

August 17, 1990

Docket No. 50-317

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Mr. G. C. Creel  
 Vice President - Nuclear Energy  
 Baltimore Gas and Electric Company  
 Calvert Cliffs Nuclear Power Plant  
 MD Rts. 2 & 4  
 P. O. Box 1535  
 Lusby, Maryland 20657

Dear Mr. Creel:

SUBJECT: NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT FOR THE  
 CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 1 (TAC NO. 77292)

By letter dated August 13, 1990, you requested an amendment to Facility Operating License No. DPR-53 for the Calvert Cliffs Nuclear Power Plant, Unit 1. The request is to modify the existing 0-12 effective full power year (EFPY) heatup and cooldown curves and rates. In addition, adjustments to the low temperature overpressure protection (LTOP) system technical specifications are requested.

Enclosed for your information is a copy of a Notice of Consideration of Issuance of Amendment to Facility Operating License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing. The Notice has been forwarded to the Office of Federal Register for publication.

Sincerely,

ORIGINAL SIGNED BY:

Daniel G. McDonald, Senior Project Manager  
 Project Directorate I-1  
 Division of Reactor Projects - I/II  
 Office of Nuclear Reactor Regulation

Enclosure:  
Notice

cc: See next page

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Mr. G. C. Cree1  
Baltimore Gas & Electric Company

Calvert Cliffs Nuclear Power Plant

cc:

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Regional Administrator, Region I  
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UNITED STATES NUCLEAR REGULATORY COMMISSIONUTILITY NAMEDOCKET NO. 50-317NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO  
FACILITY OPERATING LICENSE AND PROPOSED NO SIGNIFICANT HAZARDS  
CONSIDERATION DETERMINATION AND OPPORTUNITY FOR HEARING

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. DPR-53 issued to Baltimore Gas and Electric Company (the licensee) for operation of the Calvert Cliffs Nuclear Power Plant, Unit 1, located in Calvert County, Maryland.

The proposed amendment would modify the existing 0-12 effective full power year (EFPY) heatup and cooldown curves and rates based on the guidance provided in Regulatory Guide 1.99, Revision 2. In addition, adjustments to the low temperature overpressure protection (LTOP) mitigating system including changes to the power operated relief valve (PORV) lift setpoint and reactor coolant pump (RCP) start controls.

By letter dated July 24, 1990, the Commission issued Amendment No. 145 to Facility Operating License DPR-53 for Calvert Cliffs Unit 1. The amendment replaced the existing heatup and cooldown curves with the current 0-12 EFPY heatup and cooldown curves. In addition, new controls were implemented to establish adequate LTOP. These included: (1) adjustments to the LTOP mitigating system; i.e., the PORV pressure lift setting and enable temperature; (2) changes to RCP controls; (3) changes to clarify high pressure safety injection (HPSI) operability requirements; and (4) modifications to HPSI pump controls.

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The RCP controls, unlike the other controls, were temporary and only valid for the current low decay heat condition (60 days shutdown). These controls were put in place on an emergency basis to allow a continuation of the Unit 1 outage while analyses were completed for long-term RCP controls. The analysis of long-term requirements for the control of RCP starts was completed by the licensee. The results indicate that only modest adjustments to the current controls are required to still be effective in the mitigation of energy addition transient when LTOP is required. Accordingly, the licensee is proposing the changes previously described. These changes are required prior to entry into Mode 2 Startup.

The specific Technical Specification (TS) changes proposed for the heatup and cooldown curves; LTOP controls; RCP start criteria; and revised bases sections to support the changes are:

1. Changes proposed to the heatup and cooldown curves and rates:

1.1 Change TS Limiting Condition for Operation (LCO) 3.4.9.1.a (p.3/4 4-23), maximum allowable heatup rates, as follows:

<u>Maximum Allowable Heatup Rate</u>	<u>RCS Temperature</u>
(FROM)	
60°F in any hour period	70°F to 305°F
10°F in any hour period	305°F to 327°F
60°F in any hour period	greater than or equal to 327°F
(TO)	
40°F in any hour period	70°F to 313°F
10°F in any hour period	314°F to 327°F
60°F in any hour period	greater than 327°F

- 1.2 Change TS LCO 3.4.9.1.b (p. 3/4 4-23) to limit the cooldown rate to 10°F per hour when RCS temperature is below 170°F. The current limit is 20°F per hour cooldown rate.
- 1.3 Replace old TS Figures 3.4-2a and 3.4-2b (pp. 3/4 4-24 and 4-24a), RCS Pressure-Temperature Limits, with new Technical Specification Figures 3.4-2a and 3.4-2b.

2. Changes proposed to adjust LTOP controls:

- 2.1 Change the PORV lift setting of TS LCO 3.4.9.3.a.1 and 2 (p.3/4 4-26a) from "less than or equal to 424.5 psia" to "less than or equal to 430 psia."
- 2.2 For references to the minimum pressure temperature (MPT) enable temperature, where the wording "below 327°F" occurs, change it to "327°F or less." This is an editorial change for consistency with other references to MPT enable temperature; i.e., "less than or equal to 327°F," and more properly reflects its meaning. Affected Technical Specifications are:

<u>TS</u>	<u>PAGE</u>
3.1.2.1	3/4 1-8
3.1.2.3	3/4 1-10
Table 3.3-3	3/4 3-11
4.5.2	3/4 5-4
3.5.3	3/4 5-6
Bases 3/4.4.9	B 3/4 4-8
Bases 3/4.5.2	B 3/4 5-2

3. Changes proposed to change RCP start criteria:

- 3.1 Change the RCP start controls in footnote (\*\*\*) to the APPLICABILITY of TS 3.4.1.3 (p. 3/4-2a) as follows:

	<u>FROM</u>	<u>TO</u>
Pressurizer water level	less than or equal to 165 in	less than or equal to 170 in
Pressurizer pressure	less than or equal to 300 psia	less than or equal to 290 psia

- 3.2 Add a footnote (\*\*) to the APPLICABILITY of TS 3.4.1.2 (p.3/4 4-2) to provide start controls consistent with those existing in TS 3.4.1.3.

3.3 Also in footnote (\*\*\*) to TS 3.4.1.3 delete the requirement to measure pressurizer pressure "...by plant computer or equivalent precision instrument," and the restriction on entry into Mode 2. These requirements were part of the temporary RCP controls established by Reference (a) and are no longer needed. Normal control room panel indication of pressurizer pressure is sufficient for implementation of the newly proposed controls. The new controls are also valid for higher decay heat loads, therefore the restriction from entry in Mode 2 can be removed.

4. Supportive TS Bases changes:

Revise TS Bases 3/4.4.1, Coolant Loops and Coolant Circulation and Bases 3/4.4.9, Pressure/Temperature Limits, to be consistent with the above changes.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

The Commission has made a proposed determination that the request for amendment involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The licensee has evaluated the proposed amendment against the standards provided above and has supplied the following information:

(1) Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability of consequences of an accident previously evaluated.

Change 1 - Heatup and Cooldown Curves and Rates

The existing Unit 1 12 EFPY P-T limits were conservatively developed in accordance with the fracture toughness requirements of 10 CFR 50, Appendix G, as supplemented by the ASME Code Section III, Appendix G. The reactor vessel material Adjusted  $RT_{NDT}$  values are based on the conservative methodology provided in Regulatory Guide 1.99, Revision 2.

This amendment will not change the P-T limit calculations that are the basis for the existing heatup and cooldown curves; however, a new combination of heatup and cooldown curves and associated rates has been selected from this set of limits. This new selection, which features lower heatup and cooldown rates, permits the Appendix G allowable pressure to be increased for corresponding temperatures, thereby increasing the region of allowable operations with reactor coolant pumps. This additional operational flexibility minimizes the potential for pressure transients that could challenge the P-T limits during normal plant startup and shutdown evaluations. The new heatup and cooldown curves and associated limits continue to provide conservative administrative restrictions on reactor coolant system pressure to minimize material stresses in the RCS due to normal operating transients, thus minimizing the likelihood of a rapidly propagating fracture due to pressure transients at low temperature. Because these new heatup and cooldown curves and rates are based on the same P-T limits previously approved by the NRC, this portion of the proposed amendment does not involve an increase in the probability or consequences of accidents previously evaluated.

Change 2. - LTOP Controls

Consistent with the selection of new heatup and cooldown curves and rates, the LTOP controls are being changed by increasing the PORV lift setting to 430 psia. The MPT enable temperature of 327°F is not being changed. The new PORV setpoint is based on protecting the most restrictive pressure of both the heatup and cooldown curves; i.e., a 10°F per hour cooldown at 70°F RCS temperature. Since the basis for the selection of the PORV setpoint has not changed, the PORV would provide the same degree of protection in mitigating postulated LTOP transients with the new setting as that provided by the present LTOP system. Therefore, this portion of the change does not increase the probability or consequences of accidents previously evaluated.

Change 3. - RCP Start Criteria

The lower heatup and cooldown rates and the increased PORV lift setting provides additional margin to accommodate postulated pressurization from energy addition transients. New calculations have been performed that more precisely predict the response to such transients. From these calculations, a revised set of RCP start controls have been selected that will permit planned RCP starts during normal operational activities without challenging the PORV. For the postulated start of 2 RCPs during recovery from a loss of decay heat removal, the PORVs may be required to respond in cases where decay heat load is high if operator actions are either not taken or are ineffective. A single PORV has been determined to be capable of adequately mitigating this transient. Because these RCP controls now credit the function of the PORV to mitigate certain energy addition transients, this is considered a slight increase in the

consequences of these transients. However, because the results of the analysis remain well within the conservative acceptance limits of 10 CFR 50 Appendix G, this increase is not significant.

Thus, the probability or consequences of an accident previously evaluated are not significantly increased.

(2) Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different type from any accident previously evaluated.

The changes to: (1) the heatup and cooldown curves and rates, (2) PORV lift setting and, (3) the RCP controls do not represent a significant change in the configuration or operation of the plant. Specifically, no new hardware is being added to the plant as part of the proposed change, no existing equipment is being modified, nor are any significantly different types of operations being introduced. Therefore, the proposed amendment would not create the possibility of a new or different kind of accident from those previously evaluated.

(3) Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in margin of safety.

These changes (changes 1 through 3), will ensure that the margin of safety is maintained. With respect to an energy addition event, the margin of safety is maintained in that there are no postulated events that could challenge the Appendix G curves. The changes to the controls placed on the variables for a planned RCP start are minor in nature and provide an additional margin of

safety. The changes to the heatup and cooldown curves/rates and the PORV lift setting ensure that the margin safety is maintained by protecting the Appendix G limits for all postulated transients.

The changes made in the manner of reference to the MPT enable temperature are editorial. The MPT enable temperature is 327°F; therefore, all references to the LTOP temperature region should be "at 327°F and less," or equivalent. Since this is consistent with other existing references to MPT enable temperature, this portion of this change does not reduce the margin of safety.

Thus, proposed Changes 1 through 3 would not involve a significant reduction in a margin of safety.

The staff has reviewed and agrees with the licensee's analysis of the significant hazards consideration determination. Based on the review and the above discussion, the staff proposes to determine that the proposed change does not involve a significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination. The Commission will not normally make a final determination unless it receives a request for a hearing.

Written comments may be submitted by mail to the Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, and should cite the publication date and page number of this FEDERAL REGISTER notice. Written comments may also be delivered to Room P-223, Phillips Building, 7920 Norfolk Avenue, Bethesda, Maryland, from 7:30 a.m. to 4:15 p.m. Copies of

written comments received may be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C. The filing of requests for hearing and petitions for leave to intervene is discussed below.

By September 17, 1990 , the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written petition for leave to intervene. Request for a hearing and petitions for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested persons should consult a current copy of 10 CFR 2.714 which is available at the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C. 20555 and at the Local Public Document Room located at Calvert County Library, Prince Frederick, Maryland. If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or an Atomic Safety and Licensing Board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition and the Secretary or the designated Atomic Safety and Licensing Board will issue a notice of hearing or an appropriate order.

As required by 10 CFR §2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) the nature of the petitioner's right under the Act to be made party to the proceeding;

(2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition should also identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or who has been admitted as a party may amend the petition without requesting leave of the Board up to fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than fifteen (15) days prior to the first prehearing conference scheduled in the proceeding, a petitioner shall file a supplement to the petition to intervene which must include a list of the contentions which are sought to be litigated in the matter. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide a brief explanation of the bases of the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion. Petitioner must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would

entitle the petitioner to relief. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses.

If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held.

If the final determination is that the request for amendment involves no significant hazards consideration, the Commission may issue the amendment and make it effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If a final determination is that the amendment involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

Normally, the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish a

notice of issuance and provide for opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Docketing and Services Branch, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C., by the above date. Where petitions are filed during the last ten (10) days of the notice period, it is requested that the petitioner promptly so inform the Commission by a toll-free telephone call to Western Union at 1-(800) 325-6000 (in Missouri 1-(800) 342-6700). The Western Union operator should be given Datagram Identification Number 3737 and the following message addressed to Robert A. Capra: (petitioner's name and telephone number), (date petition was mailed), (plant name), and (publication date and page number of this FEDERAL REGISTER notice). A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, and to Jay E. Silbert, Esquire, Shaw, Pittman, Potts, and Trowbridge, 2300 North Street, NW, Washington, D.C., 20037, attorney for the licensee.

Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent a determination by the Commission, the presiding officer or the Atomic Safety and Licensing Board that the petition and/or request should be granted based upon a balancing of the factors specified in 10 CFR 2.714(a)(1)(i)-(v) and 2.714(d).

For further details with respect to this action, see the application for amendment dated July 24, 1990, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C. 20555 and at the Local Public Document Room located at the Calvert County Library, Prince Frederick, Maryland.

Dated at Rockville, Maryland, this 14th day of August, 1990.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script that reads "Daniel G. McDonald Jr".

Daniel G. McDonald, Senior Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation