



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

July 31, 2013

Mr. George H. Gellrich, Vice President  
Calvert Cliffs Nuclear Power Plant, LLC  
Calvert Cliffs Nuclear Power Plant  
1650 Calvert Cliffs Parkway  
Lusby, MD 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 –  
ISSUANCE OF AMENDMENTS REGARDING PEAK CALCULATED  
CONTAINMENT INTERNAL PRESSURE (TAC NOS. ME9081 AND ME9082)

Dear Mr. Gellrich:

The Commission has issued the enclosed Amendment No. 303 to Renewed Facility Operating License No. DPR-53 and Amendment No. 281 to Renewed Facility Operating License No. DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated July 2, 2012, as supplemented by letters dated March 6 and May 28, 2013.

The amendments revise TS 5.5.16 by increasing the peak calculated containment internal pressure ( $P_a$ ) from 49.4 pounds per square inch gauge (psig) to 49.7 psig for the design basis loss-of-coolant accident. In support of the revised  $P_a$ , the amendments also revise TS 3.6.4 by decreasing the upper bound internal containment pressure limit from 1.8 psig to 1.0 psig.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink, appearing to read "Nadiyah S. Morgan".

Nadiyah S. Morgan, Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318

Enclosures:

1. Amendment No. 303 to DPR-53
2. Amendment No. 281 to DPR-69
3. Safety Evaluation

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

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 303  
Renewed License No. DPR-53

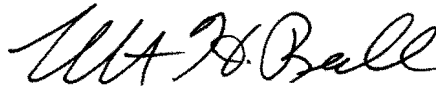
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Calvert Cliffs Nuclear Power Plant, LLC (the licensee) dated July 2, 2012, as supplemented by letters dated March 6 and May 28, 2013, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-53 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 303, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "R. Beall", is positioned above the typed name and title.

Robert Beall, Acting Chief  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the License and  
Technical Specifications

Date of Issuance: July 31, 2013



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

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 281  
Renewed License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Calvert Cliffs Nuclear Power Plant, LLC (the licensee) dated July 2, 2012, as supplemented by letters dated March 6 and May 28, 2013, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Renewed Facility Operating License No. DPR-69 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 281 are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Robert Beall". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Robert Beall, Acting Chief  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the License and  
Technical Specifications

Date of Issuance: July 31, 2013

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 303 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 281 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

Replace the following page of the Renewed Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove Page  
3

Insert Page  
3

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Pages  
3.6.4-1  
5.5-17

Insert Pages  
3.6.4-1  
5.5-17

rules, regulations, and orders of the Commission, now or hereafter applicable; and is subject to the additional conditions specified and incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady-state reactor core power levels not in excess of 2737 megawatts-thermal in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 303, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.

- (a) For Surveillance Requirements (SRs) that are new, in Amendment 227 to Facility Operating License No. DPR-53, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 227. For SRs that existed prior to Amendment 227, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 227.

(3) Additional Conditions

The Additional Conditions contained in Appendix C as revised through Amendment No. 297 are hereby incorporated into this license. Calvert Cliffs Nuclear Power Plant, LLC shall operate the facility in accordance with the Additional Conditions.

(4) Secondary Water Chemistry Monitoring Program

The Calvert Cliffs Nuclear Power Plant, LLC, shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

- a. Identification of a sampling schedule for the critical parameters and control points for these parameters;
- b. Identification of the procedures used to quantify parameters that are critical to control points;

C. This license is deemed to contain and is subject to the conditions set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act, and the rules, regulations, and orders of the Commission, now and hereafter applicable; and is subject to the additional conditions specified and incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at reactor steady-state core power levels not in excess of 2737 megawatts-thermal in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 281 are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.

(a) For Surveillance Requirements (SRs) that are new, in Amendment 201 to Facility Operating License No. DPR-69, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 201. For SRs that existed prior to Amendment 201, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 201.

(3) Less Than Four Pump Operation

The licensee shall not operate the reactor at power levels in excess of five (5) percent of rated thermal power with less than four (4) reactor coolant pumps in operation. This condition shall remain in effect until the licensee has submitted safety analyses for less than four pump operation, and approval for such operation has been granted by the Commission by amendment of this license.

(4) Environmental Monitoring Program

If harmful effects or evidence of irreversible damage are detected by the biological monitoring program, hydrological monitoring program, and the radiological monitoring program specified in the Appendix B Technical Specifications, the licensee will provide to the staff a detailed analysis of the problem and a program of remedial action to be taken to eliminate or significantly reduce the detrimental effects or damage.



3.6 CONTAINMENT SYSTEMS

3.6.4 Containment Pressure

LCO 3.6.4 Containment pressure shall be  $\geq -1.0$  psig and  $\leq 1.0$  psig.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Containment pressure not within limits.	A.1 Restore containment pressure to within limits.	1 hour
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	6 hours
	<u>AND</u> B.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4.1 Verify containment pressure is within limits.	12 hours

5.5 Programs and Manuals

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5.5.16 Containment Leakage Rate Testing Program

A program shall be established to implement the leakage testing of the containment as required by 10 CFR 50.54(o) and 10 CFR Part 50, Appendix J, Option B. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, including errata, as modified by the following exceptions:

- a. Nuclear Energy Institute (NEI) 94-01 – 1995, Section 9.2.3: The first Unit 1 Type A test performed after the June 15, 1992 Type A test shall be performed no later than June 14, 2007. The first Unit 2 Type A test performed after the May 2, 2001 Type A test shall be performed no later than May 1, 2016.
- b. Unit 1 is excepted from post-modification integrated leakage rate testing requirements associated with steam generator replacement.
- c. Unit 2 is excepted from post-modification integrated leakage rate testing requirements associated with steam generator replacement.

The peak calculated containment internal pressure for the design basis loss-of-coolant accident,  $P_a$ , is 49.7 psig. The containment design pressure is 50 psig.

The maximum allowable containment leakage rate,  $L_a$ , shall be 0.16 percent of containment air weight per day at  $P_a$ .

Leakage rate acceptance criteria are:

- a. Containment leakage rate acceptance criterion is  $\leq 1.0 L_a$ . During the first unit startup following testing, in accordance with this program, the leakage rate acceptance criterion are  $\leq 0.60 L_a$  for Types B and C tests and  $\leq 0.75 L_a$  for Type A tests.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO

AMENDMENT NO. 303 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 281 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-69

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-317 AND 50-318

1.0 INTRODUCTION

By application dated July 2, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12187A250), as supplemented by letters dated March 6, 2013 (ADAMS Accession No. ML13070A078) and May 28, 2013 (ADAMS Accession No. ML13151A047), the Calvert Cliffs Nuclear Power Plant, LLC, the licensee, submitted a request to the Nuclear Regulatory Commission (NRC) for changes to the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 (Calvert Cliffs), Technical Specifications (TSs). The supplements dated March 6 and May 28, 2013, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* (FR) on September 4, 2012 (77 FR 53926).

The proposed changes revise TS 5.5.16 "Containment Leakage Rate Testing Program" by increasing the peak calculated containment internal pressure ( $P_a$ ) from 49.4 pounds per square inch gauge (psig) to 49.7 psig for the design basis loss-of-coolant accident (LOCA). In support of the revised  $P_a$ , the amendments also revise TS 3.6.4 "Containment Pressure" by decreasing the upper bound internal containment pressure limit from 1.8 psig to 1.0 psig. This change is needed to support the calculation of  $P_a$  while maintaining the  $P_a$  below the design limit of 50 psig.

2.0 REGULATORY EVALUATION

2.1 System Description

The  $P_a$  is calculated to determine, in part, whether the design pressure limit for the containment building would be exceeded during a design-basis accident (DBA) basis LOCA. A LOCA is initiated by the rupture of the primary coolant system piping. The primary coolant flashes to steam and escapes through the pipe break. As the steam is released to containment, containment atmosphere pressure and temperature quickly increase. The structures in

Enclosure

containment will absorb energy and condense steam, counteracting the initial pressure and temperature increase. The containment air coolers and containment spray system, which are activated by the increase in containment pressure, act to reduce containment pressure and temperature by removing energy from the containment atmosphere as the event progresses. During a LOCA event, the initial blowdown of the primary coolant system adds mass and energy to the containment atmosphere.

## 2.2 Proposed TS Changes

The TS 5.5.16 would be revised by increasing the  $P_a$  value from 49.4 psig to 49.7 psig.

The TS 3.6.4 would be revised by decreasing the upper bound of containment pressure from 1.8 psig to 1.0 psig.

## 2.3 Regulatory Requirements and Guidance Documents

The construction permits for Calvert Cliffs were issued by the Atomic Energy Commission (AEC) on July 7, 1969, and the operating licenses were issued on July 31, 1974 for Unit No.1 and August 13, 1976 for Unit No.2. The AEC published the final rule that added Title 10 of Code of Federal Regulations (CFR) Part 50, Appendix A, "General Design Criteria [GDC] for Nuclear Power Plants," in the Federal Register (36 FR 3255) on February 20, 1971, with the rule effective on May 21, 1971. As stated in SECY-92-223, dated September 18, 1992, the Commission decided not to apply the Appendix A GDC to plants with construction permits issued prior to May 21, 1971. The Calvert Cliffs Updated Final Safety Analysis Report (UFSAR) states that the plant was designed and constructed to meet the intent of the draft GDC published in July 1967. The plant GDC is discussed in the UFSAR Appendix 1C, "AEC Proposed General Design Criteria for Nuclear Power Plants."

The plant specific GDC 10 and 49 address the capability of the containment to withstand the containment pressure resulting from a postulated design basis LOCA.

GDC 10, "Containment" – Containment shall be provided. The containment structure shall be designed to sustain the initial effects of gross equipment failures, such as a large coolant boundary break, without loss of required integrity and, together with other engineered safety features as may be necessary, to retain for as long as the situation requires the functional capability to protect the public.

GDC 49, "Containment Design Basis" – The containment structure, including access openings and penetrations, and any necessary containment heat removal systems shall be designed so that the containment structure can accommodate, without exceeding the design leakage rate, the pressures and temperatures resulting from the largest credible energy release following a LOCA, including a considerable margin for effects from metal-water or other chemical reactions that could occur as a consequence of failure of emergency core cooling systems.

The plant specific GDC 10 and 49 are closely related and consistent with current regulations at 10 CFR Part 50, Appendix A, GDC 16, "Containment design" and 50, "Containment design basis."

The regulations at 10 CFR Part 50 Appendix J Option B define  $P_a$  as the calculated peak containment internal pressure related to the design basis LOCA as specified in the TS and specify the requirements for containment leakage rate testing. The requirements of Calvert Cliffs TS 5.5.16 provide more detailed leakage rate testing requirements.

The regulation at 10 CFR 50.49, "Environmental qualification of electric equipment important to safety for nuclear power plants," requires, in part, that licensees establish a program for qualifying the electric equipment important to safety covered by section 50.49(b).

Regulatory Guide (RG) 1.89, "Environmental Qualification of Certain Electric Equipment Important to Safety for Nuclear Power Plants," Revision 1, describes a method acceptable to the NRC staff for complying with 10 CFR 50.49 with regard to qualification of electric equipment important to safety for service in nuclear power plants to ensure that the equipment can perform its safety function during and after a DBA.

### 3.0 TECHNICAL EVALUATION

#### 3.1 Containment Pressure

Westinghouse provided the licensee with the mass and energy release data, which are used as an input to the LOCA containment response analysis, and is the basis for the current  $P_a$  value of 49.4 psig. The licensee used these mass and energy release values to calculate  $P_a$  using the GOTHIC 7.2A computer code. There was no change to the GOTHIC version used for the analysis of record and the analysis used to calculate the  $P_a$  proposed in the licensee's license amendment request (LAR). The LAR stated that, "Westinghouse identified a non-conservative LOCA mass and energy release input for the containment response analysis. Westinghouse determined that the mass and energy generated by the thermal hydraulic response computer code (CEFLASH-4A) during the blowdown phase of the event was not adequately detailed, with respect to time step data, during the early stages of the transient for use in downstream containment response calculations. This error resulted in an under prediction of the mass and energy released to the containment during the blowdown phase of the event." The proposed value of  $P_a$ , which includes the corrected mass and energy release data and the proposed new initial containment pressure, is 49.7 psig. The revised calculated  $P_a$  remains below the containment design pressure of 50 psig.

Another input into the calculation of  $P_a$  is the initial containment pressure at the time the LOCA occurs. The  $P_a$  calculation assumes that the containment is at the peak pressure allowed by TS 3.6.4. Since inclusion of the additional mass and energy release led to an increase in the calculated  $P_a$ , the licensee determined that a reduction in the initial containment pressure assumed was necessary to prevent exceeding the containment design pressure. Therefore, the licensee also proposed a TS change to the upper limit allowed for the containment pressure during plant operations to match the initial conditions assumed in the accident analyses, which determined the proposed  $P_a$ .

In response to the NRC staff's request for additional information (RAI) question #3, the licensee stated in its March 6, 2013, letter that the typical containment pressure range during normal operation is approximately 0.0 psig to +0.5 psig. The plant operators have been meeting the +1.0 psig upper pressure limit, since the non-conservative mass and energy release data issue was identified in the spring of 2009. Administrative controls were put in place at that time to limit

the containment pressure upper limit, while analyses were performed to support this license amendment request. The licensee stated that there have been no challenges to operator control of this modified upper containment pressure limit.

The NRC staff reviewed the licensee's proposed changes to TS 3.6.4, "Containment Pressure." The current TS 3.6.4, requires that the primary containment internal pressure be between  $\geq -1.0$  psig and  $\leq 1.8$  psig. The proposed change to TS 3.6.4 requires the primary containment internal pressure to be maintained between  $\geq -1.0$  psig and  $\leq 1.0$  psig. The lower maximum containment pressure is more restrictive and will assure that the accident peak containment pressure remains within design limits. The DBA LOCA analysis was performed using the maximum primary containment internal pressure of +1.0 psig as an initial condition. Therefore, with respect to containment safety analyses, the NRC staff finds the proposed change to the limiting safety system setting acceptable.

### 3.2 Containment Leakage Rate Testing

The licensee stated that upon NRC approval of its LAR, the increase in  $P_a$  would be reflected in the 10 CFR Part 50, Appendix J containment leak rate testing procedures, as reflected in TS 5.5.16, and in the USFAR as a single value for both units.

The TS 5.5.16 specifies that containment leakage rate testing shall be in accordance with the guidelines contained in RG 1.163, "Performance-Based Containment Leakage Testing Program," dated September 1995. The RG 1.163, in turn, references NEI 94-01, Revision 0, dated July 26, 1995, "Industry Guideline for Implementing Performance Based Option of 10 CFR 50 Appendix J," prepared by the Nuclear Energy Institute (NEI). This document provides methods acceptable to the NRC staff for complying with the provisions of Option B in 10 CFR Part 50 Appendix J. The NEI 94-01 references the American National Standards Institute (ANSI) 56.8-1994, "Containment System Leakage Testing Requirements," for detailed descriptions of the technical methods and techniques for performing Type A, B, and C tests.

The ANSI 56.8-1994 specifies that Type A testing should be performed at a pressure not less than 0.96 times the calculated  $P_a$  and not more than the containment design pressure. The licensee stated that these values will be updated in the procedure prior to the next performance of the Type A test for either unit.

The licensee also stated in the LAR that Appendix J Type B and C test procedures do not require revision upon approval of its LAR. The ANSI 56.8-1994 Section 3.3.2 requires that Type B and C testing be performed at a pressure not less than  $P_a$ , except for airlock door seals, which may have a lower pressure specified, and not more than 1.1 times  $P_a$  when a higher differential pressure results in increased sealing. Calvert Cliffs procedures for Type B and C testing require that testing be performed within a range of pressures that, with the revised  $P_a$ , will continue to be within the range of pressures required by ANSI 56.8-1994. Therefore, the Type B and C test procedures will not require revision upon approval of the LAR. The NRC staff agrees with the licensee's interpretation of compliance with the requirements of TS 5.5.16.

### 3.3 Environmental Qualification (EQ) of the Electric Equipment

In the LAR, the licensee stated that the change in  $P_a$  does not adversely affect environmentally qualified equipment within the containment. The licensee reviewed the effects of this change in

mass and energy release on the EQ of equipment in containment, and determined that the equipment remained qualified for service in the revised pressure and temperature environment.

In response to the NRC staff's RAI question #5, the licensee stated in its March 6, 2013, letter that the containment pressure and temperature response was re-analyzed for a LOCA. The licensee provided the results of this analysis in a temperature and pressure profile. The containment temperature and pressure profiles in Figures 1 and 2 in the licensee's March 6 and May 28, 2013, letters show the comparison of containment temperature and pressure with EQ temperature and pressure profile curves for the cold leg break LOCAs. The licensee stated that various worst case breaks are compared to the EQ bounding temperature and pressure profiles (EQ overlays).

The NRC staff reviewed the overlays, and found that the EQ bounding temperature profile envelopes the plant profiles. However, when the NRC staff reviewed the pressure profile, it was found that the EQ bounding pressure profile does not envelope the plant pressure profile for 14 seconds. The licensee stated that the EQ bounding pressure profiles bound the plant pressure profiles in magnitude (65 pounds per square inch atmosphere (psia) versus 62 psia) and duration (2+ hours versus 14 seconds). The licensee further stated that temperature and pressure margins in the Calvert Cliffs EQ program are applied to the EQ bounding temperature and pressure profiles for environmentally qualified equipment in accordance with 10 CFR 50.49 and RG 1.89. Therefore, the 14 seconds not enveloped in the EQ bounding pressure profile is insignificant. Since the EQ bounding pressure profile exceeds the expected peak pressure and is qualified for a longer duration at an elevated pressure, and the margins are applied in addition to the EQ bounding pressure, the NRC staff determined that there will be no adverse impact on the EQ of electric equipment for both temperature and pressure inside containment as a result of the increase in  $P_a$ .

Additionally, the licensee stated that the proposed change in  $P_a$  for the design basis LOCA does not result in any impact on any area of the plant outside of the containment. Based on this information, the NRC staff finds that there will be no adverse impact on the EQ of electric equipment for both temperature and pressure outside containment due to the proposed LAR.

### 3.4 NRC Staff's Findings

Based on the above evaluation, the NRC staff determined that:

1. The proposed LAR complies with the plant specific GDC 10, GDC 49, and 10 CFR Part 50 Appendix J; and the implementation of the proposed changes complies with the requirements of Calvert Cliffs TS 5.5.16 and TS 3.6.4.
2. The electric equipment remains environmentally qualified in accordance with 10 CFR 50.49, and there will be no adverse impact on the EQ of electric equipment for both temperature and pressure inside and outside containment due to the revised LOCA containment pressure and temperature profiles.

Therefore, the NRC staff finds the proposed changes acceptable.

#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Maryland State official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on September 4, 2012 (77 FR 53926). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

#### 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor(s): B. Lee  
M. McConnell  
S. Som  
N. Morgan

Date: July 31, 2013



July 31, 2013

Mr. George H. Gellrich, Vice President  
Calvert Cliffs Nuclear Power Plant, Inc.  
Calvert Cliffs Nuclear Power Plant  
1650 Calvert Cliffs Parkway  
Lusby, MD 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 –  
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A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly *Federal Register* notice.

Sincerely,

/ra/

Nadiyah S. Morgan, Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
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cc w/encls: Distribution via Listserv

ADAMS Accession No. ML13197A000

\*Via email dated 7/17/2013, \*See memo dated 5/6/2013,

\*\*See memo dated 7/3/2013

OFFICE	LPLI-1/PM	LPLI-1/LA	DSS/SCVB/BC	DE/EEEB/BC	DSS/STSB/BC	OGC	LPLI-1/BC
NAME	NMorgan	KGoldstein	BDennig	RMathew	REllott	CKanatas	RBeall
DATE	7/18/2013	7/17/2013*	5/6/2013*	7/3/2013**	7/18/2013	7/31/2013*	7/31/2013*

OFFICIAL RECORD COPY

DATED: July 31, 2013

AMENDMENT NO. 303 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-53  
CALVERT CLIFFS UNIT NO. 1

AMENDMENT NO. 281 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-69  
CALVERT CLIFFS UNIT NO. 2

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