accordance with the proposed amendments:

1. *Would not involve a significant increase in the probability or consequences of an accident previously evaluated.*

The proposed change to Technical Specifications 3.3.1 and 3.3.2 does not adversely impact structure, system, or component design or operation in a manner that would result in a change in the frequency of occurrence of accident initiation. The reactor trip bypass and automatic enable functions are not accident initiators. Consequently, the proposed Technical Specification change will not significantly increase the probability of accidents previously evaluated. Clarifying the input process variable of the operating bypasses and automatic bypass removals of the affected reactor trips does not alter the setpoint nor the manner of operation of the operating bypasses and automatic bypass removals.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. *Would not create the possibility of a new or different type of accident from any accident previously evaluated.*

No new or different accidents result from clarifying the input process variable of the operating bypasses and automatic bypass removals of the affected reactor trips. The results of previously performed accident analyses remain valid.

Therefore, the proposed change does not create the possibility of a new or different type of accident from any accident previously evaluated.

3. *Would not involve a significant reduction in a margin of safety.*

The proposed change does not alter the setpoint nor the manner of operation of the operating bypasses and automatic bypass removals of the affected reactor trips. The change merely replaces the identification of the input process variable with the appropriate identification of power.

Therefore, this proposed modification does not significantly reduce the margin of safety.

ENVIRONMENTAL ASSESSMENT

We have determined that operation with the proposed amendment will not result in any significant change in the types or significant increases in the amounts of any effluents that may be released offsite, and no significant increases in individual or cumulative occupational radiation exposure. Therefore, the proposed amendment is eligible for categorical exclusion as set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed amendment.

SAFETY COMMITTEE REVIEW

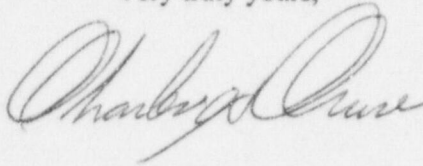
The Plant Operations and Safety Review Committee and the Offsite Safety Review Committee have reviewed this proposed amendment and concur that operation with the proposed amendment will not result in an undue risk to the health and safety of the public.

STATEMENT OF EXIGENT CIRCUMSTANCES

This situation could not have been avoided. As stated previously, failure to act quickly could result in preventing resumption of operation of Calvert Cliffs Units 1 and 2 should an unscheduled shutdown occur. Forced outages are not uncommon during the operating cycle of a nuclear power plant and can happen at anytime. Baltimore Gas and Electric Company believes that there is insufficient time to allow for the normal 30-day public comment period in order to preclude an emergency situation, similar to the one faced by SCE. Therefore, given the need to act quickly and the determination that this change does not represent a significant hazard, we request that this Amendment be considered under exigent circumstances, as described in 10 CFR 50.91(a)(6).

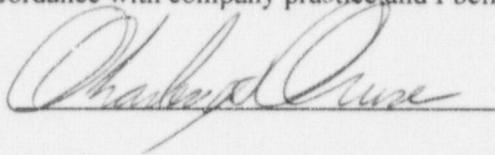
Should you have questions regarding this matter, we will be pleased to discuss them with you.

Very truly yours,



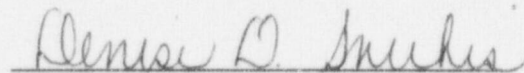
STATE OF MARYLAND :
: TO WIT:
COUNTY OF CALVERT :

I, Charles H. Cruse, being duly sworn, state that I am Vice President, Nuclear Energy Division, Baltimore Gas and Electric Company (BGE), and that I am duly authorized to execute and file this License Amendment Request on behalf of BGE. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other BGE employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.



Subscribed and sworn before me, a Notary Public in and for the State of Maryland and County of Calvert, this 16th day of October, 1998.

WITNESS my Hand and Notarial Seal:


Notary Public

My Commission Expires:

2/1/2002
Date

CHC/GT/bjd

Attachment: (1) Technical Specification Marked-up Pages

cc: R. S. Fleishman, Esquire
J. E. Silberg, Esquire
S. S. Bajwa, NRC
A. W. Dromerick, NRC

H. J. Miller, NRC
Resident Inspector, NRC
R. I. McLean, DNR
J. H. Walter, PSC

ATTACHMENT (I)

TECHNICAL SPECIFICATION MARKED-UP PAGES

3.3.1-11

3.3.2-1